STUDIES OF PUBLIC ATTITUDES TOWARD TRANSIT CRIME AND VANDALISM

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This paper describes the findings of six studies in five cities on the question of whether fear of transit crime and vandalism affects a person's decisions to use urban transit systems. Although the studies do not give a firm answer, they offer some tentative conclusions: Transit crime and vandalism can exert strong influence on decisions concerning use of urban transit, but there are many variations depending on the volume of crime or vandalism in the area served by a particular route, the transportation alternatives available to passengers, the hours at which they must ride, and other factors. In general, transit crime and vandalism are more likely to influence passenger decisions concerning riding on rapid transit than on buses. Riders are more likely to view with serious concern the potentially menacing aspects of rowdyism such as verbal threats and vandalism than "nuisance" aspects such as the pushing and shoving involved in horseplay. Riders' concern is likely to be more intense when they personally witness crime or serious rowdyism than when they are not personally involved. Those who are reluctant to ride urban transit because of personal security considerations least favor riding after 7:00 p.m. Transit crime and vandalism may have a potential influence on all classes of riders regardless of age or sex, although possibly not in the same degree. It is extremely difficult to establish that a given change in ridership is caused by a single factor such as crime or vandalism. In any situation, there may be a combination of factors that influence ridership and make it all but impossible to determine the degree of influence of any one factor.

• THIS PAPER recounts the findings of six studies on the question of whether fear of transit crime and vandalism affects people's decisions to use urban transit systems. The little that has been published on this topic gives conflicting opinions. For example, Misner and McDonald (1) assert that "There can be no mistake . . . that 'fear of crime' is an important consideration in the decision to use or not to use public transportation systems." A study by ABT Associates (2) states that "among the various factors that determine the choice of mass transportation as one's mode of transportation, personal security is comparatively unimportant, or at least, not as prominent in the mind of users as are other factors more directly related to the operation of the system." A survey of bus users in three cities found that 12 percent of the riding public (3,497 respondents) had been deterred from using urban transit at least once and perhaps more often during a period of approximately 6 months because of concern for crime on buses. Thus, impressions differ as to how important transit crime and vandalism are in influencing public attitudes toward use of urban transit.

Although the studies summarized in this paper do not give a firm answer, they intimate that the influence of transit crime and vandalism varies with local conditions and that, in general, the influence of other factors is stronger than that of transit crime and vandalism on decisions to use mass transit or seek alternate modes of transportation.

The six studies are derived from a project undertaken under the sponsorship of the Urban Mass Transportation Administration (3). Several methodologies were used. In Milwaukee and in Washington, questionnaires were distributed by hand on regular bus

runs. In Baltimore and Cleveland, traffic counts were made following criminal incidents that had occurred on a bus and at a rapid transit station. In Chicago, a marketing study used personal interviews conducted in households, and an accompanying qualitative opinion study used group interviews with small panels of respondents. Another study in Chicago conducted interviews by telephone. Results of the six studies were mutually sustaining on some aspects and were conflicting on others.

The Milwaukee study found no support for a hypothesis that transit crime and vandalism adversely affect ridership on a city bus route. The Washington study, using substantially the same questionnaire, found crime and vandalism to be probable influences on ridership. The Baltimore study found that a slight decrease in ridership following a criminal incident was not necessarily caused by the incident, but the Cleveland study positively attributed a decrease to the criminal incident. The Chicago attitude study found that personal safety is not a major influence on ridership, but a qualitative opinion study found that personal safety is a major influence with at least some of the riders on subway and elevated rapid transit, and the security study conducted by telephone gave support to this finding.

Details of the individual studies follow.

MILWAUKEE STUDY

Milwaukee was selected as the site of one case study because, among other reasons, the Milwaukee and Suburban Transport Company had experienced 1,677 reported incidents of vandalism and crime during 1971, not counting damage to equipment such as slashed seats and broken windows. Bus route 60 was chosen for the test because it serves riders with a wide range of ages, occupations, and racial characteristics in an area that embraces factories, residences, hospitals, shops, and schools. To avoid prejudicing answers, the questionnaire included crime and vandalism with six other factors that have influence on transit patronage. This procedure developed incidental information concerning passenger attitudes toward things other than crime and vandalism, such as frequency of service and fare levels.

A pretest was carried out in December 1971, and some of the questions were reworded on the basis of lessons learned from the preliminary trial. The actual test on route 60 was conducted on April 12, 1972. Approximately 1,000 questionnaires were handed out by researchers who rode seven bus round-trips from 6:34 a.m. to 8:00 p.m., and another 1,000 were sent to selected addresses in the vicinity of route 60 by mail. A total of 370 questionnaires handed out on buses and 279 distributed by mail were returned. Not every question was answered. Findings are grouped under three subheadings: basic parameters, attitudes toward crime and vandalism, and service characteristics.

The pattern that emerged from the responses to basic parameter questions was one of a ridership in which females outnumbered males by more than two to one. Most riders used route 60 to go to work or to go shopping, and most of these were females aged 35 and over. The largest group of riders took the bus before 9:00 a.m., and the second largest took it between 3:00 and 6:00 p.m. This pattern was important in that it corresponded with what was already known about route 60 before the survey began. Although no attempt was made to obtain a random sample of route 60 riders, the correspondence of the pattern to existing knowledge suggested that a sample was obtained of ridership on a typical day that was undistorted by special considerations such as unusual weather, a parade or convention, or other exceptional set of circumstances.

The questions on attitudes toward crime and vandalism, the principal concerns of the study, followed three lines of approach: Two questions noted the frequency with which respondents singled out personal safety from a total of eight factors influencing use of route 60, two other questions probed into respondents' personal experience with crime and vandalism on the route, and a third pair of questions inquired whether there were times of day at which riders preferred not to take the bus because of considerations of personal safety. Responses were punched into cards and tabulated by computer, and attempts were made to cross-link and corroborate the replies to the three approaches through analysis of relationships.

The study sought to test a hypothesis that incidents of transit crime and vandalism adversely influence ridership on route 60. Findings from the first approach indicated that considerations of personal safety do not strongly affect passenger patronage on the route. Findings from the second approach suggested that

1. Riders on route 60 are not strongly concerned about rowdyism (including vandalism),
2. Riders are more concerned about menacing aspects of rowdyism, such as verbal threats and vandalism, than about nuisance aspects such as the pushing and shoving involved in horseplay, and
3. Riders' concern was more likely to be intense when they personally witnessed serious rowdyism than when they were not personally involved.

The third approach disclosed that, when asked directly, patrons said they were influenced by considerations of personal security to a greater degree than appeared in the responses to the other two approaches. This direct response, however, was contradicted to some extent by cross-checks that indicated that passenger decisions and actions were not strongly influenced by such considerations. Those stating they preferred not to take the bus for reasons of personal safety least favored the hours after 7:00 p.m. for ridership.

The aggregate of the three approaches was that the data developed by the survey did not confirm the hypothesis that incidents of transit crime and vandalism have a major influence on ridership of route 60.

The study disclosed findings on service characteristics in addition to those on crime and vandalism. When asked to select the service characteristics they considered most important, respondents chose frequency of service and convenience of routes more often than personal safety. Respondents were also asked to rate eight service characteristics as satisfactory or poor. The characteristics checked satisfactory most often were accomodating driver, comfortable ride, and convenient routes; those checked poor were frequency of service, fare level, and travel time. Finally, respondents were asked whether they would increase their use of route 60 considerably, a little, or not at all if benches were provided at bus stops, if frequency of service were increased, if fares were lowered, or if travel times were speeded up. Nearly 50 percent of 589 respondents thought they would increase their use considerably if fares were lowered; 28 percent answered not at all. The gap was narrower for benches, frequent service, and travel times.

WASHINGTON, D.C., STUDY

The specific purpose of the Washington study was akin to that of the Milwaukee study: to test the hypothesis that transit crime and vandalism adversely influence passenger patronage of one bus route in Washington. The route selected (called route 30 for this paper) runs from the extreme northwest corner to the extreme southeast corner of the city and serves many institutions of secondary and higher education, affluent and low-income residential areas, varied business districts, tourist centers of all kinds, and numerous government office buildings. A pretest was conducted on November 13, 1972, with two 2-man research teams each handing out questionnaires (substantially the same as that used in Milwaukee) on one bus round-trip. The full test was conducted on November 15, 1972, with questionnaires handed out on 21 round-trips from 6:30 a.m. to 10:00 p.m. and also in shopping centers and stores at six locations from northwest to southeast Washington. Unlike Milwaukee, no questionnaires were distributed by mail. A total of 4,037 questionnaires were given out, and total usable responses numbered 2,054 (50.88 percent). Responses were punched into cards and tabulated by the same computer program as in the Milwaukee study. Findings are again grouped under three subheadings: basic parameters, attitudes toward crime and vandalism, and service characteristics.

Basic parameter findings revealed that ridership on route 30 is approximately 60 percent female and 40 percent male; the largest age bracket is 20 to 34 years. The largest group rides between 7:00 and 9:00 a.m., and the next largest group rides be-

tween 4:00 and 7:00 p.m. Work and shopping are the chief reasons given for using route 30. About 63 percent of the respondents said that the bus is their usual means of transportation, and 53 percent said they had no alternative means of transport. In none of these basic parameter findings was there any recognizable discrepancy from facts already known about the route. All indications were that the responses to the questionnaire constituted a representative sample of the typical daily ridership.

As with the Milwaukee study, the questions concerning attitudes toward crime and vandalism followed three lines of approach. The first approach tried to ascertain attitudes indirectly by determining whether respondents considered personal security an important characteristic of service and whether they had a strong opinion about its quality. The second approach probed attitudes by inquiring about personal experience with transit rowdyism (including vandalism) and crime. The third approach endeavored to determine attitudes by asking respondents if there were times at which they preferred not to use route 30 because of personal security considerations.

Findings from the first approach did not indicate respondents' opinions clearly. Respondents indicated that they did not consider personal security very important in comparison to other service characteristics, but approximately 20 percent of the respondents said they considered personal security on the route poor.

The findings from the second approach indicated the probable existence of concern about vandalism and crime on the part of a group of patrons large enough to affect ridership patterns. Small, but not inconsequential, percentages of respondents had witnessed vandalism, verbal threats, or crime, and nearly 4 percent had been victims of robbery or assault on the route. Relatively high percentages of those who had witnessed vandalism thought personal security on the route was poor. Those who rode frequently reported a higher percentage of observance of crime and vandalism than those who used the route less often, and 23 percent of respondents said their patronage had decreased in recent years, although not necessarily as a result of crime and vandalism. In the aggregate, these findings lent support to the hypothesis that transit crime and vandalism adversely affect ridership on route 30.

Findings from the third approach indicated concern about transit crime and vandalism in many passengers. Nearly 30 percent of the respondents said there are times at which they prefer not to ride the bus for reasons of personal security. Comparatively high percentages of these reported personal experience with rowdyism, robbery, or assault. More than 40 percent of the passengers who preferred not to take the bus and 13 percent who had no objection to taking the bus thought personal security on route 30 was poor. The sum of the third approach findings was further support for the hypothesis that transit crime and vandalism adversely affect ridership patterns on route 30. In total, the findings were considered to support the hypothesis.

Findings were developed coincidentally on service characteristics. Respondents selected reliable and on time, frequency of service, and convenient routes as the three most important service characteristics. As satisfactory they most often picked convenient routes, accomodating driver, and comfortable ride, only one of which was among the service characteristics designated most important. Relatively few respondents thought they might increase their patronage if bus shelters, more frequent service, or faster travel times were provided, but approximately 50 percent said they might increase their use considerably if the fare were lowered by 20 cents (base fare at time of survey was 40 cents).

MILWAUKEE VERSUS WASHINGTON

The findings of the Milwaukee study did not support the hypothesis that fear of transit crime and vandalism adversely affects passenger ridership on a given bus route, but those of the Washington study did support it. Whether the implication is that crime and vandalism are not major influences on ridership on all bus routes of Milwaukee but are major influences on all routes of Washington needs further research. Comparable results from surveys on at least one additional route in each city would be needed to confirm this broad assumption. Perhaps the only conclusion that can be drawn from a comparison of the two surveys is that conditions differ from one community to another,

and research is necessary in each instance to determine whether transit crime and vandalism are major factors affecting passenger decisions.

BALTIMORE STUDY

A case study undertaken in Baltimore tried to determine whether a well-publicized criminal incident, an armed robbery of driver and passengers on a Baltimore city bus route, influenced passenger patronage of that route in the short term. The objective of the study was to accumulate empirical evidence toward acceptance or rejection of the general hypothesis of a functional relationship between transit riding patterns and passenger attitudes toward transit crime and vandalism.

The data developed indicated that there was a certain decrease in ridership after the robbery but only of a magnitude attributable to a rational margin of error. The possibilities for error during the study appeared numerous enough to raise serious questions about the validity of the figures and the causes of the decrease in ridership, if indeed there was a decrease. It was concluded that the study did not establish a definite relationship between the robbery and passenger patronage of the route and that, because of many imponderables, it may be unfeasible to reach conclusions in a situation of this type.

The incident occurred on August 2, 1972, on a westbound MTA (Baltimore) route 5 bus. When the driver made a routine stop at 2:20 p.m., four young men boarded, threatened him and the passengers with a revolver and shotgun, and made off with $106 in cash and a check for $161. No one was injured. Four alleged robbers, all under age 20, were apprehended within 30 minutes.

It happened that MTA had conducted a traffic check of route 5 on July 12, 1972, just three weeks prior to the incident. At the request of the research team, MTA conducted a special passenger traffic check on August 9, 1972. The resulting figures were then compared on the presumption that, with the comparison made so promptly, the dominant variable in the daily routine would be the criminal incident. If the comparison disclosed a substantial decrease in ridership, the hypothesis that there is a functional relationship between transit riding patterns and passenger perceptions toward crime would be supported. At the same time, inquiries were made to see whether changes in variables other than the criminal incident could also have affected transit riding patterns.

The traffic checks disclosed a decrease in passenger ridership between August 2 and August 9 that could be accounted for by statistical error and was not necessarily attributable to the criminal incident. To this extent, the hypothesis of a relationship between the criminal incident and transit riding patterns was not confirmed, but questions concerning the accuracy of the traffic check figures, plus the presence of other variables that could have influenced passenger riding patterns to an indeterminable extent, raised doubts that tended to void this tentative finding. Since these independent variables could have influenced passenger ridership patterns both positively and negatively, it was decided that no definite conclusion was possible and that the hypothesis was neither accepted nor rejected.

CLEVELAND STUDY

A study made by the Cleveland Transit System (CTS) found that ridership in rapid transit decreased in the short term following a homicide at a rapid transit station.

CTS attempted to evaluate the effect on ridership of a homicide that occurred at the Superior rapid transit station on Sunday, January 18, 1970. Ridership at Superior and other east side stations of CTS was tabulated for 2 weeks before and 3 weeks after the incident. The findings that follow are from an internal memorandum dated June 19, 1970:

> Total east side ridership compared to the week preceding the homicide was down 4.0% the week in which the homicide occurred; 1.1% the second week; and 1.5% the third week. . . .decreases at Superior Station for each of the three weeks following the homicide were greater than that which occurred at all other east side stations with the exception of East 105th Station for the week ending January 24th. . . .total east side ridership for the first five months of 1970 versus 1969 was down 6.8%. And during this time period, Superior Station registered a decrease of 6.2%–a lower rate of decrease than occurred at 5 out of the remaining 6 east side stations.

> Accordingly, it must be concluded that the homicide did have a short-term effect on ridership at Superior Station. However, shortly thereafter, ridership must have returned to near normalcy based on long-term ridership results at Superior Station compared to the ridership results at the remaining individual east side stations and the combined west side stations for the equivalent long-term period.

Although the memorandum does not say so, presumably the possible presence of other factors (e.g., exceptional weather, mid-year time at schools and universities, changes in fare structure or frequency schedules) that conceivably might have affected ridership following the homicide was considered and discounted. Accordingly, the findings in this CTS study are in sharp contrast with those of the Baltimore study, where it was felt that the decline in ridership following a bus robbery could have been caused by factors other than the incident of transit violence.

CHICAGO STUDIES

A survey of passenger attitudes carried out by a contractual research organization for the Chicago Transportation Authority (CTA) found that personal safety is not a major influence on whether patrons decide to ride. A qualitative opinion survey conducted coincidentally, however, suggested that personal safety is a major influence with at least some riders on subway and elevated rapid transit (El).

For the attitude surveys, which consisted of personal interviews in approximately 200 households, respondents were read six statements pertaining to their experiences with CTA facilities. As each statement was read respondents were asked whether they agreed, disagreed, or neither agreed nor disagreed. For purposes of analysis, the results were "repercentaged" to eliminate the neither agree nor disagree responses. Only one of the six statements had to do with personal security: "There is no reason to be concerned about riding the CTA during the day."

Agreement with the statement varied with frequency of ridership; i.e., the more often a person rode the CTA the more often he agreed with the statement. For frequent riders 75 percent agreed with the statement and 25 percent disagreed; for occasional riders 72 percent agreed, 28 percent disagreed; and for infrequent riders 65 percent agreed, 35 percent disagreed. The remaining five statements dealt with service characteristics such as comfort, convenience of routes, and readily available travel information. Based on percentage of disagreement with the statement, safety during the day ranked fourth in all areas. This ranking, plus the high percentage of agreement with the statement, suggested that personal safety is not an item of great influence on ridership decisions with passengers on the CTA.

The accompanying qualitative study was conducted with four groups of CTA riders and non-riders. Each group consisted of eight to ten non-Black Chicago residents, 20 to 60 years old. All sessions were video tape recorded, but findings were not tabulated. Respondents were encouraged to describe situations in which they had accepted or rejected use of CTA.

Both men and women admitted that they felt fear when traveling in the city, especially in unfamiliar areas, whether using private or public transportation. Many respondents who rode Els and subways said they did so only at rush hours when there was safety in numbers. They felt exposed and alone unless they were surrounded by other passengers. This attitude prevailed before boarding, during the ride, and after getting off, i.e., throughout the whole El or subway experience.

Respondents said that they experienced feelings of anxiety before boarding, particularly at non-peak hours, and that they anticipated and dreaded trouble as they approached the subway platform. Although some of their anxiety lessened after they were on the train, some fear remained because there rarely was a conductor or other authority figure visible as a protector and crime inhibitor. Anxiety resumed when they got off and confronted lonely platforms and the danger of being physically or verbally abused.

Because of these considerations, many respondents perceived subways as more appealing at times when one is physically uncomfortable (crowded, hot, jostled) than when one is psychologically uncomfortable. Thus, some passengers tended to time their rides not for comfort or convenience but for safety. To do this they either post-

poned the trip until peak hours or rode the bus rather than the subway. Buses seemed to be the least anxiety-provoking form of public transportation. On the bus, there was the impression that the driver was there to guard and protect and there was the knowledge that the bus could be stopped anywhere and was more neighborhood-oriented than subways or Els.

Attitude Study Versus Qualitative Study

Whereas the CTA attitude study suggests that personal safety is not a major concern for transit passengers, the CTA qualitative study suggests that personal safety is a prime influence on passengers who ride the El or subway. Whether equal weight should be given the two studies is questionable. The narrow, even biased, scope of the qualitative study is a factor to be considered because the four respondent groups of non-Blacks, each numbering not more than ten, were definitely not a representative sample of CTA ridership. Notwithstanding, the qualitative study offers evidence that personal safety is a major consideration in decisions about riding on urban rapid transit.

CTA Transit Security Study

A survey conducted by telephone in Chicago examined the question, among other things, of the conditions in which the public feels most secure and least secure while using the CTA and of the conditions under which passengers would feel more secure than at present.

Data for the survey were obtained from a questionnaire that was used for 1,586 interviews conducted by telephone with a statistically random sample of all private households in Chicago with telephones. The two (out of 45) questions dealing with passenger security were

1. "While using the CTA, under which conditions do you feel most secure and under which do you feel least secure?" and
2. "Which of the following conditions would make you feel most secure?"

For each of these questions, respondents were asked to select from lists of conditions which were read to them over the telephone.

The conditions in which the respondents felt most secure were while riding the bus, while going from home to bus or El or subway stop, and while riding the El or subway. The conditions in which they felt least secure were while on the stairs, rampway, or tunnel to the El or subway platform; while waiting on the El or subway platform; and while waiting in the El or subway stations.

The three preferred conditions under which respondents believed they would feel more security were if they saw more police officers on El and subway platforms and trains, if they knew quick assistance was available from CTA personnel or the police, and if a policeman and police dog were assigned to each bus or El or subway train during non-rush-hour periods.

These results provide some measure of confirmation for the findings of the qualitative study that personal safety is a major influence on passenger decisions regarding patronage of the El or subway but is less of an influence regarding patronage of buses.

CONCLUSIONS

Despite the areas of disagreement, the following tentative conclusions can be drawn from the six studies:

1. Transit crime and vandalism can exert strong influence on passenger decisions concerning use of urban mass transit, but there are many variations depending on the volume of crime or vandalism in the area served by a particular route, the transportation alternatives available to the passengers, and the hours at which they must ride.
2. In general, and subject to deviations according to local conditions, transit crime and vandalism are more likely to influence passengers riding on rapid transit than on buses.
3. Riders are more likely to view with serious concern the potentially menacing aspects of rowdyism such as verbal threats and vandalism than "nuisance" aspects such

as the pushing and shoving involved in horseplay.

4. Riders' concern is likely to be more intense when they personally witness crime or serious rowdyism than when they are not personally involved.

5. Those who are reluctant to ride urban transit because of personal security considerations least favor riding after 7:00 p.m.

6. On the basis of the six studies, no firm conclusion is possible regarding attitudes toward transit crime and vandalism according to age and sex characteristics. However, findings suggest that transit crime and vandalism have a potential influence on all classes of riders regardless of age or sex, although possibly not in the same degree.

7. It is extremely difficult to establish that a given change in ridership is caused by a single factor such as crime or vandalism. In any situation there may be a combination of factors that influence ridership and make it all but impossible to determine the degree of influence of any one factor.

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