TRANSPORTATION PLANNING AND STATUS OF TRANSPORTATION USER GROUPS

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Consideration of the social status of transit user groups as something more than a marketing characteristic leads to discussion of the workability of certain basic transit planning goals and means. Distribution and maintenance of the quality of a resource (transportation) are viewed as functions of primary user group status, altruism, and power of the controlling agency. Race and sex are basic social status variables. Four user groups are examined—white and nonwhite males and females. Travel behavior and attitude data are presented from the 1960 and 1970 censuses for 11 cities and from a home-interview survey conducted in Trenton, New Jersey, in 1973 (N = 548). Census data show that increasing proportions of minorities use transit over the period of general decline of transit systems. Also shown is the high level of dependence on this declining-quality transit system by the lowest status users. The Trenton attitude and behavior data show that improvements in transit are likely to draw only low-status users and that their increasing presence might further discourage use by high-status travelers. Furthermore, only direct restrictions on automobile use are likely to turn high-status travelers to transit. The uncomfortable conclusion of this analysis of planning ends and means is that planning to provide a system primarily for those without alternatives or placing faith in being able to attract riders to transit by dealing only with transit system attributes is shortsighted. To be successful over the long term, a system must be substantially used by high-status groups who will probably not be users by choice.

•TWO assumptions are basic to current approaches to public transportation planning and policymaking. First, a transit system can both serve primarily those with no alternative means of transportation and maintain high-quality service. Second, improving the quality of a transit system will attract new transit users away from their cars. As city after city has obtained control of public transit, the reason most often heard for acquiring and upgrading or replacing these failing systems is that those without alternatives cannot be left without transportation. The goal is a system that can survive, perhaps prosper, while serving primarily those without alternatives. Planners also recognize the need to increase ridership to improve the chances that the new or improved system will be self-supporting. Two policies might achieve this. First, car users could be attracted to transit by adjusting the relative quality of transit and the automobile. Second, alternatives to transit could be eliminated. This second policy is ordinarily rejected because of its probable political consequences. However, the assumption underlying the first policy alternative—that the relative quality of transit and the automobile accounts for the distribution of travelers in each—must be questioned.

Questioning these assumptions requires developing a theory of the determinants of resource distribution. [Although sociologists have long been interested in resource distribution, and many classifications of resources exist, this is the first research that uses public-private and quality-quantity distinctions. Furthermore, the purpose of this paper is not to fully support and develop the arguments presented (although ample support exists especially in the sociological literature that deals with health, education and welfare). Although some empirical support for our arguments is offered for the trans-

portation case, the primary purpose of the paper is to stimulate thought about the implications of sociological theory for social planning.] One of a society's fundamental characteristics is its distribution of such basic public resources as education, housing, and transportation (together with their corresponding facilities: schools, buses, and the like). In the United States, this distribution is inherently problematic because societal norms call for equal access to opportunity, yet resources are scarce and unequally distributed among various social groups. Thus understanding the distribution of public resources requires studying the factors that produce variation in the quality of resources. The quality is produced by 3 factors: (a) the status of user groups, (b) the level of altruism exhibited by the agencies controlling a facility, and (c) the power of the controlling agencies. Over time, changes in the level of any or all of these factors will affect the quality of the resources.

Our concern here is primarily with user group status. We present data from several sources to illustrate the current and anticipated effects of user group status on the quality of public transportation. We are secondarily concerned with the efficacy of agency altruism evident in plans for improved service and equipment. The third factor, the power of controlling agencies, is beyond the scope of this paper.

THEORY

Quality in this paper is defined not as the technical sophistication of a facility but as the social value that consumers place on that facility as a means to their ends. Thus the quality of a transit system lies not in its design and engineering but in its ability to transport people to desired locations in a manner acceptable to their tastes. We offer 2 propositions.

1. The level of altruism exhibited by an agency (for example, public subsidizing of services, operating costs, or large start-up investments) directly influences the short-term quality of facilities. Altruism is the degree to which agencies that control a facility attempt to implement such broad social norms as equal opportunity and equal access to resources, individual freedom of choice, and "good service."
2. If the effects of altruism are allowed in the short term, the long-term quality of a facility will be directly proportional to the average social status of the user population. [This follows logically from 2 prior premises: (a) A status group's ability to demand quality effectively depends on the status of the groups using the facility in question; (b) in the long term, quality depends on the effectiveness of demands by status groups.]

A user group consists of people who share the use of a facility and similar social status. A user group is not equivalent to a marketing group, which is a passive, manipulated population. Social status is a function of the social honor and prestige of membership in a status group. A user group that becomes a large proportion of all users is a primary user group. A user group may influence policy directly, and its status may become linked to the particular facility.

In the long term, if the quality of a public facility is not matched by the status of its primary user groups, its quality will gradually adjust to that consistent with the user group's status level. This situation occurs, for example, when the quality level is higher than the primary users could obtain on their own (without the effects of altruism). Such user groups lack the power to demand maintenance of high quality; at best, social consensus supports only equal access to public resources and not the implementation of (much less the maintenance of) a high-quality system for such groups.

Changes that affect the relative sizes of user groups may affect the average social status of the user population. This change, in turn, affects facility quality. Such changes may be either policy induced or natural occurrences. Without specifying the size of the effect, we suggest that 3 factors likely to affect the size of user groups (and the resulting, average status of the user population) are (a) the distribution of access to alternative facilities, (b) the quality of a facility, and (c) social evaluations of the facility.

In general, a group's social status is related to its members' access to alternative facilities. The higher a group's status is, the greater its access to higher quality alternatives is. Low-status user groups can be expected to have little, if any, access to alternative facilities. Changes in the use of alternative facilities are thus likely to produce disproportionate changes in the sizes of the various user groups of a particular facility.

The effect of facility quality on the user population's average social status (through its effect on the relative sizes of user groups) is a feedback process secondary to the process expressed in the second proposition (the user population's average social status affects facility quality). The use of a facility by a user group should shrink or expand with changes in facility quality (the degree to which it meets the user group's needs). For those without access to alternative facilities, changes in quality will change the size of the user group (and, hence, the user population's average status); for those with access to alternative facilities, quality changes may or may not alter the size of user groups. These relationships, in turn, may vary as user groups' notions of quality (and of what serves their needs) vary. Social evaluations of a facility become important as facilities become associated with user group status in the general public's mind, especially when users' status characteristics are highly visible and when close physical contact (without accompanying physical distinctions) occurs between user groups of different statuses. To the degree that users' relative statuses are invidiously compared, user groups (in contrast to consumer or marketing groups) are not merely consumers purchasing in response to particular stimuli. A user group can itself stimulate another user (or nonuser) group to change or reinforce its use of a facility.

In short, those planning a facility should consider that, although altruistic improvements in the facility may produce a high-quality system in the short term, the user population's average social status will affect long-term quality. Furthermore, attempts to change the size of a user population are likely to affect different user groups differently and thus alter the population's average status (and thus the quality of the facility).

DATA AND METHOD

The data for this paper come from 2 sources, the U.S. Census and a home-interview survey conducted in Trenton, New Jersey. The census data for 1960 and 1970 are from 11 standard metropolitan statistical areas (SMSAs) representing all areas of the country (Atlanta, Birmingham, Denver, Detroit, Los Angeles, Indianapolis, New York, Phoenix, Saint Louis, Trenton, and Washington, D.C.). Included are data on mode of travel to work and labor force membership by race and sex. (Only since 1960 has a question about mode of travel to work been included in the U.S. Census. Although proportions of groups using transit for the journey to work are not the same proportions as for all users of the system, these are the only data easily available on a large scale.)

The Trenton data come from a home-interview survey (each interview was 1 hour) conducted in the summer of 1973 from which 548 usable interviews were collected (1). Two samples, combined here, were selected. One was a random sample of households (1 resident interviewed). The other was a random sample of residences of bus riders (selected to ensure sufficient data from riders for analysis and comparison).

Because the purpose of this paper was to provoke concern for particular social processes and to present data indicating that this concern is warranted, we did not use sophisticated data analysis techniques that would fully test the theory. We describe parts of the analysis as they become relevant. Because inferences about a particular population were not being made, the use of many statistical tests was not appropriate and thus they are not included.

Race and sex were used as measures of social status. In this research women were classified as lower in status relative to men; blacks were classified as lower in status than whites. Cross classification produced 4 user groups: white and nonwhite males and females; white males were considered the highest and nonwhite females were considered the lowest status group. However, most of the analysis used only 2 categories:

high and low status. In these categories, white males were in the high-status group and everyone else was in the low-status group.

FINDINGS AND DISCUSSION

Status and Quality

Until recently, transit quality has declined without interruption. Generally unavailable to suburban travelers, public transportation has been concentrated in city center areas. Furthermore, although cities have grown, spread, and diversified, most transit systems still concentrate on downtown areas (4). Service and equipment have deteriorated (3), and multidestination trips are virtually prohibited by cost.

The ridership picture is just as dreary. Between 1960 and 1970 there has been about a 40 percent decline in the use of transit for commuting to work (Table 1). The situation was worse in some cities (Birmingham) and better in others (New York). Census data show the specific changes in the transit commuting population [Table 2 (12, Vol. 1, Table 115; 13, Tables 164 and 190; 14, Table 2)]. The proportion of low-status transit commuters has steadily risen. The trend is to an increasingly female and nonwhite user population. Althogh the proportion of nonwhite male transit commuters remained about the same, the decline in the white proportion (both male and female) was matched by a sharp increase in the nonwhite female proportion. In those cities whose populations are 10 to 15 percent nonwhite (Atlanta, Birmingham, Washington, D.C.), by far the largest group of transit users is nonwhite female (even more so in 1970 than in 1960). These changes are not due to changes in labor force participation. The transit user population is becoming black and female more rapidly than is the labor force. Furthermore, nonwhite female representation in the transit commuter population is 4 times that in the labor force; white male representation is half that in the labor force. Finally, the proportion of nonwhite, female transit commuters has dropped more than the proportions for other groups; in addition, their use of cars has increased more than that of other groups. However, these changes, plus changes in the labor force, do not completely account for the fact that the overall proportion of transit commuters is becoming increasingly nonwhite and female.

Although census data on the mode of travel to work are available for only 2 years, 1960 and 1970, the trend indicates that the average social status of the user population has declined; simultaneously, quality of public transportation has declined. These findings, based on longitudinal data, are consistent with our theory that user status affects facility quality. More exhaustive longitudinal data are needed to confirm or disprove this causal connection. Were census data available for a longer period of time, we would expect similar patterns to emerge. One obvious criticism of this contention is that factors other than user group status affect quality. One alternative explanation of declining quality is an overall decline in the number of users without regard for their status. We offer the following case as a theoretical counterargument to this explanation. Suppose 2 parallel systems were suffering a massive loss of ridership. In both cases, the remaining riders have no alternative but to continue using the transportation system. In one system, the remaining riders are high status; in the other, they are low status. High-status riders would not remain content with the system should it deteriorate. They would use their power or their money to either demand improvements or subsidize them. In contrast, low-status users would have neither the funds nor the political influence to keep an adequate system going or to demand improvements after a period of governmental altruism was over. Their system would simply continue to deteriorate. Clearly, simple loss of ridership is not necessarily sufficient to explain deterioration in the quality of a transit system.

Factors Affecting Average Status

If the user population's average status affects long-term facility quality, then we must

Table 1. Percentage of population using public transit for journey to work in 1960 and 1970 for 11 standard metropolitan statistical areas.

SMSA	1960	1970
Atlanta	16.68	9.42
Birmingham	14.09	6.18
Denver	9.20	4.44
Detroit	12.58	8.26
Indianapolis	8.28	5.79
Los Angeles	7.57	5.63
New York	51.44	48.07
Phoenix	3.73	1.26
Saint Louis	15.95	8.13
Trenton	10.95	8.07
Washington, D.C.	22.23	16.53
Average[a]	12.13	7.34

Note: Source for this table is census tables given in Table 3.

[a]Average excludes New York City as an extreme case.

Table 2. 1960 and 1970 commuting mode percentages by race and sex for the 11 standard metropolitan statistical areas.

	1960				1970			
	Nonwhite		White		Nonwhite		White	
Category	Male	Female	Male	Female	Male	Female	Male	Female
Distribution of races and sexes								
General population	6.67	7.68	41.00	44.65	6.54	7.91	40.47	45.07
Labor force	8.67	6.00	56.74	28.59	7.79	6.80	53.00	32.46
Labor force modal access[a]								
Car	6.66	2.40	66.76	24.17	6.90	4.12	58.32	30.66
Transit	12.13	18.56	28.73	40.60	12.73	24.98	24.89	37.39
Races and sexes in labor force[b]	75.80	45.86	80.75	36.75	70.12	51.34	77.88	42.89
Labor force modal choice[c]								
Car	59.88	34.68	80.59	62.90	79.15	61.68	89.38	83.43
Transit	18.00	41.89	5.53	17.68	12.48	30.23	3.11	8.37

[a]Includes all those 16 years old and older in the civilian labor force.
[b]Based on total population.
[c]For 10 SMSAs; New York City excluded as an extreme case.

examine the factors affecting average status before we consider the implications of the second proposition for transit system planning. We now examine the factors previously introduced.

Access to Alternatives

Captive ridership on transit has been estimated to be 85 percent in Trenton, which is a conservative figure for other areas. Census data (Table 2) on commuting show that in both 1960 and 1970 women had less access to cars than men had; nonwhites had less access than whites had. Between 1960 and 1970, the proportion of each group who drove to work increased; nonwhite females showed the greatest increase. However, in 1960 and 1970, the same transit ridership trend toward predominantly nonwhite and female ridership held, although the total number of riders in all categories had declined.

The Trenton data show the past and current effects of limited access to a car. Women, especially blacks, are somewhat more likely to make extra stops on the way home from work (to shop or to pick up children) than are men (Table 3). Most women with no access to a car walked rather than took a bus for grocery shopping. Of those who did take a bus, most were black. For trips to the doctor or dentist, a higher proportion of black women took the bus; men and white women drove or found rides. Open-ended interviews revealed that, as doctors and dentists moved to the suburbs off direct bus lines, many of those who depended on public transportation simply stopped going for routine medical care to avoid the difficulties of the trip.

A Philadelphia study found that, although the bus was viewed as the most likely alter-

Table 3. Percentage of use of travel modes to certain destinations by race and sex for the combined Trenton samples.

	Nonwhite Males			Nonwhite Females			White Males			White Females		
Mode	Grocery Shop	Other Shop	Doctor	Grocery Shop	Other Shop	Doctor	Grocery Shop	Other Shop	Doctor	Grocery Shop	Other Shop	Doctor
Car	50	39	41	57	46	52	52	50	45	41	35	34
Bus	5	23	19	18	59	55	1	11	8	3	27	16
Walk	7	9	7	18	7	12	10	3	13	12	1	9
Other	38	29	33	58	46	39	37	36	34	44	37	41

native to the car for a work trip, no reasonable alternative was perceived for a nonwork trip. The study also reports that women make more nonwork trips than men make (6). These data, added to the census figures on the number of women employed, indicates that most trips made by women are nonwork and that there is no alternative for these trips.

Transit Quality

Transit quality can affect the user population average status either by affecting individual users' status or by affecting the relative sizes of user groups.

Transit quality adversely affects the status of users who are captive riders. The general pattern of orientation toward a central business district combines with captivity to limit access to better job opportunities (as available jobs move beyond the reach of transit systems). Especially affected are those with least access to cars: nonwhite women. Studies in Watts (5) and New York (10) and the work of Ornati (7) have documented the point in detail. A study in Watts showed that employers actively seek out employees who own cars and live near the business, especially for low-skill jobs, and employers discouraged use of transit and car pools (5). A New York study showed that the unemployment rate was higher among those dependent on transit and that an estimated 18,000 jobs in this city were not reachable by bus (10). Using New York City census data, Ornati concluded "that job accessibility presents more of a problem for nonwhites than for whites and that travel inconvenience to work sites is compounded for the Negro job seeker" (7, p. 13).

Improvements in an existing transit system and plans for a new one often focus on attributes demanded by potential users, a view that assumes that quality will produce changes in the number of riders. However, if the demands of various user groups are different, quality changes may not affect all user groups evenly but may instead change the proportions of user groups in the user population. Our respondents were shown a list of 10 attributes of transit systems and asked to choose the 3 most important and the 3 least important attributes for deciding which of 2 imaginary transit vehicles to take. [Simple percentages were used to permit travel behavior comparisons among groups. Attribute preference and behavior intent rankings were obtained by considering data on least important and more important attributes of transit vehicles, together with data on those least likely and most likely to change riding (nonriding) behavior.] The data showed that everyone was most concerned with arriving at the intended time, and preferably in the shortest time as well. The number of people on board was rated as least important by all groups. Women placed more emphasis than men did on arriving at a spot close to their destinations and on ease of boarding the vehicle. Men were more concerned with the presence of air conditioning, cost, contact with others, and number of stops.

Brunner et al. (8) found that men especially emphasized independence and favored a modern vehicle. Women emphasized flexibility, dependability, and even speed. When questioned about the current bus system in Trenton white women were more positive than were the other groups about buses that started and stopped too often, about the ease of carrying packages, and about the time and effort required for bus travel. Black

women, who depend most heavily on the bus, generally were most negative especially about the time and effort required, cleanliness, and crowding. The differences reflect both work and nonwork orientations of the groups and their captivity. (Evaluations of current system attributes were obtained by asking for agreement or disagreement with a statement and degree of that sentiment on a 5-point scale. Evaluations were displayed as mean scores on the scale running from -5 to +5.)

The importance of examining user group differences in attribute preference is probably greatest for planners developing a new transit system for a city. Graham (9) argued that, to meet varying passenger demands, multiple systems are preferable to a single system. Although he was not looking specifically at sex differences, he noted that demand levels are higher for voluntary trips than for necessary trips. Because our data show that women make a larger proportion of nonwork trips, many of which are voluntary, demand levels should be high for women, and several systems might be necessary to meet demand.

Further support for this is seen in the data previously discussed as they apply to 2 possible new systems: personal rapid transit (PRT) and dial-a-ride. PRT emphasis is on short trip duration, low cost, low contact with others, and no intervening stops (all characteristics rated as more important to men than to women). Dial-a-ride features door-to-door service, ease of boarding vehicles, and reliable service (all characteristics emphasized as particularly important by women). When asked whether they would ride either of the 2 systems, Trenton men were less likely than women to say they would use dial-a-ride. Men also were less likely than women to think that others like themselves would use it. On the other hand, men were more likely than women to say that they would use PRT.

In an earlier section, we discussed attribute preference in ideal systems. However, we cannot assume that the presence of a desired attribute in a new or upgraded system automatically produces use of the system. Here we use statements of behavioral intent contingent on changes in the Trenton system as indicators of actual future behavior. Respondents were asked how likely they were to ride the bus more often if certain changes were made. Although statements of behavioral intent are commonly viewed as being less than accurate in predicting behavior, the answers to this question can be seen as indicating rough directions of change, although in much smaller amounts than is suggested by the actual data. Furthermore, studies show that behavioral intent not to do something is quite accurate in predicting behavior (11). Negative intent is especially significant when real resistance to change is exhibited. All respondents agreed that loss of a car or inability to park at their destination would make them use transit more. Other changes showed lower probabilities, and variation in the race-sex groups. Figuge 1 shows the difference of the percentage of respondents answering very likely and not at all likely to the question asking would they be very likely, somewhat likely, or not at all likely to ride the bus more often if certain changes occurred.

Black women seemed most open to change, especially when proposed changes affected safety in travel and desirability of destination. Any improvement in transit would probably attract more black women or increase the trip rates for current riders. Black women also appeared to be more sensitive to restrictions in driving imposed by rising cost of gas and parking. Thus any attempt to indirectly restrict driving should also result in more trips made by black women. Black men were slightly less likely than black women to ride more given either improvements in the transit system or restrictions on driving short of loss of the car. Thus changes should increase the number of black men riding transit, but the increase should be smaller than that for black women. White women were next most likely to change. Improvements in safety, quality of destination, and fewer contacts with "undesirables" might lure some white women onto transit. Here, as elsewhere, loss of the car or parking at destination would be the most effective means of shifting white women to bus travel. Finally, white men were almost totally insensitive to changes in the transit system. They are clearly an inelastic source of demand. An especially important item to note here is that increasing the cost of gas and parking was rated as less likely to produce more bus riding than were changes in the system or quality of destination. Even major increases in costs would be tolerated in order to avoid using the transit system. Only loss of the car or of parking at the

destination would encourage white men to use buses. And, with the total loss of their car, up to 35 percent of the white men would find means other than the bus to travel (in contrast to less than 20 percent for the other groups). In short, facility quality is differently defined by different user groups; the effects of changing quality depend on access to alternatives, and changes in facility quality can be expected to alter the social status of individual users.

Social Evaluations

An experiment was conducted to test the hypothesis that the greater the proportion of low-status (in this instance, black) riders on a vehicle is, the less likely other persons, especially high-status potential users, are to choose that vehicle. In the experiment, respondents were shown a subset of 3 of 9 pictures. The pictures showed 3 types of vehicles in each of 3 conditions (10 percent, 40 percent, and 80 percent black passengers). Variation in vehicle mode (bus, subway, and PRT) was used to disguise the intent of the experiment. Each respondent saw 3 types of vehicles each of which had a different percentage of black passengers. Thus there were 6 possible subsets of 3 pictures. Approximately 50 males and 60 females saw each subset. The respondent was asked the question, If you had to go somewhere by public transportation and all 3 of the vehicles with the people on board as shown left your stop at the same time for your destination, which would you prefer to use? The respondent made a first and a second choice. There are 6 possible combinations of percentage of blacks for the 2 choices without regard to vehicle. The data are arranged in Tables 4 and 5. The cell entry in these tables is a percentage whose numerator is the number of respondents choosing the indicated combination of riders and vehicle and whose denominator is the number who were shown a subset of 3 pictures that included this combination. If race affects vehicle choice, we would expect that, regardless of vehicle preference, more people would choose to ride in the 10 percent black vehicle than in the 40 percent black vehicle than in the 80 percent black vehicle.

The results given in Tables 4 and 5 are for male and female comparisons only without regard to respondents' race to keep sufficient numbers in each cell. For both men and women, the bus was by far the most frequently picked first choice without regard to race of passengers. Women's first choices without regard to race were equally divided between the subway and PRT options. Men showed a slight preference for the PRT vehicle over the subway seating arrangement. The preference for PRT reinforces the findings previously discussed.

The first choices show no consistent preference by men or women for the vehicles carrying only 10 percent black passengers over those carrying 40 percent or 80 percent black passengers. At first, then, our hypothesis seems invalid. However, in Tables 4 and 5, which show a more detailed breakdown of respondents' first and second choices, a pattern consistent with our hypothesis appears for 1 group of men. The first 2 lines of Table 4 show that, for all 6 vehicle choice combinations and for those men whose first choice had 10 percent black passengers, more men chose the 40 than the 80 percent vehicle as their second choice. This clear-cut, consistent pattern does not appear for men whose first-choice vehicle held either 40 or 80 percent blacks or for women in any of the race-vehicle combinations. We find, then, that the race of passengers does make a difference in vehicle choice for a certain part of the male population, but not for other males or for the female population.

In sum, we find that some men who initially choose transit modes with 10 percent black passengers are sensitive to racial percentages in their choices of vehicles. Such sensitivity would, if generalized, influence (by decreasing) the relative size of the male user groups and indirectly affect the average status of the user population. This does not appear true for other male subgroups or females in general. Although results are only tentative and await more detailed analysis, there are now indications that this line of investigation is worth pursuing. For estimates of the size of the population for whom this effect might be working, data must be gathered for the area in question.

Figure 1. Percentages of people very likely and not at all likely to ride the bus more often if certain changes occurred.

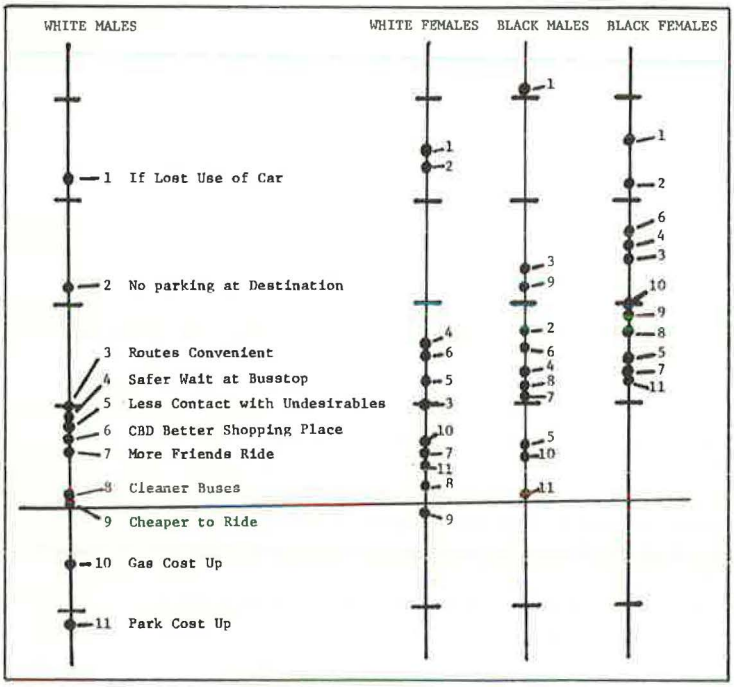

Table 4. First and second choices of preferred vehicle by males in the mode and race experiment.

Racial Composition First Choice	Racial Composition Second Choice	Bus as First Choice		Subway as First Choice		PRT as First Choice	
		Subway as Second Choice	PRT as Second Choice	Bus as Second Choice	PRT as Second Choice	Bus as Second Choice	Subway as Second Choice
10 percent black	40 percent black	20.0	40.7	15.2	26.1	23.1	21.2
	80 percent black	7.4	22.5	4.4	12.1	9.1	7.7
40 percent black	10 percent black	24.2	26.9	2.5	24.2	11.1	13.0
	80 percent black	34.6	27.3	6.1	17.5	8.7	29.6
80 percent black	10 percent black	17.4	21.2	3.7	7.7	12.5	9.1
	40 percent black	18.2	30.4	0.0	7.4	12.1	25.0

Table 5. First and second choices of preferred vehicle by females in the mode and race experiment.

Racial Composition First Choice	Racial Composition Second Choice	Bus as First Choice		Subway as First Choice		PRT as First Choice	
		Subway as Second Choice	PRT as Second Choice	Bus as Second Choice	PRT as Second Choice	Bus as Second Choice	Subway as Second Choice
10 percent black	40 percent black	23.2	26.5	10.4	26.0	13.0	14.0
	80 percent black	24.5	31.9	5.6	15.5	14.0	9.3
40 percent black	10 percent black	15.5	24.1	4.4	18.6	14.3	9.3
	80 percent black	24.1	29.3	9.3	15.9	13.0	10.2
80 percent black	10 percent black	27.8	16.3	6.1	24.1	13.0	19.0
	40 percent black	28.0	18.5	5.6	18.4	10.4	11.6

PLANNING IMPLICATIONS

The acquisition of a transit system by a public agency is ordinarily justified by showing a need to provide transportation for those without alternatives. Planners then assume that the system can be successfully operated largely to serve the needs of the transportation poor ("successful operation" being thought of in terms of service quality rather than financial independence). This assumption appears lacking if we apply our theoretical propositions to a hypothetical instance of system upgrading and then consider the resulting status of the user population. If no direct restrictions on automobile use will accompany the upgrading of a system, the initial user population will be the transportation poor who are (and will likely continue to be) of low status. With a burst of altruism, the quality of the transit system may in fact be raised. If so, the quality boost should increase the number of low-status riders and not initially affect the number of high-status riders. As the proportion of low-status users increases, the average social status of the user population will obviously decline. As status declines, system quality will decline over time because low-status users lack the political power to demand adequate funds for operation and maintenance. Even under mechanisms that require responsive consumer participation in planning and maintaining systems, the user population is competing in a political system for extremely scarce resources. The low-status user is automatically less well equipped for such competition and thus can be expected to lose more often than not (unless a strong social consensus supports his or her position). As quality and average social status of the user population decline, the social evaluation of the system also declines; and this cycle continues, further depressing the size of the remaining, high-status user group.

A more realistic means for providing long-term, high-quality service is to plan for a system to be used by a broad range of status groups. If this is the case, a transit system must be a serious alternative to the car, and overall ridership (not just the transportation poor) must be increased. Because the figures previously given show a drastic decline in transit use, planners should work toward increasing riders in all groups, especially those in high-status groups. Two plans come to mind. First, riders can be attracted by improvements in transit. Second, alternatives other than transit can be eliminated, thus making captive riders of them all. The second plan is ordinarily eliminated from consideration immediately. Planners are committed to freedom of choice and action, and policymakers are unwilling to risk certain removal from office by offended high-status travelers. Caught between American political values and the strong associations between masculinity, freedom, and the automobile, this policy alternative is usually not taken seriously. The popularity of the first plan is evident in the growing literature on attribute preference. The planning assumption of interest here is that improving the quality of transit is a workable way to attract new (higher status) users.

The model outlined in the section on theory indicates that the effect of quality increases depends on access to alternatives. Without any restriction on access to alternatives, the ability of planning to attract users is subject to the same argument just mentioned: The system will be dominated by low-status users, which will reduce quality in the long term. If access is restricted, though, quality increases should raise the user population's average social status and, therefore, result in the maintenance of or further rise in quality. To the extent that different user groups define quality differently, different systems (or variations within systems on crucial attributes) must be provided to ensure a high-quality system for all.

We conclude that, for a high-quality transit system to be achieved and maintained, a significant proportion of the users must be of high status. Achieving this goal requires making captive riders of high-status users. Correct plans will not have this effect. Given this situation, planners would do well to consider the varying definitions of high-quality transit and to expect greatly increased demands from both high- and low-status captive riders. Multiple systems might answer many of the varying demands, but the success of a system dominated by low-status users must be tied to the success of a system dominated by high-status users to avoid problems from system deterioration.

Planners also need to remember that only nonvoluntary trips are amenable to a policy

of making captive riders of transit users. Even if a representative mix of status groups uses transit for nonvoluntary trips, there probably is no policy that can achieve this aim for voluntary trips. Planners may have to assume the continued dominance of low-status users for some systems or parts of systems.

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