En-gendering Effective Planning:
Spatial Mismatch, Low-Income Women, and Transportation Policy

Evelyn Blumenberg
Department of Urban Planning
UCLA School of Public Policy and Social Research

Forthcoming in the *Journal of the American Planning Association*

Revised: July 19, 2003

Evelyn Blumenberg, Assistant Professor, Department of Urban Planning, UCLA School of Public Policy and Social Research, 3250 Public Policy Building, Los Angeles, CA 90095-1656, phone 310-825-1803, fax 310-206-5566, **eblumenb@ucla.edu**

Evelyn Blumenberg is an Assistant Professor of Urban Planning in the School of Public Policy and Social Research at UCLA. Her research focuses on low-wage labor markets, urban poverty, transportation and the poor, and women's economic status.

Acknowledgments

This paper is the product of several years of research on welfare participants, job access, and transportation. I thank the University of California Transportation Center and the Mineta Transportation Institute for their financial support for this research. I also thank Paul Ong, Lisa Schweitzer, Lois Takahashi, Brian Taylor, Martin Wachs, the many graduate students who have participated in my research projects on this topic, and the anonymous reviewers of this paper. Although I have received support from numerous places and individuals, responsibility for all errors lies with the author.

Abstract

Welfare-to-work transportation programs are premised on a conceptualization of the spatial mismatch hypothesis that focuses on the mismatch between the central city locations of welfare participants, rapidly expanding job opportunities in the suburbs, and the long commutes needed to connect them. Feminist scholarship and travel behavior research, however, show that low-income, single mothers have travel patterns that are not consistent with a mismatch between central city residents commuting considerable distances to suburban jobs. Premising welfare-to-work transportation policies on the spatial mismatch hypothesis has thus resulted in a policy mismatch between welfare recipients and their transportation needs. To better address the transportation needs of low-income mothers, policies must account for the important role of gender in determining *where* welfare recipients will look for work, *how* they are likely to conduct their job searches, and the *mode* by which they travel to both employment and household-supporting destinations.

The paid-work emphasis of recent welfare programs has policymakers and scholars searching for strategies to move welfare participants, most of whom are women, into the labor market. Policymakers have seized on transportation as a simple and effective answer to welfare participants' employment difficulties, on the assumption that transportation is a significant barrier to steady employment for many welfare participants. In policy circles, the emphasis on welfare recipients and their mobility is justified by a growing body of research showing the negative employment effects associated with inadequate transportation.

Policies to increase welfare participants' access to employment are largely predicated on narrowly-drawn conceptualizations of the spatial mismatch hypothesis that stress the spatial separation between the central city residential locations of welfare participants, rapidly expanding job opportunities in the suburbs, and the long commutes needed to connect them. However, a growing body of feminist scholarship and travel behavior research on working mothers demonstrates that these women's residential and work location decisions are far more complex than narrow interpretations of the spatial mismatch hypothesis suggest. Consequently, the application of the spatial mismatch hypothesis to welfare-to-work transportation policies has, in many cases, created a policy mismatch between welfare participants and their transportation needs.

This paper compares the research on the spatial mismatch hypothesis with data on the travel behavior of welfare participants to show that orthodox notions of the spatial mismatch hypothesis are not relevant to many—if not most—welfare participants. In particular, I argue that an emphasis on reverse commuting to facilitate travel from central cities to outer suburbs is not likely to have significant, long-term effects on employment outcomes for low-income

women. The distinct travel patterns of low-income women and the complexity of metropolitan urban structure instead require a more nuanced understanding of labor market access, one that recognizes the full range of factors that influence women's employment decisions. Likewise, effective welfare-to-work transportation policies will require flexibility to adapt to the varied transportation problems faced by poor, working mothers.

The evidence for this analysis is drawn from a series of studies conducted by the author on employment, transportation, and welfare reform in California (Blumenberg, 2002; Blumenberg & Ong, 2001; Blumenberg & Ong, 1998; Ong & Blumenberg, 1998). The data from these studies include survey data on the travel patterns and behavior of welfare participants and administrative data on the spatial location of welfare participants, jobs, and public transit. Admittedly, a focus on California may bias the conclusions reported here since the urban structure of metropolitan areas in the west certainly differs from those in the East or Midwest. However, the California data are also supplemented by studies from other regions of the country and data from the 1995 Nationwide Personal Transportation Survey to provide additional support for the findings reported here.

The Spatial Mismatch Hypothesis, Welfare Participants, and Federal Transportation Policies

The spatial mismatch hypothesis was first proposed by John Kain in the 1960s to explain the deepening poverty in many central-city, African-American neighborhoods (Kain, 1968). Kain and the subsequent proponents of the hypothesis argue that (1) the shift in the demand for labor toward suburban areas, (2) racial discrimination in housing markets which

limits housing mobility among minorities, particularly African Americans, and (3) poor transportation linkages between cities and suburbs combine to increasingly isolate African Americans in poor, central-city neighborhoods. The argument follows, therefore, that joblessness and low wages among African Americans result from their spatial separation from low-wage job opportunities increasingly located in suburban areas. More than 75 studies and 8 literature reviews have examined the spatial mismatch hypothesis.[1] A numerical majority of this research supports the spatial mismatch hypothesis; however, there remains vigorous scholarly debate over its validity and significance.[2]

While the debate over the merits of the spatial mismatch hypothesis continues, the hypothesis enjoys broad support among many academics and in policy circles. In an article published shortly after the passage of major federal welfare legislation, Ihlanfeldt and Sjoquist (1998) examined recent research on the spatial mismatch hypothesis and "their implications for welfare reform." Welfare reform has also prompted many scholars and transportation planners to examine the spatial location of welfare recipients and potential low-wage employment opportunities. While not directly testing the spatial mismatch hypothesis, these studies use maps to illustrate the high concentrations of welfare participants living in central cities, the growth in suburban, low-wage jobs, and, frequently, the weak public-transit linkages between central cities and suburbs (Bania *et al.*, 1999; Blumenberg & Ong, 2001; Citizens Planning and Housing Association, 1999; Coulton *et. al.*, 1996; Lacombe, 1998; New York Metropolitan Transportation Council, 1999; Rich, 1999; Sawicki & Moody, 2000). For example, in her analysis of Boston, Lacombe (1998:1) concludes:

> Welfare recipients are disproportionately concentrated in big cities and very few own an automobile, so most must rely on transit to access employment and related services… …many of the entry level jobs for which recipients are qualified are located in the outer suburbs of metropolitan areas which are not typically serviced by public transit.

Also confirming the linkage between the spatial mismatch hypothesis and welfare participants are studies that show a strong relationship between job access and employment outcomes. Blumenberg and Ong (1998) and Allard and Danziger (2001) find that access to employment leads to better economic outcomes for welfare participants. And a growing number of studies show that cars increase welfare participants' likelihood of employment (Cervero *et al*., 2002a; Danziger *et al.*, 2000; Ong, 1996; Ong, 2002).

Empirical evidence in support of the spatial mismatch hypothesis has thus become the intellectual foundation for public policies to enable low-income, central-city residents to overcome spatial barriers to employment. One policy strategy centers on enhancing the mobility of the poor through transportation services that better connect urban residents with suburban job opportunities. The classic example of this approach is the Bridges to Work demonstration project, a joint project of Public/Private Ventures (P/PV), a Philadelphia-based nonprofit organization, and the U.S. Department of Housing and Urban Development (HUD). The purpose of the project was to connect inner-city residents with suburban employment opportunities by providing job placement and transportation services. The perceived strength of this demonstration project paved the way for the National Joblinks Employment and Transportation Initiative, a program administered by the Community Transportation Association

of America (CTAA), with funding from the Federal Transit Administration and the U.S. Department of Labor. Joblinks was a series of demonstration projects intended to test a variety of transportation strategies to help unemployed and underemployed people achieve economic self-sufficiency. Once again, underlying these demonstration projects was the premise that "…current transit service routes and schedules rarely fit the needs of the inner-city poor and unemployed" who have to reach jobs, two out of three of which are "…being created in the suburbs, outside of the urban core" (Community Transportation of America, nd).

In response to the passage of the Personal Responsibility and Work Opportunities Reconciliation Act of 1996 and the perceived strengths of previous reverse commute demonstration projects, Congress enacted the Job Access and Reverse Commute grant program, a component of the 1998 Transportation Equity Act for the 21st Century (TEA-21). The Job Access program provides $150 million annually to assist states and localities in developing new or expanded transportation services to connect welfare participants and other low-income persons to jobs and employment-related services. Once again, the spatial mismatch hypothesis was used to justify the funding of this program. Section 3037 of the Job Access and Reverse Commute grant program reads, "Congress finds that (1) two-thirds of all new jobs are in the suburbs, whereas three-quarters of welfare recipients live in rural areas or central cities…" and closes with "many residents of cities and rural areas would like to take advantage of mass transit to gain access to suburban employment opportunities" (Federal Transit Act, 1998).

Indeed, references to the spatial mismatch hypothesis appear in most public statements regarding the federal Job Access program.[3] While it is difficult to determine the extent to which

counties have enacted reverse commute programs, fragmentary evidence suggests that many counties are experimenting with such programs (American Public Transit Association, 1999; Community Transportation Association of America, nd; Rosenbloom, 1998; Transportation Research Board, 1999). Through both their rhetoric and policy initiatives, policymakers and planners have asserted the importance of suburban employment for welfare participants and the necessity of reverse commute service to facilitate travel from inner-city neighborhoods to job-rich suburbs.

Women, Welfare Recipients, and the Spatial Mismatch

Much of the early literature on the spatial mismatch hypothesis examines African American men and, in particular, African American youth (Ihlanfeldt & Sjoquist, 1998; Preston & McLafferty, 1999). Yet, over 85 percent of adults on welfare are women (U.S. Department of Health and Human Services, 1997) and almost two-thirds of welfare participants in the U.S. (63%) are not African American (U.S. Department of Health and Human Services, 1998). Research on women and the spatial mismatch hypothesis has yielded mixed results with support of the hypothesis varying by (1) metropolitan age, size, and location (2) residential location within cities, (3) race and ethnicity, and (4) data source and methodological approach (Bell, 1974; Blackley, 1990; Ihlanfeldt, 1993; McLafferty & Preston, 1992, 1996, 1997; Reid, 1985; Thompson, 1997; Vrooman & Greenfield, 1980; Wyly, 1996).[4]

However, a growing body of scholarship by feminists and other scholars, particularly geographers and urban planners, suggests that a narrowly drawn conceptualization of the spatial mismatch hypothesis is not appropriate as the underlying premise for designing and implementing

welfare-to-work policies. Drawing from this research, underscored by data on the travel patterns of welfare recipients, I posit three reasons to challenge the relevance of these narrow interpretations of the spatial mismatch hypothesis to welfare recipients; these reasons provide the basis for developing alternative planning solutions. First is the reliance on a simplified central city-suburb dichotomy between welfare recipients and jobs; second is an overemphasis on lengthy commutes to suburban destinations; and third is an inappropriate focus on the employment behavior of men thereby neglecting the many gendered aspects of the labor market.

The Central City-Suburb Dichotomy. Most metropolitan areas defy a simple model of job-poor, central-city neighborhoods and job-rich suburbs posed by the spatial mismatch hypothesis. Despite decades of increasing suburban employment growth, most central cities still host large shares of employment well suited for low-wage female workers. Unquestionably, employment growth has, in recent years, been more rapid in the suburbs than in the central cities. Between 1992 and 1997, private-sector jobs grew by almost 18 percent in suburban neighborhoods, compared to 8.5 percent in central cities (U.S. Department of Housing and Urban Development, 2000). But rapid suburban job growth is not evidence that central cities are job poor. During the late 1990s cities in all regions of the country experienced employment growth. Central-city employment grew at more than five times the rate of the central-city population, with the most rapid growth occurring in the service sector where most welfare participants find employment; and during this time period, the overall decline in unemployment rates was higher in the cities than in the suburbs (U.S. Department of Housing and Urban Development, 2000).

The employment figures used to support the notion of a spatial mismatch often emphasize the creation of net *new* jobs on the supposition that "the relationship between the number of jobs and turnover may not be constant" (Ihlanfeldt & Sjoquist, 1998:856). However, empirical evidence suggests that job *growth* figures are less appropriate measures of job access than total employment since many more job openings are due to vacancies created by job turnover than by the creation of new jobs. In Boston, 1990 data show that job turnover accounted for an overwhelming 95 percent of all job opportunities for unemployed workers (Shen, 2001). Further, preexisting employment—the source of most job vacancies—remained disproportionately concentrated in the central city (Shen, 2001).

Recent studies have begun to paint a more nuanced picture of the spatial distribution of employment relative to the residential locations of welfare recipients. Many of these apply a gravity model to estimate relative employment access and show that welfare participants' access to jobs varies depending on their residential location and commute mode (Blumenberg & Ong, 2001; Cervero *et al.*, 2002a; Laube *et al.*, 1997; Ong & Blumenberg, 1998; Pugh, 1999). Table 1 shows data for Los Angeles on access to jobs within a 30-minute commute by mode for seven neighborhoods with high concentrations of welfare recipients. These data reveal that in central-city neighborhoods adjacent to the central business district, such as the Pico-Union neighborhood, welfare recipients are able to reach many jobs within a reasonable commute by either car or public transit. In contrast, other welfare recipients, such as those living in Watts, reside in job-poor, central-city neighborhoods where, if transit-dependent, they likely face long and difficult commutes that limit their likelihood of finding and sustaining employment even if traveling to destinations within the central city. Still other welfare recipients live in suburban

areas, such as Pacoima, where jobs are dispersed over large geographic areas. In these areas, low-skilled workers can live miles from employment opportunities without the benefits of the more extensive public transit infrastructure often available in dense, central-city neighborhoods. Hence, given the complexity of metropolitan urban structure, the spatial mismatch hypothesis oversimplifies the geographic location of employment opportunities suitable for welfare recipients.

[Insert Table 1 here]

The Long Road Home? The spatial mismatch hypothesis emphasizes the distance between home and work. Yet among all low-income workers, average commute distances and times are relatively short and the vast majority of work trips are made in private vehicles. While such data exclude the unemployed, travel data for all low-income individuals—not just commuters—suggest reasons to challenge a primary focus on the home-work relationship in policymaking. First, contrary to popular perception, most low-income people have automobiles in their households and, therefore, are not necessarily isolated from more distant jobs. And, second, most trips are not related to employment.

Table 2 shows the travel patterns and auto access of working-age adults, low-income single parents, and welfare recipients in two California counties—Los Angeles and Fresno. As the data show, travel distance among low-income, single parents is quite short, even in a large sprawling metropolis such as Los Angeles. The average commute distance for low-income, single parents is less than 8 miles, compared to 12.5 miles for all working-age adults. Although small sample sizes limit comparisons of travel time by mode, the data show that the average

commute time for low-income, single parents is five minutes shorter than for all working-age adults.

[Insert Table 2]

The relatively short commutes of low-income, single mothers may be the result of economic and transportation barriers to longer-distance travel. Overall, commute distance tends to be positively correlated with earnings, with higher income commuters traveling, on average, longer distances than low-income commuters. The positive relationship between income and commute distance has been attributed to (1) the geographic dispersion of higher income jobs (Simpson, 1992), (2) the preferences of higher-income workers to trade off longer commutes for larger houses (3) the relatively higher levels of residential amenities found in many suburban areas (Muth, 1969; Simpson, 1992), and (4) the greater likelihood that higher-income workers will travel by car, the highest speed commute mode (Hu & Young, 1999).

Low-income women, however, tend to be concentrated in sex-segregated occupations in which they, on average, earn lower wages than men (Sorensen, 1994), and low wages make long distance commutes less attractive (MacDonald, 1999; Madden, 1981). The residential locations of poor, single mothers are often constrained to central-city neighborhoods by housing discrimination and a lack of affordable rental or publicly-subsidized units in the suburbs (Massey & Denton, 1993). In addition, travel from the central city to the suburbs, particularly on public transit, can be quite difficult since most public transit systems are best suited for travel within or to the central city (Bania *et al.*, 1999; Rich, 1999). Reverse commutes to dispersed suburban employment sites on transit often require multiple transfers, and can take hours (Bania *et al.*, 1999; Pisarski, 1996; Rich 1999). Given these difficulties associated with long-distance

commuting to low-wage jobs, it is not surprising that long commutes are unattractive to low-income single mothers. Evidence from Los Angeles, for example, shows that, while welfare recipients who commute longer distances earn higher wages, these commutes are difficult to sustain and lead to higher turnover rates and lower overall earnings (Ong & Blumenberg, 1998).

However, low-income women have other reasons for preferring jobs closer to home. For single mothers who typically have sole responsibility for the functioning of their households, the ability to sustain employment rests on access to a variety of household-supporting destinations, only one of which is work. Long commutes are especially difficult for welfare participants who must balance the costs of traveling to and from low-wage jobs with the need to make child- and other household-serving trips. As the data in Table 2 show, travel to employment comprises less than 12 percent of all trips; even among all working-age adults, work trips comprise only 18 percent of all trips. The literature on the travel patterns of low-income women shows that, relative to low-income men, low-income women make more trips (Hu & Young, 1999; Rosenbloom, 1994), make a higher percentage of household-serving trips (Federal Highway Administration, 1995; Hu & Young, 1999; McGuckin & Murakami, 1999; Steiner, 1996; Taylor & Mauch, 1996), and have a greater propensity to make stops on the way to and from work (McGuckin & Murakami, 1999).

It is likely that single mothers work closer to home than men, in part, to ease the difficulty of balancing paid work with household responsibilities (Erickson, 1977; Madden, 1981; Singell & Lilleydahl, 1986). Empirical evidence of the effect of household responsibility on commute distance is ambiguous (Gordon et al., 1989; Madden, 1981; Preston, McLafferty & Hamilton, 1993). However, existing research does not provide an effective test of this

hypothesis since measures of family status—typically marital status or the presence of children—captures two contradictory effects on commute time and distance. Some single mothers prefer employment close to their homes in order to more easily shoulder household responsibilities. Offsetting the desire for proximate employment is the necessity of making numerous household-serving trips, many of them as part of the journey to work. Therefore, depending on how travel data are collected, the effect of family status on commute time or distance may be difficult to interpret.

Finally, most welfare recipients have access to automobiles and, therefore, have reasonably good spatial access to jobs regardless of their residential locations. For these recipients, the friction of commute distance is substantially reduced and commute direction is not an obstacle. Cars offer flexibility in trip making, a flexibility that enables women to more easily and safely manage their multiple responsibilities as heads of households (Rosenbloom & Burns, 1994). Low-income women are more likely than men to work nights and weekends (Blumenberg, 2002; Presser & Cox, 1995, 1997); cars enable women to travel safely during off-peak hours when transit service is limited, and after dark, when women's concerns for their personal safety are highest (Schulz & Gilbert, 1996). Compared to public transit, cars also enable women to more easily trip chain, make multiple stops in a tour. Given the advantages of cars, working mothers—particularly those with young and/or many children—are more likely to drive to work at all income levels than are comparable men or other women (Rosenbloom & Burns, 1994).

With respect to welfare recipients and cars, early figures from the U.S. Department of Health and Human Services (1997) reported that as few as 7 percent of all families on welfare

owned automobiles. Based on this widely publicized figure, which is cited in the Job Access legislation and many other federal documents, many planners and policymakers assume that welfare participants depend primarily on transit for mobility. They have, in turn, emphasized improving public transit to increase job access among welfare recipients. However, nearly every other study of travel by welfare participants finds that most commute by car and not public transit (Blumenberg, 2002; Danziger, 2000; Federman et al., 1996; Los Angeles County, 2000; Murakami & Young, 1997). Table 2 shows that, although public transit use among welfare recipients is significantly higher than among all working-age adults, most low-income, single parents commute by private vehicle. As the data in Table 1 show, welfare recipients in Los Angeles who commute by car—even those in job-rich, transit-friendly neighborhoods—can access many more jobs within a 30-minute commute than recipients who rely on public transit. Further, data from the Nationwide Personal Transportation Survey show that 82 percent of all low-income, single-parents, regardless of employment status, have at least one personal vehicle in their households (Table 2).

The Gendered Labor Market. Finally, the spatial mismatch hypothesis is silent on gender differences in labor markets. Gender influences the spatial location of employment opportunities, shapes women's access to the labor market, and, accordingly, influences women's transportation needs.

Although occupational sex segregation has declined in recent years, it is still a fundamental characteristic of the labor market and remains quite high. As of 1990, 50 percent of all women would have to change jobs to have the same occupational distribution as men (Baunach, 2002). Occupational sex segregation affects the spatial structure of urban areas and

influences women's travel patterns. For example, research points to a positive relationship between localized commutes and occupational sex segregation (Gilbert, 1998; Hanson and Pratt, 1995; Madden, 1981). Some scholars attribute women's shorter commutes to the spatial dispersion of feminized occupations (Gordon, Kumar & Richardson, 1989; Hanson & Johnston, 1985). Others have argued convincingly that some employers locate in particular neighborhoods to take advantage of the available supply of low-wage female labor (Hanson and Pratt, 1992; Nelson, 1986). Employers' locational decisions thereby create highly localized female labor markets and enable women's short commutes. Women who commute shorter distances to feminized occupations tend to earn less than women who commute farther to male-dominated occupations (Hanson and Pratt, 1995).

In contrast to studies emphasizing the effects of dispersed feminized occupations on commutes, Wyly (1996; 1998) shows that, while women seek to minimize their work trips, employment in feminized secondary-sector jobs has no independent effect on travel time. He argues that the important connection between transportation and the labor market extends from the relationship between women's disproportionate (though diminishing) reliance on bus transportation and labor market segmentation. Among women who travel by bus, 49 percent are employed in female-dominated secondary occupations compared to 38 percent of solo commuters (Wyly, 1998). These differences persist even when controlling for the characteristics of women using this mode of travel; travel by bus is associated with an 8 percent increase in segmentation (Wyly, 1998). Such findings suggest that policies to increase automobile access among low-income women may result in better jobs, greater employment stability, and higher wages.

Women's short commutes may also be the product of welfare participants' reliance on place-based information networks. Social networks are an integral part of the job search process for most workers (Granovetter, 1995). Some studies show that women, particularly low-income women with children, rely on informal, neighborhood-level networks to connect them to employment (Chapple, 2001; England, 1995; Gilbert, 1997, 1998; Hanson & Pratt, 1995). Many low-income women engage in localized job searches to minimize the high costs associated with learning of and traveling to distant and dispersed job vacancies (Holzer & Reazer, 2000). Women are also more likely than men to engage in localized job searches which extend from the rich sets of relationships that they develop through their involvement with families, local employers, neighbors, and community institutions (Gilbert, 1998).

The spatial boundedness of women's job search does not necessarily lead to negative employment outcomes. Gilbert (1998) finds that the use of personal contacts among welfare recipients was somewhat more likely to lead to employment in female-dominated occupations; however, she also demonstrates the role of place-based personal networks in the survival strategies of African American and white working poor women with children. Chapple (2001) finds that welfare recipients who obtained jobs through social contacts found jobs that paid more and were more satisfying than those who found jobs using other job search strategies.

Low-Income Women and Reverse Commute Services – A Policy Mismatch

So despite widespread support for a new generation of reverse commute transit services, there is strong evidence that they will be ineffective in meeting the transportation needs of unemployed, single mothers. Most travel by welfare recipients (and other commuters, for

that matter) is not in the reverse direction from central cities to suburbs. Further, even if the job prospects are better in suburban areas, long distance commutes can be costly—in terms of both time and money—and difficult for single mothers to sustain.

Yet many transportation planners contend that effective reverse commute services are necessary to help jobless, inner-city residents overcome difficulties associated with commuting from central cities to suburbs. As such, many counties are experimenting with more direct central-city to suburb fixed-route public transit service, vanpool programs, and guaranteed ride home programs to allow welfare participants a quick and easy ride home in case of emergencies (American Public Transit Association, 1999; Community Transportation Association of America, nd; Rosenbloom, 1998). Rosenbloom (1998:53) finds that "…most reverse-commute services provided by transit operators have been effective in increasing transit ridership…" Reducing the costs and increasing the convenience of central-city-to-suburb service should logically increase demand for this type of travel (Rosenbloom, 1998).

However, the effects of reverse commute service on the employment outcomes of low-income women with children are predicted but not demonstrated (Rosenbloom, 1998). In fact, evaluations of an earlier round of reverse commute demonstration projects find that improved bus service to outlying employment centers does not reduce unemployment in inner-city neighborhoods (Rosenbloom, 1992; Transportation Research Board, 1999). Reverse commute services are especially ill-suited to multi-destination, job-search trips. Yet, welfare participants face the greatest transportation difficulties when searching for work and having to travel to multiple, unfamiliar destinations (Blumenberg, 2002; County of Los Angeles, 2000). Once employed, reverse-commuting welfare participants will likely face long journeys to work,

especially if they depend on public transit. In 1990, average drive-along travel times from central cities to suburbs were close to 25 minutes, compared to approximately 15 minutes for trips within the central city (Pisarski, 1996). This means that welfare recipients who reverse commute are, at best, 25-minutes away from their children in case of emergencies. In a recent reverse commute study, Cervero et al. (2002b) examined peak travel times in nine reverse-direction transit corridors in California; they find that average travel time by transit is approximately four times that by car.

Finally, even if welfare participants find suburban jobs and are able to successfully negotiate their daily commutes, they would have difficulty sustaining these commutes when no longer eligible for transportation subsidies. Most county welfare agencies reimburse welfare recipients for the costs of their employment-related travel. Welfare transportation assistance may help subsidize longer commutes, but steady work eventually eliminates the subsidies, reducing the attractiveness of distant jobs. To ease this problem, many counties have implemented transitional assistance to aid welfare participants for a certain period of time once they find employment and are no longer eligible for aid. Eventually, this, too, comes to an end. Ultimately, welfare recipients become ineligible for post-employment services and incur the full costs of their travel with, perhaps, fewer transportation options on which to rely.

Thus, for those welfare participants who face a spatial mismatch between their residential locations and job opportunities, both the travel patterns common to low-income single mothers and the employment constraints such women face combine to greatly diminish the attractiveness of distant suburban jobs. Long-distance commutes separate single parents from their children whose needs are not confined to non-work hours. Working single mothers often

have sole responsibility for their children when they are sick, in emergencies, or when their day care arrangements fail. Long commutes are time consuming, and for transit riders usually require waiting and transfers to get from home to school to work. Distant work locations thus make it especially challenging for single mothers to balance home and work responsibilities. Such factors should, at the very least, deter policymakers from promoting long-distance commuting among low-income mothers.

Toward Effective Welfare-to-Work Transportation Policies

Unfortunately, simple, cookie-cutter solutions characterize most current welfare-to-work transportation policies. Many welfare-to-work transportation plans have been based largely on maps showing the locations of welfare participants and low-wage jobs. But to develop effective, targeted job-access transportation policies for welfare participants, planners and policymakers must move beyond such simple maps of metropolitan structure to consider the full array of factors that influence the travel behavior of welfare participants. In particular, such policies must account for the important role of gender in determining *where* welfare recipients will look for work, *how* they are likely to conduct their job searches, and the *mode* by which they travel to both employment and household-supporting destinations. Collectively, the evidence on low-wage female labor markets, single-parent households, and women's travel behavior suggests that to effectively meet the transportation needs of single mothers, policymakers must focus their efforts in the following four policy areas.

Geographic targeting. Effective policies and programs must be tailored to the unique characteristics of individual counties and, more importantly, neighborhoods within counties.

Public transit is most effective in places with dense concentrations of trip origins and destinations, environments that justify frequent service that reduces waiting and transfer times (Levinson, 1992). In neighborhoods with high densities of both jobs and low-income residents, welfare recipients are able to reach numerous employment opportunities within a reasonable time using public transit. For example, low-income women living adjacent to central business districts can often find suitable service sector employment within a short commute on public transit. However, in low-income neighborhoods with few employment opportunities, the need for longer commutes—even within the central city—will reduce the likelihood that welfare recipients will find and keep employment. Many of these neighborhoods already have high levels of local transit service but suffer from poor inter-regional transit connectivity. These neighborhoods require transportation services that reduce travel times to job-rich neighborhoods (e.g. rapid bus service, demand responsive service, express service, or freeway flyers) as well as policies to facilitate the use of private vehicles.

Job-Search Transportation. More than the general population, welfare recipients lead lives that are constantly in flux and, not surprisingly, these changes influence their travel behavior and needs. Changes in residential or employment location, for instance, affect how welfare recipients travel. Similarly, evidence suggests that, as welfare recipients move through the various components of welfare-to-work programs, their transportation needs change. Surveys conducted in Los Angeles and Fresno Counties in California show that welfare recipients perceive the greatest transportation difficulties during their search for employment when they must travel to multiple and unfamiliar destinations (Blumenberg, 2002; County of Los Angeles, 2000). Transportation problems are particularly acute for transit-dependent job

seekers who must create daily trip plans, take new and unfamiliar bus routes, and navigate through unknown neighborhoods between transit stops and job sites to avoid being late for job interviews. Once employed, transit-dependent welfare recipients report fewer travel difficulties, since they are commuting to known destinations and can routinize their travel (Blumenberg, 2002; County of Los Angeles, 2000). Therefore, transportation policies can aid welfare recipients during the temporary, though highly variable, job-search phase of transitioning into paid work. Policy options for job seekers include taxi script programs, rental car vouchers, and detailed transit trip itinerary planning.

Complex Travel Patterns. Simply focusing on the journey to work fails to incorporate the array of factors that influence women's travel. Not surprisingly, robust explanatory models of travel behavior consider the central role of household-serving travel in shaping commuting behavior. In recent years transportation scholars have turned to more behaviorally-based models of travel behavior that incorporate the role of out-of-home activities (work, shopping, school, etc.), the complex interactions among household members, and the influence of household structure, life-cycle stage and lifestyle choices (Meyer and Miller, 2001). Similarly, social scientists have developed multivariate statistical models such as path analysis (McLafferty & Preston, 1997) and covariance models (Wyly, 1996) to examine causal relationships between and among variables in explaining work and travel choices.

Such analyses reveal complex interactions among the determinants of women's travel. Women's employment, household responsibilities, and housing choices are interrelated, and these decisions affect and are affected by women's travel behavior (Hanson and Pratt, 1988, 1995; Gilbert, 1998). Employment is not possible unless single mothers find appropriate

childcare for their young children, are able purchase groceries, clothes, and other necessities for the household, can attend to the educational and health needs of their children, and have the ability to respond quickly to family emergencies as they arise. Policymakers, therefore, must move beyond a narrow focus on the commute and recognize that work-related travel is fundamentally linked to other life-supporting travel and develop policies that enable single mothers to reach an array of destinations, often in long tours of linked trips.

Private Vehicles. There is mounting evidence that low-income travelers—particularly low-income women—accrue significant benefits from driving automobiles (Ong, 1996, Ong, 2002; Rosenbloom & Burns, 1994). Thus, in most cases private vehicles, not public transit, is welfare recipients' mode of choice. As Waller and Hughes (1999:1) have written "In most cases, the shortest distance between a poor person and a job is along a line driven in a car." Therefore, policies should be adopted to help welfare participants purchase, insure, maintain, and otherwise drive reliable automobiles.

Automobiles are strongly linked to the employment of welfare participants. Ong (1996; 2002) finds that welfare participants with automobiles have significantly higher employment rates, mean hours, and monthly earnings compared to welfare participants without automobiles. In an analysis of Alameda County, California, Cervero *et al.* (2002a) also find that car ownership significantly increases the probability that welfare participants' transition into the labor market. While automobiles are not *required* for most jobs (Holzer & Danziger, 1998), they enable welfare participants to more widely search for employment than can welfare participants without cars. Moreover, private vehicles typically increase the number of available jobs located within a reasonable commute distance (Blumenberg & Ong, 2001).

But private vehicles are expensive to own and operate. Many welfare recipients report that they cannot afford automobiles, either because of the high up-front costs of purchasing them or because of ongoing costs for insurance, fuel, maintenance, repairs, and the like (Blumenberg, 2002; County of Los Angeles, 2000). Compared to all working-age adults, low-income, single parents are less likely to have access to private vehicles. Most welfare recipients have limited access to vehicles (Blumenberg, 2002; County of Los Angeles, 2000) and must compete with other adults for use of household cars. While more than 74 percent of low-income, single parents and welfare recipients live in households with cars, the ratio between the number of persons in the household and household cars is two to three times higher for low-income single mothers than for all working-age adults (Table 2). Additionally, access to automobiles varies substantially across racial and ethnic groups, with African American recipients more likely than white, Hispanic, or Southeast Asian welfare recipients to live in zero-vehicle households (Blumenberg, 2002; County of Los Angeles, 2000).

Even though many studies demonstrate the importance of automobiles in facilitating employment, policies to enable welfare recipients to buy and maintain cars are rare. In fact, many states have enacted policies and regulations to *limit* welfare participants from owning reliable automobiles. Half of all states have vehicle asset limitations that cap the dollar value of the vehicles owned by welfare participants (Urban Institute, 2000). In states such as California, the asset limitation has been set so low ($4,650) that welfare participants can purchase only older, less reliable vehicles (Los Angeles County, 2000).

Many, if not most, policymakers loathe promulgating policies and programs that might be perceived as promoting auto use, thus contributing to traffic congestion, air pollution, and

sprawl (Waller & Hughes, 1999). They are, perhaps, even more averse to policies that appear to give welfare recipients something—in this case automobiles—for nothing. Such proposals evoke the longstanding image promoted by former President Reagan of welfare recipients as Cadillac-driving welfare queens, who live lavishly off the public largesse. Transportation policies clearly need to address the negative effects of widespread auto use. But the potential contribution of auto-using welfare recipients to congestion and related problems is clearly very small. Yet it is likely that on largely symbolic grounds welfare recipients are penalized for their poverty by policies that steer them toward modes of transportation, such as public transit, that may not be well suited to their needs.

Moving Women to Work

Policies intended to meet the transportation needs of welfare recipients, must be informed by research on the lives, work, and travel of low-income, single mothers. The male-centered spatial mismatch hypothesis is likewise an inappropriate model on which to design transportation policies intended to serve working single mothers. On the scholarly front, feminists have begun to re-conceptualize the spatial mismatch hypothesis. Burnell (1997:79) argues that in a "good" model of urban structure "…an urban area does not begin with the 'featureless urban plain' hypothesized in neoclassical models; rather, it is a set of social institutions that are likely to be spatially specific…" Similarly, Preston and McLafferty (1999:388) contend that scholars must adopt a much broader definition of the spatial mismatch, one that examines "…the geographical barriers to employment for inner city residents that arise from changing social and economic relations and the impacts of those barriers on labor market achievement." Law (1999) argues that we must expand the existing framework for examining

women and transportation beyond studies of journey-to-work travel and think more broadly about the relationship between gender and daily mobility. Finally, Gilbert (1998) challenges us to rethink the notion that the spatially limited daily activity patterns of low-income women are necessarily constraining since local opportunity structures such as place-based personal networks are essential in women's daily survival and, therefore, can be *enabling*.

A number of creative welfare-to-work transportation programs have been implemented as a consequence of welfare reform and the Job Access and Reverse Commute Program (American Public Transit Association, 1999; Community Transportation Association of America, nd; Waller & Hughes, 1999). However, despite attempts—both scholarly and applied—to broaden the spatial mismatch hypothesis, welfare policy continues to rest primarily on universally-applied notions of urban form and travel behavior. This reliance on antiquated ideas has created a policy mismatch between welfare participants and the programs intended to meet their transportation needs. To facilitate the travel of low-income women, planners and policymakers must promote a more appropriate set of public policies; these policies must reflect the diversity of urban neighborhoods, extend beyond the journey to work, account for the changing needs of low-income women as they move through the welfare program, and acknowledge the central role of automobiles in metropolitan life today.

Table 1: Access to Low-Wage Jobs

Los Angeles Neighborhoods with High Concentrations of Welfare Recipients*

Neighborhoods	Location	Accessible jobs within a 30-minute commute		Ratio of Autos to Public Transit
		Public Transit	Automobile	
Boyle Heights	East Los Angeles	93,254	583,730	6.3
Little Phnom Penh	Long Beach	21,689	149,364	6.9
Monterey Park	East Los Angeles	5,966	418,581	70.2
Pacoima	San Fernando Valley	7,733	214,255	27.7
Pico Union	Central Los Angeles	118,990	615,700	5.2
Watts	South Los Angeles	8,001	468,561	58.6
West Adams	Central Los Angeles	55,890	583,035	10.4

*Data on travel time by mode are from the Southern California Association of Governments. The number of low-wage jobs located within these 30-minute commute buffers was estimated using census tract-level employment data from the American Business Institute, Inc. See Blumenberg and Ong, 2001.

Table 2: Travel Patterns of the Poor				
	Working-Age Adults*	Low-Income, Single Parents*	Welfare Recipients	
	United States		Los Angeles **	Fresno***
Daily person trips by trip destination				
Work	18%	9%	11%	9%
Home	33%	33%	36%	33%
Shopping	14%	15%	13%	22%
Other	35%	44%	40%	22%
Distribution of workers by mode				
Car Driver	90%	80%	50%	68%
Car Passenger	2%	6%	10%	18%
Public Transit	5%	9%	26%	7%
Walk	3%	4%	7%	6%
Other	1%	0%	2%	1%
Personal Vehicles				
Vehicle in household	97%	82%	56%****	74%
Persons in household to household vehicles	1.6 : 1	3.1 : 1	na	4.4 : 1
Commute Distance (miles)	13	8	7	8

Commute Time (minutes)	22	17	NA	NA

Source: *Nationwide Personal Transportation Survey (1995)[5]. **County of Los Angeles (2000). ***Blumenberg (2002). ****The percentage of welfare recipients who report *owning* at least one vehicle.

References

Allard, S.W., & Danziger, S. (2001). "Proximity and Opportunity: How Residence and Race Affect the Employment of Welfare Recipients." *Center for Policy Research*, Syracuse University. http://www-cpr.maxwell.syr.edu/faculty/allard/respap.htm

American Public Transit Association (1999, October). *1999 Access-to-work best practices survey, Summary repor*t, Parts 1 and 2, Access to Jobs Task Force.

Bania, N., Coulton, C. & Leete, L. (1999, November). *Welfare reform and access to job opportunities in the Cleveland metropolitan area*. Paper presented at the 1999 Annual Fall Research Conference of the Association for Public Policy Analysis and Management, Washington, D.C.

Baunach, D.M. (2002). Trends in occupational sex segregation and inequality, 1950 to 1990. *Social Science Research*, 31, 77-98.

Bell Jr., D. (1974). Residential location, economic performance, and public employment. In G.M. Von Furstenberg, B. Harrison, & A.R. Horowitz (Eds.), *Patterns of racial discrimination* (pp. 55-76). Lexington, MA: Lexington Books.

Blackley, P.R. (1990). Spatial mismatch in urban labor markets: Evidence from large US metropolitan areas. *Social Science Quarterly*, 71, 39-52.

Blumenberg, Evelyn (with Peter Haas) (2002). *The Transportation Needs and Behavior of Welfare Participants in Fresno County.* U.S. FHWA Report FHWA/CA/OR-2001023. San Jose, CA: Mineta Transportation Institute.

Blumenberg, E. & Ong, P. (1998). Job accessibility and welfare usage: Evidence from Los Angeles. *Journal of Policy Analysis and Management* 17(4), 639-657.

Blumenberg, E. & Ong, P. (2001). Cars, buses, and jobs: Welfare recipients and employment access in Los Angeles. *Journal of the Transportation Research Board*, 1756, 22-31.

Burnell, B.S. (1997). Some reflections on the spatial dimensions of occupational segregation. *Feminist Economics*, 3, 69-86.

Cervero, R., Sandoval, O. & Landis, J. (2002a). Transportation as a stimulus of welfare-to-work: Private versus public mobility. *Journal of Planning Education and Research*, 22 (1), 50-63.

Cervero, R., Tsai, Y., Wachs, M., Deakin, E., Dibb, J., Kluter, A., Nuworsoo, C., Petrova, I., Pohan M.R. (2002b). *Reverse Commuting and Job Access in California. Markets, Needs and Policy Prospects.* Institute of Transportation Studies, University of California, Berkeley.

Chapple, K. (2001). Time to work: Job search strategies and commute time for women on welfare in San Francisco. *Journal of Urban Affairs*, 23, 155-173.

Citizens Planning and Housing Association (1999). Access to jobs in the Baltimore region.

Community Transportation of America (nd). Background. *JOBLINKS: Connecting people to the workplace*.

Community Transportation Association of America (nd) *Access to jobs. A guide to innovative practices in welfare-to-work transportation.*

Coulton, C., Verma, N., & Guo, S. (1996). *Time limited welfare and the employment prospects of AFDC recipients in Cuyahoga County.* The Center for Urban Poverty and Social Change, Case Western Reserve University, WP-96-01.

County of Los Angeles (2000). *Assessing the transportation needs of welfare-to-work participants in Los Angeles County.* Los Angeles: Urban Research Division, Chief Administrative Office.

Danziger, S., Corcoran, M., Danziger, D., Heflin, C., Kalil, A., Levine, J., Rosen, D., Seefeldt,K., Siefert, K., & Tolman, R. (2000). Barriers to the employment of recipients. In R. Cherry & W.M Rodgers III (Eds.), *Prosperity for all? The economic boom and African Americans*. New York: Russell Sage Foundation.

England, K. (1995). 'Girls in the office': Recruiting and job search in a local labor market. *Environment and Planning A*, 27, 1995-2018.

Erickson, J.A. (1977). An analysis of the journey to work for women. *Social Problems*, 24, 428-35.

Federal Highway Administration (1995). *Our nation's travel: 1995 NPTS early results report.* 1995 Nationwide Personal Transportation Survey.

Federal Transit Act (1998). Sec. 3037. Job access and reverse commute grants. <49 USC 5309 note.>

Federman, M., Garner, T.I., Short, K., Cutter IV, W.B., Kiely, J., Levine, D., McGough, D., & McMillen, M. (1996). What does it mean to be poor in America? *Monthly Labor Review*, 119, 3-17.

Gilbert, M. (1997). Feminism and difference in urban geography. *Urban Geography*, 18, 166-179.

Gilbert, M. (1998). "Race," space, and power: The survival strategies of working poor women. *Annals of the Association of American Geographers*, 88, 595-621.

Granovetter, M. (1995). *Getting a job: A study of contracts and careers* (2nd ed.). Chicago: University of Chicago Press.

Hanson, S. & Johnston, I. (1985). Gender differences in work-trip length: Explanations and implications. *Urban Geography*, 6, 193-219.

Hanson, S. & Pratt, G. (1988). Reconceptualizing the links between home and work in urban geography. Economic Geography, 64, 299-321.

Hanson, S. & Pratt, G. (1992). Dynamic dependencies: A geographic investigation of local labor markets. *Economic Geography*, 68, 373-405.

Hanson, S. & Pratt, G. (1995). *Gender, work and space*. New York: Routledge.

Holzer, H.J. & Danziger, S. (1998). Are jobs available for disadvantaged workers in urban areas? Institute for Research on Poverty, Discussion paper no. 1157-98.

Holzer, H.J. & Reaser, J. (2000). Black applicants, black employees, and urban labor market policy. *Journal of Urban Economics*, 8, 365-387.

Hu, P.S. & Young, J.R. (1999). *Summary of travel trends. 1995 Nationwide Personal Transportation Survey*. U.S. Department of Transportation. Washington, D.C.: Federal Highway Administration.

Humphrey, T.J. (2001). *MBTA reverse commuting study*. Boston Metropolitan Planning Organization, Central Transportation Planning Staff, May.

Ihlanfeldt, K. (1993). Intra-urban job accessibility and Hispanic youth employment rates. *Journal of Urban Economics*, 33, 254-271.

Ihlanfeldt, K.R., & Sjoquist, D.L. (1998). The spatial mismatch hypothesis: A review of recent studies and their implications for welfare reform. *Housing Policy Debate,* 9, 849-892.

Kain, J.F. (1968). Residential segregation, negro employment, and metropolitan decentralization. *Quarterly Journal of Economics*, 82, 175-197.

Lacombe, A. (1998). *Welfare reform and access to jobs in Boston*. Volpe National Transportation Systems Center for the U.S. Department of Transportation, Bureau of Transportation Statistics. BTS98-A-02, January.

Laube, M., Lyons, W. and vanderWilden, P. (1997). *Transportation planning for access to jobs. Job access and the metropolitan transportation planning process in Hartford, St. Louis, and Detroit.* U.S. Department of Transportation, Research and Special Programs Administration. Boston: Volpe National Transportation Systems Center.

Law, R. (1999). Beyond 'women and transport': towards new geographies of gender and daily mobility. *Progress in Human Geography*, 23, 567-588.

Levinson, H.S. (1992). System and service planning. In G.E. Gray & L.A. Hoel (Eds.) *Public Transportation* (Second Edition). Englewood Cliffs, NJ: Prentice Hall.

Madden, J.F. (1981). Why women work closer to home. *Urban Studies*, 18, 181-194.

MacDonald, H.I. (1998). Women's employment and commuting: Explaining the links. *Journal of Planning Literature*, 13, 267-283.

Massey, D.S. & Denton, N.A. *American Apartheid. Segregation and the Making of the Underclass*. Boston: Harvard University Press.

McGuckin, N. & Murakami, E. (1999). Examining trip-chaining behavior: Comparison of travel by men and women. *Transportation Research Record*, 1693, 79-85.

McLafferty S. & Preston, V. (1992). Spatial mismatch and labor market segmentation for African American and Latina women. *Economic Geography*, 68, 406-431.

McLafferty S. & Preston, V. (1996). Spatial mismatch and employment in a decade of restructuring. *Professional Geographer*, 48, 420-431.

McLafferty S. & Preston, V. (1997). Gender, race and the determinants of commuting: New York in 1990. *Urban Geography*, 18, 192-202.

Meyer, M.D. & Miller, E.J. (2001). *Urban Transportation Planning*. Second Edition. New York: McGraw Hill.

Murakami, E. & Young, J (1997). *Daily travel by persons with low income.* Paper for the NPTS Symposium, Bethesda, MD, 29-31 October.

Muth, R.F. (1969). *Cities and Housing*. Chicago: University of Chicago Press.

Nelson, K. (1986). Labor demand, labor supply and the suburbanization of low-wage office work. In A.J. Scott & M. Storper (Eds.), *Production, Work, Territory: The Geographical Anatomy of Industrial Capitalism*. Boston: Allen & Unwin.

New York Metropolitan Transportation Council (1999). Access-to-jobs. http://www.nymtc.org/access/default.html

Ong, P. (1996). Work and car ownership among welfare recipients. *Social Work Research*, 2, 255-262.

Ong, P.M. (2002). Car access and welfare-to-work. *Journal of Policy Analysis and Management*, 21, 239-252.

Ong, P. & Blumenberg, E. (1998). Job access, commute and travel burden among welfare recipients. *Urban Studies*, 35, 77-93.

Pisarski, A.E. (1996). *Commuting in America II. The second national report on commuting patterns and trends*. Lansdowne, VA: Eno Transportation Foundation.

Presser, H.B. (1995). Job, family and gender: Determinants of non-standard work schedules among employed Americans in 1991. *Demography*, 32, 577-598.

Presser, H.B. & Cox, A.G. (1997). The work schedules of low-educated American women and welfare reform. *Monthly Labor Review*, 120, 25-34.

Preston, V. & McLafferty, S. (1993). The impact of family status on black, white, and Hispanic women's commuting. *Urban Geography*, 14, 228-250.

Preston, V. & McLafferty, S. (1999). Spatial mismatch research in the 1990s: Progress and potential. *Papers in Regional Science*, 78, 387-402.

Preston, V., McLafferty, S., & Hamilton, E. (1993). The impact of family status on Black, White and Hispanic women's commuting. *Urban Geography*, 14, 228-250.

Pugh, M. (1998). *Barriers to work: The spatial divide between jobs and welfare recipients in metropolitan areas*. Discussion Paper. Washington, D.C.: Brookings Institution Center for Urban and Metropolitan Policy.

Reid, C. E. (1985). The effect of residential location on the wages of black women and white women. *Journal of Urban Economics*, 18, 350-63.

Rich, M. (1999). *Access to opportunities: The welfare-to-work challenge in metropolitan Atlanta.* Paper presented at the 1999 Annual Fall Research Conference of the Association for Public Policy Analysis and Management, Washington, D.C.

Rosenbloom, S. (1992, March). *Reverse commute transportation; emerging provider roles*. U.S. Department of Transportation, Federal Transit Administration, Washington, D.C.

Rosenbloom, S. (1994). *Travel by women*. NPTS Demographic Special Reports. Washington, D.C.: Federal Highway Administration.

Rosenbloom, S. (1998). *Transit markets of the future. The challenge of change*. Transportation Research Board, Transit Cooperative Research Program, Report 28. Washington, DC: National Academy Press.

Rosenbloom, S. & Burns, E. (1994). Why working women drive alone: Implications for travel reduction programs. *Transportation Research Record*, 1459, 39-45.

Sawicki, D.S. & Moody, M. (2000). Developing transportation alternatives for welfare recipients moving to work. *Journal of the American Planning Association*, 66, 306-318.

Schulz D. and Gilbert S. (1996). Women and transit security: A new look at an old issue. *Women's travel issues. Proceedings from the second national conference, October 1996*, FHWA-PL-97-024, Office of Highway Information Management, HPM-40, Federal Highway Administration. Washington, DC: U.S. Department of Transportation.

Shen, Q. (2001). A spatial analysis of job openings and access in a US metropolitan area. *Journal of the American Planning Association*, 67, 53-68.

Singell, L. D. & Lilleydahl, J. H. (1986). An empirical analysis of the commute to work patterns of males and females in two-earner households. *Urban Studies*, 23, 119-29.

Simpson, W. (1992). *Urban structure and the labour market. Worker mobility, commuting, and underemployment in cities*. Oxford: Oxford University Press.

Sorensen, E. J. (1994). *Comparable worth: Is it a worthy policy?* Princeton: Princeton University Press.

Steiner, R. (1996). Women's travel for shopping in traditional neighborhoods: How does a woman's role in the household affect activity and travel for shopping. *Women's travel issues. Proceedings from the second national conference, October 1996*, FHWA-PL-97-024, Federal Highway Administration. Washington, DC: U.S. Department of Transportation.

Taylor, B.D. & Mauch, M. (1998). Gender, race, and travel behavior: An analysis of household-serving travel and commuting in the San Francisco Bay Area. *Women's travel issues. Proceedings from the second national conference, October 1996*, FHWA-PL-97-024, Federal Highway Administration. Washington, DC: U.S. Department of Transportation, 371-405.

Thompson, M.A. (1997). The impact of spatial mismatch on female labor force participation. *Economic Development Quarterly*, 11, 138-145.

Transportation Research Board (1999). *Using public transportation to reduce the economic, social, and human costs of personal immobility.* TCRP Report 49. Washington, D.C.: Federal Transit Administration.

Urban Institute (2000). *Welfare rules database – Selected rules*. Assessing the New Federalism. Washington, D.C.: Urban Institute.

U.S. Department of Health and Human Services (1997). *Characteristics and financial circumstances of TANF recipients. Fiscal year 1996.* Administration for Children and Families, Office of Planning, Research and Evaluation.

U.S. Department of Health and Human Services (1998). *Characteristics and financial circumstances of TANF recipients. Fiscal year 1998.* Administration for Children and Families, Office of Planning, Research and Evaluation.

U.S. Department of Housing and Urban Development (2000). *The state of the cities 2000. Megaforces shaping the future of the nation's cities*. Fourth Annual Report. Office of Policy Development and Research.

U.S. Department of Transportation (2000). National Transit Database. Table 18. Washington D.C.: Federal Transit Administration.

Vrooman, J. & Greenfield S. (1980). Are blacks making it in the suburbs? Some new evidence on intrametropolitan spatial segmentation. *Journal of Urban Economics*, 7, 155-67.

Waller, M. & Hughes, M.A. (1999, August). *Working far from home. Transportation and welfare reform in the ten big states*. Progressive Policy Institute and Public/Private Ventures.

Wyly, E.K. (1996). Race, gender, and spatial segmentation in the Twin Cities. *Professional Geographer*, 48, 431-444.

Wyly, E. (1998). Containment and mismatch: Gender differences in commuting in metropolitan labor markets. *Urban Geography*, 19, 395-430.

Wyly, E. (1999). Local labor markets and occupational sex segregation in an American metropolis. *Journal of Urban Affairs*, 21, 1-33.

[1]The findings of these studies are summarized in a series of comprehensive literature reviews on the topic the most recent of which are Ihlanfeldt and Sjoquist (1998) and Preston and McLafferty (1999).

[2]Some critics of the spatial mismatch hypothesis argue that race or transportation mode better predict racial variations in employment among the poor than spatial proximity.

[3] References to the spatial mismatch hypothesis are widespread despite the fact that federal legislation limits spending on formal reverse commute programs to no more than $10 million per fiscal year.

[4] Some studies show that African American women living in central cities face longer commutes than other workers due to their lower incomes and more limited access to personal vehicles (McLafferty & Preston, 1996, 1997). However, it is important not to conflate long-distance commutes with travel from central cities to suburbs. Even within the central city, travel from job-poor destinations to employment locations may require long travel times.

[5] Low-income, single parents are defined according to the method used by Murakami and Young (1997). A person is defined as low-income, single parent if they are the sole parent and live in a household of 1-2 persons with a household income of less than $10,000, or 3-4 persons with household income of less than $20,000, or 5+ persons with a household income of less than $25,000. Working-age is defined as ages 16 to 64.