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PUBLIC ATTITUDES TOWARD URBAN TRANSPORTATION ISSUES

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Study Abstract

The present study was directed toward definition and measurement of attitudes which might underlie citizen support (or opposition) of the transportation planning and development efforts of local governments and transportation agencies. Specifically, the major focus of the research was the development of a questionnaire instrument which would provide for measures of local citizen perceptions and feelings about transportation issues and which, at the same time, would be easily modified so as to be useful in other metropolitan areas.

The approach to questionnaire development involved interviews of samples of local residents in order to ascertain the topical nature of transportation issues as viewed by potential respondents.

The preliminary form of the questionnaire which was developed was administered to a sample of 120 persons for the purpose of eliminating or revising questions which were inappropriate, misunderstood, or lacking in desired statistical attributes. Usable completed questionnaires were returned by 101 persons. Response distributions, intercorrelations among the item responses, and frequency of omission were examined. In an effort to determine the dimensions which may underlie responses, an exploratory factor analysis was conducted for the evaluative, need deficiency and importance responses relating to the various transportation issues included in the questionnaire. In each case, the factor analysis suggested a meaningful multi-dimensional structure of dimensions underlying citizen responses.

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INTRODUCTION

> A referendum to construct a 44-mile metropolitan transit system was defeated at the polls last November, but its advocates consider the turn-down only a temporary setback. The plan is now being restudied by the Metropolitan Atlanta Transit Authority, and a revised proposal will be presented to the voters at a later date.
>
> ...excerpt from the Forum Magazine
> April 1969 issue, page 50.

A major consideration in the effective planning and implementation of any community improvement program is public attitude toward various aspects of that particular issue and program among different groups of the citizenry. The present study was directed toward definition and measurement of attitudes which might underlie citizen support (or opposition) of the transportation planning and development efforts of local governments and transportation agencies. Specifically, the major focus of the research was the development of a questionnaire instrument which would provide for measures of local citizen perception and feelings about transportation issues and which, at the same time, would be easily modified so as to be useful in other metropolitan areas.

A review of the literature suggested that there is a need for data collection methods designed specifically for use within metropolitan areas and directed toward collection of information relating to variables which could influence citizen support of local transportation planning and improvement activities. This kind of citizen-generated information and participation in the development of measures was not apparent even in the two most comparable atti-

tude studies[a] uncovered in the technical and scientific literature.

The satisfaction and importance study in Baltimore and Philadelphia by the University of Maryland group was conducted to identify and assess the attributes of an ideal transport system(s) as viewed by the citizenry. This study obtained data on four trip purposes (work/school, intown shopping/personal, intown social/recreational, out-of-town social/recreational) in terms of 44 attributes judged relevant to urban transportation. Factor analysis, by trip purpose, revealed six similar importance factors: cost, travel time, independence of control, traffic, age of vehicle, and freedom from repairs.

The classification system, which emerged as the wide range of resource materials was obtained and reviewed, is provided on the next page. From the array of urban transportation-related topics, a blueprint of specific urban variable categories was condensed into the following conceptual framework.

Conceptual Framework for Problem Definition

Categories of Purpose:	Work-Related	Family-Personal Life (including leisure)
Problem Perspective:	Individual Needs	Community Needs
Geographic Perspective:	Atlanta-Metro	Beyond Metro Area
Underlying Variables or Attitudinal Dimensions	such as known facilities, reliability, travel, time and cost and perceived convenience, independence, personal safety and viable traffic alternatives in the midst of urban traffic congestion.	

This project planning and design activity, and resulting guide for instrument development, proved helpful as semi-structural interviews were constructed for the purpose of eliciting problem topics and ideas from the general citizenry.

[a] McMillan, R.K. & Assael, J. National survey of transportation attitudes and behavior, Phase II. Prepared for the NCHRP Program of the Highway Research Board, 1969.

[b] Paine, F.T., Nash, A.N. Hille, S.J. and Brunner, G.A. Consumer conceived attributes of transportation: An attitude study. College Park, Md.: University of Maryland, Department of Business Administration, 1967.

Transportation Attitudes Project
School of Psychology
Georgia Institute of Technology

TRANSPORTATION RESEARCH MATERIALS AND LIBRARY RESOURCES

Functional Reference Categories[a]

I. ACCIDENTS
   1. Automobile
   2. Bibliography

II. ATTITUDES, GENERAL
   1. Measurement
   2. Bibliography

III. COMPUTER APPLICATION

IV. DRIVER SPECIFIC
   1. Behavior
   2. Training

V. GROUP BEHAVIOR THEORY AND MEASUREMENT
   1. Reference Groups
   2. Bibliography

VI. MAPS, CHARTS
   1. Bureau of Census, City Directories
   2. Local Political Boundaries, Registration Lists

VII. METHODOLOGY
   1. Content Analysis of Qualitative Information
   2. Sampling and Survey Methods
   3. Statistical References
   4. Bibliography

VIII. RELIABILITY: THEORY AND METHOD

IX. SAFETY LITERATURE

X. TRANSPORTATION
   1. Air Transportation
   2. Area Studies
   3. Attitude, Issues
   4. Report Drafts From Present Project
   5. Rapid Transit
   6. Bibliography

XI. URBAN PLANNING, URBAN AFFAIRS
   1. Bibliography
   2.

XII. VALIDATION: THEORY AND METHODS

XIII. MISCELLANEOUS MATERIALS
   1. Agency Liaison Persons

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[a]A working file of documents, research papers, reference books and speeches, study abstracts, maps and assorted clippings.

Public Preferences for Individual Transportation. Recent studies directed toward attitudes relating to urban transportation have ranged from post hoc analyses of city referenda[a] and specific user studies[b] to research which focused on attributes of the nation's transportation system including route choice and private vs public mode preference.[c] Other specific-purpose investigations have included transportation-related attitudinal influence on residential choice[d] and a mail survey in Greater Nottingham attempting to determine the manager-perceived transport needs of manufacturing industries.[e]

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[a] Madison study by W.H. Dodge at the University of Wisconsin (HRIS Selection #2R15 203005, report expected early 1970); Atlanta study by F. Crawford at Emory University subsequent to voter refusal of rapid transit. November 1968.

[b] A consumer report on attitudes among Chicago bus riders conducted by the Transit Advertising Association (MRIS #1P52 202435). 1969. Ridership study of existing transit system by Port Authority Allegheny County of Pennsylvania; Metropolitan Planning Commission study in Nashville among patrons of experimental bus lines (HRIS #2P84 085367, 1966).

[c] McMillan, R.K. and Assael, H. National survey of transportation attitudes and behaviors. Phase I summary. NCHRP Report #49. Washington, D.C.: Highway Research Board. 1968.

Sommers, A.N. The transportation analyst and the social environment. High Speed Ground Transportation Journal, 1969, 3(2),238-242

Wachs, M. Evaluation of engineering projects using perception of and preferences for project characteristics. Transportation Center Report. Evanston: Northwestern University. March 1967.

[d] Lansing, J.B. Residential location and urban mobility. Survey Research Center report. Ann Arbor: University of Michigan. 1969.

[e] Legg, K.L.; Higson, M. & Horne, F.B. Transportation study of the East Midland area. Loughborough University of Technology (HRIS #2RII 064079, undated.

A Student-Initiated Substudy

Early in the project, a pilot study which represented an adaptation of the Delphi method[a] was planned and conducted among a small sample of upperclassmen enrolled at Georgia Tech. It served, in addition to being a methodological try-out of this procedure for obtaining consensus information, as an attempt to obtain a preliminary taxonomy of urban transportation issues as perceived by these young men. By means of three group sessions and a point-ranking system, sixty distinct issues or attributes of transportation were reduced to the following issues considered most relevant.

1. The need for a rapid transit system.
2. Planning for future traffic volume.
3. System overload during rush hour.
4. Better public transportation (unspecified other than "public").
5. "Doing something" rather than "just talking."

Much of this qualitative information was found congruent with the ideas generated by the interviews held among a wide range of the Atlanta citizenry. For example, two items relating to planning, an item focusing on express transit and inclination toward rapid transit endorsement and use are included in the questionnaire that was constructed.

A copy of the Working Paper which describes the research task and the findings is appended to this project completion report.

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[a] Dalkey, N., & Helmer, O. An experimental application of the Delphi method to the use of experts. United States Air Force Project RAND Contract No. Af 49(638)0700. Santa Monica, California: The RAND Corporation. 1961. Pp.458-467. (also, in Management Science, 1963, 9, 458-467.)

Sampling Design For The Instrument Development And Pre-Test

The "Atlanta Area" is difficult to define in a meaningful way. Local opinion studies focusing on the general public have been based usually on "available lists" such as the registered voters, telephone or home ownership, the two commercial City Directories or more specialized listings of subpopulations among the citizenry. No one of these resources for names/addresses is wholly satisfactory in research studies involving the public which is scattered across geographic area and political boundaries. It is encouraging that the Census Bureau is actively promoting "user conferences" relating to the stored population and descriptive data now emerging from the 1970 tabulations with respect to the Atlanta S. M. S. A.

Several sampling techniques[a] were considered in the present multi-method approach to citizen-generated information which may be included in an opinion instrument under development prior to a large-scale survey of public attitude toward local urban transportation issues. For example, the registered voter lists for each of the metropolitan counties--appropriate on logical grounds because of an assumed rapid transit referendum in late 1971--was judged as less than satisfactory in these early stages of problem-definition and instrument pre-test. Not all of the potential users and underwriters are registered to vote! Telephone ownership also did not meet the general prerequisite of broad public participation in the

[a]Effective references on the sampling dilemma include:
Kish, L., Survey sampling. New York: Wiley, 1964
Parten, Mildred. Surveys, polls, and samples. New York: Harper, 1950.
Selltiz, Claire; Jahoda, Marie; Deutsch, M., & Cook, S. W. Research methods in social relations. New York: Holt, 1965.

instrument development. A multi-stage area probability sampling design incorporating The Atlanta Standard Metropolitan Statistical Area would be a more ideal design.

The sampling which was accomplished within budget constraints was anchored by the nine wards of the city, the four- and eight-directional slices of Atlanta (WNW, NNW, NNE, ENE, ESE, SSE, SSW, WSW) and its recent population growth and the identifiable neighborhoods out to and in some instances exceeding the perimeter highway. Particularly helpful within the city was the mapping and descriptive data provided by the Community Council of the Atlanta Area, Inc.

QUESTIONNAIRE DEVELOPMENT

The approach to questionnaire development involved interviews of samples of local residents in order to ascertain the topical nature of transportation issues as viewed by potential respondents. A series of semi-structured interviews[a] of individuals and groups was employed in order to establish clearly the transportation issues deemed relevant to a developing urban area. A multi-method approach was implemented through the development and tryout of three interview techniques:

1) structured interviews in small group setting; a sampling of 52 members of Atlanta's Black Community was accomplished by means of this technique which involved paid group conveners and participants responding orally to direct transportation-related questioning by a professional interview team--a psychologist and a social worker. The instrument is appended to the project report.

2) telephone interviews (as a joint effort with a methodologically-oriented Citizen Panel Project)[b] which generated brief first-associations to one stimulus question relating to transportation problems in Atlanta.

3) semi-structured interview schedules requiring a written response by the citizen interviewee. The instrument is appended to the project report.

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[a] The body of literature on the interview method pervades the Social and Behavioral Sciences. As a data-gathering procedure relating to individual attitudes, the obtained qualitative information must be analyzed in terms of a relevant conceptual scheme of categories of content derived from the data. In the present study, the interview protocols of all individuals administered the semi-structured questions were reviewed for underlying transportation-related issues.

[b] The assistance of Dr. G. Dale Baskett is acknowledged with respect to collection of these data through the use of student interviewers. The general frame of reference was environmental quality. Over 300 response cards were available for content analysis of the verbatim comments to the question: "What do you think should be done about transportation?"

Citizen-generated qualitative information, in the form of problem areas, issues, and suggested solution obtained by the three interview procedures, was thus available to employ in questionnaire construction. Categories of transportation issues evolving from the structured interviews which elicited oral responses among Black citizens included "limited bus service in outlying areas," "traffic congestion", "bus schedules", and "payroll tax to finance rapid transit." The telephone interviews which sampled households in Atlanta having a phone listing and asked one general question, provided a high frequency of responses relating to "rapid transit", " faster service", "a general need for transportation improvement", and "no transportation problem." The third interview procedure, a self-administered interview-questionnaire, elicited suggestions of problem areas such as "bus comfort", "parking", "driver courtesy", and "distance from home to bus stop."

Instrument Description

The preliminary version of the Transportation Opinion Study questionnaire was constructed in an attempt to explore--among the Atlanta citizenry--the evaluation of present conditions, citizen needs and individual values in connection with each of the transportation issues included in the study. Also, estimates were made of action tendencies such as expressed inclination to vote for Rapid Transit and to use Rapid Transit in getting to and from work, along with system type and funding preference.

The format of this instrument is derived in part from previous research by the present writers,[a] and provides for the determination--with respect to each transportation issue--of respondents' evaluations of present conditions, their expressed needs for changes and their judgments of the importance of each issue. More information of theoretical and practical usefulness accrues from this kind of rating procedure. An illustration of the format is depicted below, using one of the transportation issues embedded in the present experimental version of the questionnaire.

DISTANCE TO PUBLIC TRANSIT STOP

A public transit stop is very close to your home.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true <u>should</u> this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

The respondent is instructed to circle one number on each scale. A copy of the preliminary Transportation Opinion Study questionnaire is provided in the Appendix G.

PRE-TEST FINDINGS

A major objective of the pre-test was the elimination or revision of statements or questions which were inappropriate, misunderstood or lacking in desired statistical attributes. The preliminary form of the newly constructed questionnaire was distributed to and self-administered to a sample of 120 persons residing in the Atlanta area. The composition of the sample (101 citizens returned the forms in time for the analyses) along selected demographic characteristics is given in Tables 1, 2, and 3 on the next page. The proportion of females and well-educated are slightly overrepresented, although no exact figures were available for the Atlanta area.[a] Variables such as age, occupational status, gepgraphic area and race were included in the 101 pre-test data. Each individual asked to complete the questionnaire was able to mark their opinions. About ten lower socioeconomic status persons were given assistance in the instructions and item interpretation if requested of the interviewer.

Summary Means and Variables

The average rating and spread of response on each of the thirty-nine items are tabled to give an overview of the pre-test respondents' feelings relating to local transportation issues. Table 4 portrays the evaluation of present conditions. The following examples serve to illustrate the kinds of information which might be elicited with the experimental questionnaire developed in this study. Rated as relatively false were conditions

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[a] A Census User Conference schedules for December 1 in Atlanta may answer in part the degree of representativeness among the present pre-test data.

TABLE 1

PRE-TEST SAMPLE CATEGORIZED BY SEX

Respondent	Frequency	Per Cent
Male	38	38.4%
Female	61	61.6%
NR	2	

TABLE 2

AGE OF THE PRE-TEST SAMPLE

Age Category	Frequency	Per Cent
19 or less	2	2%
20 - 29	24	24
30 - 39	35	35
40 - 49	22	22
50 - 59	7	7
60--69	8	8
70 - 79	1	1
No Response	1	1

TABLE 3

EDUCATIONAL LEVEL OF THE PRE-TEST SAMPLE

Educational Attainment	Frequency	Percent
Less than High School Grad	14	14%
High School Grad	18	18
Some College	21	21
Bachelor's Degree	20	20
Some Graduate Study	12	12
Advanced Degree	15	15
No Response	1	1

relating to the people being informed on transportation plans, taxi fares reasonable for the poor, free movement of traffic in Atlanta, public transit being faster than the automobile and adequate parking downtown. Higher ratings (i.e., it is true) were given to the perceived present influence of business leaders in transportation planning and the potential impact of civic-public groups. The highest variability was associated with ratings to the statement "A public transit stop is very close to your home."

Citizen Needs. Differences[b] between responses to questions one and two in each attitude variable are illustrated by the high mean scores associated with the issues of adequate parking downtown, expressways handling heavy traffic, and the people being informed of transportation planning. A need deficit among identifiable subgroups of the Atlanta population, for these kinds of local issues and transportation conditions, would be useful information if documented by a large-scale survey of public opinion. Refer to Table 5 for the summary mean scores obtained from the small sample pre-test.

Importance Ratings. In these pre-test data, high ratings of importance were associated with easy travel to and from work, taxes being high enough to cover transit imporvements, accompanied by freely moving traffic with quick removal of stalled vehicles.

In the eyes of these people, it was considered especially important that the public be informed on transportation problems, that transit riders feel safe from personal attach and that public groups could influence transit planning.

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[b] To illustrate, a difference score of 9 would emerge if on Variable 38, an individual rated the present situation a "2" then marked "5" on the extent to which the statement that "taxi service easily obtainable" should be true. Hence 5-2 plus a constant of 6 equals 9.

TABLE 4

AVERAGE EVALUATIVE SCORES AND RESPONSE VARIABILITIES FOR THE PRETEST SAMPLE

Variable	Urban Transportation Issue	Mean	SD
4	Bus routes facilitate cross-town travel	2.89[a]	1.32
5	Taxi fares reasonable for poor people	1.55	0.98
6	Can be proud of public transportation vehicles	3.73	1.38
7	Public transportation faster than auto	2.04	1.38
8	People informed of transportation planning	1.93	1.13
9	Adequate public transportation in the suburbs	2.42	1.59
10	Arrive on time via public transportation	3.27	1.36
11	Easy travel to and from work	2.90	1.61
12	Adequate rail transportation	2.10	1.33
13	Busses run on schedule	3.49	1.28
14	Clean public transportation vehicles	3.32	1.32
15	Business leader influence gtr. than other citizens	4.71	1.56
16	Taxes high enough to finance transir improtvements	3.97	1.97
17	Easy shopping travel	2.13	1.50
18	Public transportation routes serve personal needs	2.84	1.83
19	Bus fares high enough for reasonable profit	4.43	1.60
20	New PT routes do not change neighborhoods	3.14	1.67
21	Adequate parking downtown	2.01	1.45
22	Comfortable busses	3.97	1.39
23	Easy travel to recreation areas	2.09	1.28
24	PT permits package carrying	2.31	1.35
25	PT routes concentrated in poor neighborhoods	3.17	1.42
26	Traffic moves freely in metro area	1.89	1.28
27	Disabled vehicles quickly removed from streets	2.51	1.48
28	Fellow PT riders pleasing to you	3.46	1.34
29	Public informed on transportation problems	2.70	1.54
30	Reasonable parking charges	2.72	1.49
31	Nearness of PT stop to home	3.84	2.04
32	PT riders are friendly people	3.90	1.06
33	PT riders are safe from personal attacks	3.18	1.53
34	Public transportation vehicles uncrowded	2.31	1.42
35	Bus routes where the people are	3.41	1.35
36	Easy express transit to suburbs	2.85	1.39
37	Easy non-auto travel to airport	2.64	1.62
38	Taxi service easily obtainable	3.58	1.51
39	Many one-way streets in metro area	4.04	1.64
40	Civic & public groups can influence transit planning	4.70	1.26
41	Metro expressways can handle heavy traffic	2.03	1.25
42	Airport facilities adequate	2.95	1.68

[a]Ratings were made on the following scale:
How true is this statement?
Completely False 1 2 3 4 5 6 Completely True

TABLE 5

AVERAGE DIFFERENCE SCORES AND RESPONSE VARIABILITIES FOR THE PRETEST SAMPLE

Variable	Urban Transportation Issue	Mean	SD
4	Bus routes facilitate cross-town travel	8.42[a]	1.46
5	Taxi fares reasonable for poor people	8.74	1.77
6	Can be proud of public transportation vehicles	7.45	1.56
7	Public transportation faster than auto	8.50	1.73
8	People informed of transportation planning	9.64	1.55
9	Adequate public transportation in the suburbs	8.86	1.77
10	Arrive on time via public transportation	7.98	1.64
11	Easy travel to and from work	8.30	1.87
12	Adequate rail transportation	8.65	1.82
13	Busses run on schedule	7.78	1.59
14	Clean public transportation vehicles	7.91	1.60
15	Business leader influence gtr. than other citizens	5.14	2.10
16	Taxes high enough to finance transit improvements	6.97	2.09
17	Easy shopping travel	8.90	2.00
18	Public transportation routes serve personal needs	8.16	2.16
19	Bus fares high enough for reasonable profit	6.58	1.87
20	New PT routes do not change neighborhoods	7.75	1.90
21	Adequate parking downtown	9.26	1.93
22	Comfortable busses	7.34	1.63
23	Easy travel to recreation areas	8.96	1.70
24	PT permits package carrying	8.45	1.81
25	PT routes concentrated in poor neighborhoods	7.18	1.94
26	Traffic moves freely in metro area	9.41	1.61
27	Disabled vehicles quickly removed from streets	8.86	1.86
28	Fellow PT riders pleasing to you	6.96	1.62
29	Public informed on transportation problems	8.77	1.74
30	Reasonable parking charges	8.68	1.82
31	Nearness of PT stop to home	7.36	1.96
32	PT riders are friendly people	6.40	1.38
33	PT riders are safe from personal attacks	8.29	1.67
34	Public transportation vehicles uncrowded	8.52	2.10
35	Bus routes where the people are	7.89	1.65
36	Easy express transit to suburbs	8.34	1.85
37	Easy non-auto travel to airport	8.70	1.86
38	Taxi service easily obtainable	7.69	1.55
39	Many one-way streets in metro area	6.35	1.85
40	Civic & public groups can influence transit planning	6.24	1.47
41	Metro expressways can handle heavy traffic	9.33	1.71
42	Airport facilities adequate	8.54	1.95

[a] This index of citizen need is operationally defined as the rating on Question #1 minus the Question #2 rating plus six. The range of difference scores is thus 1 to 11, higher scores reflecting greater expressed need for that transportation attribute.

TABLE 6

AVERAGE IMPORTANCE RATINGS AND RESPONSE VARIABILITIES FOR THE PRETEST SAMPLE

Variable	Urban Transportation Issue	Mean	SD
4	Bus routes facilitate cross-town travel	4.08[a]	1.85
5	Taxi fares reasonable for poor people	3.58	1.99
6	Can be proud of public transportation vehicles	4.37	1.47
7	Public transportation faster than auto	4.18	1.72
8	People informed of transportation planning	5.31	1.13
9	Adequate public transportation in the suburbs	4.37	1.75
10	Arrive on time via public transportation	4.62	1.65
11	Easy travel to and from work	5.07	1.59
12	Adequate rail transportation	3.59	1.80
13	Busses run on schedule	4.42	1.72
14	Clean public transportation vehicles	4.54	1.59
15	Business leader influence gtr. than other citizens	4.67	1.45
16	Taxes high enough to finance transit improvements	5.00	1.40
17	Easy shopping travel	4.28	1.71
18	Public transportation routes serve personal needs	4.35	1.79
19	Bus fares high enough for reasonable profit	4.41	1.62
20	New PT routes do not change neighborhoods	4.42	1.67
21	Adequate parking downtown	4.91	1.56
22	Comfortable busses	4.40	1.64
23	Easy travel to recreation areas	4.16	1.83
24	PT permits package carrying	3.71	1.73
25	PT routes concentrated in poor neighborhoods	4.11	1.77
26	Traffic moves freely in metro area	5.42	1.07
27	Disabled vehicles quickly removed from streets	5.26	1.23
28	Fellow PT riders pleasing to you	3.86	1.68
29	Public informed on transportation problems	5.01	1.47
30	Reasonable parking charges	5.07	1.34
31	Nearness of PT stop to home	4.78	1.51
32	PT riders are friendly people	3.67	1.71
33	PT riders are safe from personal attacks	5.20	1.49
34	Public transportation vehicles uncrowded	4.34	1.63
35	Bus routes where the people are	4.56	1.55
36	Easy express transit to suburbs	4.33	1.68
37	Easy non-auto travel to airport	4.74	1.45
38	Taxi service easily obtainable	4.33	1.56
39	Many one-way streets in metro area	4.17	1.60
40	Civic & Public groups can influence transit planning	4.89	1.26
41	Metro expressways can handle heavy traffic	5.31	1.31
42	Airport facilities adequate	4.96	1.43

[a]Ratings were made on the following scale:
How important is this to you?
Not Important 1 2 3 4 5 6 Very Important

Interrelationships Among Selected Issues

In addition to the response distributions, the four inter-correlations matrices (rated evaluation of present conditions, ratings of what should be, importance ratins, and a citizen needs score operationally defined as the Question #2 rating minus Question #1 plus 6) reveal the interrelationships among the thirty-nine transportation issues, the demographic characteristics available on each respondent and the two action tendency questions relating to rapid transit.

Inspection of the correlations obtained from the evaluative opinion pre-test data suggests that the person with higher educational attainment views the airport as inadequate, busses not helping cross-town travel, transit routes might alter neighborhood character and he or she feels that taxes and bus fares are not high enough to cover improvements and a company profit. The more educated respondents observe that there are not enough one-way streets and that the expressways can't handle heavy traffic. These data may be compared to those of McMillan and Assael[a] from a nation-wide survey which found the less educated less willing to allocate more money and effort to roads and highways and yet placing the automobile closer to the ideal mode of transportation.

The pre-test data from Question #1 also suggest that older persons may view the present airport facilities as adequate and that taxes are high enough. This would be congruent with the body of literature which has documented the conservatism associated with

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[a] McMillan, R.K. & Assael, H. National survey of transportation attitudes and behaivor, phase II. Prepared for the NCHRP Program of the Highway Research Board. 1969.

advancing age. Again, the findings in the Chilton survey (McMillan and Assael, 1969) indicate that the younger citizens were more willing to allocate greater expenditures and were more disposed to the automobile.

These are the kinds of information which would be available from a larger pre-test sample, Statements similar to those in the preceeding section could be made with greater confidence, and with respect to the "citizen needs" and ratings of importance (Question #3), as well as the evaluation of present conditions (Qeustion #1).

Ratings providec by the 61 women in the pre-test sample were not studied separately due to the small number. On the premise that men and women view transportation differently and may or may not endorse referenda, this subgroup comparison and similarly for other demographic variables, would be meaningful if a larger pre-test were accomplished.

The four complete correlational matrices for the pre-test data are given in Appendix C. Each 44 x 44 matrix of correlations portrays the patterns of association among the items or variables. Statistical significance at the .05 level of confidence, for n of about 100, is obtained when the r-coefficient equals or exceeds .20. Empirical review of these interrelationships is discussed in the next section which describes the statistical analyses employed to ascertain the response dimensionality.

Factor Analyses Of The Pre-Test Data

Responses to the thirty-nine sets of attitude questions, three demographic items and two behavioral items included in the questionnaire were analyzed statistically to determine whether a smaller set of variables could be found to represent the factors measured by the questionnaire. For this purpose, response data were subjected to exploratory factor analyses.[a] This method of analysis provides for definition of the dimensionality of responses in terms of a relatively small set of factors, each of which represents a variable underlying a number of questionnaire items. In the analysis of questions relating to importance of various transportation issues, for example, a set of seven factors was derived to represent the dimensionality of importance responses. It is possible to estimate a "factor score" for each respondent on each underlying factor and to use such scores for further analysis and use of survey data.

In the pre-test of the questionnaire developed in this study, results of factor analysis can be useful for further development of the instrument (i.e., pointing to the nature of additional questions which may be needed) as well as for understanding the nature of attitudes toward local urban transportation issues. The factors produced

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[a]Harmon, H. H. Modern factor analysis. Chicago: University of Chicago Press, 1960.

can be used as tentative dimensions of public attitudes toward such issues.

For purposes of this report, responses relating to evaluations of present transportation conditions, judgments of importance of various issues, and expressed desires for changes (as measured by the differences between responses to questions one and two in each attitude item), were factor analyzed separately. Each analysis also included three demographic variables and responses to two questions referring to behavior related to rapid transit. These analyses produced three sets of factors. The factors which are described below appear to deal with transportation issues and problems of the type which people consider when making judgments and decisions about needs for changes, improvements, and innovations in local transportation systems, rather than with modes of transportation, or public transportation as an abstraction. This suggests possible usefulness of a questionnaire of the type described in this report for prediction of citizen reactions to planning by public officials and for prediction of voting behavior in transportation referenda.

The Dimensions of Evaluative Responses. When evaluative questions (i.e., How true is this statement?) were factored, five factors emerged, along with a set of four "doublets" representing incompletely defined factors which need further exploration and development. Each of these "doublets" is represented by only two questions. The factors which were produced were:

Factor I - this might be termed a "satisfaction with present public transportation" factor. The items which help to define it include, "Express transportation is easily available in suburbs", "People who ride public transportation are the kind of people with whom you like to ride", and "Public transportation routes do not change the character of neighborhoods".

Factor II - could be described as one concerned with "ease of urban travel". Persons scoring high on this factor would tend to feel that: traffic moves easily in the metropolitan area, it is easy to get to recreation areas without an automobile, it is easy to travel to and from shopping areas without an automobile, and that expressways in the metropolitan area can handle heavy traffic easily. It is interesting to note that these people would also tend to believe that business leaders do not have more influence on transportation planning than other citizens.

Factor III - seems to represent "transportation action tendency" as reflected in expressed willingness to vote for a rapid transit system in the metropolitan area and an expressed willingness to use a rapid transit system in preference to an automobile for travel to and from work. This tendency seems to be related to a judgment that airport facilities are not adequate and to educational level of respondents (those with higher education express the aforementioned tendencies).

Factor IV - appears to be a "personal convenience" factor defined largely by items "one can expect to arrive on time when riding public transportation", "busses run on schedule", "public transportation vehicles are very clean", and "busses are comfortable". Also,related to these items are judgments that "as a citizen one can be proud of the appearance of public transportation vehicles", "it is easy to travel to and from work" and "public transportation routes are concentrated in areas in which poor people live". This factor seems to represent satisfaction with the personal convenience aspects of current public transportation.

Factor V - this factor suggests an underlying dimensions relating to judgments of the "effectiveness of transportation development"in the metropolitan area. High scoring respondents might be expected to feel that taxes are high enough to pay for transportation improvements, that bus fares are high enough to

allow for operation of the system and a reasonable profit, that there is not enough parking in downtown areas and that bus routes do not go where the people are. Respondents who feel this way tend to be female and of lower educational levels.

The Doublets - seem to represent potential factors which could emerge if additional items were written for inclusion in the que questionnaire. These are listed as "factors" VI, VII, VIII and IX in Table .

The Dimensions of Expressed Needs for Change. As indicated previously, a "difference score" for each attitude item was computed by subtracting each respondent's rating of the evaluative question (How true is this statement?) from this rating of the extent to which he felt each statement should be true (How true should this statement be?). This difference score represents the respondent's expressed need for change in a conditions relating to a aprticular transportation issue. These scores were factor analyzed in the manner employed for the evaluative questions, producing a set of seven factors as follows:

Factor I appears to be descriptive of respondents needs for general improvements in local transportation facilities. Items which are represented by this factor include transportation issues ranging from taxi fares through public transportation speed (as compared with auto travel), bus routes, rail transportation, parking to service to suburban areas.

Factor II suggests an underlying dimension which involves the over-all cost of public transportation to the local citizen. Persons with high scores on this factor would tend to indicate that they feel that the statement, "Taxes are high enough to pay for transportation improvements" and the statement, "Bus fares are high enough to pay the cost of operation and allow for a reasonable profit" should be more true than they are at present. It is of interest that such persons would also see a need for a large number of one-way streets in the metropolitan area, thus suggesting that one-way streets are perceived as an economical way of improving transportation in the area. There is a slight tendency for older persons to respond more in the above manner than younger persons.

Factor III. Persons who feel that it should be more true that: public transportation routes do not change the characteristics of neighborhoods through which they pass, people who ride public transportation are the kind of people with whom they like to ride, and public transportation routes are not concentrated in areas in which poor people live, would score high on this factor. These people also would tend somewhat to feel that the statement, "Business leaders have more influence in transportation planning than other citizens" should be less true than it is now. Thus, high-scoring respondents want changes which will work toward protection of neighborhoods from change, insure that routes are not concentrated (only) in poor areas, and provide

transportation riders who are perceived as compatible. They also would tend to want a decrease in business leader influence on transportation planning relative to the influence of other citizens. In a sense then, this factor seems to involve a "personal defense" variable.

Factor IV might be termed a "transportation action tendency" factor, in that persons scoring high on it would, in a referendum, vote for development of a rapid transit system, would use rapid transit for work trips in preference to auto travel, and would feel that cross-town travel, expressway adequacy, and airport facilities should all be improved. Such persons would also tend to be older than persons who would score lower on this factor.

Factor V seems to represent a variable which involves changes perceived as relating to a local transportation system oriented toward serving consumer needs. Examination of the items listed under this factor in Table reveals also that persons scoring high on this factor would tend not to want business leaders to have more influence in transportation planning.

Factor VI is defined by high loadings on cleanliness of public transit vehicles, comfortable busses, busses running on schedule and arriving on time. Thus, it would seem that this factor represents needs for changes which increase the personal convenience of public transportation.

Factor VII appears to involve desire for changes which will increase the extent to which the transportation system provides uncrowded vehicles, safety from personal attack, and other variables which might engender a relaxed trip.

The Dimensions of Local Transportation Issues Importance.

The factor analysis of judgments of the importance of the various transportation issues generated seven factors representing the tentative dimensions of the importance of transportation issues included in the questionnaire. These factors were:

Factor I appears to reflect values relating the extent to which public transportation fulfills personal and social needs of respondents. This factor is defined by judgments of the importance of conditions, such as "People who ride public transportation are friendly people," "People who ride public transportation are the kind of people you like to ride with," and "It is easy to carry packages on public transportation vehicles." It is of interest to note that educational level is negatively related to this factor, thus suggesting that persons with more education judge items relating to fulfillment of their personal-social needs as less important than do persons with lesser amounts of education. This could be a function of the extent to which such people use public transportation.

Factor II is defined by items relating to parking, adequate expressway facilities, and adequate airport facilities and seems to depict values related to variables involved in inter and intra urban travel convenience. Persons scoring high on this factor would be concerned about the ease with which they can travel to town via auto, park their cars easily and economically, and travel by air to out of town destinations.

Factor III concerns the importance of items relating to traffic flow--easy travel to and from work and quick removal of stalled vehicles from streets. The moderate loading of the importance of people in the area being informed about what public officials are planning to do about transportation problems suggests the possibility that traffic flow is viewed as an issue about which respondents expect important planning to take place.

Factor IV seems to measure importance of the extent to which public transportation is "efficiently" provided. That is to say, the extent to which one can depend upon it to arrive on time, to provide clean vehicles of good appearance which run on routes serving the personal needs of respondents.

Factor V involves variables which appear to relate to "pocket book" issues of importance to respondents. Thus, respondents who score high on this factor would feel that tax support of transportation improvements, bus fares, influence of civic and other public groups upon transportation planning, and public information on transportation problems and transportation planning an important issue.

Factor VI appears to be a "rapid transit" factor. High scores on this factor tend to indicate persons who would vote for development of a rapid transit system, who would use that system to go to and from work in preference to auto travel , and who feel that locating bus routes where the people are and providing comfortable busses and express transportation to suburbs are important issues.

Factor VII contains a variety of items relating to various aspects of public transportation, and can best be described as indicating perceived importance of public transportation in general.

TABLE 7

ROTATED FACTOR LOADINGS AND COMMUNALITIES: EVALUATIVE SCORES

Variable	The Factors I	II	III	IV	V	VI	VII	VIII	IX	h^2
[illegible]9	50									32
20	54									39
28	50									52
31	46									34
36	59									40
15		49								42
17		55								55
23		62								52
26		78								72
41		49								49
44			65							59
43			58							36
3			42							24
42			-56							55
13				71						53
10				68						56
22				65						62
14				61						58
6				46						38
25				41						38
11				42						38
16					61					62
19					50					49
1					47					24
3					-56					50
35					-69					39
21					-45					30
27						73				60
38						60				47
33							64			50
32							56			46
24								65		58
30								48		45
[illegible]									[illegible]	[illegible]

ROTATED FACTOR LOADINGS AND COMMONALITIES: DIFFERENCE SCORES

Variable	I	II	III	IV	V	VI	VII	VIII	h^2
#18	74								63
9	60								46
21	54								40
35	50								48
12	50								36
31	45								43
7	44								28
36	40								40
19		71							54
39		64							48
16		61							53
2		40							28
28			63						69
20			57						43
25			-57						54
15			-40						41
42				64					59
44				56					54
43				54					34
3				47					47
41				46					52
4				42					53
29					63				51
26					53				66
8					48				32
27					49				70
30					48				56
41					43				52
23					43				54
4					42				53
15					41				41
14						79			62
22						62			47
13						62			51
10						58			58
24						40			59
34							71		80
33							51		36
27							49		70
11							48		55
24							41		59
32							40		41
38								79	69
40								43	37
27								40	40

TABLE

ROTATED FACTOR LOADINGS AND COMMUNALITIES: RATINGS OF IMPORTANCE

Variable Number	I	II	III	IV	V	VI	VII	h^2
32	80							77
28	80							75
24	52							78
34	51							65
22	49							72
35	40							77
3	-56							52
30		82						71
21		80						71
41		67						62
42		63						53
11			66					54
27			64					72
8			42					59
10				69				76
14				53				73
13				45				25
18				45				63
6				40				53
16					63			47
29					47			51
8					47			59
40					46			35
19					45			52
43						53		36
44						51		30
35						48		77
36						47		56
22						40		72
38							68	70
25							65	52
12							63	50
13							63	75
5							60	58
4							59	68
23							58	62
31							56	61
17							54	45
24							54	78
6							53	52
7							51	50
22							51	72

TRAINING ACTIVITIES

Training activities associated with this project were focused primarily upon development of transportation research skills by graduate and undergraduate students in psychology. Five students (four graduate students and one senior undergraduate) participated directly in the present project, which was directed toward definition of transportation issues and development of an instrument to measure attitudes and opinions toward such issues. A student project, entitled "Student Perceived Transportation Issues in the Atlanta Community," is described in a paper being submitted for publication and included in Appendix F of this project completion report.

Transportation problems and relevant research methodologies have been included in instructional materials employed in the teaching of social psychology to students of engineering, management and science in the Georgia Institute of Technology. Active student involvement in transportation problems was encouraged through approval and guidance given to social psychology students in a class project designed to construct and pre-test a brief attitude scale dealing with campus parking problems (see Appendixed excerpt from this student effort).

The growth of transportation research on the campus has created a need for course in which methodologies for measurement of social psychological variables relating to transportation and other similar research areas can be taught. In large part as a response to this need, Dr. C. M. York (Principal Investigator) has initiated a seminar in social psychology and sociology

measurement techniques. This course will be taught jointly by Dr. York and Dr. Morris Mitzner of the Department of Social Sciences in the Winter Quarter of 1971. It will be open to students, faculty, and enrollees from the local community, and will include significant transportation issues among the topics to be discussed.

In the Winter Quarter of 1970, the present Project Director offered upon request, a Special Problems in Industrial Psychology course, with the specific focus being "psychological aspects of urban transportation".

SUMMARY AND CONCLUSIONS

This instrument was intended to measure attitudes toward urban transportation issues of the types which citizens consider when making judgments and decisions about needs for changes, improvements, and innovations in local transportation systems. Analysis of the pre-test data suggests that attitudes toward these types of issues are in fact measured by the questionnaire. Thus, the instrument developed focuses upon transportation issues deemed relevant by local citizens as frames of reference relating to local transportation and transportation planning. Completion of the questionnaire requires less than 30 minutes of most respondents' time. Semi-literate respondents were able to complete the instruments with encouragement and interpretative assistance from an interviewer.

There is a need to revise the preliminary instrument on the basis of pre-test findings and to administer it to a representative sample of Atlanta area citizens. This is a propitious time for such a survey inasmuch as a rapid transit referendum is presumably planned for the fall of 1971. Information collected via such an effort could be of considerable use to transportation planners in the metropolitan area, from the standpoint of both public education planning and transportation planning.

It would also be highly desirable to administer the questionnaire in another developing urban area for exploration of the generality of the instrument and attitudes toward the issues which are included therein.

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A P P E N D I C E S

A. Data Code Sheet and Legend of the Variables

B. Pre-Test Frequency Distributions

1. Question #1 Rating
2. Question #2 Rating
3. Question #3 Rating
4. Difference Scores
5. Criterion Variables

C. Pre-Test Intercorrelation Matrices

D. Results of the Pre-Test Factor Analyses

E. Previous Opinion Studies

F. Student-Initiated Studies

G. Pre-Test Instruments

TRANSPORTATION ATTITUDES PROJECT
Project B-2105
Georgia Tech

DATA GENERATED BY THE INSTRUMENT PRE-TEST

Common Information on all Cards

Col 1-4	Project Number (0570)
5	Deck #
6	Card # (1, 2, or 3)
7-11	Identification # of Respondent (00001, etc.)
12	Age (see attached code; 1-8 ascending)
13	Educational Level (see attached code; 1-6 ascending)
14-15	Occupation (see attached code)
16-17	Individual's Home Location (see attached code)
18	Sex (m-1; f-2)
19	Blank

Specific Attitudinal Information

Card-1

Col 1-19	Common or Control Data on Respondent (card # changes)
20-58	Ratings on Question #1 (39 items)
59	Blank
60	Projected Rapid Transit Vote (for-1; against-0)
61	Type of RT System Favored (see attached code sheet)
62-63	Funding Preference
64	RT for Work Trips? (yes-1; no-o)
65-80	Blank

Card-2

Col 1-19	Common or Control Data on Respondent
20-58	Ratings on Question #2 (39 items)
59-80	Blank

Card-3

Col 1-19	Common or Control Data on Respondent
20-58	Ratings on Question #3 (39 items)
59	Blank
60-79	Two-Digit Difference Scores (Q2 Rating less QI Rating + 6)
80	Blank

Card-4

Col 1-19	Common or Control Data on Respondent
20-77	Difference Scores for Items 11 thru 39
78-80	Blank

LEGEND FOR THE RESEARCH VARIABLES IN THE PRE-TEST

Variable Number and Content

1. SEX
2. AGE
3. EDUCATIONAL LEVEL
4. BUS ROUTES MAKE IT EASY TO GET FROM ANY PART OF TOWN TO ANY OTHER PART.
5. TAXI FARES ARE LOW ENOUGH FOR POOR PEOPLE TO USE TAXIS WHEN NECESSARY.
6. AS A CITIZEN YOU CAN BE PROUD OF THE APPEARANCE OF PUBLIC TRANSPORTATION VEHICLES.
7. PUBLIC TRANSPORTATION IS FASTER THAN AUTOMOBILE TRANSPORTATION.
8. PEOPLE IN THIS AREA KNOW WHAT LOCAL OFFICIALS ARE PLANNING TO DO ABOUT TRANSPORTATION PROBLEMS.
9. PUBLIC TRANSPORTATION IN SUBURBAN AREAS IS ADEQUATE.
10. WHEN YOU RIDE PUBLIC TRANSPORTATION, YOU CAN EXPECT TO ARRIVE ON TIME.
11. IT IS EASY TO TRAVEL TO AND FROM WORK.
12. RAIL PASSENGER TRANSPORTATION SERVING THIS METROPOLITAN AREA IS ADEQUATE.
13. BUSSES RUN ON SCHEDULE.
14. PUBLIC TRANSIT VEHICLES ARE VERY CLEAN.
15. BUSINESS LEADERS HAVE MORE INFLUENCE IN TRANSPORTATION PLANNING THAN OTHER CITIZENS.
16. TAXES ARE HIGH ENOUGH TO PAY FOR TRANSPORTATION IMPROVEMENTS IN THE METROPOLITAN AREA.
17. IT IS EASY TO TRAVEL TO AND FROM SHOPPING AREAS WITHOUT AN AUTOMOBILE.
18. PRESENT PUBLIC TRANSPORTATION ROUTES SERVE YOUR PERSONAL NEEDS.
19. BUS FARES ARE HIGH ENOUGH TO PAY THE COST OF OPERATING THE BUS SYSTEM AND MAKE A REASONABLE PROFIT.
20. NEW PUBLIC TRANSPORTATION ROUTES DO NOT CHANGE THE CHARACTERS OF THE NEIGHBORHOODS THROUGH WHICH THEY PASS.
21. THERE IS ENOUGH PARKING SPACE IN THE DOWNTOWN AREAS.
22. BUSSES IN THE METROPOLITAN AREA ARE COMFORTABLE.
23. IT IS EASY TO GET TO RECREATION AREAS WITHOUT AN AUTOMOBILE.
24. IT IS EASY TO CARRY PACKAGES ON PUBLIC TRANSPORTATION VEHICLES.
25. PUBLIC TRANSIT ROUTES ARE CONCENTRATED IN AREAS IN WHICH POOR PEOPLE LIVE.
26. TRAFFIC MOVES EASILY IN THE METROPOLITAN AREA.
27. STALLED CARS, TRUCKS, ETC., ARE QUICKLY REMOVED FROM STREETS.
28. PEOPLE WHO RIDE PUBLIC TRANSPORTATION ARE THE KIND OF PEOPLE YOU LIKE TO RIDE WITH.
29. THE PUBLIC IS ADEQUATELY INFORMED ABOUT TRANSPORTATION PROBLEMS IN THIS AREA.
30. PARKING CHARGES ARE REASONABLE.
31. A PUBLIC TRANSIT STOP IS VERY CLOSE TO YOUR HOME.
32. PEOPLE WHO RIDE PUBLIC TRANSPORTATION ARE FRIENDLY PEOPLE.
33. PERSONS WHO RIDE PUBLIC TRANSPORTATION ARE SAFE FROM PERSONAL ATTACKS.
34. PUBLIC TRANSPORTATION VEHICLES ARE NOT CROWDED.
35. BUS ROUTES ARE LOCATED WHERE THE PEOPLE ARE.
36. "EXPRESS" TRANSPORTATION TO AND FROM SUBURBAN AREAS IS EASILY AVAILABLE.
37. IT IS EASY TO GET TO THE AIRPORT WITHOUT AN AUTOMOBILE.
38. TAXI SERVICE IS EASILY OBTAINABLE.
39. THERE ARE A LARGE NUMBER OF ONE-WAY STREETS IN THE METROPOLITAN AREA.
40. CIVIC AND OTHER PUBLIC GROUPS CAN INFLUENCE TRANSPORTATION PLANNING.
41. EXPRESSWAYS IN THIS AREA CAN HANDLE HEAVY TRAFFIC EASILY.
42. AIRPORT FACILITIES ARE LARGE ENOUGH TO HANDLE AIR TRAVEL NEEDS IN THIS AREA.
43. ON THE BASIS OF WHAT YOU KNOW NOW, HOW WOULD YOU VOTE IN A REFERENDUM ON A RAPID TRANSIT SYSTEM IN THE METROPOLITAN ATLANTA AREA?
44. IF YOU HAD A CHOICE BETWEEN AUTOMOBILE TRAVEL AND RAPID TRANSIT TRAVEL, WOULD YOU USE RAPID TRANSIT TO TRAVEL BETWEEN YOUR HOME AND YOUR PLACE OF EMPLOYMENT?

TABLE

FREQUENCY DISTRIBUTION FOR EACH QUESTION #1 RATING

Variable	Rating Scale 1	2	3	4	5	6	Total	NR
4	11	32	29	11	7	6	96	5
5	66	21	7	2	2	1	99	2
6	6	14	19	27	19	10	95	6
7	51	19	8	13	3	3	97	4
8	41	34	13	2	3	2	95	6
9	39	20	14	7	9	6	95	6
10	12	17	20	24	18	2	93	8
11	22	23	19	11	10	9	94	7
12	43	22	16	6	4	3	94	7
13	7	14	23	23	22	2	91	10
14	7	23	17	22	19	2	90	11
15	7	6	6	9	28	39	95	6
16	18	10	12	8	11	36	95	6
17	47	21	9	6	6	5	94	7
18	35	15	15	9	9	14	97	4
19	5	9	14	13	15	36	92	9
20	19	22	16	11	16	10	94	7
21	53	17	6	9	6	3	94	7
22	6	11	13	21	32	9	92	9
23	39	28	15	4	4	3	93	8
24	35	23	18	10	6	2	94	7
25	12	15	15	22	9	4	77	24
26	47	15	10	8	0	3	83	18
27	30	19	12	14	7	3	85	16
28	7	8	28	20	7	8	78	23
29	21	25	15	9	6	7	83	18
30	25	16	17	16	7	4	85	16
31	25	7	6	9	18	31	96	5
32	1	4	31	26	21	6	89	12
33	14	23	17	14	18	6	92	9
34	38	21	15	11	6	3	94	7
35	10	14	23	20	23	2	92	9
36	22	15	24	23	5	4	93	8
37	33	19	15	11	11	6	95	6
38	9	19	18	14	27	8	95	6
39	7	15	16	14	19	26	97	4
40	2	5	10	15	35	29	96	5
41	45	23	18	5	4	2	97	4
42	29	15	12	16	17	6	95	6

TABLE

FREQUENCY DISTRIBUTION FOR EACH QUESTION #2 RATING

Variable	Rating Scale 1	2	3	4	5	6	Total	NR
4	1	3	2	10	30	53	99	2
5	4	11	16	18	24	26	99	2
6	1	4	4	7	37	42	95	6
7	5	3	15	15	32	28	98	3
8	1	2	3	3	12	75	96	5
9	2	1	5	8	28	51	95	6
10	0	3	3	9	34	49	98	3
11	2	1	5	8	30	52	98	3
12	3	8	8	12	26	36	93	8
13	0	2	3	11	28	53	97	4
14	1	3	4	7	31	52	98	3
15	11	6	24	19	16	23	99	2
16	5	1	12	12	15	51	96	5
17	2	3	8	12	24	48	97	4
18	4	1	10	7	33	40	95	6
19	4	1	4	20	21	47	97	4
20	0	5	8	21	20	42	96	5
21	3	1	3	6	29	55	97	4
22	1	0	2	10	36	47	96	5
23	1	1	7	13	30	42	94	7
24	0	2	13	18	36	28	97	4
25	5	5	13	14	18	25	80	21
26	0	0	3	10	30	41	84	17
27	1	3	3	3	22	52	84	17
28	3	2	19	16	16	27	83	18
29	0	0	4	6	24	51	85	16
30	0	1	1	12	22	49	85	16
31	1	0	3	15	29	50	98	3
32	3	3	18	27	21	22	94	7
33	0	3	3	8	11	70	95	6
34	2	2	11	16	31	36	98	3
35	0	0	8	3	34	50	95	6
36	0	1	9	9	32	42	93	8
37	1	0	3	9	29	55	97	4
38	0	1	4	10	35	46	96	5
39	0	5	21	23	28	19	96	5
40	1	4	10	10	31	41	97	4
41	1	0	6	8	27	55	97	4
42	1	1	5	4	22	62	95	6

TABLE

FREQUENCY DISTRIBUTION FOR EACH QUESTION #3 RATING

Variable	Rating Scale 1	2	3	4	5	6	Total	NR
4	14	12	10	17	10	37	100	1
5	22	17	13	6	11	30	99	2
6	6	4	18	18	24	28	98	3
7	12	6	16	14	18	32	98	3
8	2	1	6	8	19	61	97	4
9	11	8	8	10	22	35	94	7
10	7	9	9	8	21	44	98	3
11	8	4	4	6	12	65	99	2
12	19	13	10	15	20	17	94	7
13	11	8	7	13	22	38	99	2
14	8	6	10	11	27	36	98	3
15	5	5	12	11	30	37	100	1
16	3	4	9	14	11	56	97	4
17	11	7	12	17	16	35	98	3
18	13	8	6	12	21	37	97	4
19	7	8	13	18	14	38	98	3
20	10	6	10	13	23	35	97	4
21	9	1	7	7	23	51	98	3
22	9	7	10	14	24	33	97	4
23	15	7	10	13	18	33	97	4
24	18	7	16	19	18	19	97	4
25	12	3	14	13	11	27	80	21
26	0	4	3	5	14	58	84	17
27	2	3	3	8	15	53	84	17
28	9	7	23	11	9	22	81	20
29	6	1	5	10	15	48	85	16
30	4	1	5	12	16	47	85	16
31	5	6	8	16	16	48	99	2
32	14	13	15	22	10	21	95	6
33	7	2	3	6	11	65	94	7
34	11	4	10	21	20	32	98	3
35	7	4	12	14	22	36	95	6
36	11	4	10	19	16	33	93	8
37	4	7	6	16	23	40	96	5
38	7	8	12	19	21	30	97	4
39	9	6	17	22	15	29	98	3
40	2	3	12	10	31	40	98	3
41	4	3	2	9	11	68	97	4
42	5	3	8	8	23	49	96	5

TABLE

FREQUENCY DISTRIBUTION FOR EACH DIFFERENCE SCORE

	Question 2 Minus Questions 1 and 6												
Variable	1	2	3	4	5	6	7	8	9	10	11	Total	NR
4	0	0	0	2	1	6	12	24	33	9	8	95	6
5	0	0	0	0	4	10	11	15	22	14	22	98	3
6	0	0	0	1	5	23	22	20	11	5	5	92	9
7	0	0	0	0	2	14	14	18	15	18	15	96	5
8	0	0	0	2	0	3	6	4	16	31	32	94	7
9	0	0	0	0	1	14	8	12	20	15	23	93	8
10	0	0	0	0	4	14	23	17	15	11	8	92	9
11	1	0	0	1	1	16	11	20	14	19	11	94	7
12	0	0	0	0	2	18	8	9	18	22	16	93	8
13	0	0	1	0	1	21	18	20	15	9	5	90	11
14	0	0	1	0	3	14	19	20	18	10	5	90	11
15	7	2	11	16	8	36	7	3	2	0	3	95	6
16	3	0	2	0	0	48	7	16	3	3	10	92	9
17	0	0	0	0	4	16	5	9	15	14	30	93	8
18	0	1	0	2	4	23	9	11	10	16	18	94	7
19	2	1	2	3	7	37	11	16	5	3	3	90	11
20	0	0	0	1	4	31	10	15	12	7	13	93	8
21	0	0	0	0	1	16	5	6	10	18	37	93	8
22	1	0	0	0	0	33	20	17	10	3	6	90	11
23	0	0	0	0	1	9	12	10	21	15	23	91	10
24	0	0	0	1	0	17	14	15	16	13	18	94	7
25	1	1	1	0	6	21	16	14	5	6	5	76	25
26	0	0	0	0	2	6	1	10	18	18	27	82	19
27	0	0	0	1	1	8	14	10	16	7	26	83	18
28	0	0	1	2	1	38	14	9	5	4	4	78	23
29	0	0	0	0	1	13	6	13	17	15	17	82	19
30	0	0	0	1	2	12	6	14	19	12	18	84	17
31	0	0	0	2	6	42	9	9	6	11	10	95	6
32	1	0	1	4	6	45	15	8	9	0	0	89	12
33	0	0	0	1	2	10	22	12	20	14	10	91	10
34	0	0	1	2	3	14	14	9	13	14	24	94	7
35	0	0	0	1	0	24	16	18	16	9	8	92	9
36	0	0	1	0	2	13	17	18	12	11	17	91	10
37	0	0	1	0	0	15	13	9	20	14	22	94	7
38	0	0	0	0	1	28	19	15	18	8	5	94	7
39	0	1	7	9	4	37	13	11	8	4	1	95	6
40	1	0	5	4	3	48	21	5	6	0	1	94	7
41	0	0	0	1	1	7	7	10	16	22	32	96	5
42	0	0	0	1	2	16	13	14	13	10	24	93	8

TABLE

FREQUENCY DISTRIBUTION FOR CRITERION VARIABLES RELATING TO PROJECTED VOTE AND PREFERRED SYSTEM

"On the basis of what you know now, how would you vote in a referendum on a rapid transit system in the metropolitan Atlanta area?"

	Frequency	Frequency	Percent	Percent
For	78	79	83.1	79%
Against	15	15	16.1	15%
No Response	8	7		7%

"Of the following, which type of rapid transit system would you most prefer for this area?"

	Frequency	Percent
Bus	18	20.7
Trains (on present routes)	3	3.4
Combination of trains and buses	29	33.3
Trains on new transit routes	25	28.7
Other[a]:	12	13.8
No Response	14	

[a] Written suggestions included: monorail; subways; indifferent, whatever would be best; monorail or some other high speed system; elevated train; high speed train; a call of bus computerized system; monorail and bus.

TABLE

FREQUENCY DISTRIBUTION FOR CRITERION VARIABLES RELATING TO WORK TRAVEL ON RAPID TRANSIT AND FUNDING PREFERENCES

"If you had a choice between automobile travel and rapid transit travel, would you use rapid transit to travel between your home and your place of employment?"

	Frequency	Per Cent
Yes	53	57.6
No	39	42.4
No Response	9	

"How should a rapid transit system be paid for?"

	Frequency	Per Cent
Income Tax	5	5.5%
Wage tax on those working in Metro area	20	22.0
Property tax	0	.0
Federal government funds	18	19.8
Rider fares	36	39.6
Sales tax	4	4.4
Other[a]	8	8.8
No Response	10	

[a] Written suggestions included: bond issue; combination of fed. & state funds with fares; area tax; excise & luxury taxes; taxes; state tax, amusement & hotel & motel tax; state tax (plus combination others); federal govt. combined with solution of survey; state funds; gasoline & parking tax.

INTERCORRELATIONS AMONG THE DIFFERENCE SCORES

Transportation Attitude Project

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1		05	-21	-02	13	10	09	06	13	10	21	13	11	07	-08	-09	15	26	-13	-01	25	05
2			-02	04	-19	-49	-01	12	-11	-06	-05	02	-04	-16	-01	18	-07	-03	30	-07	-05	-15
3				17	-23	-08	-16	-04	-11	-05	05	18	-09	07	23	39	-14	-15	31	17	-06	04
4					29	35	19	20	30	26	11	33	22	12	-18	25	26	13	02	13	25	23
5						28	27	21	24	19	17	28	01	-01	-24	-19	23	32	-29	03	33	07
6							35	28	23	46	26	28	31	33	-12	02	33	24	-01	-04	19	34
7								21	26	30	30	18	23	06	-14	-05	21	45	04	01	27	09
8									10	25	20	18	03	10	-09	13	23	16	07	00	11	24
9										27	28	32	16	22	-08	13	49	42	06	04	29	17
10											53	45	54	50	10	10	29	35	04	02	31	36
11												13	37	24	05	16	26	48	05	04	25	30
12													12	17	01	07	30	40	-01	25	34	04
13														46	07	01	30	23	02	-09	23	47
14															03	23	36	10	15	02	02	46
15																-03	-19	00	09	-19	-04	06
16																	24	02	53	30	10	23
17																		29	04	08	24	26
18																			-09	22	54	02
19																				08	06	10
20																					26	02
21																						11
MEAN	1.62	3.42	3.43	8.42	8.74	7.45	8.50	9.64	8.86	7.98	,8.30	8.65	7.78	7.91	5.14	6.97	8.90	8.16	6.58	7.75	9.26	7.34
SD	.49	1.37	1.61	1.46	1.77	1.56	1.73	1.55	1.77	1.64	1.87	1.82	1.59	1.60	2.10	2.09	2.00	2.16	1.87	1.90	1.93	1.63

	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
1	04	14	17	07	08	20	-13	14	14	-01	12	15	28	09	17	14	-23	05	03	07	-09	20
2	-06	-22	08	-06	03	-08	04	-10	-08	-07	00	-10	-09	07	-01	07	21	11	-04	-15	-17	-12
3	14	-18	-16	16	11	-06	11	-08	-21	-27	-04	-09	-15	03	-26	-10	22	18	14	31	29	12
4	44	18	22	35	16	-03	28	16	26	15	-01	21	38	24	15	-01	02	-04	43	41	21	21
5	25	37	31	20	09	24	04	24	25	28	09	42	46	07	13	14	-12	06	20	04	-02	-00
6	21	28	12	23	20	08	29	31	22	06	04	25	21	16	18	-02	-02	-17	24	22	-01	13
7	16	26	30	16	29	18	15	31	14	25	11	26	24	24	19	18	-06	03	11	17	04	09
8	30	34	31	25	37	04	39	33	14	09	26	24	21	10	22	-04	04	-04	23	07	03	19
9	34	27	11	12	09	25	-02	16	35	19	12	13	26	38	27	-08	01	10	19	24	-06	11
10	40	50	27	37	38	17	18	35	26	18	25	43	26	26	32	10	-04	02	29	24	-10	23
11	38	29	21	40	37	05	09	15	30	23	35	47	30	38	24	08	17	12	20	34	-09	05
12	35	29	-03	37	11	27	10	36	27	25	13	25	25	25	26	20	-02	11	30	18	05	15
13	30	40	31	39	32	-02	21	29	30	02	15	38	21	19	32	21	-11	-01	35	29	-09	11
14	40	34	09	27	12	11	01	31	13	-16	14	24	26	12	24	17	-14	16	17	28	11	27
15	-26	-10	15	-32	-21	-27	-D1	-30	-26	-15	-09	-18	-17	-18	-02	05	22	09	-19	-02	-01	12
16	34	01	-04	23	17	D3	04	08	00	-12	01	02	01	19	03	-05	39	10	20	35	18	02
17	50	36	12	34	27	35	22	41	28	11	27	33	28	28	41	13	-07	02	23	21	09	08
18	26	35	17	20	29	28	00	29	47	29	14	44	43	34	27	19	00	26	24	15	-02	14
19	15	-03	-06	15	15	03	00	-15	-19	-16	19	-15	-18	11	-06	-09	44	14	18	23	25	03
20	10	18	-28	18	-04	41	-03	27	29	05	16	22	22	25	04	-09	03	14	08	16	25	-14
21	23	37	11	39	22	41	-01	38	29	25	19	42	37	23	26	15	12	07	34	19	09	08
22	24	38	13	34	15	03	25	17	25	09	18	39	14	12	23	-01	-11	-02	12	20	01	20
23		47	21	58	37	07	21	43	25	11	20	38	41	30	20	06	00	08	54	40	12	13
24			39	42	45	40	25	45	35	26	36	62	44	22	38	14	-19	12	29	16	-02	-04
25				09	28	-22	18	08	09	21	15	24	37	-13	05	18	-14	-04	06	00	-03	08
26					49	24	38	56	27	08	36	49	33	34	30	15	06	14	63	45	12	05
27						33	47	33	20	14	36	54	40	26	25	41	15	31	35	25	04	-04
28							-02	39	38	34	33	37	32	34	36	21	-14	29	12	01	01	-22
29								30	06	-05	05	21	05	06	24	24	14	02	31	38	08	01
30									43	14	23	37	35	26	32	14	-20	03	34	11	12	01
31										35	22	41	38	48	24	05	-24	19	27	07	10	04
32											27	50	30	14	18	-04	-17	-03	13	03	-10	-08
33												47	20	27	11	11	07	19	23	23	-00	-10
34													53	30	29	21	-15	21	40	36	-03	03
35														35	35	28	-07	25	20	15	06	11
36															29	-01	-04	33	26	23	01	-06
37																35	-05	14	13	16	-02	12
38																	07	30	18	18	16	19
39																		08	10	20	05	03
40																			13	14	17	-09
41																				58	15	25
42																					31	40
43																						36
44																						
MEAN	8.96	8.45	7.18	9.41	8.86	6.96	8.77	8.68	7.36	6.40	8.29	8.52	7.89	8.34	8.70	7.69	6.35	6.24	9.33	8.54	1.16	1.42
SD	1.70	1.81	1.94	1.61	1.86	1.62	1.74	1.82	1.96	1.38	1.67	2.10	1.65	1.85	1.86	1.55	1.85	1.47	1.71	1.95	.37	.49

INTERCORRELATIONS AMONG THE EVALUATIVE OPINIONS

Transportation Attitude Project

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	
1		05	-21	12	-05	-03	03	02	-08	-04	-12	-00	08	05	15	34	-03	-16	17	11	-26	13	08	-01	-05	02	-03	03	23	-07	-03	09	-14	-09	-17	-05	-07	-02	19	06	00	01	09	-20	1
2			-02	-08	06	04	05	-16	-02	02	08	-13	01	11	20	-28	-02	-01	-15	00	08	14	01	13	00	06	-07	00	-09	15	03	04	-03	05	03	-04	-02	-11	-11	-08	03	21	17	12	2
3				-20	16	07	09	-03	14	12	04	-20	05	-14	-16	-46	13	19	-31	-23	16	-13	-12	09	16	-12	-03	-08	-14	15	13	-14	08	-00	27	07	25	04	22	-06	-22	-33	-29	-12	3
4					16	31	12	08	08	18	15	29	14	19	-07	23	37	23	25	12	00	04	32	02	26	12	23	07	23	-03	06	-01	13	10	22	05	11	04	19	-12	22	29	18	14	4
5						08	11	-02	17	22	13	-08	05	-04	-17	05	25	12	-08	-12	35	-07	07	24	03	27	-05	-02	-00	07	08	-12	02	13	28	04	15	-06	-01	-07	06	01	-08	09	5
6							15	10	-10	31	15	09	30	40	03	17	30	17	22	07	01	33	36	08	16	-03	21	03	23	24	09	-19	-06	01	01	-05	13	10	-00	04	13	15	10	26	6
7								-00	-04	17	14	14	13	-06	04	-26	21	34	01	-09	15	05	-09	-01	20	01	19	19	08	16	-02	08	-04	16	21	08	17	05	-12	-14	-07	-09	-16	-04	7
8									-10	23	04	30	00	17	00	-00	09	-02	13	04	-03	09	25	-05	18	11	07	02	34	08	13	06	14	13	08	-00	18	-04	-05	-06	04	-15	-02	11	8
9										02	02	24	02	09	-13	-01	14	31	08	-00	04	09	13	11	07	06	-06	25	-07	09	18	20	18	17	14	48	05	-08	07	13	12	02	01	07	9
10											46	15	50	52	09	02	24	31	13	-08	16	32	28	25	26	15	13	04	23	04	11	01	09	21	11	-00	32	06	-19	-08	10	10	-04	28	10
11												-00	25	22	-05	03	22	30	13	04	13	22	26	07	25	27	19	-12	00	-08	26	08	24	26	20	09	32	12	08	-06	15	25	-03	19	11
12													-01	18	-11	03	07	19	11	29	00	-02	16	-11	-04	01	09	20	15	12	08	18	-01	10	06	15	16	08	-04	04	07	07	09	11	12
13														46	20	07	14	26	24	-09	13	42	04	11	28	-02	26	-13	16	00	16	-15	10	15	09	10	26	08	-19	-01	24	22	-02	17	13
14															15	05	14	13	18	06	08	45	25	11	17	-02	02	09	15	15	-06	-15	07	15	12	-12	12	15	-09	17	24	22	21	35	14
15																-06	-35	05	04	-08	-03	16	-30	01	07	-38	-01	-43	-04	-08	-14	-11	-11	-02	-08	-25	04	03	-10	10	-23	-09	-03	11	15
16																	16	-14	51	16	-14	08	18	-11	-12	16	03	-05	16	-19	-10	-01	-16	-06	-25	03	-07	03	47	04	13	26	19	01	16
17																		18	19	12	12	13	43	13	09	37	24	36	07	-00	10	-12	16	11	20	19	25	-11	12	-07	12	09	-08	-11	17
18																			-07	11	32	-07	18	14	23	-05	25	14	02	25	34	12	08	26	26	25	25	01	-11	-00	14	02	-04	13	18
19																				06	-23	20	16	03	05	07	18	03	17	-29	-14	-06	13	-03	-21	03	-05	10	38	06	17	27	18	12	19
20																					-02	14	17	06	-12	00	-05	43	-03	11	33	19	14	04	14	22	11	-03	14	11	-02	12	09	-18	20
21																						-07	05	06	-04	20	06	07	-08	25	08	-10	06	19	29	-03	18	05	-23	-09	02	00	16	03	21
22																							15	29	27	17	01	10	24	-04	20	09	24	22	-00	16	11	-02	-07	00	12	14	-05	12	22
23																								30	11	51	09	22	18	18	12	09	21	24	30	11	09	-04	19	-13	45	25	08	08	23
24																									06	32	17	18	14	41	21	09	14	43	26	14	06	-11	01	-15	20	01	-14	-10	24
25																										-00	11	-03	15	-10	07	09	35	26	38	07	12	12	-09	-02	18	02	-08	09	25
26																											12	30	37	18	21	11	22	36	14	17	06	-07	20	-10	56	20	01	-04	26
27																												18	30	02	-02	04	14	36	09	-14	22	41	17	08	24	15	03	-02	27
28																													18	29	19	40	27	24	06	24	09	-03	05	04	24	11	02	-19	28
29																														09	02	03	-06	13	-02	06	14	15	12	10	21	29	11	-00	29
30																															28	13	-02	25	25	09	07	-00	-17	05	18	-03	14	04	30
31																																26	16	23	32	37	13	-10	-11	05	01	-03	07	-02	31
32																																	43	16	-01	07	-03	-06	01	18	12	-02	-09	32
33																																		23	10	13	07	14	02	09	23	17	-02	-06	33
34																																			40	18	34	01	-12	26	21	05	01	34
35																																				10	24	13	-03	02	07	03	-04	08	35
36																																					24	-13	-05	04	01	02	-03	-13	36
37																																						33	-05	09	02	09	-07	10	37
38																																							09	28	10	25	17	19	38
39																																								09	15	25	-01	-06	39
40																																									-08	-03	11	-03	40
41																																									42	10	22	41
42																																										28	38	42
43																																											36	43
44																																												44
Mean	1.62	3.42	3.43	2.89	1.55	3.73	2.04	1.93	2.42	3.27	2.90	2.10	3.49	3.32	4.71	3.97	2.13	2.84	4.43	3.14	2.01	3.97	2.09	2.31	3.17	1.89	2.51	3.46	2.70	2.72	3.84	3.90	3.18	2.31	3.41	2.85	2.64	3.58	4.04	4.70	2.03	2.95	1.16	1.42	
S.D.	0.49	1.37	1.61	1.32	0.98	1.38	1.38	1.13	1.59	1.36	1.61	1.33	1.28	1.32	1.56	1.97	1.50	1.83	1.60	1.67	1.45	1.39	1.28	1.35	1.42	1.28	1.48	1.34	1.54	1.49	2.04	1.06	1.53	1.42	1.35	1.39	1.62	1.51	1.64	1.26	1.25	1.68	0.37	0.49	

INTERCORRELATIONS AMONG THE QUESTION #2 DATA

Transportation Attitude Project

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	
1		05	-21	09	11	08	14	14	08	15	20	13	31	16	08	36	18	16	00	14	10	28	18	23	15	15	09	26	15	16	20	09	-00	16	27	04	24	19	-10	13	02	10	09	-20	1
2			-02	-05	-20	01	03	01	-18	-04	06	-11	-01	-04	21	-07	-10	-03	29	-10	03	-03	-05	-20	08	-04	-04	-08	-10	05	-01	-02	-01	-12	-09	05	-03	-09	13	05	-11	-01	17	12	2
3				-04	-13	-07	-09	-10	04	09	09	-11	-10	-13	06	-12	-03	03	02	-06	08	-17	01	-18	04	13	-04	-21	03	13	-20	-45	02	-17	10	14	-12	-11	05	12	00	09	-29	-12	3
4					37	43	10	07	28	37	23	38	33	23	09	17	15	23	18	24	39	43	25	15	-03	23	26	16	10	14	07	27	12	23	15	39	31	15	18	17	31	17	-04	-09	4
5						29	16	27	38	28	13	43	13	14	-09	-10	33	24	-15	20	20	20	25	21	23	10	17	24	16	-12	09	32	02	38	25	15	13	32	-11	13	22	16	-03	08	5
6							32	21	30	54	49	35	48	34	11	15	33	29	06	13	19	31	19	12	03	-02	48	14	-05	26	-06	23	21	14	14	42	40	08	11	18	30	29	10	15	6
7								44	11	23	31	22	16	09	-08	06	23	42	-02	28	19	25	35	29	32	16	25	35	25	06	28	26	15	17	28	27	26	21	05	09	30	44	-19	-14	7
8									29	18	19	27	23	17	-04	09	24	22	05	16	27	37	29	19	27	20	38	05	44	24	20	16	25	33	42	30	20	24	-07	26	27	37	-08	-16	8
9										24	11	39	24	08	-01	14	36	18	04	09	43	42	18	39	06	23	18	-03	31	43	27	12	09	16	27	40	34	06	05	23	35	24	-06	-09	9
10											56	54	57	57	02	23	31	45	01	15	46	31	51	22	09	28	58	33	33	29	16	17	44	42	41	71	26	34	-11	27	44	45	09	01	10
11												22	54	38	02	09	32	56	15	24	34	30	44	09	24	10	60	19	09	28	10	14	31	31	25	20	33	43	22	-03	29	24	35	12	04	13
12													33	31	06	15	43	37	04	10	49	38	29	30	05	41	29	11	21	20	18	37	33	31	09	39	34	35	06	19	40	32	02	-10	12
13														52	09	18	40	27	13	14	20	44	31	20	10	41	25	46	15	39	27	16	21	25	20	33	43	22	-03	29	24	35	12	04	13
14															-04	38	27	23	20	-06	17	24	39	10	17	25	43	27	15	19	13	08	32	15	30	37	31	24	-18	28	20	32	10	01	14
15																-03	08	-04	05	-20	05	-02	-24	-17	-16	-24	-12	-11	-18	-06	-09	-02	03	-26	-06	-04	08	-15	35	14	-09	-18	-04	-08	15
16																	26	23	17	11	15	41	20	24	-05	11	16	21	02	25	30	26	30	15	27	21	37	11	-10	23	15	20	03	-07	16
17																		17	-02	14	13	36	36	40	07	19	34	16	17	29	15	35	25	18	23	21	55	38	-02	34	29	40	-26	02	17
18																			04	32	32	33	52	28	17	20	43	40	09	15	30	30	30	43	47	34	32	38	-05	25	44	49	-01	-07	18
19																				07	23	22	02	02	-08	02	15	02	-10	08	23	04	-01	03	11	06	19	-01	27	17	07	16	-04	11	19
20																					22	37	28	29	32	38	28	39	21	23	18	26	31	26	18	16	27	04	23	30	22	-27	-04	20
21																						29	23	15	03	32	11	07	35	27	26	11	29	33	24	42	07	26	42	22	06	-08	21
22																							41	46	14	24	46	24	24	53	22	33	34	33	42	36	49	22	06	26	32	31	-07	-15	22
23																								41	40	40	51	28	28	30	33	19	29	48	59	48	38	60	-14	46	49	68	-10	-11	23
24																									31	40	26	52	28	31	44	37	21	36	35	22	33	31	09	22	28	35	-18	-08	24
25																										33	18	31	25	17	18	22	13	21	28	-02	03	17	-05	19	16	20	-05	-01	25
26																											24	31	48	35	22	14	34	37	25	32	24	41	-04	22	40	38	-21	-15	26
27																												20	28	40	02	05	48	39	47	60	42	35	07	52	49	65	-03	05	27
28																													24	07	21	48	38	38	38	23	17	27	-05	15	20	16	-09	00	28
29																														38	22	07	38	38	37	36	43	19	37	-15	18	39	32	00	-05	29
30																															16	10	42	14	25	38	40	24	-06	30	36	33	01	05	30
31																																32	35	28	29	23	39	31	-06	24	26	29	-09	-11	31
32																																	41	48	18	19	44	36	-01	18	31	24	-00	-06	32
33																																		31	47	46	38	40	01	49	54	43	-04	06	33
34																																			47	36	18	48	-04	30	45	49	07	-05	34
35																																				54	30	41	03	54	47	50	-16	-09	35
36																																					34	35	-04	42	62	53	-06	-08	36
37																																						54	10	41	39	45	-11	-08	37
38																																							-06	41	54	56	-02	-02	38
39																																								08	05	-03	-10	-13	39
40																																									37	42	-11	08	40
41																																									66	-11	-11	41
42																																										-10	-11	42
43																																											36	43
44																																												44
Mean	1.62	3.42	3.43	5.26	4.26	5.12	4.53	5.58	5.23	5.26	5.23	4.70	5.31	5.24	3.93	4.92	5.03	4.94	5.00	4.90	5.29	5.30	5.09	4.77	4.38	5.30	5.36	4.46	5.44	5.38	5.26	4.34	5.49	4.84	5.33	5.13	5.37	5.26	4.36	4.95	5.32	5.43	1.16	1.42	
S.D.	0.49	1.37	1.61	1.04	1.48	1.10	1.39	0.98	1.10	0.96	1.09	1.44	0.93	1.07	1.60	1.44	1.25	1.30	1.27	1.20	1.12	0.87	1.07	1.07	1.52	0.81	1.09	1.39	0.82	0.85	0.94	1.28	0.99	1.21	0.89	1.01	0.90	0.88	1.17	1.21	0.98	0.99	0.37	0.49	

INTERCORRELATIONS AMONG THE IMPORTANCE RATINGS
Transportation Attitude Project

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1		05	-21	39	30	18	26	23	29	16	-01	27	35	28
2			-02	-07	-17	-17	-22	-09	-20	-19	-25	-11	-20	-06
3				-37	-33	-32	-17	-11	-30	-22	-04	-18	-19	-27
4					70	45	58	25	41	53	38	43	69	52
5						52	53	25	50	42	36	59	57	52
6							30	30	41	54	33	42	44	58
7								47	40	43	42	40	49	43
8									33	47	39	21	25	40
9										56	32	47	47	47
10											63	37	65	66
11												26	53	54
12													44	43
13														64
14														
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41														
42														
43														
44														
MEAN	1.62	3.42	3.43	4.08	3.58	4.37	4.18	5.31	4.37	4.62	5.07	3.59	4.42	4.54
SD	0.49	1.37	1.61	1.85	1.99	1.47	1.72	1.13	1.75	1.65	1.59	1.80	1.72	1.59

INTERCORRELATIONS AMONG THE IMPORTANCE RATINGS
Transportation Attitude Project

	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	21	32	27	16	34	07	11	09	23	31	14	06	10	08	19	07
2	-05	06	-20	-10	00	-07	-11	-09	-23	-31	-14	04	-05	-11	-03	-04
3	-20	-20	-19	-19	-19	-18	-18	-33	-35	-33	-19	09	13	-53	-13	-15
4	33	30	50	60	52	40	18	68	46	62	38	01	-01	47	36	09
5	35	31	56	51	43	36	20	55	34	54	40	-06	10	37	34	17
6	42	12	55	42	26	52	27	43	37	40	41	20	14	29	24	18
7	15	04	40	51	38	36	18	53	31	50	38	19	19	25	24	14
8	33	36	30	38	42	32	15	18	15	29	28	35	58	-01	42	18
9	39	25	35	49	36	48	42	45	40	54	37	16	10	35	29	34
10	47	20	46	62	43	42	21	45	41	52	31	26	34	28	36	08
11	22	04	33	53	23	29	19	35	22	39	33	19	34	17	45	18
12	41	29	34	40	40	39	25	45	30	41	51	15	12	29	18	17
13	43	27	51	60	50	33	15	59	38	55	39	-16	-04	38	32	00
14	34	32	53	55	47	46	45	47	27	48	37	09	32	31	50	30
15		32	37	36	37	31	02	36	27	29	33	06	00	24	21	-08
16			25	13	38	21	18	20	09	24	16	06	16	23	44	09
17				47	46	34	11	32	55	48	33	08	20	37	24	06
18					38	31	15	60	44	61	43	23	17	45	39	09
19						33	17	44	42	48	35	05	08	24	29	09
20							33	48	16	40	28	13	09	35	25	20
21								26	19	34	16	22	25	28	32	71
22									40	65	48	06	-09	53	34	18
23										64	55	17	08	43	10	15
24											57	27	24	55	37	27
25												24	14	30	21	08
26													61	-08	12	26
27														-27	38	35
28															24	15
29																40
30																
31																
32																
33																
34																
35																
36																
37																
38																
39																
40																
41																
42																
43																
44																
MEAN	4.67	5.00	4.28	4.35	4.41	4.42	4.91	4.40	4.16	3.71	4.11	5.42	5.26	3.86	5.01	5.07
SD	1.45	1.40	1.71	1.79	1.62	1.67	1.56	1.64	1.83	1.73	1.77	1.07	1.23	1.68	1.47	1.34

INTERCORRELATIONS AMONG THE IMPORTANCE RATINGS
Transportation Attitude Project

	31	32	33	34	35	36	37	38	39	40	41	42	43	44
1	30	06	-01	15	24	14	14	36	15	28	08	13	09	-20
2	-13	-02	-09	-29	-20	-17	-23	-09	-15	-06	06	-08	17	12
3	-33	-52	-15	-27	-16	-19	-13	-28	-11	-04	-09	02	-29	-12
4	58	50	23	60	63	52	37	55	17	28	23	15	-08	-15
5	49	45	25	44	49	44	42	61	27	19	19	14	-12	-16
6	43	31	15	28	31	22	32	46	25	16	05	18	-12	02
7	50	28	15	49	60	44	38	49	23	25	27	31	-09	-30
8	28	08	24	31	39	29	19	24	35	33	23	29	08	-06
9	46	36	21	37	44	33	33	44	27	09	11	34	-12	-20
10	48	30	32	49	52	42	44	43	17	33	14	17	01	-07
11	28	14	37	40	40	35	50	30	19	32	19	29	-07	-04
12	39	27	06	17	39	30	39	53	31	24	25	35	-05	-10
13	58	38	14	51	49	33	47	52	17	28	11	12	-06	-22
14	63	33	27	34	44	45	55	60	30	33	35	41	-15	-14
15	23	31	21	17	30	12	17	26	21	18	09	17	10	02
16	13	37	06	12	25	30	14	25	27	36	10	08	-05	02
17	36	35	21	49	44	29	30	50	17	10	10	08	-14	-08
18	57	44	38	54	60	49	49	46	17	29	20	22	-12	-29
19	38	31	29	39	44	28	32	55	39	37	30	22	10	-04
20	48	33	30	40	54	38	25	35	30	33	10	27	-15	-15
21	28	34	05	16	17	21	49	40	36	02	55	53	-20	-21
22	67	58	32	60	71	60	51	56	17	23	27	27	-27	-23
23	44	37	15	47	43	24	30	50	09	19	18	13	-00	-02
24	60	54	41	70	65	54	47	64	25	30	31	28	-10	-14
25	57	30	15	30	41	35	30	66	24	22	11	28	03	-16
26	02	-08	11	11	18	14	21	17	12	25	44	34	-11	01
27	07	-19	24	12	17	26	38	16	23	21	49	27	-09	-01
28	46	79	26	50	47	34	20	37	05	15	03	08	02	-10
29	23	22	33	15	35	31	36	42	39	36	34	25	-18	-14
30	11	10	23	10	05	20	42	35	45	12	57	48	-22	-22
31		50	25	52	31	57	45	53	11	22	11	23	-17	-29
32			28	47	50	51	23	35	11	11	16	10	-14	-11
33				36	37	37	38	25	24	27	27	20	-08	-11
34					65	51	37	41	19	25	18	16	-08	-23
35						59	43	54	20	41	20	26	-19	-26
36							43	37	24	17	27	27	-28	-28
37								59	29	16	50	55	-23	-16
38									39	33	42	40	-14	-11
39										24	41	46	-16	-19
40											23	15	03	-04
41												62	-27	-13
42													-19	-16
43														36
44														
MEAN	4.78	3.67	5.20	4.34	4.56	4.33	4.74	4.33	4.17	4.89	5.31	4.96	1.16	1.42
SD	1.51	1.71	1.49	1.63	1.55	1.68	1.45	1.56	1.60	1.26	1.31	1.43	0.37	0.49

ROTATED FACTOR LOADINGS AND COMMUNALITIES

ariable	Factor Names and Item Content	Loadings	h^2
I	Satisfaction With Current Public Transportation		
9	PT in suburbs adequate	50	32
20	PT routes don't change neighborhoods	54	39
28	Kind of people you like to ride with	50	57
31	Busses stop close to home	46	34
36	Express transportation available in the suburbs	59	40
II	Ease of Travel		
15	Business leaders have more influence	49	42
17	Easy travel without auto to shopping	55	55
23	Easy travel to recreation areas	62	52
26	Traffic moves easily in Metro	78	72
41	Expressways are adequate	49	49
III	New Transportation Facilities		
3	Educational level	42	24
42	Airport facilities adequate	-56	55
43	Rapid transit voted favorable	58	36
44	Would use rapid transit to work	65	59
IV	Personal Convenience		
13	Busses run on schedule	71	53
10	Busses arrive on time	68	56
22	Comfortable busses	65	62
14	PT vehicles are clean	61	58
6	Appearance of PT vehicles	46	38
25	PT routes come in your area	41	38
V	Effectiveness of Transportation Development		
16	Taxes high enough to pay for improvements	61	62
19	Bus fares high enough for profit	50	49
1	Sex of Respondent	47	24
3	Educational level	-56	50
35	Bus routes where the people are	-49	39
21	Enough parking	-45	30
VI	Avoidance of Delay		
	Stalled cars removed	73	60
	Taxi service easily obtainable	60	47

VII	(unnamed factor)		
32	Friendly people	56	46
33	Safe from personal attack	64	50
VIII	(unnamed factor)		
30	Reasonable parking charges	48	45
24	Easy to carry packages on PT	65	58
IX	(unnamed factor)		
8	People informed about transportation problems	74	60
12	Rail transportation adequate	49	43

ROTATED FACTOR LOADINGS AND COMMUNALITIES

ariable	Factor Names And Item Content	Loadings	h^2
I	General Transportation Improvement		
18	Bus routes serve personal needs	74	63
9	PT to suburban areas	60	46
21	Parking space downtown	54	40
35	Bus routes where the people are	50	48
12	Adequate rail transportation	50	36
31	Distance to transit stop	45	43
7	PT faster than automobile	44	28
36	Easy express transit to suburbs	40	40
II	Fiscal Conservation		
19	Bus fares high enough	71	54
39	Enough one-way streets	64	48
16	Taxes high enough to finance	61	53
2	Age	40	28
III	Social Defense		
28	Kind of people you like	63	69
20	Routes don't change neighborhoods	57	43
25	Routes are concentrated in poor areas	-57	54
15	Business leaders influence planning	-40	41
IV	Transportation Action Tendency		
42	Airport facilities adequate	64	59
44	Would use RT to work	56	54
43	Favorable RT vote	54	34
3	Educational level	47	47
41	Expressways can handle heavy traffic	46	52
4	Bus routes facilitate cross-town travel	42	53
V	Consumer Orientation		
29	Public informed on transportation problems	63	51
26		53	66
8	People informed on transportation plans	48	32
27	Disabled vehicles quickly removed	49	70
30	Reasonable parking charges	48	56
41	Expressways handle heavy traffic	43	52
23	Easy travel to recreation areas	43	54
4	Bus routes facilitate cross-town travel	42	53
15	Business leaders influence planning	-41	41

VI	Personal Convenience		
14	Clean PT vehicles	79	62
22	Comfortable busses	62	47
13	Busses run on schedule	62	51
10	Arrive on time via PT	58	58
24	Easy to carry packages on PT	40	59
VII	Relaxation During Trip		
34	PT vehicles uncrowded	71	80
33	Feel safe from personal attack	51	36
27	Disabled vehicles quickly removed	49	20
11	Easy to travel to and from work	48	55
24	Easy to carry packages	41	59
32	PT riders are friendly people	40	41
VIII	Non-Interpretable?		
38	Taxi service easily obtainable	79	69
40	Civic groups can influence planning	43	37
27	Disabled vehicles quickly removed	40	70

ROTATED FACTOR LOADINGS AND COMMUNALITIES

able	Factor Names and Item Content	Loadings	h^2
	Personal-Social Need Fulfillment		
2	PT riders are friendly people	.80	.77
3	Fellow PT riders pleasing to you	.80	.75
4	PT permits package carrying	.52	.78
4	Public transportation vehicles uncrowded	.51	.65
2	Comfortable busses	.49	.72
5	Bus routes where the people are	.40	.77
8	Educational level	.56	.52
I	Intra-Inter Urban Travel Convenience		
9	Reasonable parking charges	.82	.71
1	Adequate parking downtown	.80	.71
1	Metro expressways can handle heavy traffic	.67	.62
2	Airport facilities adequate	.63	.53
II	Traffic Flow Problems		
1	Easy travel to and from work	.66	.54
7	Disabled vehicles quickly removed from streets	.64	.72
8	People informed of transportation planning	.42	.59
V	Effective Public Transportation Management		
0	Arrive on time via public transportation	.69	.76
4	Clean public transportation vehicles	.53	.73
8	Busses run on schedule	.45	.75
8	Public transportation routes serve personal needs	.45	.63
6	Proud of Appearance of PT	.40	.53
	Citizen-Centered Transportation Planning		
6	Taxes high enough to finance transit improvements	.63	.47
9	Public informed on transportation problems	.47	.51
8	People informed of transportation planning	.47	.59
0	Civic & public groups can influence transit plng.	.46	.35
9	Bus fares high enough for reasonable profit	.45	.52
I	Rapid Transit		
3	Favorable rapid transit vote	.53	.36
4	Would use rapid transit to work	.51	.30
5	Bus routes where the people are	.48	.77
6	Easy express transit to suburbs	.47	.56
2	Comfortable busses	.40	.72

II	General Transportation Importance		
8	Taxi service easily obtainable	.68	.70
6	PT routes concentrated in poor neighborhoods	.65	.52
2	Adequate rail transportation	.63	.50
3	Busses run on schedule	.63	.75
5	Taxi fares reasonable for poor people	.60	.58
4	Bus routes facilitate cross-town travel	.59	.68
3	Easy travel to recreation areas	.58	.62
1	Nearness of PT stop to home	.56	.61
7	Easy shopping travel	.54	.45
4	PT permits package carrying	.54	.78
6	Can be proud of public transportation vehicles	.53	.52
7	PT faster than auto	.51	.50
2	Comfortable busses	.51	.72

Previous Opinion Studies Among Atlantans

An opinion study designed by Dr. York of the present project and conducted under his direction by a downtown Atlanta men's civic group, obtained opinion ratings and written comments from 1200 registered voters in the city of Atlanta (less Ward 2). This report[a] presented to the Mayor and the Board of Aldermen in the Spring of 1965 revealed that transportation-related issues were viewed as interrelated with other environmental characteristics and local problems of concern. For example, when the recipients of the questionnaire were asked to respond in writing to two open-end questions, the general findings were:

"Is there anything you particularly dislike about the city of Atlanta?"

Predominant Content Categories
Traffic conditions in Atlanta
Street problems relating to maintenance, improvements, etc
The police and their law enforcement in the city
Slums, cluttered areas
"Politics" and "politicians"
The racial dilemma

"In your opinion, what are the five most important things which need to be done to make this a better community?"

Improve law enforcement
Street conditions
Relieve traffic congestion
Recreation facilities and programs
Rapid transit system and service
Clean and beautify the city
Educational facilities and programs
Alleviate the sewage problem

---

[a] Atlanta Junior Chamber of Commerce. Atlanta Community attitude survey. June 1965. Copies deposited in the Atlanta Public Library and at the Georgia Institute of Technology.

A polling agency obtained "problems of concern" from an unreported number and kind of Atlantans, under contract to the United Appeal. In the Adamson article[b], "crime prevention", "neglected children", "low income housing" and "race relations" were ranked higher than issues such as "public transportation", "health care" and "welfare".

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[b] Adamson, T. United Appeal groups need to be involved. Atlanta Constitution, 1970 June 23 issue.

Appendix F

An Undergraduate Student Project
in Social Psychology.
Psychology 410, Fall 1969
c/o Dr. C. M. York
Georgia Institute of Technology

DEVELOPMENT OF AN ATTITUDE SCALE RELATING TO PARKING ON CAMPUS

Excerpts From the Student Report

In our attempts to develop a representative attitude scale on the parking problems at Tech we selected the following test questions from our much larger list. (The actual mathematical results appear on later pages.)

2. There is ample space for parking at any time around Tech.
5. Parking sticker fees should be made yearly and not quarterly.
11. Campus designers have ignored the parking problem.
14. Students who live on campus and are issued permits should be restricted to the lots that are farthest away from the center of class activity.
16. Tech has good parking facilities.
20. Raising the price of parking violations would help.
22. Raising the price of parking stickers would improve the parking situation.
23. The parking situation at Tech can only get worse.
26. Campus security is not strict enough in enforcing parking rules and regulations.
28. The Tech administration is making adequate plans for meeting future parking requirements.
29. Most of the time it is easy to find a parking place on campus.

The Thurstone method of attitude scale development has advantages because it is specifically designed to include the important criteria that make an attitude scale effective. Its scale items are designed to be discriminating to elicit useful information on attitudes and this discrimination is easily seen in the minds of the readers of the questions. Further, a minimum number of items are incorporated to provide an economically efficient testing procedure while still retaining reliability. Finally, the questions are spread over the entire scale so as to eliminate variations which occur at different areas of the attitude scale.

This test procedure is not without disadvantages. Scale values assigned by judges could have an inherent bias in them which results from the bias of the judges. Some difficulty may also arise in determining which items with nearly equal scale values are the most discriminating and useful. Variations cannot be easily eliminated; those variations which result from changing psychological conditions and normal changes over time are especially hard to remove. There are no easy means of determing if results are really valid. Finally, the projecting of any theories as a result of test scores may not reflect the actual meanings of these results and there is no good means of checking this.

If any actual assessment is done on this problem, we feel that the sample to be considered should be carefully studied with respect to composition. Groups such as upperclassmen, off-campus students, students who work and students active in nonacademic

activities should be considered separately.

The successful application of this instrument may benefit the school and the community in determining the actual wishes of the student body and members of the Georgia Tech teaching, research and administrative staffs. Since the purpose of this school is to serve society through helping the students, the determination of and actions, in accordance with these systematically obtained attitudes, would be useful to all concerned with the Tech community. [End of student written excerpt; the attitude item pool is attached; pre-test data are now being collected.]

PARKING ON CAMPUS

1. Tech has adequate parking facilities.
2. Some lots should be n-decked to allow additional parking space.
3. The "Tech Stinger" improves parking conditions.
4. The administration has not made a strong effort to relieve the parking problem.
5. Parking penalties at Tech are not strict enough.
6. Students who live on campus and are issued permits should be restricted to the lots which are furthest away from the center of class activity.
7. The impounding fee at Tech is fair.
8. The parking situation at Tech can only get better.
9. Campus security should be more strict in enforcement of regulations.
10. Atlanta police should be allowed to give tickets on campus.
11. There is ample space for parking at most times around Tech.
12. Too many parking spaces are allotted to the faculty.
13. There should be a more efficient means of obtaining a parking sticker.
14. City traffic is not a factor in the parking problem at Tech.
15. The Tech expansion program will improve the parking problem.
16. The EE parking lot is always full at the most critical times of the day.
17. It is impossible to get a parking place any time during 9-12 am week days.
18. The administration should do a study on parking facilities at Tech.
19. Freshmen should be given extensive parking privileges.
20. Graduate student privileges are not any different than regular student privileges.
21. Football parking priorities should be limited to students and professors at Tech.
22. The $1 parking fee charge for parking during football games should be used for better parking facilities at Tech.

23. A 5 minute time limit parking area should be instituted for on-the-hill parking for auxiliary services.

24. Parking facilities should be better policed to prevent burglary and infringement on parking stickers.

25. We need to make more of the city streets running through the campus and campus streets student parking areas.

26. Parking congestion on campus could be improved by spreading the campus out more.

27. I would rather walk on this campus than ride in a car.

28. A nice car can't survive dents, bumps, or scratches while parked on this campus.

29. Some way must be found to fully impress upon the administration how critical the present parking situation is.

30. Parking at Tech is annoying.

31. Tech's parking problem seems to be multiplying every day.

32. Tech's parking problem infuriates both professors and students.

33. Parking areas at Tech are very limited.

34. Tech's parking problem is one which must be revised immediately.

35. There is a need for more visitor parking for Tech.

36. Tech's parking problem does not indicate any form of planning.

37. Tech is progressing in every area except that in parking facilities.

38. No on-campus parking should be allowed at Tech.

39. Illegal parkers at Tech should be heavily fined.

40. Upperclassmen only should be allowed to park on campus.

41. The number of vehicles parking on campus should be restricted by issuing only a limited number of parking stickers.

42. The parking at Tech should be on a first come first serve basis.

43. Reserved parking spaces should be rented.

44. Parking problems at Tech exist only at certain hours or days.

45. Off-campus parking lots should be built and a shuttle bus used to get students to class.

46. The only solution to parking at Tech is off-campus commercial lots.

47. The parking situation at Tech would be alleviated if fraternity residents were not allowed to park on streets.

48. I would use the Tech Stinger but the tickets are too expensive.

49. Tech is the only school with a parking problem.

50. If more students rode bicycles to class the parking situation would improve.

STUDENT-PERCEIVED TRANSPORTATION ISSUES IN THE ATLANTA COMMUNITY

Organt, J.; Swint, E.; Talbert, T. & York, M.
School of Psychology - Georgia Institute of Technology

The purpose of this pilot project was first to assess the feasibility of adapting the Delphi method as a data-collection device in compiling qualitative information relating to the perceived urban transportation issues in the Atlanta community. A second objective was a preliminary taxonomy which would identify the issues as viewed by a limited segment of the Atlanta population. A third objective was to provide stimulation and direction among students through this kind of conceptual and methodological demonstration. As a result of the teaching exercise, one or more students might elect to pursue, individually or jointly, some of the pressing urban transportation issues.

METHOD AND PROCEDURE

Participants

Thirty-five male undergraduate students enrolled at Georgia Institute of Technology were involved in at least one phase of the present study. Most of them participated in all three phases. The individuals were attending two classes in Social Psychology.

Procedure

The present study was conducted in three phases or tasks:

Task I. The individuals were asked to list in no particular order the five most important issues concerning urban transportation in the Atlanta area as they perceived them.

Task II. One week after Task I, all individuals were requested to select from this listing the fifteen issues they felt to be the most important in the group and place a check mark next to them.

Task III. In Task III, presented four days later, they were provided a sheet containing a randomly ordered list of the sixteen issues from Task II which were selected the greatest number of times as one of the fifteen most important. They were instructed to read through these sixteen issues, selecting the ten most important and recording their decision by placing the numbers one (most important) through ten (least important). The instrument format is appended.

Tabulation of the Final Rank. Two weighted ranking systems were used along with median ranks for each of the sixteen issues presented in Task III. Median ranks were discarded as unstable and meaningless due to the small number of participants.

Being submitted (Fall 1970) as a Technical Note to a professional journal sponsored by the American Institute of Planners

The two remaining weighting systems are described below:

Point Ranks. For each person, issues were given a point-weighting according to its rank.

1 = 10 points
2 = 9
3 = 8
4 = 7
5 = 6
6 = 5
7 = 4
8 = 3
9 = 2
10 = 1

Final rankings were assigned according to the total number of points each issue accumulated.

Weighted Mean Ranks. Individual rankings were totaled for each issue. If an issue was left unranked, a weighting of thirteen was applied to the total on that issue. Thirteen represents the median rank of none ranked, issues (10-16). The sum of the ranks, plus weightings were divided by N. Final ranking was determined by the mean rank sum.

Rank-order correlation between the two weighting systems was found to be .96. The Point Rank system will be referred to in the remainder of this paper; it is easier to use and the results were essentially the same for both methods.

RESEARCH FINDINGS

Sixty distinct transportation issues were collected as a result of this student project. Of these sixty issues, Task III revealed the five most relevant issues among these upperclassmen.

1. The need for a rapid transit system in Atlanta. (233 points; 12 first place votes).
2. Inadequate planning for future volumes of traffic. (204;5)
3. Overloading of the entire transportation system during the rush hours. (169;1)
4. Need for more and better public transportation. (152;2).
5. Getting someone to do something about transportation problems rather than "just talking about them." (148;7).

Secondary student perceptions relating to urban transportation issues are reflected in the following rankings: (6th) inadequate designing of expressways; (7th) how to change from individual to mass transportation; (8th) education of public with respect to transportation needs and problems; (9th) inadequate number of expressways; (10th) inadequate design of entrance and exit ramps. The summary data are appended as Table 1.

SUMMARY AND IMPLICATIONS

Inspection of these preliminary data indicate that a modified-Delphi Method can have satisfactory reliability (r of .75 between two student groups) and may be a rewarding information-gathering procedure. For the present topic, effort needs to be placed on structuring each task so that the term "transportation" takes on a more broadly defined view to include more representation of issues in the areas of rail, air, and water transportation.

Also, the present investigators feel that delineation of issues peripheral to the vehicle (such as safety, air pollution, traffic control, etc.) was under-represented. The college sample used in the present study proved to be extremely car-oriented, a conceptual restriction also revealed in the sparce empirical literature relating to identification of publicly perceived urban transportation issues.

TABLE 1

STUDENT-PERCEIVED TRANSPORTATION ISSUES IN THE ATLANTA COMMUNITY

Categorized Content	Rank	Frequency
Lack of left-turn signals.	11	68
Need for more and better public transportation. (2)*	4	152
Inadequate planning for future volumes of traffic. (5)	2	204
Inadequate number of expressways due to overcrowding. (1)	9	102
Overloading of the entire transportation system during rush hours. (1)	3	169
Need for efficient short-distant transportation to eliminate parking problems.	14	65
Education of public with respect to transportation needs and problems. (2)	8	119
Improper timing of traffic lights. (1)	15	64
How to change from individual to mass transportation.	7	120
Time of transportation from outlying areas into town.	13	66
Lack of parking in Atlanta.	12	66
Getting someone to do something about transportation problems rather than just talking about them. (7)	5	148
Need for quick removal of wrecked and stalled vehicles. (12)	16	57
The need for a rapid transit system in Atlanta. (12)	1	233
Inadequate design of entrance and exit rampst.	10	83
Inadequate designing of the expressways. (1)	6	132

*number of first place votes

Task II

Modified-Delphi Instrument

Enclosed is a list of the transportation issues in Atlanta which you perceived as being the most important ones. Place a check to the left of the 15 issues which you feel are the most important ones facing the Atlanta community. Do not let the order or the spacing of items influence you. The statements appear randomly and not in any order of importance. The spacing of the sentences is designed to improve readibility and does not group the issues in any special way.

___1. Shortage of traffic signs and lights.
___2. Lack of left-turn traffic signals.
___3. Inadequate planning for future volumes of traffic.
___4. Lack of parking in Atlanta.
___5. Need for enlarging the present airport.
___6. Need for better co-operation between maintenance crews and the utility companies.
___7. Overloading of the entire transportation system during rush hours.
___8. More sanitary and faster "Tech Stingers."
___9. Need to restrict inner-city parking.
___10. Lack of turn lanes.

___11. Failure of slow traffic to stay in the right-hand lane.
___12. Crowding of bus terminals.
___13. How to change from individual to mass transportation.
___15. Improper timing of traffic lights.
___16. Lack of vehicle safety.
___17. Need for more and better public transportation.
___18. Inadequate number of expressways due to overcrowding.
___19. Traffic signals are in places where they should not be.
___20. Overcentralization of businesses causing many transportation problems.

___21. Inadequate designing of the expressways.
___22. Should Atlanta compete with other cities of its size in the different transportation areas.
___23. Need for quicker and more adequate rescue of accident victims.
___24. Increasing expressways by double-decking.
___25. Shortage of traffic control policemen.
___26. The need for a rapid transit system in Atlanta.
___27. Widening and improving of city streets.
___28. Need to place restrictions of thru-city traffic.
___29. Widening and improvement of present expressways.
___30. Education of public with respect to transportation needs and problems

___31. Gaps between the number of facilities on the interstate highways.
___32. Where a rapid transit system should run.
___33. Upkeep of the airport runways is poor.
___34. High rates being charged for public transportation--buses and taxis.
___35. Not enough two-way streets.
___36. Getting someone to do something about transportation problems rather than just talking about them.
___37. Location of residential areas in relation to business centers.
___38. Parking fees are too high.
___39. Too many trucks on the highway.
___40. Noise pollution due to vehicles.

___41. Too many delays at the airport.
___42. Not enough streets going North-South.
___43. Inadequate design of entrance and exit ramps.
___44. Not enough one-way streets.
___45. Better traffic control during events such as football games.
___46. Need for quick removal of wrecked and stalled vehicles.
___47. Where to locate a new airport.
___48. Uncontrolled power of the State Highway Department.
___49. Lack of pedestrian co-operation with the flow of traffic.
___50. Air pollution due to transportation vehicles.

___51. HOw a rapid transit system should be financed.
___52. Inadequate maintenance of city-streets--they are always torn up.
___53. Death of the passenger train.
___54. Present airport has no room for expanding.
___55. Need for efficient short-distant transportation to eliminate parking problems.
___56. Lack of safety for pedestrians, including school children.
___57. Poor attitudes toward expressway driving.
___58. Lack of transportation from airport to downtown area.
___59. Integration of all modes of transportation under one complete system.
___60. Time of transportation from outlying areas into town.

Check to see that you have placed a check next to 15 issues.

Go to Part II

Part II

Is this list complete? The statements in the list may give you ideas about other issues which you did not think of last time. If you feel that there are other important and pressing transportation issues in Atlanta which did not appear in the list, but that should appear, please write them in the spaces provided below:

1. _____

2. _____

3. _____

4. _____

5. _____

_____

SELECTED REFERENCES RELATING TO THE DELPHI METHOD

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Organt, J.; Swint, E.; Talbert, T. & York, M. Perceived transportation issues in the Atlanta Community. Working Paper. School of Psychology. Atlanta: Georgia Institute of Technology. November 1969.

Task III Modified-Delphi Instrument

TRANSPORTATION ISSUES IN THE ATLANTA COMMUNITY

Below are the sixteen transportation issues which received the highest indication of being the most important in the Atlanta community. From this list, pick out the ten that you feel are the most important and rank them from one to ten with one being the most important issue. The items appear randomly and not according to any order of importance.

___ Lack of left-turn signals.
___ Need for more and better public transportation.
___ Inadequate planning for future volumes of traffic.
___ Inadequate number of expressways due to overcrowding.
___ Overloading of the entire transportation system during rush hours.
___ Need for efficient short-distant transportation to eliminate parking problems.
___ Education of public with respect to transportation needs and problems.
___ Improper timing of traffic lights.
___ How to change from individual to mass transportation.
___ Time of transportation from outlying areas into town.
___ Lack of parking in Atlanta.
___ Getting someone to do something about transportation problems rather than just talking about them.
___ Need for quick removal of wrecked and stalled vehicles.
___ The need for a rapid transit system in Atlanta.
___ Inadequate design of entrance and exit ramps.
___ Inadequate designing of the expressways.

If there are any issues that you still feel are more important than the ones listed above, list them here.

_____

_____

_____

_____

_____

_____

nterview Schedule[a] #_____

. INDIVIDUAL TRANSPORTATION PROBLEMS (faced by you and people like you)

"What kinds of transportation do you use now?" "For what purpose?" "How often?"

"Problems encountered?"

Probe for different modes. Insure coverage of work (if appropriate) & non-work or family/personal life.

"Where is most of this travel you've mentioned? From where to where?"

Obtain geographic range of all travel mentioned. Probe local transportation, then if necessary, "How about travel beyond Atlanta area?"

[a] A study involving Problem Definition prior to instrument development in the area of PUBLIC ATTITUDES TOWARD URBAN TRANSPORTATION ISSUES.

PERCEIVED COMMUNITY/AREA-WIDE TRANSPORTATION PROBLEMS AND ISSUES.
"We've been talking about the transportation problems faced by you and people like you. Now, let's focus on the community at large." For example, what kinds of transportation problems do you feel our city and area face with respect to work-related travel.

Probe for "beyond the Atlanta area" if not emerging.

"And transportation problems the city and area face with respect to Family/Personal Non-Work Life?"

Probe for "beyond the Atlanta area" if not emerging. Close with probe on "air travel" in terms of work and non-work.

"Transportation also involves the movement of <u>things</u> as well as people. Think of problems you've experienced in the movement of something from one place to another."

.....
Probe mildly into shipping, mailing, etc.
.....

In conclusion, and in general what are the Most Important Problems facing this city and area. List five things.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Finally, rank the most critical need as "1", then 2, 3 and so on.

.....
If transportation not mentioned probe for where it fits into their "issues of concern".
.....

Interview Schedule[a] (for use in group or individual interviews conducted by an Interviewer or to be filled out through self-administration)

* *

I. INDIVIDUALLY EXPERIENCED TRANSPORTATION PROBLEMS

What kinds of transportation do you use now?	Purpose	How often per week?
a.	_____	_____
b.	_____	_____
c.	_____	_____
d.	_____	_____

Probe for different modes. Insure coverage of work (if appropriate) & non work or family/personal life.

Kinds of problems encountered by you and people like you? If one or two difficulties come to mind, please describe:

_____

_____

_____

Good features of the transportation you use.

_____

_____

_____

Unfavorable features of the transportation you use.

_____

_____

_____

Where do you live?

_____ Downtown Atlanta
_____ Northwest Atlanta Area
_____ Northeast Atlanta Area
_____ Southwest Atlanta Area
_____ Southeast Atlanta Area
_____ Other Area (write in: _____)

---

[a] Part of a research study focusing on PUBLIC ATTITUDES TOWARD URBAN TRANSPORTATION ISSUES. The present phase is concerned with citizen-generated ideas leading possibly to broader Problem Definition prior to the actual development of attitude measures for use in a larger survey.

Return the form to the Convener who shared it with you. Or, mail it anonymously to:

Dr. Mike York
Attitude Research Studies
Georgia Institute of Technology
Atlanta, Georgia 30332

II. WHERE DO YOU WORK?

_____Downtown Atlanta
_____Northwest Atlanta area
_____Northeast Atlanta area
_____Southwest Atlanta area
_____Southeast Atlanta area
_____Other area (write in:_____)

How many times per week do you make a round-trip to work at that location? _____

How many trips per month do you make:
_____out of the Atlanta area but in Georgia
_____out of the state
_____out of the country

Where is most of your travel? From where to where?
_____ to _____

III. "What kinds of things would influence your choice of transportation to use in the future?

in terms of bus service?

in terms of automobile?

in terms of rapid transit?

other kinds of transportation?

IV. PERCEIVED ATLANTA AREA TRANSPORTATION PROBLEMS AND ISSUES.
We've been talking about the transportation problems faced by you.and people like you. Now, focus on the community at large--greater Atlanta. For example, what kinds of transportation problems do you feel our city and area face with respect to work related travel of people.

Probe for local needs, in and around Atlanta

Beyond Atlanta Area?

Transportation problems the city and area face with respect to Family/Personal Non-Work Life?

How would you like to see transportation in this city and area?

Probe for "beyond the Atlanta area" if not emerging. Close with probe on "air travel" in terms of work and non-work.

V. Transportation also involves the movement of things as well as people. Think of problems you've experienced in the movement of something from one place to another. Describe one or two examples.

How many times per month do you ship something?
_____ out of the Atlanta area but in Georgia
_____ out of the state
_____out of the country

VI. In conclusion, and in general what are the Most Important Problems facing this city and area. List five things.

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

Finally, rank the most critical need "1", then 2, 3, and so on.

TRANSPORTATION OPINION STUDY

This questionnaire has been prepared by Georgia Tech for the purpose of collecting citizen opinions regarding transportation in the metropolitan area. All replies will be absolutely anonymous. No person can be identified. Only a summary of the ideas and opinions obtained will be given in a report of this study.

PLEASE DO NOT SIGN YOUR NAME

Your sex is: Male _____ Female _____

AGE (Check one)

19 or less _____
20 - 29 _____
30 - 39 _____
40 - 49 _____
50 - 59 _____
60 - 69 _____
70 - 79 _____
80 or over _____

YOUR EDUCATIONAL LEVEL

Less than High School Grad _____
High School Grad _____
Some College _____
Bachelor's Degree _____
Some Graduate Study _____
Advanced Degree _____

WHAT IS YOUR OCCUPATION? _____

On the following pages are some questions which ask you to give YOUR OPINIONS on various aspects of transportation in the metropolitan area. Rate your answers to each question by CIRCLING ONE NUMBER ON EACH RATING SCALE, with 6 being the highest rating, and 1, the lowest. Numbers between 1 and 6 should be used for ratings between "Completely False" and "Completely True" or "Not Important" and "Very Important." (LOOK AT THE EXAMPLE WHICH IS ALREADY MARKED.)

BUS STOPS

Busses stop at every corner.

How true is this statement?

Completely False 1 (2) 3 4 5 6 Completely True

How true <u>should</u> this statement be?

Completely False 1 2 3 4 (5) 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 (6) Very Important

DO NOT CIRCLE ANYTHING BUT NUMBERS

BUS ROUTES

Bus routes make it easy to get from any part of town to any other part.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true should this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

TAXI FARES

Taxi fares are low enough for poor people to use taxis when necessary.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true should this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

APPEARANCE

As a citizen you can be proud of the appearance of public transportation vehicles.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true should this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

PUBLIC TRANSIT SPEED

Public transportation is faster than automobile transportation.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true <u>should</u> this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

TRANSPORTATION PLANNING

People in this area know what local officials are planning to do about transportation problems.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true <u>should</u> this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

SUBURBAN AREAS

Public transportation in suburban areas is adequate.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true <u>should</u> this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

DEPENDABILITY

When you ride public transportation, you can expect to arrive on time.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true should this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

GOING TO WORK

It is easy to travel to and from work.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true should this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

RAIL TRANSPORTATION

Rail passenger transportation serving this metropolitan area is adequate.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true should this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

BUS SCHEDULES

Busses run on schedule.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true <u>should</u> this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

CLEANLINESS

Public transit vehicles are very clean.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true <u>should</u> this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

PARTICIPATION IN PLANNING

Business leaders have more influence in transportation planning than other citizens.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true <u>should</u> this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

TAXES

Taxes are high enough to pay for transportation improvements in the metropolitan area.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true should this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

SHOPPING

It is easy to travel to and from shopping areas without an automobile.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true should this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

TRANSPORTATION ROUTES

Present public transportation routes serve your personal needs.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true should this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not important 1 2 3 4 5 6 Very Important

BUS FARES

Bus fares are high enough to pay the cost of operating the bus system and make a reasonable profit.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true should this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

NEIGHBORHOODS

New public transportation routes do not change the characters of the neighborhoods through which they pass.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true should this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

PARKING

There is enough parking space in the downtown areas.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true should this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

BUS COMFORT

Busses in the metropolitan area are comfortable.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true <u>should</u> this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

RECREATION AREAS

It is easy to get to recreation areas without an automobile.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true <u>should</u> this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

PACKAGES

It is easy to carry packages on public transportation vehicles.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true <u>should</u> this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

PUBLIC TRANSPORTATION ROUTES

Public transit routes are concentrated in areas in which poor people live.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true should this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

TRAFFIC MOVEMENT

Traffic moves easily in the metropolitan area.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true should this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

ROAD SERVICE

Stalled cars, trucks, etc., are quickly removed from streets.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true should this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

PUBLIC TRANSPORTATION RIDERS

People who ride public transportation are the kind of people you like to ride with.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true <u>should</u> this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

TRANSPORTATION PROBLEMS

The public is adequately informed about transportation problems in this area.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true <u>should</u> this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

PARKING CHARGES

Parking charges are reasonable.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true <u>should</u> this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

DISTANCE TO PUBLIC TRANSIT STOP

A public transit stop is very close to your home.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true <u>should</u> this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

PUBLIC TRANSPORTATION RIDERS

People who ride public transportation are friendly people.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true <u>should</u> this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

PERSONAL SAFETY

Persons who ride public transportation are safe from personal attacks.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true <u>should</u> this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

CROWDING

Public transportation vehicles are not crowded.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true <u>should</u> this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

BUS ROUTES

Bus routes are located where the people are.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true <u>should</u> this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

EXPRESS TRANSPORTATION

"Express" transportation to and from suburban areas is easily available.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true <u>should</u> this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

TRANSPORTATION TO AIRPORT

It is easy to get to the airport without an automobile.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true <u>should</u> this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

TAXI

Taxi service is easily obtainable.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true <u>should</u> this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

ONE-WAY STREETS

There are a large number of one-way streets in the metropolitan area.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true <u>should</u> this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

PUBLIC INFLUENCE

Civic and other public groups can influence transportation planning.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true <u>should</u> this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

EXPRESSWAYS

Expressways in this area can handle heavy traffic easily.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true <u>should</u> this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

AIRPORT FACILITIES

Airport facilities are large enough to handle air travel needs in this area.

How true is this statement?

Completely False 1 2 3 4 5 6 Completely True

How true <u>should</u> this statement be?

Completely False 1 2 3 4 5 6 Completely True

How important is this to you?

Not Important 1 2 3 4 5 6 Very Important

On the basis of what you know now, how would you vote in a referendum on a rapid transit system in the metropolitan Atlanta area?

(Check One) For_____ Against_____

Of the following, which type of rapid transit system would you most prefer for this area? (Check One)

1. Bus _____
2. Trains on present railroad routes _____
3. A combination of 1 and 2 _____
4. Trains on new transit routes _____
5. Other _____
(Write In)

If you had a choice between automobile travel and rapid transit travel, would you use rapid transit to travel between your home and your place of employment?

(Check One) Yes_____ No_____

How should a rapid transit system be paid for? (Check One)

1. Income Tax _____
2. Wage tax on those working in Metropolitan area _____
3. Property tax _____
4. Federal government funds _____
5. Rider fares _____
6. Sales tax _____
7. Other _____
(Write In)