TOWARD A POSITIONING STRATEGY
FOR TRANSIT SERVICES IN METROPOLITAN SAN JUAN

An Initial Typology of Public Perception of Transit Options

by

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TOWARD A POSITIONING STRATEGY FOR TRANSIT SERVICES IN METROPOLITAN SAN JUAN:

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ABSTRACT

A series of focus groups was conducted among four targeted segments of the mode choice market for transit services in Metropolitan San Juan, Puerto Rico. These groups—secretaries and office workers from Hato Rey, students, and medical workers from Centro Médico—explored issues relating to traffic congestion, transit modes, desirable and undesirable places, travel behavior, and global perceptions related to modal choice. Data from each of the four focus groups was transcribed and subjected to a content analysis with the aim of identifying how members of these targeted segments characterize transportation options and choices.

The results of the study suggest that transit services intended to serve these segments of the mode choice market will need to meet customer expectations of service reliability and "composure" (the ability of a transit user to maintain personal neatness and comfort) if they are to significantly penetrate these markets. The importance of peer or reference groups is noted, as are the implications of culturally-specific social orientation. Modal choice issues, such as the use of walking and preferences toward being driven, are discussed, as is the role played by fear of assault in transportation decision-making. Finally, the process of attitude formation is highlighted, with examples drawn from the study.

The implications of these findings toward the development of a market positioning strategy is explored. A set of hypotheses regarding the "marketing mix" for transit services is proposed. A list of management activities that can further support the development of an effective marketing strategy, including market segmentation and positioning decisions, is proposed.

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Alan Hoffman received his Bachelor's degree, cum laude, from Cornell University, where he majored in Social Relations and Sociology. He holds an M.S. in Educational Foundations and Policy Studies (International/Intercultural Development Education) from The Florida State University, where he was both a College of Education Fellow and a University Fellow. He also holds an M.Ed. from Harvard University in Administration, Planning, and Social Policy. He served a number of years as an assistant professor at INCAE, the Central American Institute of Business Administration, where he taught market research and service management in INCAE's graduate management programs, in addition to extensive consulting and teaching throughout Central America. He has consulted to the United States Agency for International Development, the World Bank, the Inter-American Development Bank, and the Intercultural Center for Research in Education. He has also consulted to the private sector on marketing strategy and the use of information technologies.
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INTRODUCTION

Transit Services in Metropolitan San Juan

The San Juan Metropolitan Area is the current focus of a number of efforts to improve mobility through the development and refinement of public transportation services. A new metro rail line, known in its developmental stages as Tren Urbano, is in the advanced planning stages. The Metropolitan Bus Authority, known by its Spanish acronym AMA (Autoridad Metropolitana de Autobuses), is in a multi-year process of both institutional and route reform intended to improve performance and better meet existing demand for bus services. A second line of the separately-contracted Metrobus, a “premium” bus service, has just been developed. The system of privately-run jitneys, known as públicos, is receiving attention as well by transportation planners. In addition, some consideration is being given to the development of some other feeder bus services in support of Tren Urbano.

Both AMA and Tren Urbano are or will be faced with the challenge of attracting new riders to transit. Though there is some evidence to suggest that public support for the expenditure of large amounts of public funds on Tren Urbano is related to the public’s desire to find a “solution” to the problems of traffic congestion that currently plague Metropolitan San Juan (a recent study of residents of several neighborhoods near the proposed right-of-way determined that 60% of those surveyed favored “building a system such as Tren Urbano to alleviate congestion in the [San Juan Metropolitan Region]”), it is unclear whether such support emerges from a belief that the Tren will somehow alleviate road congestion (thereby improving driving conditions for those with no real desire to use transit services) or whether it arises from a strong desire of individuals to have a new modal choice.

The challenge of attracting new riders to transit, therefore, is one that calls for a careful consideration of the special needs of those who can potentially choose this option. In Dellibovi’s simplest of explanations, “you begin by asking, ‘what will people use?’” The problem is not trivial; among the key problems facing transit managers throughout the

1 Though there are no plans to rename the service once operational, the question of naming the service is discussed from a marketing perspective at the conclusion of this report.

2 A brief description of the primary transit modes is included as an appendix to this report.


United States is that of attracting—and retaining—riders.\textsuperscript{5} Lave suggests that transit systems lost passengers because transit did not provide the kind of service these passengers desired.\textsuperscript{6} As Smerk notes, transit systems are not like municipal water systems; they must \textit{compete} with the automobile in the marketplace of transportation choices.\textsuperscript{7} The implications for San Juan are clear: the challenge of attracting new riders to transit will depend in great part on the extent to which the needs of these potential users are understood, responded to, and communicated in a marketplace where other choices exist. In managerial terms, the success of current transit efforts in San Juan will depend on the creation and execution of an effective \textit{marketing strategy}.

\textbf{Purpose of Study}

The present study is an attempt to explore public perception of transit options with an eye toward developing an effective market positioning strategy linking new and improved services with potential users of these services.\textsuperscript{8} Though the specific goal of this study is to develop a \textit{typology} of such public perception, some tentative framing of marketing choices is attempted, and encouragement is given for an on-going market research program to further test and refine the many informal hypotheses advanced by planners regarding the potential acceptance of new transit services.

What would it take to attract mode-choice riders to Tren Urbano? While there are macro factors which place upper bounds on potential ridership (namely, access of potential users to stations and the location of stations by demand generators), the micro factors affecting the choices of potential users are of greatest concern in the short term. Given a fixed routing and station/neighborhood interface, how can the number of potential riders be maximized?

Traditional transportation planning is somewhat passive on this point; it tends to follow a process in which transportation mode choices are predicted through the determination of the systematic utility of a particular mode and the \textit{value} potential users place on a fixed set of variables (normally, travel time, walking/access time, and out-of-pocket cost). Once these values have been determined through econometric analysis, mode allocation can then be determined using statistical procedures.

While it cannot be argued that this mode of planning is useful, it also has its limitations, particularly when addressing \textit{particularities} of a given situation.


\textsuperscript{8} The nature and determinants of a market positioning strategy are discussed in the following chapter of this report.
• It is difficult to develop true measures of those qualitative variables (such as "cleanliness") which may mean different things to different people.

• It does not explain the variation in the systematic utilities of different modes.

• It tends to discount that which it cannot measure, even in cases where most thoughtful observers are aware of some factor which is clearly influencing ridership (but which cannot be easily measured, as above).

• It may easily miss variables which are causal only in particular instances (for example, public reluctance in certain cultures to ride a vehicle that was involved in a homicide).

• It may project ridership, but may fail to specify how a transit system can enjoy public political support, especially among non-riders. A transit system that develops a reputation for crime or that has a negative impact on land values may easily lose public funding support (for bond issues, as in California), even when it meets ridership targets; conversely, a transit system that doesn't meet targets early-on in its development might still be positively perceived and supported (in terms of expansion) by a larger public.

Pickrell, in his study of the gap between projected and actual ridership on US rail systems, observed that these gaps “were so large that they are unlikely to be eliminated by technical changes in the way forecasts are produced,” implying that some not-accounted-for systematic distortion is at work. Though it is beyond of the scope of the current study to formally address this question, it is worth asking whether the failure of most US-built rail systems to meet initial expectations derives from the almost universal lack of properly-developed positioning strategies, influencing system design as well as promotions, to communicate to potential users that the system was indeed designed for them.

The sections that follow in this report outline the role of a marketing strategy in positioning transit services, review research efforts undertaken previously to help define such a strategy, and describe the present study. The use of focus groups as a research methodology is given special attention. The results of a series of focus groups conducted as part of this study are presented, along with conclusions and recommendations.

A Note on Language

The field work reported in this study was conducted in Spanish, which is entirely appropriate given the predominance of Spanish in Puerto Rico. Wherever possible, Spanish names are used in this report (such as AMA for the Metropolitan Bus Authority, Centro Médico for the Medical Center, etc.). Where research data are reported in English translation, the original Spanish is also given where appropriate.

Translation is an art, not a science; whenever possible, attention has been paid to conveying the closest equivalent English meanings to Spanish expressions, even when more exact “literal” translations are available. The author is highly grateful to his Puerto Rican counterparts who have explained terms and expressions unique to this unique island.

MARKETING STRATEGY
AND PUBLIC TRANSIT

Marketing “is that aspect of an organization that links what the organization does or produces to the needs of (potential) customers.” The four elements that determine this link are referred to as the “marketing mix;” they include:

1. the design of the product or service being offered;
2. the pricing of that product or service;
3. the choice of distribution channels; and
4. the means by which the organization communicates with its market about the offering and its attributes.

The marketing function has been little understood or appreciated in most North American transit agencies. It is frequently confused with promotions, an element of the communications aspect of the marketing mix. This downgrading of the marketing function is frequently attributed to the heavy operations focus typical in transit agencies, and the failure of many agencies to better manage the relationship between marketing and operations.

Given that marketing is a management function, it follows that it benefits from relevant data and coherent strategy. The following sections outline the role of marketing research in the development of a marketing strategy and the two primary considerations through which strategy is actualized: market segmentation and product/service positioning.

Role of Marketing Research

“A true marketing effort,” Smerk notes, “must be based on careful market research.” This research is not necessarily the same as opinion polling; rather, it is specifically built around the strategic questions facing management. It must carefully consider how (potential) customers participate in a given market—what they value and why they value it—as well as

explore the dimensions of the market itself (such as the size and composition of the market and the nature of the competition and of the competitors).

The importance of market research is underscored by the situation, noted by Lovelock, Lewin, Day, and Bateson, that “management often has a biased view of the relative market positions held by the organization and its competition.”\(^\text{16}\) They give the example of a transit property that thought it had achieved a high degree of service reliability, only to discover (through market research) that its customers viewed reliability in quite different terms.

A significant aspect of any general market research program is a consideration of the competitive environment in which an organization finds itself; one failing of many customer segmentation studies is precisely this lack of competitive focus.\(^\text{17}\)

Market research is especially valuable when an organization wishes to understand how a market is divided. *Market segmentation*, mentioned above and described below, is the technique that allows an organization to target a set of customers it most directly wishes to serve. Market research can enable an organization to learn how best to serve its target segments; it can also identify how these segments would be willing to value offered services.

### Market Segmentation

Not all customers value the same product or services, or value the same attributes of these items. Market segmentation is a means of dividing a marketplace along dimensions relevant to an organization and its product or service offering. The literature recognizes many different bases of segmentation, such as by self-concept, product attributes, and beliefs about products.\(^\text{18}\)

It is generally recognized that transit’s greatest competitive threat is the private passenger automobile. An intelligent market segmentation strategy, however, can enable transit planners to identify and serve key segments for which transit can potentially compete. It has been noted that\(^\text{19}\)

> Transit’s competitive position against the automobile may vary sharply for different segments. Intelligent segment analysis, particularly that which emphasizes benefits sought, may facilitate development and implementation of marketing strategies designed to improve transit’s competitiveness for key segments.

Of especial interest to transit planners should be the relative sensitivities of different segments to service vs. price. Most transit services, as publicly-owned entities, must respond to political demands of transit-dependent riders, who are generally price-sensitive. Mode-choice

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passengers, however, are typically service-sensitive.\textsuperscript{20} This central dilemma has plagued many transit systems; a recent series of lawsuits in Los Angeles led to this observation:\textsuperscript{21}

...the Los Angeles case illustrates a more modern conflict: Transit systems must convince affluent motorists to quit clogging roads and fouling air while still providing transportation to people who can't afford cars.

Any transit service that seeks to compete with automobiles, however, will need to compete on the basis of service; once again, market segmentation only makes sense when it includes a consideration of the competitive environment:\textsuperscript{22}

The process of market segmentation... involves matching not merely customer characteristics and product characteristics, but a tripartite matching of customers and offerings and the array of competitors in the market. [emphasis in original]

### Positioning Strategy

A market positioning strategy is one that communicates to potential users (customers or clients) of a service (or product) the nature of that service in terms meaningful to the potential user.\textsuperscript{23} The importance of a positioning strategy in the service sector has been amply demonstrated in a variety of industries. Hoffman\textsuperscript{24} gives the example of the American Express card, which, though inferior to its competitors (gold VISA and Mastercard) in most “rational” measures (cost of card, ability to carry a balance, interest rate, and outlets that accept the card), was one of the “star” products of the 1980’s, largely due its positioning as a conveyor of social status. Heskett defines the positioning strategy as the crucial element linking targeted markets with the service offering.\textsuperscript{25}

Public transit in the United States has been criticized for its poor positioning in the marketplace:\textsuperscript{26}

All too often, public transit finds itself positioned in the marketplace by consumers as the low cost, low quality transportation service.

\textsuperscript{20} C. Kenneth Orski, “Redesigning Local Transportation Service,” in Charles A. Lave, editor, \textit{Urban Transit: The Private Challenge to Public Transportation} (San Francisco: Institute for Public Policy Research, 1985), p. 261. It has also been noted that “there is evidence from consumer research that, outside of the lower income groups, travelers are more sensitive to speed of service in their modal choice behavior than to the cost of service.” Lovelock, Lewin, Day, and Bateson, \textit{Marketing Public Trans}, p. 50.

\textsuperscript{21} “Suit alleges overspending on transit for white riders,” \textit{San Diego Union Tribune} (12 December 1994).


\textsuperscript{24} Hoffman, \textit{Application}.

\textsuperscript{25} Heskett, \textit{Managing}.

\textsuperscript{26} Lovelock, Lewin, Day, and Bateson, \textit{Marketing Public Transit}, p. 13.
Smerk defines the problem starkly:  

The image of transit as a service for the losers of society has to be changed, or those who identify with the winners will not be attracted.

Hoffman, in his study of the San Diego Metropolitan Transit Development Board, identified the need to re-position the San Diego Trolley in the marketplace as “the single greatest marketing challenge” facing the MTDB in the 1990s.  

Positioning is a function of both public perception and managerial choice. In the absence of a careful strategy, products or services acquire a *de facto* position in the marketplace determined in great part by how the market perceives that product’s chief relevant characteristics. When management learns what these characteristics are, it can design and promote services that meet the market’s image of what it wants. So, in this sense, *positioning* is both a *fait accompli* and a choice.

The process of developing an effective market positioning strategy for new transit services will necessarily involve the mapping of how current transit options are positioned *de facto* in the marketplace—most likely in the absence of strategic thought or intent. But the question of how new services (or even existing services) can or should be positioned is a *managerial choice*—by designing and promoting new services around attributes most highly valued by the targeted customers, management can very directly impact the ways in which the offered services are received and understood in the marketplace. The power of a positioning strategy is that it serves to organize and inform a wide range of choices, down to the specifics of the marketing mix. The current study is intended to inform this process, by generating the data from which current transit services may eventually be mapped, and providing clues as to what kinds of marketing choices might lead to an effective positioning strategy.

Marketing strategy is the means by which segments are identified and targeted, products and services are positioned, and the elements of the marketing mix are developed and refined. It is based on solid customer analysis, for it otherwise commits the error of building on untested assumptions. The importance of maintaining clarity on these points is highlighted by a review of the Portland, Oregon-area “Tri-Met Marketing Communication Plan” for 1993. Though purportedly a strategy for positioning Tri-Met transit services in the Oregon marketplace, it fails to consider the elements essential to any market strategy.

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29 It should be noted that positions do not naturally or automatically exist in a market; they are either *staked out* by management or else “fall” into a position based on public perception. While it is true that a positioning strategy may “fail” (that is, the targeted customers view the product or service differently than does management), this failure is more likely due to management’s failure to identify and respond to key attributes identified by targeted customers and/or the inability of the product or service to meet customers’ expectations as to how these attributes are to be realized.

1. It confuses “positioning” with a public-relations strategy. A positioning strategy necessarily relates the product or service offering (the first element of the marketing mix) to the targeted market segments. A public-relations strategy is primarily a communications effort; the difference lies in the degree to which the product or service is actually designed to match identified attributes.

2. Its segmentation strategy is incomplete. By dividing the market into “non-riders,” “potential riders/supporters,” “new riders/supporters,” “and regular riders,” it defines the market only in terms of the Tri-Met product, not in terms that could lead to the identification of customers for whom Tri-Met could feasibly offer competitive services.

3. It bases its positioning strategy on Tri-Met’s idea of what it is offering, not explicit customer analysis. A positioning strategy should relate a product or service to identified, targeted market segments with reference to the competition and be based on values, attitudes, or other variables identified by these segments as being important. Tri-Met’s decision to position transit “as a positive and essential part of our community and its future mobility: ‘The Transit Solution,’” makes no mention of this variable (“essentialness” of transit and the generalized “mobility” of a community) playing a significant role when targeted individuals make their modal choices. Most likely, the strategy represents Tri-Met’s image of how it would like to be seen, but it is doubtful that the positioning strategy will help the organization better compete against other transportation modes.

The development of a coherent marketing strategy for Tren Urbano will need to consider all of these issues. But most importantly, it will need to be based on a solid understanding of the marketplace for transportation services in the San Juan Metropolitan Area. The following chapter outlines studies that have been undertaken to date to help define this market.
Three previous studies provide the background to the current study. Of these, one was directly concerned with marketing issues, the first two with issues of public opinion.

**Worcester Polytechnic Institute**

A study was undertaken in the Spring of 1994 by three undergraduate students from the Worcester Polytechnic Institute to measure public perception of the Tren Urbano project among residents of selected neighborhoods near proposed station locations. The stated purpose of the study was to assess public perception of the Tren Urbano project among residents of these neighborhoods to allow the Department of Transportation and Public Works (DTOP) to address their concerns in a neighborhood outreach program and provide the public with a voice in the planning of the system. The actual study did not focus on Tren Urbano as much as on transit in general, given DTOP’s concern that a large, detailed study might lead residents to feel that the construction of the project is impending and they would organize against it.

It is interesting to note that the WPI group originally planned to conduct a focus group to find out about the neighborhood and its concerns, but that DTOP staff rejected this methodology as “time-consuming” and “a very specialized technique, not valid for statistical purposes.”

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34 Baggaley, Small, and Socha, *An Assessment*, p. 19. While there were good reasons to not conduct a focus group as part of the study—focus groups, as discussed in a later chapter, require trained moderators and further training in qualitative data analysis—the DTOP’s rejection of the method was based on two errors of understanding. The literature on research methodologies notes that, if anything, focus group studies generally can be accomplished in less time than traditional surveys [c.f., Thomas L. Greenbaum, *The Handbook for Focus Group Research*, revised and expanded edition (New York: Lexington Books, 1993), pp. 34-35, and Richard A. Krueger, *Focus Groups: A Practical Guide for Applied Research*, second edition (Thousand Oaks, California: Sage Publications, 1994), pp. 25-26]. Regarding the issue of “statistical purposes,” while it is true that focus groups cannot be used to generate replicable or projectable statistical data, the choice of research methodologies should follow the question or purpose being investigated; statistical representation is useful only when one is already sure of the value of that which one is measuring. This notion is explored further in a later chapter on choice of research methodologies.
Findings

Among the WPI study’s findings were the following points. In several cases, the terms have been retranslated here from the Spanish to avoid the at-times serious problems of mistranslation that plague the English report. This problem is dealt with below in the remarks concerning of the WPI report.

In general, AMA buses were viewed more negatively than públicos; somewhat interestingly, larger numbers of respondents voiced no opinion about públicos than did the same with buses. The following tables present the response to questions concerning acceptance of the level of quality on the particular mode for each of the mentioned variables:

| Do you think the quality of service provided by AMA is acceptable in these aspects? |
|---------------------------------|----------|--------|----------|
| Routes, “convenient” service    | Yes 29.1% | No 37.4% | No opinion 33.5% |
| Cleanliness of buses            | 23.8%   | 42.3%  | 33.9%    |
| Cleanliness of bus stops        | 22.9%   | 41.9%  | 34.2%    |
| Safety/security (seguridad) at the same | 18.1%   | 48.0%  | 33.9%    |
| Information on routes and itineraries | 19.4%   | 43.6%  | 37.0%    |

| Do you think the quality of service provided by públicos is acceptable in these aspects? |
|---------------------------------|----------|--------|----------|
| Routes, “convenient” service    | Yes 41.4% | No 18.9% | No opinion 41.9% |
| Cleanliness of the vehicles     | 21.6%   | 34.8%  | 46.3%    |
| Capacity of the vehicles        | 21.6%   | 34.8%  | 43.6%    |
| Safety/security (seguridad) at stops | 20.3%   | 35.7%  | 44.1%    |
| Hours of service                | 29.5%   | 25.1%  | 45.4%    |

The WPI study also reported that respondents listed “building a system such as Tren Urbano” and “improving the existing system of buses” as the options considered “most effective” in “alleviating traffic congestion in the San Juan Metropolitan Area” among a list that also included “making [hacer] more highways and avenues,” “improving the Aqua Expreso,” “limiting the use of private cars,” and “other.” It is not clear, however, whether “highways and avenues” would universally be interpreted to include freeways.

The WPI study also found a preliminary disposition to using Tren Urbano, with most respondents indicating a willingness to use the new system.

35 Baggaley, Small, and Socha, An Assessment, p. 78.
Remarks

While the WPI study provides interesting base-line data, care must be taken in interpreting the results of this study for several reasons.

1. The survey was conducted during the day at peoples’ residences. Those who work day jobs were severely under-represented.

2. There are a number of unsubstantiated claims in the study, inferences drawn not from the survey instrument but from discussions with interviewees. While such statements are useful, the lack of rigor in their collection make their validity suspect; qualitative data should be treated differently from quantitative data in order to avoid confusion on the part of users of these data. Examples of these inferences include the statement that “people do not use the current bus system because it is unreliable and inconvenient”\(^\text{36}\) (this can only be correctly offered as an hypothesis, since the question was not directly asked nor is any regression data offered linking transit use and perceptions of reliability or inconvenience. In fact, their study did find a statistical relationship showing that “people who do not use AMA or Publicos have a more favorable opinion of public transportation that those who do use their modes.”\(^\text{37}\), and that “in talking to the interviewees, a large number said they would rather use Tren Urbano than their cars because of the difficulty in parking and traffic congestion”\(^\text{38}\)—an interesting point, but one that should likewise be expressed as a hypothesis, not a finding.

3. It is difficult to know how to interpret responses to the survey. One person’s “acceptable” may not equal another’s; even the study’s authors were forced to speculate that “in general, many people felt that the current public transportation system in their neighborhood was acceptable because there is no alternative.”\(^\text{39}\)

4. The survey was developed in English, then translated into Spanish. While this could not be helped, there are notable differences between the two versions which were not mentioned in the final report. In particular, the use of the single Spanish term \textit{seguridad} to mean both “safety” and “security” results in an interpretational dilemma: it is not clear whether the interviewees were responding to safety (in terms of vehicle safety) or security (freedom from personal assault or related danger). Of greater concern, the question asking about safety and security is phrased confusingly (and differently from the English). For AMA, the phrase “\textit{seguridad en las mismas}” (safety or security in the same) appears below the phrase “\textit{limpieza de las paradas}” (cleanliness of bus stops); though the implication is clearly that of safety \textit{at bus stops}, it would be easy for a respondent to view the question in its context (a list of five variable describing AMA) and respond with reference to the buses, not just the stops. While the question regarding públicos is specifically directed at stops ("\textit{Seguridad en las paradas}"), both phrases differ from the English version (and the discussion of the results), in which safety is spoken of generally, not with reference to bus stops. Needless to say, this error is

\(^{36}\) Baggaley, Small, and Socha, \textit{An Assessment}, p. 58.

\(^{37}\) Baggaley, Small, and Socha, \textit{An Assessment}, p. 55.

\(^{38}\) Baggaley, Small, and Socha, \textit{An Assessment}, p. 52.

\(^{39}\) Baggaley, Small, and Socha, \textit{An Assessment}, p. 55.
serious, and can definitely lead to misunderstandings as to what respondents were attempting
to rate.

5.  The study misrepresents several questions. In a number of instances, respondents were
asked to choose from a list of options regarding “best” solutions to given problems. The
results are reported, however, as if the questions were open-ended. Though an option was
given for “others” in some cases, the results must be reported in terms of selection from a list
of options. This criticism applies to the earlier-mentioned finding regarding means for
alleviating traffic congestion; the choice of Tren Urbano and improved bus service is relative
to the other listed options, not an absolute statement of support.

The WPI report, despite its limitations, offers a useful jumping-off point for further
market and public-opinion studies. It not only generates useful baseline data, it implicitly
raises a series of questions that can help guide project development—questions such as how
to explain the more favorable ratings assigned to públicos than to buses (given that no one
apparently mentioned “improving the público system” as a means for reducing congestion).
The study also points out the limitations of survey methodologies at the initial stages of
market characterization—though such studies generate useful data, they raise important
interpretational issues that call for different research tools.

Luntz Research

A more formal study was commissioned by Tren Urbano planners in early 1995. This study,
conducted by the Luntz Research Companies,40 reports the results of a wide-scale survey
conducted among persons living or working along the general corridor planned for Tren
Urbano. The study produced the following results:

1.  When asked, “which of the following do you believe is the best solution to the traffic
and transportation problems?”, the respondents answered as follows (n=1000):41

<table>
<thead>
<tr>
<th>Best solution</th>
<th>Second best solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expand public transportation to include a public train network</td>
<td>62.6% 17.5%</td>
</tr>
<tr>
<td>Better bus service</td>
<td>26.9% 49.6%</td>
</tr>
<tr>
<td>Improve público service</td>
<td>6.2% 19.2%</td>
</tr>
<tr>
<td>Encourage drivers to use public transit by introducing tolls and increasing the tax on gasoline</td>
<td>3.0% 9.3%</td>
</tr>
<tr>
<td>Don’t know/refused</td>
<td>1.3% 4.4%</td>
</tr>
</tbody>
</table>

40 The Luntz Research Companies, “San Juan Metropolitan Area Tren Urbano Benchmark Survey Data,”
unpublished study (24 March 1995).
2. Most respondents (93.6%) said that they would use Tren Urbano at least sometime; half (52.0%) said they would use the train at least a few times per week.42

3. Of those 93.6% who at least occasionally would use Tren Urbano, in terms of primary purpose, 36.4% would use it for work, 26.1% for pleasure, 21.8% for shopping, 11.5% for medical reasons, and 1.1% for school.43

4. Respondents generally viewed public transportation as reasonably priced but not efficient. The following table portrays the survey results.44

<table>
<thead>
<tr>
<th>The current system of public transportation is...</th>
<th>...efficient</th>
<th>...reasonably priced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly</td>
<td>4.8%</td>
<td>49.5%</td>
</tr>
<tr>
<td>Somewhat</td>
<td>23.8%</td>
<td>36.3%</td>
</tr>
<tr>
<td>Disagree</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Somewhat</td>
<td>26.1%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Strongly</td>
<td>42.5%</td>
<td>3.1%</td>
</tr>
<tr>
<td>Don't know/refuse</td>
<td>2.8%</td>
<td>4.2%</td>
</tr>
</tbody>
</table>

5. The study found that, although most of those surveyed responded favorably to having a station located near their homes, 22.4% were against this possibility. This latter group cited concerns with noise, crime/undesirables, and "pollution/dirty" concerns.45

6. Those surveyed reported mean travel times of 32.7 minutes on their one-way trip to work; only 7.5% reported travel times in excess of 60 minutes. Less than one half of those surveyed had destinations in Hato Rey, the old city, or Santurce.46

Remarks

1. The documents reviewed by the research were presented in English, but no Spanish language copy of the questionnaire was included. As noted with the WPI study, this leads to definite interpretational problems.

2. The study results do not include notes on the research methodology. Once again, this lack of information makes it difficult to judge the survey results.

3. The Luntz study presents several paradoxes that go beyond the scope of the questions asked. For example, as noted above, respondents heavily favored improving the bus system over improving the system of públicos as a means of solving the traffic and transportation problems.

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problem, although the earlier WPI study found that attitudes toward AMA were generally more negative than attitudes toward públicos. It is possible that people are responding to the worse of the two problems; it is a likelier hypothesis that they do not wish to rely further on públicos as a transportation mode.

4. The Luntz questionnaire offers some opportunities for respondents to misunderstand the question. The question regarding trip time, for example, asks “how long does it take to complete a ONE-WAY trip to that destination,” [emphasis in original] which could easily be answered in terms of off-peak as opposed to peak times; the generality of the question does not make the distinction specific, nor does it inquire as to how long the trip could take under the worse of all conditions. It also does not account for the fact that some people schedule work or school trips so that they arrive early (to avoid traffic jams).

5. The statements on Tren Urbano should be taken with a hefty grain of salt; as the system is not built and operating, it is likely that most respondents have generally unformed (as opposed to experientially-formed) opinions. The literature on transit planning, in particular, notes that noncommittal survey methods tend to generate overly positive estimates of potential demand.47

As with the WPI study, the limitations of the Luntz study serve to highlight at the same time its major contributions. The generally positive opinion held by the public on Tren Urbano certainly suggests the presence of a public idea (or ideas) of the benefits such a system can provide, and raises intriguing questions as to how or why the public holds these ideas. The Luntz study, as noted above, raises the vitally important question as to why the general public does not see públicos playing a more important role in a future transportation system. The finding that only a little more than a third of potential users of Tren Urbano would use the system to commute also raises significant questions of interest to the planners and managers of this new system: where and when do the rest of these potential users plan to use the system? Do they have expectations as to where it will go, as to station location, as to operating hours and frequencies? The fact that the Luntz study is a baseline study means that it will continue as well to provide a coherent set of longitudinal data through the course of project development—data that can be used to assess the effectiveness of marketing strategy as the project progresses.

Learning from San Diego

The author of the current study conducted an earlier study applying the Strategic Service Model, a management model developed by James Heskett of the Harvard Business School,48

47 Fielding, Managing Public Transits, pp. 158-159.

48 c.f., Heskett, Managing in the Service Economy, and James L. Heskett, “Lessons in the Service Sector,” Harvard Business Review (March/April 1987). The Strategic Service Model identifies four key and three integrative elements of business strategy for service-sector enterprises. The first three of these elements outline the basis of marketing strategy: the identification of targeted market segments, the design of a clear service concept, and the elaboration of a market positioning strategy to link the targeted segments with the service concept.
to the San Diego Metropolitan Transit Development Board, developers and operators of the San Diego Trolley. The study of San Diego's experience with its trolley suggests that

There are three marketing issues confronting Tren Urbano that, if not dealt with strategically, can backfire and place in jeopardy both the ultimate success and future expandability of the project. These issues include the targeting of appropriate users, a clear development of an appropriate service concept to maximize the attractiveness of Tren Urbano to these users, and a thoughtful positioning strategy.

Based on the San Diego experience, a number of strategic decisions facing Tren Urbano were found to have marketing implications, including:

- the issue of integrating Tren Urbano with públicos;
- actual station location decisions (such as with Centro Médico);
- the choice whether or not to build one station or two to serve Río Piedras and the University;
- choice of car size;
- station design;
- means of accessing Tren Urbano; and
- whether information technology should be visible or hidden to the public in the operation of transit systems.

While no means exhaustive, the list is intended to give an idea of the kinds of planning decisions that have marketing implications, and hence should derive ideally from a marketing strategy.

The study of San Diego also yielded a number of strategic lessons of use to planners and managers of transit systems. The chief lesson to emerge from this study was the finding that a marketing perspective could be used as a planning tool to inform service design and specification. The application of a marketing perspective to the problems of developing a transit system generated unique perspectives and prescriptions that can help transit system managers frame problems and opportunities, and perhaps make better choices as a result. The study of the San Diego trolley demonstrated the importance of differentiating demand—"segmenting" in marketing terminology—as well as the importance of paying attention to how services are positioned in the transportation marketplace. The San Diego study further suggested that the physical aspects of station design help position transit systems in the mind of the public—a finding that suggests the need to develop a clear positioning strategy before engaging in facility design. Another finding of great importance to the Puerto Rico project was the "Caracas Positioning Paradox," which argued that special care must be taken in positioning transit services when serving lower socio-economic urban areas to avoid transit being linked with poverty or social pathology by the middle classes.


Remarks

The study on San Diego attempted to review the process by which a transit system was developed and the problems it encountered in this process; as such, it relied on existing data sources. It then imposed a framework for interpreting what had occurred with the Trolley. While such a study is normally useful, it is different in scope from a research study intended to test hypotheses or generate new data for use in planning a new system. The management model used in the San Diego study—the Heskett Strategic Service Model—is a framework that attempts to link marketing concerns with operations. Its chief value and application to the San Juan project derives from the finding that marketing questions can be used to frame managerial and design choices in potentially useful ways. The current study is a direct outgrowth of this finding; by asking questions about positioning and segmentation strategies (and beyond to the actual “marketing mix” that defines the core of a marketing strategy), this study hopes to contribute a coherent and systematic perspective to the many decisions facing planners and managers of transit systems.
Both AMA and Tren Urbano seek to play an increased role (obviously, in the case of Tren Urbano) in serving the transportation needs of residents of the San Juan Metropolitan Area. To do so, they will need to effectively position themselves in the transportation marketplace. As Heskett notes, a positioning strategy links a targeted market to the specific service concept by identifying characteristics important to that market, devising a means of meeting those needs, differentiating the service from the competition, and communicating the service's salient characteristics back to the target market in terms important to that market.

Any market positioning strategy for transit systems in San Juan must begin with a thorough understanding of how the residents of that region conceptualize their transportation options. This de facto positioning can then serve as the basis for the active decision to define and promote new services; by careful attention to service design, pricing, distribution, and communication strategies, these new services can be proactively positioned in the marketplace in ways understood and valued by targeted potential users.

Segmentation and Positioning Issues

The San Juan urban transportation market may be understood as consisting of two primary sub-markets: persons with access to automobiles (mode choice riders) and those without such access (transit-dependents). It is assumed that the proportion of automobile-access persons who choose to make metropolitan-area trips via a transit mode is exceedingly small, especially when compared to other comparably-sized U.S. cities. Framed another way, it is also assumed that the percentage of transit trips made by so-called “mode choice” passengers (those who could have traveled by automobile) is smaller than the average of comparable U.S. cities. These assumptions derive from the simple observation that most comparably-sized cities in the US have some form of urban rail transit, which is generally known to attract larger numbers of “mode choice” riders than bus-only systems; they are reinforced by the generally small share of trips made by transit modes within the San Juan Metropolitan Area.

It is widely suspected that San Juan is characterized by a high level of unmet travel demand, especially among those without access to automobiles. Just the same, Tren Urbano will need to attract large numbers of mode choice riders if it is to meet public expectations that the

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51 Heskett, Managing.
52 It is more proper to consider these two groups as separate markets or sub-markets rather than as segments of a single market, as members of the second group—transit dependents—do not (by definition) have access to automobiles, precluding their participation in the mode choice market.
system will help mitigate the effects of road congestion; the Luntz study previously cited relates public support for Tren Urbano to the desire for automobile congestion relief. Given this situation, the present study focuses on the modal choice market—a special challenge and a highly important market for Tren Urbano and other transit services.

Traditional planning models have been able to place values on travel time, out-of-pocket cost, waiting time, and access (walking) time with respect to Tren Urbano. A system designed only to these specifications, however, may lose or gain significant ridership (especially among mode choice riders) due to a number of other considerations that are more difficult to model empirically, such as a sense of personal security, a sense of “belonging,” or even the potential for social interaction.

To be useful, a segmentation strategy for transit services must be based on characteristics relevant to certain sets of customers, to the transit organization, and with respect to the competition. It follows, therefore, that market research will need to identify both attributes of transportation services which are valued in the marketplace, and attitudes held by individuals in this marketplace with regard to the products and services being offered. The development of an effective service positioning strategy, it follows, can then be based on a clear understanding of how the targeted market segments view their own needs, the competition, and the proposed service(s). This strategy not only can build on an understanding of what characteristics are important to potential customers, it can also identify, and hence communicate in, the language these customers use to describe transportation choices.

The key question driving the process of identifying market segments is that of uncovering the dimensions by which markets can be segmented; as Heskett notes, innovative segmentation strategies can allow service sector enterprises to exploit niches that may not be adequately served by existing options. This process involves exploration of attitudes held by area residents toward driving, public/private space, sharing of space, congestion, walking, transit modes, and personal security.

**Research Problem**

The problem to be investigated in this research is therefore an initial exploration of the ways in which targeted segments of the San Juan modal-choice transportation market conceptualize transportation modes, perceive issues of urban mobility, assign societal members to transportation modes, and value aspects or dimensions of transportation service. A related but nonetheless integral aspect of this research must consider the kinds of places potential customers are attracted to, the language people use to describe transportation, and the kinds of behavior people manifest when traveling.

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53 There is actually considerable debate as to whether Tren Urbano—or any urban rail project—can reduce traffic congestion, or whether these metro systems instead increase the capacity of urban areas to move people along certain corridors. Just the same, such projects are usually promoted as a means of reducing (or otherwise responding to) traffic congestion. For a discussion of the themes used in promoting transit construction projects, see Hoffman, *Application*.

54 Heskett, *Managing*. 

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The research problem may be formalized into a series of five questions:

1. How do persons within the mode choice market view the primary competitor (i.e., automobiles and highways, as well as parking and toll-charge “shortcuts”)?
2. How do these persons describe and characterize the different modal options available to them (specifically, AMA, Metrobus, públicos, Aqua Expreso, walking, and getting rides)?
3. How do these people describe different places that might give clues as to the urban form that transit services should support or provide?
4. What travel behaviors and attitudes are salient to people's description of modal choice?
5. What social perceptions influence behavioral choices, especially with relation to transportation (such as feelings of security, gender and status differences, and socio-economic status)?

These questions are necessarily broad, as previous research has not explored these issues in any great depth. The breadth of the issues necessitates a qualitative methodology capable of capturing the range of expressions and attitudes which could prove important in the formulation of marketing strategy for transit services. The specific methodology selected in this study is that of focus groups; the technical requirements of this methodology, and the theoretical issues surrounding its use, are considered in the following sections. The use of focus groups will allow for the development of market-derived data relevant to addressing each of the above questions; on the basis of these data, further research can more appropriately and confidently measure that which is crucial and ask that which is relevant.

Applications of the Findings

There are a number of service dimensions which have yet to be defined for both the AMA restructuring and for Tren Urbano. Among these are issues regarding the interface between transit and the city (including station design, station-area zoning, urban form, catchment basin strategy, etc.), the operation of transit (including the role of personnel, the size and seating arrangement of vehicles and of waiting/staging areas, payment strategies, etc.), and the image of transit (modern, high tech, colonial; imported or domestic; perception of security, etc.).

The purpose of focus group research, therefore, is to identify the themes which may be important in answering the above questions. While it has not been possible to actually work directly with those managers responsible for framing options and decision criteria, nevertheless, an attempt has been made to suggest a range of such decisions and the nature of the criteria which might guide the decision-making process.

Planners of Tren Urbano are faced with a wide range of design options on those issues most directly related to the actual service that will be offered to potential customers. They generally fall into the following categories:

- the identification of potential customers and the development of a clear profile of these segments’ needs, preferences, and expectations;
- the interface between the Tren Urbano system and the surrounding metropolitan area;
the physical design of Tren Urbano, both fixed installations (stations) and the trains
themselves, including the furnishing and decoration of the two;
the characteristics of service that will be provided; and
the information and promotional strategies that will form the primary communications
between Tren Urbano and the general public (including potential customers).

AMA management is also faced with a range of decisions regarding the restructuring of San
Juan's municipal bus system. In order to build ridership, it must identify and target those
who are not presently regular users of the system and devise services that will attract this
segment to AMA buses. Among the decisions potentially facing AMA are the following:

- Should AMA upgrade service on all lines, or instead launch a “premium” service (much
  as Metrobus) to attract new riders?
- What kinds of routes and connections are most likely to appeal to new riders?
- What aspects or features of bus service are the greatest detriment to new riders? What
  aspects or features are perceived as plusses?
- What kinds of amenities (both at bus stops and on buses) would be most meaningful to
  potential riders?
- What “image” should AMA strive for? How should AMA position its services in the
  marketplace?
- What communication channels would be most effective for attracting targeted
  customers?
- What information needs would customers—potential and actual—have, and how could
  these best be met?

A Note on the Limitations of the Study

The current study is concerned with transportation; it is not an opinion poll on Tren
Urbano, nor does it have said project as its explicit focus. The study instead focuses on
perceptions of transportation and related issues as they are presently constituted.

This distinction is crucial, and it derives from the nature of qualitative research. The
strongest positioning strategy is based on an intimate understanding of how a target market
views and values its options. Given that Tren Urbano is not yet built, nor widely publicized,
the process of opinion-formation has not yet advanced significantly. This process is a social
process; as Krueger notes,

> Attitudes and perceptions relating to concepts, products, services, or programs
> are developed in part by interaction with other people... People may need to
> listen to opinions of others before they form their own personal viewpoints.

The current study therefore was developed on the basis that it would be of greater value to
uncover how residents of the San Juan Metropolitan Region view their current, known
options, than to explore in great detail perceptions that have not yet been fully formed.

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The current study makes use of focus groups as its primary research methodology. The following discussion explains how the research was conducted; the theoretical issues surrounding the choice of this methodology are considered in a later chapter.

Focus groups are a form of group interview designed to allow participants the greatest ability to reveal that which is salient to their understanding of some issue or topic. Krueger identifies a focus group as...

...a carefully planned discussion designed to obtain perceptions on a defined area of interest in a permissive, nonthreatening environment. It is conducted...by a skilled interviewer. The discussion is comfortable and often enjoyable for participants as they share their ideas and perceptions. Group members influence each other by responding to ideas and comments in the discussion.

As Krueger further notes,

Careful and systematic analysis of the discussions provide clues and insights as to how a product, service, or opportunity is perceived.

In the course of a focus group discussion, the moderator poses questions (or raises points) from a prepared outline. He (or she) then follows the course of the conversation, noting phrases, expressions, and the general understandings and perceptions revealed by group members. A skilled moderator can then ask probing questions to uncover the mental constructs underlying expressions and understandings. This ability to “uncover” meanings and exploit social dynamics is the hallmark of focus group research. Consequently, this methodology has enjoyed immense popularity in the marketing field, especially for shaping marketing strategies.

There are generally eight steps involved in focus group research:

1. Formulation of the research question;
2. Identification of the sampling frame;
3. Identification of the moderator;
4. Generation and pretesting of the interview guide;
5. Recruitment of the sample;
6. Conducting of the group;

56 Krueger, Focus Groups, p. 6.
57 Krueger, Focus Groups, p. 6.
59 Stewart and Shamdasani, Focus Groups.
7. Analysis and interpretation of data; and 
8. Writing of the report.

The first stage (formulation of the research question) has been dealt with above; the others are introduced below.

**Sampling Frame**

This study targeted four classes of automobile-dependent residents of the San Juan Metropolitan Area: secretaries and other white collar workers in Hato Rey, medical workers in the Centro Médico area, and upper-middle-class university-age youth. The sampling frame thus allowed for some discrimination based on age, sex, and occupation.

One focus group was conducted with female secretaries employed in offices located near a proposed Tren Urbano station in Hato Rey. The reasons for selecting this group were as follows:

1. Safety concerns have been consistently mentioned by San Juan residents as paramount (witness the ratings assigned to safety issues in the WPI study, cited previously); it was hypothesized that women would be likely to be more concerned with personal safety than men, and that women make up the vast majority of all secretaries in Puerto Rico;

2. This group likely represents a reasonable share of the potential market for Tren Urbano and improved AMA services;

3. This group is more likely to be price sensitive than better-paid office workers, and hence might be expected to show greater transit use, *ceteris paribus*.

Another focus group was conducted with office clerical workers from the same office tower. This group shares the characteristics of the first group, except that it tends to have a much larger male representation and somewhat higher income.

A third focus group targeted medical workers in the Centro Médico area; with over 20,000 employees, this center represents a major trip demand generator (and source of traffic and parking congestion) in the San Juan Metropolitan Area.

A fourth focus group was conducted with university-age youth; this group is a likely market for transit services, yet had been little-studied in San Juan.

Details of the four focus groups are presented in the following table.
The decision to conduct focus groups with the four groups chosen was driven by practical and theoretical considerations. Given that the first segment of Tren Urbano will serve three primary demand generators: the Centro Médico medical area, the main campus of the University of Puerto Rico, and the commercial center of Hato Rey, it was postulated that workers (or students) from these areas would make up the natural market for new transit services. It was further postulated that workers occupying the larger share of jobs in these centers—primarily semi-skilled but non-professional positions (or students, in the case of the university) should represent the target markets toward which transit services should be designed and promoted, given that these groups would tend to be more price sensitive (and hence more easily disposed to transit) than executives and higher-level professionals.60

Furthermore, office workers in Hato Rey were divided into general white-collar workers (oficinistas,61 or clerks) and secretaries, with the hope of isolating gender-specific issues (given that secretaries are overwhelmingly female in Puerto Rico) that might not emerge in a mixed group. In retrospect, it might have been worthwhile to conduct a group with only male participants62

The use of homogeneous groups is highly encouraged in the literature.63 Krueger especially recommends homogeneity in terms of occupation and downplays the role of randomization.64 The reasons are simple: people who share relevant characteristics or experiences are more likely to be able to sustain a viable discussion; their base of shared meaning is that much broader.

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60 This may not be necessarily the case, though it offers a good starting point for the purposes of developing a market segmentation strategy.
61 This word is not commonly used in Puerto Rico, though it is apparently understood.
62 Several notable differences between male and female transportation-related behavior were noted in the different groups; in virtually all cases, men drove when traveling with their wives, men kept the cars during the work day, and men were more likely to be referred to when discussions centered on the automobile's impact on a person's identity. Though men (the moderator and an observer) were present in the secretaries' group, the conversation still managed to capture gender-specific issues. These are discussed later in this report.
63 "The rule for selecting focus group participants is commonality, not diversity." Krueger, Focus Groups, p. 14.
64 Krueger, Focus Groups, p. 77 and p. 87.
Socioeconomic composition

Participants in the groups were generally not questioned as to their socioeconomic status. Just the same, some characterizations may be made, based on other information revealed by group participants (such as place of residence, number of cars in family, characterization of spouse’s employment, and out-of-country travel experience).

The medical workers as a group showed the greatest range in socioeconomic status, as the group included persons with working-class backgrounds (such as ambulance drivers) and office managers. This group was characterized by a Puerto Rican observer as ranging from working class to middle middle-class.

The secretaries all reported working spouses. They generally appeared to be lower middle-class (ranging to middle middle-class); as a group, they had little experience outside Puerto Rico.\textsuperscript{65}

The office workers appeared to be better-paid (and occupying positions of higher responsibility) than the secretaries. They were characterized as middle middle-class, though some \textit{may} have belonged to the upper middle class.

The students were clearly members of the upper middle class, and freely identified themselves as such. Their families enjoyed sufficient resources to send them all (for study or for pleasure) to the U.S. While they were quite conscious of money, they appeared neither hobbled by financial circumstance nor overly blessed.

Group size and number

The groups conducted in San Juan (secretaries, medical workers, and office workers) ranged from 7 to 9 participants. This size is within the range recommended in the literature on focus groups,\textsuperscript{66} though some specialists consider a minimum of 8 participants more typical.\textsuperscript{67} The student group was significantly smaller; the methodological issues involved in “mini groups” are discussed below. It is also instructive to note that the literature on Puerto Rican culture signalizes the importance of groups of 5 to 8 persons in terms of “bonding” and group interaction.\textsuperscript{68}

The number of groups conducted, four, fits within the number specified in the research literature; Krueger notes that the typical study uses a minimum of three groups;\textsuperscript{69} Stewart and Shamdasani suggest that most studies are conducted with a maximum of three to four

\textsuperscript{65} The students in particular identified travel outside the island as a hallmark of class status; while poorer classes \textit{might} travel to the U.S., foreign travel (including to the U.S.) was an activity of choice among the higher classes.

\textsuperscript{66} Krueger, \textit{Focus Groups}, p. 6.

\textsuperscript{67} Stewart and Shamdasani, \textit{Focus Groups}, p. 10. The emphasis is on “typical,” not “recommended.” Other researchers, such as Krueger, recommend groups of 6-9 as being more ideal. Krueger, \textit{Focus Groups}, p. 78.


\textsuperscript{69} Krueger, \textit{Focus Groups}, p. 6.
groups. The literature supports a group length of 90 minutes (the length of each of the four groups conducted).

**Use of “mini-groups”**

Of the four focus groups conducted in this study, one—that of the university students—was what the literature describes as a “mini-group” of four persons. Such groups, made up of only 4-6 participants, are growing increasingly popular in marketing research. While the reason for the small group was logistical—it was not possible to recruit a larger group at the time—the trend to smaller groups is also supported for methodological reasons; Krueger explains that the old dictum of needing 10 to 12 participants for a focus group is largely unworkable with complex topics. Smaller groups...offer more opportunity for individuals to talk.

Krueger further suggests that smaller groups are preferable when the participants have a great deal to share about the topic or have had intense or lengthy experiences with the topic of discussion.

Anyone who has experienced the daily traffic congestion of San Juan (or who has had an eventful ride on the AMA buses) can appreciate that the participants in this study have certainly had “intense or lengthy experiences” with mobility in the San Juan Metropolitan Area. Indeed, it is the researcher’s conclusion, having conducted the four groups, that smaller groups would have proven easier to manage, and would likely have generated higher-quality data.

**Moderator**

The author of this study moderated the four focus groups. Greenbaum identifies a number of “natural” characteristics and “learned skills” that define an effective moderator. The former include abilities to listen, recall, and respond, in addition to a “high energy level;” the

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70 Stewart and Shamdasani, *Focus Groups*, p. 57.


73 This reason is actually cited in the literature as both a reason for conducting mini-groups and an emerging necessity (i.e., the growing difficulty researchers have in assembling larger groups in “over-researched” populations). Greenbaum, *Handbook*, p. 3 and p. 147. The presence of an additional Puerto Rican observer (plus the moderator) led to a total group size of six people—exactly in the range spoken of earlier by Nine Curt as being the ideal size for effective group interaction among Puerto Ricans (Nine Curt, “Nuestra Divina Saterfa,” p. 6.)

74 Krueger, *Focus Groups*, p. ix.

75 Krueger, *Focus Groups*, p. 79.

latter include prior relevant business experience, category experience, and good communication skills.

The author is trained in qualitative research, and has conducted a number of qualitative and evaluative studies, in addition to previous focus groups, in both English and Spanish. He has experience in transportation marketing specifically and is informed as to transportation issues in general.

**Interview Guide**

An interview guide was generated and tested in the first of the groups (the student mini group). This guide consisted of a variety of themes to be covered during the group conversation, and included the use of three photos to generate direct responses (among the three groups conducted in Puerto Rico itself). The moderator generally attempted to steer the conversations to cover the points mentioned in the guide, and asked for clarification and further explanation when deemed necessary. The interview guide followed the directive...

…to provide direction for the group discussion. It is not a verbal version of a survey questionnaire; survey questionnaires provide a great deal more structure... [and]  
often provide both questions and potential responses.

The interview guide consisted of four principal parts. The first was an introduction, specifying the introductory activities of the focus group. The second part began the actual discussion, in which the general question of "what it's like getting around San Juan" was broached. The third part focused more directly on areas of specific concern, and the fourth part contained key points to be covered. A closure activity completed each group.

While the interview guide serves as a primary resource for the group moderator, it does not necessarily serve as a sequential guide to activities. The fluid nature of focus groups typically involves several "waves" of discussion touching on central issues, interspersed with tangents. It must be emphasized again that the interview guide is not a set of direct questions; it is a guide to areas the group's conversation should cover at some point. Effective focus group moderation requires that the moderator be skilled in directing a conversation without providing "leading" cues to the participants.

A copy of the final interview guide follows.

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77 The author has completed three courses at the graduate level (at Harvard University and Florida State University) in qualitative research and ethnography, in addition to two courses in consultation and additional coursework in group and social behavior. He has conducted qualitative studies among the Shuswap people of Canada (1984), immigrant employees of Boston's Beth Israel Hospital (1988), inter-cultural couples (1989), Central American governmental leaders (1991), and Guatemalan businessmen (with Regina de Alfonso, 1992).

78 The author recently developed a marketing strategy for Boston's Airport Water Shuttle for Beacon Management Company; he has also studied transportation issues (and public transit) at the graduate level at MIT.

79 Stewart and Shamdasani, *Focus Groups*, p. 61.
Focus Group Outline

Introduction
Bienvenidos. Soy investigador del Centro para el Estudio de Transporte en el MIT. Estoy estudiando la situación de la congestión en San Juan. Según entiendo, es algo difícil andarse en la ciudad, dado toda la congestión. Lo que me gustaría explorar en esta discusión es cómo la congestión impacta a Uds. y su habilidad de andarse, ir a trabajo, hacer compras o visitas. Mucho agradecería si Uds. me ayudan a entender cómo es su situación.

Quiero pedir disculpas de antemano si muestro ignorancia de su país, su cultura o su lenguaje. Si es obvio que no capto algo, por favor, dígámenle y les prometo aprender.

Voy a empezar con algunas preguntas generales.

Warm-up
• What's it like getting around San Juan?
• Is your decision where/when to go somewhere affected by transportation considerations?
• Do you make stops on the way to or from work? (Esp. school trips?)
• Do you travel alone or with someone?

Details and key questions
• What are the AMA buses like?
  • Who rides them? What does it say about someone if they use AMA?
  • Would someone who has a car use them?
  • Would you ever ride them?
• Describe AMA buses (and using them).
• Is it safe taking the bus? Why or why not?
• Waiting
• Transfers
• Comfortable? Would smaller or larger buses make a difference?
• Frequency:
  • vs. Punctuality
• how frequent is frequent?
• What about Metrobus?
  • Is it different from AMA (waiting, reliability, security)
  • Who rides it? Do they have cars?
• What about the públicos?
  • Who rides them? Why would someone use a público instead of a bus?
  • Would you ever ride them?
  • Is there a future for públicos?
• Some cities have subways. What do you know about them?
  • Who rides them?
  • Are they safe?
• What about driving?
  • Do you enjoy it? What don’t you like about it?
  • Do you like being driven?
  • Is a car important to a person’s identity? What does a car say about someone?
  • Would you ever give up your car?
• What about walking?
• Where do people enjoy going (where they feel safe)?
  • What’s so special about Plaza las Américas?
    • Is the Plaza “nuestro” or foreign?
    • What makes a place puertorriqueño?
  • What makes a place feel safe? (Lighting? “Alegre”? Guardia?)
• What’s with these gated communities?
  • Is it better to live that way? Is it preferable to wall-less communities?
• Images
  1. Subway stop: please describe. What do you feel?
  2. On overhead platform: Do these women feel safe? Why? Do they have cars?
    • What social class are they?
  3. Inside metro car: Are the people comfortable? What social class are they?
    • Why are they riding the metro? Are they puertorriqueños?

**Key content**
• Under what conditions do you walk?
  • For getting somewhere?
  • Alone or in groups?
  • How far away do people park?
• Why don’t more people use the puente Moscoso? (Expense only? Time not worth it?)
• What is the current danger of criminality in San Juan?
  • When is one at risk? How can one tell?
    • Physical setting
    • Persons who are threatening
  • When does one feel safe?
  • Is one safer in a car, on a bus, or in a público?
Moderating techniques

The literature describes a range of moderating techniques used to elicit quality emic data in focus groups. These techniques generally fall into three categories:

- **Projective techniques**, used to generate associations between relevant variables;
- **Probing techniques**, used to delve further into statements and search for concrete examples of abstract points; and
- **Control techniques**, used to compensate for poor group dynamics.

The present study made use of one projective technique, “situational associations,” in which photos of three transit situations (an underground subway station, an elevated metro station, and the interior of a metro car) were used to generate a range of responses. The study also made extensive use of “laddering,” a probing technique used to uncover the sources of underlying feelings. The importance of this technique is underscored by Greenbaum, who notes:

> The essence of laddering theory is that the initial explanation that participants give for a feeling they have is not the real explanation or the one that will make the difference in terms of reaching a target customer.

The use of control techniques in this study raises some fascinating questions of cross-cultural group research. Greenbaum identifies two primary control techniques—assuring participants' authenticity by having them write down their answers first, and controlling dominant participants through a number of means. The moderator attempted the first of these techniques with the photos which were distributed (one at a time) in the three groups conducted in Puerto Rico. While there was general compliance with the first photo, the

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80 The notion of *emic*, or participant-generated meaning, is discussed in the section on choice of research methodologies which appears in the following chapter.


participants in all three groups essentially refused to comply with the instruction that they write their responses before discussing the photos, even though the instructions were repeated and emphasized.

What happened? The author can only hypothesize that the participants strongly desired to socially validate their perceptions before committing to them. While this dynamic may lead the North American researcher to push harder in isolating views before they are socially formed, an alternative response would be to allow the process of social validation to occur, precisely because of the tendency or willingness of Puerto Ricans to moderate or form their perceptions socially—a tendency not nearly as widespread among "low-context" cultures.\(^8^4\) In the Puerto Rican case, the desire of persons to confirm their observations did not seem to detract from the presence of opposing views, but it did seem to allow persons to express their commitment to the group before staking out different points of view.

The moderator also exercised control techniques in the presence of dominant members, mostly by calling directly on certain members for their views or by asking for "other" views. The moderator was by no means completely successful in this endeavor, and recommends, for those moderators not intimate with the cultural forms of Puerto Rico, the use of a Puerto Rican counterpart to serve explicitly as a co-moderator, with the function of controlling (or compensating for) dominant members.

### Choice of participants

Selection of the actual individuals could not be done directly by the researcher, due to a number of practical concerns:

1. Three of the groups needed to be organized quickly during a study trip to San Juan;
2. Lack of adequate budget and staff worked against more extensive pre-selection of participants; and
3. In all of the cases, the focus groups depended on the good will of institutions and individuals willing to support the research.

This last point is of exceptional importance. The two groups in Hato Rey were made possible only through the efforts of several individuals to phone office managers throughout the targeted building, and the resulting agreement of these managers to allow their employees to take (paid) time from their jobs in order to participate in the study. The group in Centro Médico was assembled under the direction of the chief of one of the major departments as a favor to the father of an MIT undergraduate working as a researcher on the project (!), and the group of students in Cambridge was organized by that same undergraduate.

\(^{8^4}\) Carmen Judith Nine Curt, "Cross-Cultural Communication among Puerto Ricans and Anglos from a Nonverbal Perspective," unpublished manuscript (San Juan, Puerto Rico: 1994), p. 24. The concept of "high-context" and "low-context" cultures is derived from the anthropological literature. Nine Curt cites Puerto Rico as an example of a "high context" culture, one in which social meanings are extensive, shared, and of extreme importance.
While efforts were made to ensure that the persons participating met the basic standards set forth in an invitation letter (attached as an appendix to this study)—that they be auto users—the lack of direct control over participant selection led to an unusual and potentially destructive situation in which the organizer of the Centro Médico group decided to invite a woman known throughout the complex as being among the more die-hard users of public transportation, because the organizer thought her views should be represented. This person, identified in the transcripts as “FTP” (Femenina, Transporte Público), did attempt to dominate the session, disagreeing with many of the comments and attempting to convince others to her view. On the other hand, it was noted that her participation did little to stifle these “opposing” (or, judging from the context, “different” as compared to “opposing”) views, and in fact served to highlight some of the differences in perception among automobile-dependent and public transit-dependent groups.

A greater theoretical problem was presented with the first of the groups conducted (that of the students). While there is considerable debate as to whether it is valid, for purposes of analysis, to conduct a mini group with people who are already well-familiar with each other, there is also strong support for the view that adolescents, in particular, are extremely peer-focused, and hence would tend to more greatly represent the views of their broader set of peers. In addition, the four students, though friends from high school, had been apart for several months and hence re-socialized in different youth environments; as a consequence, while great caution should still be exercised in drawing inferences from this group, it would be equally ill-advised to dismiss this group as irrelevant to the purposes of this study.

Logistical arrangement and the conduct of the groups

Of the four groups held, the first, among students, was conducted on 23 November (Thanksgiving Day) in the student lounge of the Center for Transportation Studies at MIT. The group had been assembled by a Puerto Rican undergraduate at MIT from graduates of her high school in San Juan. A bagel and muffin brunch was served prior to the formal discussion, which lasted approximately 90 minutes.

The two groups conducted in Hato Rey (secretaries and office workers) were held in the conference room of the Puerto Rican Private Industry Council, which very kindly donated use of its space in support of the purposes of this project. An noted earlier, participants for both groups were identified by office managers throughout the Plaza Mercantil building at the request of the building’s general manager. The author of this study cannot overemphasize

85 Krueger, noting that the issue revolves about whether participants may be responding more to past experiences with each other, or whether familiarity might inhibit disclosure, nonetheless points out that “Focus groups have traditionally been composed of people who do not know each other… More recently, however, researchers are questioning the necessity and practicality of this guideline.” Focus Groups, p. 18.

86 Templeton notes that “Adolescents are more peer-centripetal (more conforming as a group) than adults between the ages of 21 and 65,” implying a greater tendency to represent their reference group. The Focus Group, pp. 107-108.

87 c.f. the invitation letter included as an annex to this report.
the extent to which these and other individuals went out of their way to aid and support this research effort. Once the participants had been identified, they were each offered their choice of a free lunch, which was delivered to the conference room and eaten in the half hour before the formal discussion began. Though the moderator made a tremendous effort to avoid discussion of transportation themes during the lunch, it was inevitable that some (though not much) discussion of traffic did occur.

The arrangements for Centro Médico were made entirely by Centro Médico staff at the request of a consultant to the director of one of the Centro Médico divisions. This consultant, the father of the undergraduate assisting with this study, explained that the research was part of the Tren Urbano effort. Though the author attempted to explain to the person actually organizing the employee participation that the study was about transportation and not about Tren Urbano, it was clear, judging from concluding remarks made by group members, that they wished to express a variety of views about Tren Urbano. Just the same, the range of views and disagreements manifested in the group lend credence to the conclusion that views of the Tren Urbano project did not overtly color earlier remarks; one possible explanation is that the participants do not classify Tren Urbano with other transit modes, nor do they expect the use of Tren Urbano to be conditioned or otherwise be dependent on modal connections.

The Centro Médico group differed from the other groups in two other respects. First, a snack (of sandwiches and beverages) was served at the conclusion, not beginning, of the group. Second, the group began approximately 40 minutes after the arrival of the first participants; the other members needed to be “rounded up.” Even so, several persons arrived shortly after the group began. In terms of group process, though, this “accident” allowed some group formation and bonding to occur that became methodologically useful when the transit-dependent person arrived (as noted above); the group had already established some degree of trust and bonding around the common problems of mobility for automobile-dependent persons, and was able to maintain this bond even in the face of at times quite vocal disagreement.

All of the groups were tape recorded, with the cassette recorder being introduced before the initiation of the formal discussion. In all cases, the moderator offered to turn off the tape at any time for any reason. The tape recordings served as the basis for preparing written transcripts, though notes were taken as well by both the moderator and at least one other observer who had been briefed prior to the meetings.

The use of tape recorders is common practice for qualitative research, though there are practical problems with this practice. As Krueger warns, 88

Tape recorders shouldn’t be completely trusted. Murphy’s Law dictates that the most insightful comment will be lost when the tape is being switched or when background noise drowns out voices on the tape.

In consideration of the problems with tape recordings, a variable-speed transcriber was used to help isolate comments made in the presence of background noise, and the final transcripts

88 Krueger, Focus Groups, p. 11.
were checked against the group notes to fill in gaps where necessary. Still, some comments were irretrievably lost to the detriment of further insights into customer behavior. The author would recommend that future studies avail themselves of multiple tape recorders and multiple microphones to reduce this potentiality.

**Analysis and Interpretation of Data**

Written transcripts were produced of the four focus groups. These transcripts were then subjected to a content (category) analysis, in which comments were grouped by emergent themes and then related to the initial research questions. The resulting data was then used to suggest descriptive categories, or typologies, of public perceptions of transportation options and related themes as discussed in the earlier sections to this report.

**Analysis of qualitative data**

The analysis of qualitative data is a six-step process, as outlined by Krueger. 89

1. “Sequencing questions to allow maximum insight,” which was represented in the focus group outline through the phasing of questions and topics.
2. “Capturing and handling data,” which was accomplished through tape recordings and written notes.
3. “Coding data,” which formed the primary analysis methodology.
4. “Participant verification,” which was done within the groups by the process of repeating back summary statements for affirmation or correction.
5. “Debriefing between moderator and assistant moderator,” which in all cases was conducted (with the non-participant observers).
6. “Sharing of preliminary and later reports,” of which the current report is the first step.

Qualitative data is typically subject to content analysis, a process by which raw masses of data are categorized, assigned, and interpreted. The two most common mean of content analysis involve “cutting and pasting” segments of the discussion transcripts based on theme and “key-word-in-context” analysis based on the identification of where and under what conditions key words are used by the participants. 90

**Content analysis**

The process of content analysis used in this study derives from Krippendorf, 91 who defines five levels of “content units.” These units, and their application to the present study, are as follows:

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Content Unit | Application to this Study
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Physical Units | Focus Groups are the physical units being studied. There are other sources of data which might be used in a market research effort, including site observation. The choice of this physical unit was made for methodological and practical/logistical reasons.
Syntactical Units | Each focus group represents a single syntactical unit. Data is analyzed, where appropriate, in terms of specific focus groups and their group processes.
Referential Units | These are the themes or topics around which discussions occurred. A segment of a focus group that dealt with públicos, for example, was treated as a referential unit. Each of the four transcripts was coded on the basis of revealed referential units.
Propositional Units | For each referential units, participants made a number of statements. These statements are the basic propositional units which form the basis for developing a typology of public perceptions. These units are described in great detail for each referential unit.
Thematic Units | Thematic units span the syntactical units (i.e., the different focus groups). These are the recurrent themes that emerged in multiple groups.

The process of content analysis, therefore, involves the definition of referential units and of the propositional units which comprise these referential units. Thematic units, the final typology, is the final product of this kind of analysis.

**Products**

The results of the focus groups, and their initial implications to marketing strategy, are described in the following sections of this report. Where appropriate, actual participant statements are used to illustrate the identified themes. These statements have been edited for clarity and translated into English; where illustrative, the original Spanish is included.

The need to edit participant statements is well-supported in the literature, as long as such editing is intended to preserve and communicate the intended meaning. Most statements are not made in conventional sentences, but frequently include complete breaks, run-ons, and other structures that do not translate well into print. To provide other reviewers with the opportunity to verify the analysis and translation, each statement in the transcripts was assigned a unique code; any of the statements reported in this study may therefore be referenced back to the original data, which will be kept on file in the Center for Transportation Studies at the Massachusetts Institute of Technology.

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FOCUS GROUPS
AS A RESEARCH METHODOLOGY

The present study makes use of a qualitative methodology—focus group interviews, or focus groups—due to the particular suitability of this technique to the research question. Focus groups are useful in a variety of situations, though care must be taken to avoid the common abuses of this, and other qualitative, methodologies. The literature on research methodologies provides frameworks for ascertaining the appropriateness of quantitative or qualitative techniques in given research situations.

Purpose of focus groups

Focus groups are both a widespread and widely misunderstood technique of generating knowledge useful to management decision-making. Roy Bostock explains,93

Perhaps no technique for gaining useful information in the world of business generally, and in the arena of marketing specifically, has been used more often... than focus groups. And perhaps no technique has been as controversial and as misunderstood...

Focus Groups [are] an indispensable and enormously beneficial step in gathering usable and pertinent information on which to base strategic and executional decisions.

Though focus groups have been widely adopted by the private sector, their use in the public and nonprofit sectors only became common in the 1980s, as decision-makers in these sectors began to recognize the need for qualitative information.94 They are particularly useful when public services are designed or promoted by those lacking a strong market orientation; Stewart and Shamdasani note that:95

It is often the case that government planners, product design engineers, and other professionals who design products and services believe that they understand what their clients or customers need or “should” want. Focus groups provide a tool for testing the reality of assumptions that go into the design of services, programs, and products.

Focus groups, and much qualitative research in general, differs from such typical quantitative methods as surveys in their basic purpose. Krueger explains:96

94 Krueger, Focus Groups, viii.
95 Stewart and Shamdasani, Focus Groups, p. 103.
96 Krueger, Focus Groups, p. 87.
the intent of focus groups is not to infer but to understand, not to generalize but to
determine the range, not to make statements about the population but to provide
insights about how people perceive a situation.

In other words, focus groups are especially useful for delineating the kinds and types of
connections people make when talking about—hence, hopefully, thinking about—
situations, objects, or ideas. They "allow individuals to respond in their own words, using
their own categorizations and perceived associations."97 This kind of data is useful in
generating models of how individuals respond to and relate different phenomenon; it is
especially useful when planners (or researchers) are not even aware of what relationships
might exist. It is therefore of no surprise that focus group research is frequently used "for
purposes of developing hypotheses that then are tested or validated with other types of
research."98

The literature identifies a broad range of uses for focus groups. Krueger suggests six such
uses:99

1. Insights are needed in exploratory or preliminary studies.
2. There is a communication or understanding gap between groups or categories of
   people [especially when a power difference exists between these groups].
3. The purpose is to uncover factors relating to complex behavior or motivation.
4. The researcher desires ideas to emerge from the group.
5. The researcher needs additional information to prepare for a large-scale study.
6. The clients or intended target audience place high value on capturing the open-ended
   comments of the target audience.

Stewart and Shamdasani, citing Bellenger, Bernhardt, and Goldstucker, and Higgenbotham
and Cox, suggest seven common uses of focus groups:100

1. obtaining general background information;
2. generating research hypotheses that can be submitted to further research and
testing using more quantitative approaches;
3. stimulating new ideas and creative concepts;
4. diagnosing the potential for problems with a new program, service or producer.
5. generating impressions of products, programs, services, institutions, or other
   subjects of interest;
6. learning how respondents talk about the phenomenon of interest [with especial
   application to the design of further research tools]; and
7. interpreting previously obtained quantitative results.

Greenbaum identifies nine specific kinds of studies that make use of focus groups:101

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97 Stewart and Shamdasani, Focus Groups, p. 13.
98 Stewart and Shamdasani, Focus Groups, p. 113.
99 Krueger, Focus Groups, pp. 44-45.
100 Stewart and Shamdasani, Focus Groups, p. 15.
1. new product development studies, to assess reactions to, and identify strengths and weaknesses, of a concept;
2. positioning studies, to find the most appropriate way to talk about individual products and services;
3. habits and usage studies, commonly a prelude to quantitative studies;
4. packaging assessments;
5. attitude studies, to explore feelings on different products and services, especially useful for developing effective publicity campaigns;
6. advertising copy evaluation;
7. promotion evaluations, to explore customer reactions to promotion concepts;
8. idea generation, to stimulate ideas in the client by discussing specific problems; and
9. employee attitude and motivation studies, to explore corporate employees' attitudes.

Given the broad aims of the present study, the use of focus groups is supported by the literature. The study fulfills purposes 1-5 of Krueger, all seven of Stewart and Shamdasani's framework, and uses 1-3, 5, and 8 of Greenbaum.

Finally, the focus group was selected over other qualitative methodologies to take advantage of the group effects noted by Stewart and Shamdasani;\textsuperscript{102} as the purpose of the study relates to the social understanding of transportation, it was judged appropriate to employ a methodology that directly seeks to generate and uncover social language (that is, language shared among a specific group).

**Abuses of focus groups**

While focus groups are indicated for the purposes of this study, it is necessary to consider what focus groups cannot produce, in terms of valid data. Focus groups have been viewed with considerable distrust by many researchers whose primary training lies in quantitative methodologies. To be sure, as Stewart and Shamdasani note, "although focus groups do have important limitations... all research in the social sciences have significant limitations."\textsuperscript{103} A clearer understanding of these limitations can defuse the mistrust with which this methodology is frequently viewed.

The primary source of much of the skepticism of the value of focus groups "probably arises from the perception that focus group data are subjective and difficult to interpret."\textsuperscript{104} While in fact there are quite rigorous means available for the analysis of qualitative data,\textsuperscript{105} there are clear abuses of focus groups which should be noted. Among these, Greenbaum cites the use of such groups as a cheap alternative to quantitative research, the use of focus groups to

\begin{footnotesize}
\begin{enumerate}
\item[\textsuperscript{102}] Stewart and Shamdasani, \textit{Focus Groups}.
\item[\textsuperscript{103}] Stewart and Shamdasani, \textit{Focus Groups}, p. 12.
\item[\textsuperscript{104}] Stewart and Shamdasani, \textit{Focus Groups}, p. 102
\item[\textsuperscript{105}] Stewart and Shamdasani note that the techniques available for the analysis of qualitative data can be "quite rigorous," but that "the nature of the analyses of focus group data should be determined by the research questions and the purposes for which the data are collected." \textit{Focus Groups}, p. 102.
\end{enumerate}
\end{footnotesize}
produce data they are not intended to produce, and laxity with proper focus group technique. 106

In short, the primary problem with focus groups as a research method is the *mis-use* of the technique to answer questions it is unable to scientifically address, or the failure of the researcher to follow proper procedure during the research process. While the latter problem can be assessed through careful review of any specific research report, the former problem— that of the *mis-use* of the methodology—requires that the differences between quantitative and qualitative methodologies be properly understood.

**Qualitative vs. quantitative research: contrasting roles**

The choice of research methodology must follow the nature of the research question. In social research, the researcher is faced with a unique problem: as meaning-generating subjects, human beings are constantly in the process of re-inventing language. The researcher who attempts to study behavior through language must therefore be aware of the different sets of responses that are possible based on shared and divergent meaning. It is all too easy—or likely—for researchers to impose a theoretical construct on a social situation which proves invalid due to the researcher’s inability to ask the “right questions.” This problem led to the development, primarily in the anthropological sciences, of methodologies that would enable researchers to cull out, from target populations, the constructs used by these populations when facing a given situation or idea. Krippendorf speaks of the difference between *emic* data—data that arises in natural or indigenous form—and *etic* data—data that arises from a structure imposed by the researcher. 107 Glaser and Strauss, speaking in a sociological mode, argue for a process of theory generation grounded in the data [necessarily qualitative] of social research (that is, built upon emic data). 108

Stewart and Shamdasani suggest the conditions under which emic-generating or etic-generating methodologies are more appropriate: 109

Phenomenon that are not understood well often are studied first with tools that yield more emic data. As a particular phenomenon is understood better and greater theoretical and empirical structure is built around it, tools that yield more etic types of data tend to predominate.

Templeton offers an illustration of how the two forms of research differ in terms of the kind of data generated: 110

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107 Krippendorf, *Content Analysis*.
109 Stewart and Shamdasani, *Focus Groups*, p. 13
Quantitative research presumes standard meanings for key terms ("...67 percent of female heads of household say quality is the most important factor..."). Focus groups trade breadth for particularity ("What do you mean by 'quality'? Do you always mean the same thing? how would you recognize quality in toilet paper?").

Though the emergence of a large body of literature devoted to the analysis of qualitative data has improved the rigor with which such data is analyzed, LaPiere’s comment of sixty years ago accurately describes the need in contemporary market research:¹¹¹

it would seem far more worthwhile to make a shrewd guess regarding that which is essential than to accurately measure that which is likely to prove quite irrelevant.

Greenbaum cites a similar dynamic when he notes that qualitative methodologies are usually employed as part of a development process, whereas quantitative research is appropriate when the need is to picture a market (i.e., market share and preferences) at a given point in time.¹¹²


FINDINGS

The following section describes the results of the four focus groups. The results may be understood as the natural language expression of different Puerto Ricans when discussing transportation options. Within each theme, a number of referential units, or sub-themes, are identified. Each sub-theme is discussed in terms of the propositional units that participants used to identify or describe this sub-theme. Recurrent themes, or thematic units are briefly summarized in a following chapter.

Attitude toward congestion

Congestion effects

Attitudes toward congestion are reflected in the two primary effects of congestion spoken of by the groups: delays and changes in behavior. In terms of delays, participants in all groups spoke of congestion-related delays of 1 – 1 1/2 hours (secretaries and office workers), 1/2 hour (Centro Médico), and 1 1/4 hours (students). In terms of changes in behavior, the groups spoke in terms of three classes of behavior: driving behavior, location decisions, and trip decisions.

Driving behavior

Congestion leads to selfish behavior, according to the participants. One female office worker described the difficulty in moving across lanes of traffic:

F Oh no! I've got to get off here, but how am I going to get over there? And it follows, we're such good people that nooooobody wants to make room.

| ¡Ay! Por aquí me voy a ir y ahora ¿cómo me meto aquí? Y entonces somos tan buenos que naaaaaadie quiere dar el paso. | [OF-42] |

The problem of such behavior is compounded by the ways in which people use the supposedly non-lane portion of the freeways. One participant described people driving in both the left and right breakdown lanes; what's more,

F2 Because if you have a 4X4, you drive on the median. (laughter, many talking at once)  

| Porque se tiene una cuatro por cuatro, por la grama. | [OF-51] |

F1 People have no respect, it's true.

| La gente no respeta, en verdad. | [OF-53] |

F2 And if it's waterproof, they'd drive on the bay if they could (laughter).

| Y si es prueba de agua, se va por la bahía también si pueden (risa) | [OF-54] |

The same group of office workers noted the effects of congestion on one's emotional state:

F2 It affects your emotional state; when they tell you they want to eat, “don’t talk to me!”

| Y afecta a su ánimo, cuando te digan que quieren comer, ¡no me hable! | [OF-124] |
It is perhaps for this reason that driving around the San Juan Metropolitan Area (SJMA) has been described as a "nightmare" (pesadilla, by several office workers), as an activity that involves "fighting" with other drivers (pelear, by a secretary), as "really difficult" (bien difícil, by a medical worker), and as a "disaster" (disastre, by a student):

F It's difficult; there are traffic jams at all hours, the people drive like they're insane, they don't stop at lights—it's really a disaster. | Dificil, hay tapones a todas horas, la gente guía como los locos, se comen las luces, en verdad es un desastre. [ES-6]

Location decisions

Participants identified a number of ways in which location decisions (both physical and temporal) are affected by traffic considerations. One office worker noted how his office had switched to a 7:00 am starting time "to avoid a little the traffic jams" (para evitamos un poco el tapón [OF-130]), though such a strategy was not always successful (one other office worker with the same schedule still reported jams in Bayamón). Of greater interest was a brief exchange between two office workers when one described her morning commute:

F1 I leave Rio Grande with my baby to leave him with his grandmother in Cataño, but on the way back I get stuck in traffic. | Yo bajo en Rio Grande con mi bebe a dejarselo a la abuela a Cataño pero cuando regreso, ya encuentro el tapón. [OF-134]

F2 Have you considered moving? | ¿No has considerado mudarte? [OF-135]

Though no one in any of the groups had admitted to relocating their residence on the basis of travel considerations, the fact that such an idea can be expressed so willingly appears a recent development in Puerto Rico.

Trip decisions

Congestion apparently affects people's choice of activities. One office worker noted how she would postpone trips to the mall even if she needed to go, if the hour got late [OF-139]. Another worker spoke of a new kind of "family planning," in which trips would be carefully planned and coordinated [OF-156]. One student described how his non-involvement in extra-curricular activities was directly motivated by congestion considerations (to avoid the later-hour congestion) [ES-260]; another student described how they would avoid even some favored activities if it meant getting stuck in a traffic jam [ES-29]. Even as basic a choice as driving to the supermarket was put off to a later hour by one office worker who normally arrived home early [OF-140].

Reasons for congestion

The participants in the different groups assigned different reasons for the existence of congestion. These reasons are worth noting as they likely are behind people's attitudes toward transportation projects: different causes might tend to favor different solutions in the public's mind.

The secretaries focused on two causes of congestion: the number of cars on the highways and the structure of the system of traffic lights. Though the problem of quantity was mentioned first, the discussion centered around the problems of intersections:
And something else I’ve observed as a driver: this island is very small, the roads all come
together, there’re a lot of lights—one leaves one light and gets to another, left this light and
came to another.

S Mmm hmm.
S Intersection.

S1 That’s it; there are so many intersections in a row, and they’re not programmed. If you hit a
green light here, Lord, you’re going to hit a red light twenty feet later (S: the second, almost)
(S: yes). So everyone hits it fighting. My God (S: that’s why there’re so many accidents), and
there’re a lot of accidents. Because no one wants to wait at the light all over again (others
laugh).

S They run the red light.

S1 There are too many lights; they’ve got to find a way to get rid of so many lights (S: so many
lights).

S And coordinate them better. (S1: that’s right, synchronize them), because sometimes one
spends a lot of time waiting (S1: uh huh, at one, and a few seconds later at the next) for a
light...to change.

S1 So no one want to give a “break” to anyone. (others: mmm hmm)

S That’s what they’re avoiding now in Los Angeles.

S Everyone, for the reason you just said, enters the intersection and causes gridlock, and at
times it’s horrible.

In causal terms, these secretaries saw the problem of traffic light coordination leading to
accidents and to gridlock, both prime causes of traffic jams.

The other groups tended to focus more on the sheer quantity of cars on the road, and the
relative paucity of roads for these cars to drive upon. When one medical worker suggested
that there were more cars than people [CM-14], another replied:

S More cars than people. God, that would frighten me, seeing a car with no one inside.    Más carros que personas. Dios, eso me da miedo, a ver un carro sin nadie adentro. [CM-15]

Another medical worker noted that congestion was caused at different times by different
groups: workers arriving and departing, or visitors come to visit patients [CM-30]. The
office workers seized on the lack of multiple routes, as did the students; the office workers
and medical workers also noted the seasonal effects of Christmas time, which purportedly
propelled people to undertake a greater number of shopping trips [OF-20 and CM-29]—
especially to Plaza las Américas.
Coping strategies

Congestion leads to a number of coping strategies beyond that of changes in behavior as noted above. Secretaries, office workers, and students all spoke about favorite shortcuts (atrechos, cutting through residential neighborhoods). The students even acknowledged favoring routes that were longer (in both time and distance) but free-flowing, given the alternative of waiting in dense traffic.

Conclusions

Attitudes toward congestion were generally uniform among the groups. It was seen as a source of uncivilized behavior and as a major determinant of people’s choice of activities. Many people spoke of coping strategies which involved seeking alternative routes, while they acknowledged that few alternatives really existed. Of some concern is the belief that traffic lights are behind a significant share of the congestion; while such a concern might have some basis in fact, it is questionable the extent to which better signal timing can truly solve the congestion problems of the San Juan Metropolitan Area.

Attitude toward transit modes

The richest data of use to marketing strategy development arose from the discussion of the different transit options available to area residents. For each mode described, attention was paid to the first non-prompted mention of that mode; special note was also made for the entirety of how that mode was described and how its users were described. Though each group considered, at the very least, the AMA bus system (the guaguas), the Metrobus, and the públicos (known variously as públicos, carros públicos, guaguas públicas, pisicorres [“step on it and it runs”], and guaguitas [little buses]), some groups also mentioned the Aqua Expreso (the agua guagua or la lancha a Cataño), the Moscoso Bridge, parking, “catching” rides (coger pon), even the proposed Tren Urbano (as well as transit systems in other cities).

Researchers who wish to explore attitudes toward transit modes should be aware that not all Puerto Ricans neatly divide modes or services the way foreigners or transit planners might. Questions about the AMA would frequently be answered with reference to the públicos, and not everyone separated Metrobus from AMA when discussing bus routes. One person even suggested that many of the públicos were run by “Metrobus or AMA.” This kind of modal confusion (predominant among office workers and occasional among medical workers) might tend to produce biased results in surveys; it certainly called for careful interpretation of the statements made by participants in the focus groups.

AMA (la guagua)

The Metropolitan Bus Authority (Autoridad Metropolitana de Autobuses, or AMA) runs the primary bus network in the San Juan Metropolitan Area. It is frequently referred to merely as the “transit system,” though such a phrase might include the Metrobus and perhaps even the públicos.
First mention

In all four cases, the first (unprompted) mention of AMA was accompanied by expressions of the lateness of AMA buses in arriving.

Among the secretaries, the first mention of AMA was by a secretary who depends on transit to return home in the afternoons. Her first reaction was positive, though she immediately qualified her response:

S1 Yes, in bus. I like it.  
S2 Oh, yes, I like traveling by bus. It’s enjoyable.  
S1 I really like it, but it’s bad, because...

She went on to describe that she took Metrobus first, which was enjoyable, but then needed to transfer to an AMA route; she immediately explained:

S1 And that afternoon, yesterday, it didn’t come. I had to phone my sister to rescue me there in Rio Piedras…

Among the medical workers, the first mention of (public) transportation was characterized by the words pésima (“adj.: very bad, abominable, terrible”113) and malsima (extremely bad) and was followed immediately by a story of waiting two hours for the bus to arrive. The first mention of the bus among the office workers was greeted with the comment “if it came,” which was immediately repeated [OF-34 to OF-36].

The students were more descriptive, and perhaps more revealing, in their comments. In response to a general question, they answered as follows:

AH Are there any alternatives to the car which are faster?  
F There’s (pause) the bus, but—  
F1 No one uses the bus.  
AH No one uses the bus?  
F There are people that use the bus, but it’s packed…either it’s always packed, or it’s arriving late.

No one rides the bus, because its packed with people (and late, too). This seeming contradiction reveals a social fact of Puerto Rico: the socioeconomic division of the country into people with whom one may identify, and those with whom one does not identify. Though this distinction is hardly unique to Puerto Rico, it does have deep implications for marketing strategy, and is discussed later in this report.

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Description of mode

All four groups immediately associate AMA buses with excessive waiting. But they also describe them in many other terms. In general, comments about AMA can be classified into five categories: general characterizations of the system, waiting and schedules, route structure, riding the buses, and system maintenance and care. The following tables group the comments made in each of the focus groups.

<table>
<thead>
<tr>
<th>GENERAL CHARACTERIZATIONS OF THE SYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secretaries</td>
</tr>
<tr>
<td>It's so abominable</td>
</tr>
<tr>
<td>It's so bad</td>
</tr>
<tr>
<td>It's the pits (está fatal)</td>
</tr>
<tr>
<td>There's no good system</td>
</tr>
<tr>
<td>You can't depend on it</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WAITING AND SCHEDULING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secretaries</td>
</tr>
<tr>
<td>Waiting</td>
</tr>
<tr>
<td>Arriving late...is a problem</td>
</tr>
<tr>
<td>It doesn't come by</td>
</tr>
<tr>
<td>It doesn't show up (no llega)</td>
</tr>
<tr>
<td>(repeated)</td>
</tr>
<tr>
<td>It takes a long time (se tardan mucho)</td>
</tr>
<tr>
<td>It takes forever (to show up)</td>
</tr>
<tr>
<td>It won’t come by (repeated)</td>
</tr>
<tr>
<td>Waiting</td>
</tr>
<tr>
<td>We don’t arrive</td>
</tr>
<tr>
<td>You can be waiting 1/2 hour, an hour</td>
</tr>
<tr>
<td>You take your chances if it’ll come or not</td>
</tr>
<tr>
<td>You won’t arrive</td>
</tr>
</tbody>
</table>
### When bus arrives

<table>
<thead>
<tr>
<th>Sometimes they come all bunched up</th>
<th>And what if it passes all full?</th>
<th>Sometimes they're an hour late, then four arrive together</th>
<th>They're always full</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sometimes they pass all full</td>
<td></td>
<td>The number of people</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>There's a discrepancy among buses (arrivals)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>They don't have a fixed schedule</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>They run later (than the públicos)</td>
<td></td>
</tr>
</tbody>
</table>

### Schedule

| From one schedule to another      |                                 | (There's no late-night service)                           |
|-----------------------------------|---------------------------------|----------------------------------------------------------|--------------------|
| On the weekends, it doesn't exist |                                 |                                                          |                    |
| There is no schedule              |                                 |                                                          |                    |

### ROUTE STRUCTURE

<table>
<thead>
<tr>
<th>Secretaries</th>
<th>Medical workers</th>
<th>Office workers</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Traffic effects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>It gets stuck in traffic (se aguantan)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Route directness</th>
<th>Office workers</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>It stops all over the place (va a tanto sitio)</td>
<td>You spend more than 1/2 hour just going through neighborhoods</td>
<td>You've got to travel through various neighborhoods</td>
</tr>
<tr>
<td>They go all over the place (que da...vueltas)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Access/Destinations</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>If you want to get to the bus stop, you need a car</td>
<td></td>
</tr>
<tr>
<td>The stations...are far</td>
<td></td>
</tr>
<tr>
<td>Stops are km.s apart</td>
<td></td>
</tr>
<tr>
<td>Where they leave you off you then have to walk</td>
<td></td>
</tr>
<tr>
<td>It doesn't go to where we want to go</td>
<td></td>
</tr>
<tr>
<td>You've got to walk all the way to there</td>
<td></td>
</tr>
<tr>
<td>RIDING THE BUS</td>
<td>Secretaries</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------</td>
</tr>
<tr>
<td><strong>The bus in general</strong></td>
<td>But it’s bad</td>
</tr>
<tr>
<td></td>
<td>I like (riding the bus)</td>
</tr>
<tr>
<td></td>
<td>I really like it (<em>me encanta</em>)</td>
</tr>
<tr>
<td></td>
<td>It’s enjoyable</td>
</tr>
<tr>
<td></td>
<td>Uncomfortable</td>
</tr>
<tr>
<td><strong>The driver</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>If the driver is one of those who won’t open the front door for you</td>
</tr>
<tr>
<td></td>
<td>The driver closes the door (before you can get off)</td>
</tr>
<tr>
<td><strong>Standing and moving through bus</strong></td>
<td>Arrives all pushing and shoving (<em>vienen de atropellado</em>)</td>
</tr>
<tr>
<td></td>
<td>People fall on top of you</td>
</tr>
<tr>
<td></td>
<td>You bump against everyone (when deboarding)</td>
</tr>
<tr>
<td></td>
<td>You have to go “excuse me, excuse me” (to leave)</td>
</tr>
<tr>
<td></td>
<td>It stops and you fall “piiiin”</td>
</tr>
<tr>
<td><strong>Seating</strong></td>
<td>No one gave me their seat (when I was traveling with my baby)</td>
</tr>
<tr>
<td></td>
<td>There are no gentlemen (to give their seats to a woman)</td>
</tr>
</tbody>
</table>
### Other passengers

| It's all congested  
Like sardines in a can  
The buses are never too stuffed (sarcasm)  
The number of people waiting...is a lot  
There are people with bulky packages  
They fill up | Everyone's on top of you  
Sometimes some persons board...who want to bother you | The people inside speak less (than in the publicos) | Everyone shouting  
The hillbillies (*jibaros*)  
They're full |

### Getting stuck on board

| The bus takes off with me still inside (*me deja la guagua*) |

### MAINTENANCE & CARE

<table>
<thead>
<tr>
<th>Secretaries</th>
<th>Medical workers</th>
<th>Office workers</th>
<th>Students</th>
</tr>
</thead>
</table>
| No one fixes them  
No one wants to be responsible  
They don’t give them maintenance  
They get damaged  
They pollute horribly  
They’re all damaged  
They’re falling apart | | | Cleanliness—I see these dirty buses  
They stink (*apestosas*) |

As the preceding tables make abundantly clear, most characterizations of the AMA are negative. Besides the issue of waiting, the issues of trip directness, crowding, access, movement, politeness, and maintenance were all mentioned—and criticized severely—by group members. Even the few positive comments carry an important caveat: every one of them was made by someone who admitted to riding Metrobus, and, given that most of their comments are in the abstract, it is likely that they are speaking primarily of the more pleasant side of bus travel.

*Characterization of users*

Who uses the AMA bus system? From a positioning perspective, the question is not who uses the system but rather how the targeted segments characterize these users.

All four groups identified the primary users of AMA as those without cars. The following table portrays the answers given by the different groups:
Who rides the AMA bus?

<table>
<thead>
<tr>
<th>Who rides the AMA bus?</th>
<th>Secretaries</th>
<th>Medical workers</th>
<th>Office workers</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;When I was a student&quot; or &quot;students&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In case of an accident (car is damaged)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>City dwellers more likely than country-dwellers (know the routes)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;If there's no ride&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior citizens (have lots of time) and handicapped (both receive subsidized service)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housewives, workers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>in Bayamón, &quot;everyone&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>People who live in Santurce and work nearby (but may refer to Metrobus)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depends on socioeconomic level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This last point—that of socioeconomic level—is of paramount concern, as this exchange among the students illustrates:

M The system, the system has to change.

F Yes.

M This is what we're saying, the system has to change, this is it, so that some other kind of person uses the bus, and therefore—

M1 But that is, if you're going to say, but now, well, we're going to have a good system, what do I know? (thumps table?) The same people are going to continue using the bus.

Even though at this point in the discussion the students had been “offered” their hypothetical “good” system, their bottom line sentiment was that, as long as the same class of people used the bus, they would not. This feeling was made more evident in their characterizations of transit systems in US cities; among their first observations of these systems was that “everyone” (todo el mundo) can be found riding them.

Metrobus

If AMA is characterized negatively, Metrobus is generally characterized positively.

First mention

The first unprompted mention of Metrobus in each of the four groups was uniformly positive. The secretaries, for example, used the words “good,” “fast,” and “divine” (buen, rápida, and divina) on first mention of Metrobus. The medical workers, after several false starts (it had been mentioned in context, but without qualifying comment), noted that it was
“better in terms of service” most likely because it was “privatized,” and that it was clean with greater frequency [CM-487-496]. The office workers, after initial modal confusion (describing many públicos as belonging to AMA or Metrobus “or something like that” [algo así, OF-241]), immediately described Metrobus as lacking nothing (no hay carencia), as better quality, more reliable, and passing more frequently [OF-389-393].

The students, though the least enthusiastic (none admitted to having ridden the Metrobus), still managed to note that they believed it had air conditioning (adding that AMA, one believed, didn’t) [ES-156-159]. Still, it is clear that, even given some modal confusion, Metrobus enjoys a far better reputation (at least, on first recall) than AMA.

**Description of mode**

Perhaps given its more positive image, there were fewer comments made regarding Metrobus than regarding AMA. Both the secretaries and the medical workers noted that the fact of Metrobus being privately run implied a better service, in a causal manner:

- **S** Metrobus, since it’s privately-run, is excellent. (El Metrobus, como es privatizado, es buenisimo. [SEC-166])
- **S1** The service is excellent (El servicio es buenisimo. [SEC-167])

**F** Yes, but they say that the service is better, because it’s privately-run (Sí, pero dice que es mejor el servicio, porque está privatizado. [CM-489])

This last comment, by the medical worker, led to an interesting exchange: she was immediately challenged by the “transit champion” mentioned earlier in this report, who repeated “it’s the same, it’s the same.” Nonetheless, the other participants appeared to actively ignore her, agreeing with the first person that the service was better (cleaner, more frequent, better).

In general, the secretaries spoke of seven characteristics of Metrobus. The first, mentioned above, is the fact of it being privately run. In addition, they spoke of its frequency (in positive terms), the fact that it had a known and adequate schedule, that it worked, that it was kept in operation (“They put it out to test, and look, they left it,” was the comment of one, with some surprise in her voice [lo pusieron a prueba y, mira, lo dejaron, SEC-177]), that it was rapid (with known trip length), and that the cost was reasonable and worth paying. But above all, the notion of it being private was stressed; as one secretary gushed, “when they privatized that route, it was the best thing they’d done.” (cuando se privatizó esta ruta fue lo mejor que hicieron, [SEC-180]).

The medical workers, though positive, were briefer. Beyond the issue of privatization, they mentioned Metrobus as being cleaner, more frequent, and “better service” than the AMA.

The office workers were more balanced in their comments. While one noted that Metrobus was comfortable and air conditioned, another noted that it was not still entirely reliable, that many passed full, and that it was held up by slower-moving AMA buses. Still, the positive comments included the fact that the buses received proper maintenance, that the system was still of higher quality, more reliable, more frequent, faster (due to its exclusive lanes), and ran later than the alternatives.
The students, though they did not use Metrobus, still held that it was better than AMA [ES-160], though they disputed among themselves whether or not it actually passed every 15 minutes; their general conclusion was that "you can't depend on the bus, definitely," *(uno no puede depender de la guagua, definitivamente)* [ES-165], a final pronouncement on all bus services in San Juan that was followed by silence.

**Characterization of users**

Both sets of workers in Hato Rey—the secretaries and the office workers—reported using Metrobus during their lunch breaks, especially to travel to and from the bank to cash their pay checks. In both cases, the rationales given contrasted the ease of catching the Metrobus with the hassles of searching for parking twice (there and back again) during the lunch break. The office workers also noted how they would take the Metrobus to go eat at the restaurants on Roosevelt, to visit the doctor, to take care of business in Santurce or Rio Piedras (two spots known for offering few parking options), or in general when rushed.

**The públicos (jitneys)**

Públicos are quite an unpopular mode for many people, perhaps due to the nature of the público system itself. Their chief advantage lies in their arriving first (i.e., before a bus), their greater through-speed (fewer stops), and their service of customized drop-off. Beyond these three advantages, they are spoken of in unusually negative terms.

**First mention**

There was little consistency in first mentions of públicos. The first secretary to mention the públicos noted how they're generally quicker than the bus *(avanza más)*. The first medical worker recounted waiting until the público (or guaguita as it was more commonly called) filled up before the driver would leave. The first office worker was not nearly as generous in her description, calling públicos "horrible," "hot," and "all those people stuck together." The students echoed this observation (though likely less out of experience and more out of perception), noting that "they're always sardines" with "a thousand people."

**Description of mode**

The following table groups observations made in each of the focus groups about públicos.
<table>
<thead>
<tr>
<th>Secretaries</th>
<th>Medical workers</th>
<th>Office workers</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>It's quicker</td>
<td>Many belong to AMA or Metrobus</td>
<td>They're not very comfortable, they're functional</td>
<td>You don't see very many of them</td>
</tr>
<tr>
<td>It costs more (preference for the taller mini-buses)</td>
<td>An odyssey</td>
<td>It's horrible</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The drivers look out for their regulars</td>
<td></td>
</tr>
<tr>
<td>Público/traffic interface</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I hate them (for how they drive)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I’m terrified by them</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>They’re a threat (to other motorists)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evade them, get out of the way</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>They stop (in the middle of the street, away from the curb)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>They don’t care if they have cars behind them</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>They stop suddenly (paran de cantazo)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Waiting and schedules</th>
</tr>
</thead>
<tbody>
<tr>
<td>You have to wait longer (before it leaves)</td>
</tr>
<tr>
<td>If it has room inside</td>
</tr>
<tr>
<td>It’s always full</td>
</tr>
<tr>
<td>It was waiting for people to fill it (we had to pay) for the two empty seats</td>
</tr>
<tr>
<td>How many it times it passes you full and keeps on going (sigue de largo)</td>
</tr>
<tr>
<td>It’s full</td>
</tr>
<tr>
<td>The frequency isn’t fixed</td>
</tr>
<tr>
<td>They don’t have a regular schedule</td>
</tr>
<tr>
<td>They wait for them to fill up (repeated)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Route structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>It goes deeper (into the neighborhoods)</td>
</tr>
<tr>
<td>It lets you off closer (to your destination)</td>
</tr>
<tr>
<td>It lets you off in front of your house</td>
</tr>
<tr>
<td>It doesn’t have specific stops</td>
</tr>
<tr>
<td>It penetrates further</td>
</tr>
</tbody>
</table>
### Riding the públicos

<table>
<thead>
<tr>
<th>It’s uncomfortable (repeated)</th>
<th>One is crammed in there (bien apifiéado)</th>
<th>Horrible</th>
<th>Sardines</th>
</tr>
</thead>
<tbody>
<tr>
<td>They want it to seat 5 persons (across)</td>
<td>Everyone on top of each other (repeated)</td>
<td>It gets real hot (el calor se mete) (repeated)</td>
<td>A thousand people</td>
</tr>
<tr>
<td>It’s very abusive</td>
<td>In the mornings, you can ride separated...perfect</td>
<td>Stuck (together)</td>
<td></td>
</tr>
<tr>
<td>You’ll arrive in bad condition</td>
<td>Comfortable, but the number of passengers makes it uncomfortable</td>
<td>They try to fill them</td>
<td></td>
</tr>
<tr>
<td>It’s terrible</td>
<td>If you get stuck with the edge seat...</td>
<td>If you don’t get stuck with an edge seat</td>
<td></td>
</tr>
<tr>
<td>(like) sardines in a can</td>
<td>Too many people</td>
<td>As full as possible</td>
<td></td>
</tr>
<tr>
<td>One is pressed in there</td>
<td>They’re not designed to separate</td>
<td>There wasn’t enough room to move</td>
<td></td>
</tr>
<tr>
<td>Horrible</td>
<td>Shoulder to shoulder</td>
<td>Everyone stuck together (repeated)</td>
<td></td>
</tr>
<tr>
<td>It is hot</td>
<td>Uncomfortable (repeated)</td>
<td>Very uncomfortable</td>
<td></td>
</tr>
<tr>
<td>You asphyxiate</td>
<td></td>
<td>Dirty</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bad smell</td>
<td></td>
</tr>
</tbody>
</table>

### Passengers

<table>
<thead>
<tr>
<th>There’s all kinds of people</th>
<th>Charlatans</th>
<th>All sweaty</th>
</tr>
</thead>
<tbody>
<tr>
<td>There are people who are somewhat sweaty</td>
<td>People that make trouble for you</td>
<td>Always talking</td>
</tr>
<tr>
<td>There are always funny people, joking</td>
<td>You listen to the most popular radio show</td>
<td>Politics</td>
</tr>
<tr>
<td>People talk about religion, politics</td>
<td>Talking, the people talking</td>
<td>If you get stuck next to a crazy</td>
</tr>
<tr>
<td></td>
<td>Everyone meets each other</td>
<td></td>
</tr>
<tr>
<td></td>
<td>On a Friday afternoon (if you get stuck next to someone who’s had a few drinks)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Touching</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Men who take advantage of ladies (aprovechados)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The dynamics make the trip short</td>
<td></td>
</tr>
</tbody>
</table>

In general, públicos are roundly criticized for being too tightly packed. A number of people mentioned the problems of being stuck with an “edge” seat, a most uncomfortable experience. But the greatest problem appears to be the incompatibility of many públicos with
the needs of office workers (to arrive at work in a neat and clean manner). One female office worker described her last público experience thusly:

F It’s horrible; the last time I used a público was from Caguas to San Juan, when I worked in San Juan and my car broke down—I would have preferred if someone could have brought me—but the van was supposedly direct to San Juan, and a lot of people use it. But then, it’s like at that moment I needed to wait something like 20 minutes until the van filled up, to be able to—and the heat was horrible, because the Caguas station is roofed like a basement. When we left, it was everyone crammed together. The people that take the van are generally economically quite disadvantaged, and so the van was dirty, it smelled bad, all sweaty (some laugh). I arrived in San Juan hysterical; when I got off I said “never again, it would be better to skip work until I have a car.” That was my last experience, and that’s why I will never ever again board a público.

The same conclusion was drawn by a secretary who pointed out:

S If you care about neatness, you’re not going to board a público because you know you’re going to arrive in bad shape.

Characterization of users

Do people from the different target groups assign the same riders to públicos as they do to the AMA bus? In general, the answer is yes, though públicos are seen to carry more people from the countryside (as one participant explained it, públicos generally run from town to town, whereas AMA buses run along routes known primarily to city-dwellers).

Secretaries generally assigned the same people to AMA and to públicos (primarily the carless), but also noted that públicos serve a large number of seniors. Públicos might be used by others when rides were not available (or if the público came by before the bus). One of the secretaries regularly rode a público to and from her home in a far eastern town out of the Metropolitan Area.

Medical workers generally mentioned only country-dwellers and students with regard to públicos—the same as office workers (though the latter mentioned economically disadvantaged persons, as quoted above). The students first noted the use of públicos by seniors at shopping centers, then persons from the country; in general, persons who “didn’t even have access to the bus,” implying the público’s inferiority to that bus. They did note, however, as did several others, that the público was safer for carrying purchases, most likely due to the lack of anonymity among the passengers.
Aqua Expreso

The Aqua Expreso, or agua guagua, was mentioned in each of the groups. There was general acknowledgment of the original failure of the service, though some enjoyed it "when there were large activities" in the Old City (citing, invariably, the great regatta of 1992—the kind of event that occurs only infrequently).

One of the secretaries was harsh in her criticism of the agua guagua, noting how it did not meet its service goals; she cited cases of the boat going to the wrong destination and the resulting confusion [SEC-632].

Parking was mentioned as a serious problem by several participants; some felt that the lack of control (guards and controlled exit) was a disincentive to leaving their cars in Hato Rey. Some complained of the time involved in travel (waiting time plus delays plus trip time); a related problem arose from operating hours that did not match the late nights typical of visits to the old city.

One person, a female office worker, used to ride the boat from Cataño regularly. She commented favorably on the frequency: she could count on only a fifteen minute wait for the next boat. Others rode the boat more as tourists (one student explained, "it was because, oh, look, it's a water guagua," [ES-644]). Another student never rode it but reported how "people" spoke of it: "it took too long and stinks of swamp." [tardaba mucho y apeteES-642]

Tren Urbano

Though it was the intent of the moderator to avoid discussion of Tren Urbano, the subject nonetheless arose (due primarily to the presence of participants or observers from the Tren Urbano office or due to the "word of mouth" that accompanied the invitations to participate in the groups).

The secretaries in particular were quite passionate on the subject. Two of them spoke frankly of their fears that the train would not be properly maintained, that it would suffer the same fate as other projects that are launched amid fanfare but then allowed to deteriorate; one complained bitterly as to how "they paint everything real nice, but then don't give it any maintenance," [SEC-632]; another added how things began "with a lot of 'wow' and then, no 'wow,' no maintenance, no follow-up." [SEC-638].

Among office workers, the only mention of Tren Urbano (a clarification question posed by one male worker) led a female companion to murmur "it's my dream." [OF-1089].

Finally, the students struggled, as usual, over the issue of who would ride such a train. While one "always has wanted there to be a subway in Puerto Rico," [ES-639], she was reminded that "it would be the same," "the same people" and all [ES-640].

Parking

Parking is generally viewed as a problem in virtually all areas of the central city. Even Plaza las Américas was seen as having a severe parking problem (one needs to circle constantly, and auto theft is rampant there). Areas mentioned where parking is especially difficult include...
Santurce, Viejo San Juan, Hato Rey, Condado, and Rio Piedras. The parking problem in Santurce was identified as affecting one’s ability to shop there.

Some of the office workers spoke in favor of controlled parking areas, meaning they were disposed to paying a parking fee in exchange for a greater degree of security; this security, however, would need to be visible (guards at the entrance and circulating within) for people to feel safer about leaving their vehicles.

One resident of Condado not only noted how people parked on a strip of lawn by her building; she further explained that her family had “spoken with the area police so they wouldn’t give us tickets, because, if not, where would we put the cars?” [ES-99]. Apparently, the car is viewed as such a necessity (and consequently as a basic human right) that parking needs supersede parking law.

The Moscoso Bridge

The dramatic inability of the Moscoso Bridge to meet ridership targets is well known; what is less understood is why the bridge has failed to meet these targets. While it is well known that many consider the bridge over-priced, the focus group discussions suggest a possible avenue of exploration to explain why it is people’s valuation of trip time appears skewed compared to the data incorporated into the ridership models.

A theme that emerged from all of the groups was the extent to which having company in one’s car changed one’s perception of trip time (and congestion). Puerto Ricans apparently enjoy company (and conversation), and have grown adept at using their cars as extensions of their family social lives for the purposes of visiting with each other.

If this is in fact the case, then it follows that, all other things being equal, someone traveling alone would value time savings differently than they would if accompanied in their car. This hypothesis can be tested empirically; it might account for a large share of the gap in ridership. A related notion is that Puerto Ricans do not generally share costs; rather, one person picks up the tab for the group. Cost models will need to reflect this fact: two people traveling together will respond only to the price sensitivity of the person paying the entire toll.

Among the participants, one secretary admitted to riding the bridge regularly (with her husband). It is interesting to note, though, that she seemed to have set an arbitrary “two days a week” limit to her use of the bridge; as she further pointed out, the bridge was not a necessity (as many other roads are), it was an alternative. Had it been a necessity, she would have had no qualms about paying every day. [SEC-593]

Catching rides

Catching rides is a strategy used by people who are either temporarily or permanently carless; it seems to be a preferred alternative (compared to the bus or públicos). One medical worker had her technique well-developed: she would wait by the main exit to Centro Médico until someone would see her and offer her a ride. An office worker talked about waiting at his bus stop and frequently being seen by colleagues. Among students, rides were frequently a better alternative to driving [ES-277].
Systems in other cities

Office workers and students spoke of transit systems in other cities. One office worker spoke of her days living in Madrid, where buses would come by punctually every 20 minutes; “one didn’t need to worry about having a car” as a result [OF-234]. While Hong Kong’s large and modern system was viewed as “over-populated,” Caracas’s subway was described as “excellent” (buentsima), and “a thousand times preferable” [OF-534]. And though Madrid’s subway was described as “desolate,” it somehow didn’t seem unsafe, even given the “pickpockets and gypsies” [OF-535].

The students concentrated on North American systems. The bus systems of Burlington, Vermont, and Boston were praised for their “organization, punctuality, cleanliness, and security” [ES-107]—though the “difference” with Puerto Rico was described in terms of the “class of person that rides;” in the US systems, “you see all kinds of people...and no one bothers anyone else” [ES-113]. Even the much-feared New York Subway came in for favorable reviews, with the students being surprised at its cleanliness. The DC subway was described as “beautiful” and “superclean,” with its flashing lights (announcing the imminent arrival of a train) expressly noted. This aspect of interactivity was also noted in Boston’s Kendall Station, with its “Kendall Band” hands-on music sculpture receiving high praise.

Attitude toward places

Certain places seem to stand out in the Puerto Rican consciousness; a better understanding of what makes these places special may help significantly in the planning of effective transit services and their related urban amenities. Chief among the places considered in this study was Plaza las Américas, the large shopping mall that somehow has become the village square of modern-day San Juan.

Plaza las Américas?

The Hato Rey groups were especially talkative when the subject of Plaza las Américas was raised. The secretaries mentioned the following characteristics of “Plaza:” you could go at any time, everything was nearby, they had everything (repeated), you don’t get wet, you don’t get sun, there’s a supermarket, air conditioning, shoe stores, clothing for babies, cinema, food (restaurants and snack bars), everything in one place. The main problem? Trying to find an empty parking space.

The office workers repeated most of the secretaries’ list, stressing the size and completeness of Plaza when compared to the other, newer centers; Ponce (El Caribe) is smaller, Hatillo is only one level, Monte Hiedra too upscale (and too far out). Plaza was praised for its broad range of prices, all kinds of food, medical offices in the new tower, musical groups, exhibitions, and Christmas decorations. At the same time, it was finally admitted that one did not visit more than a few stores at a time, but that “people go to go” (la gente va a pasear mucho), to window shop or noveleriar (essentially, take in what’s new), to meet people or see if there’s something one may wish to buy.

Plaza is definitely a meeting place. Office workers (primarily female) describe meeting people “all the time,” “always” [OF-723-725], people “you haven’t seen in years” [OF-728], shouts
of “Fulaaaano” (anyone’s name) being common [OF-733]. One worker described this meeting environment “as part of the charm” of the place [OF-747]. One woman summed it thus:

Plaza also has its problems; chief among these, as discussed by all the groups, was parking, especially at mid-day, pay days, and holiday times. “It’s always full” was one comment [SEC-341]. Auto theft was mentioned frequently as a serious problem; one medical worker explained that “we all know it’s the number one spot in all of Puerto Rico for auto theft” [CM-301]; another noted how you could even see the “kids wandering the lots” (tú ves por ahí los muchachitos deambulando, [CM-304]) looking for cars to steal. The normally security-conscious Puerto Ricans accept this problem differently than in other places, becoming somewhat philosophical (“they can take your car anywhere” was one remark [SEC-381]).

Security within Plaza was generally well-regarded, though one male office worker warned against flashing a cellular phone inside the complex [OF-855], much to the objections of a female co-worker who insisted that she felt safe inside [OF-862].

Though Plaza is popular as well with the younger generation, the students did note that the place is showing its age; they described Plaza as “old” and “dark,” especially when compared to the new, bright, and sunny Plaza El Caribe in Ponce with its glass roof and extensive interior plantings.

While people use the expression “everyone” (todo el mundo) to describe who goes to Plaza, the phrase is not necessarily all-inclusive. The office workers would happily purchase the same items at K-Mart before spending the additional money at Plaza. Those who don’t enjoy access to a car (or to a ride) are frequently left out of the “everyone” list; the stores of the inner city are meant to serve this group, at least in the eyes of the students: poor-quality clothing that falls apart in the wash for those with limited resources [ES-730]. Plaza is even being squeezed at the top by new malls such as Monte Hiedra which target more upscale shoppers, and at the bottom by stores such as K-Mart and Walmart.

Rio Piedras

Rio Piedras is frequently contrasted with Plaza. RP is described as poorer, more popular, a place with rock-bottom prices. It is described as a more dangerous place; one medical worker reminded the others of criminals who entered its church (and apparently performed some criminal act) [CM-277]. Though some of these workers expressed a preference for RP, the place was derided by others for “its clientele, the population,” for its “wanderers, coffeehouses, and places that sell intoxicating beverages” [CM-329], its “crazies” [CM-330]. The place has “changed greatly” [CM-333], but one still can’t go there in car due to a lack of parking [CM-378].
The office workers, perhaps higher paid, were harsher. Though again one or two expressed a preference for Rio Piedras, one woman dismissed these people with "boy, never. Even if you give it to me free, I wouldn't enter there." (muchacho, jamás. Aún que me los regala. Yo no entro por allá. [OF-783]). Rio Piedras was described by some of these workers as "traffic-jammed, people all over the place, horrible," (tapones, revólú de gente, horrible, [OF-786]), a place where one feels threatened waiting for transit [OF-481], a place that lends itself to assaults [OF-803]—and besides, there's no place to park [OF-802].

When pushed ("what if there were police and parking?"), the office workers revealed a deeper set of concerns. In Rio Piedras, there are many—drug addicts [OF-928], or more correctly, people who turn into drug addicts [OF-933]. It's the "people who live in or hang out in these places" [OF-929] that are the big problem; and, "not to say anything (bad) about them" [OF-948], there are many Dominican immigrants [OF-947].

**Santurce**

Santurce suffers from a similar perception as Rio Piedras. Both secretaries and students complain that "there’s no parking." One secretary noted how Santurce was never planned for the number of people who use it, how one needed to use a público to go shopping there [SEC-373]. Santurce was described equally with Rio Piedras by several office workers as having changed due to immigrants escaping poverty—but duplicating it in their new homes [OF-949]. The neighborhood was described by one student as a dangerous places to walk [ES-69], besides being "always, always, always" congested [ES-92].

**City centers**

Rio Piedras and Santurce suffer from image problems. Downtown Ponce, however, has been restored to elegant condition—and yet remains curiously free of local shoppers, who may be found thriving the Plaza El Caribe. The students were asked about this discrepancy; the answers, though not surprising, are easily overlooked.

The Plaza, according to the students, was more convenient: no traffic jams and ready parking. It had air conditioning, in contrast to Ponce's hot streets. The shops of the Plaza, moreover, catered to the moneyed youth. These youth could be persuaded to walk the streets of Ponce, though not to shop (and likely not in the daytime):

F1 Depending on where you go, what do I know, if you just want to walk, you know, see a pretty area, "oh, how nice," okay, go. But if you’re going to buy something, you’re not going to go to—but if you’re going to relax, stroll, okay.  

| dependiendo por donde vaya, que sé yo, si lo que quieres es caminar, pues, mirar un área linda, ay, que lindo, lo pasea—pero uno va a comprar algo, uno no va a—, pero va a relajarse, pasando, pues. [ES-747] |

Even in this case, the role of social attraction is strong. Many youths gather on weekend nights in the old city of San Juan, not necessarily for any reasons intrinsic to the place, but because that's where "everyone else" is:

M1 What’s more, everyone’s there (Old San Juan)  

| que más, todo el mundo está allí [ES-75] |

F That’s right, everyone.  

| exacto, todo el mundo [ES-752] |

M1 That continues to be the main attraction.  

| sigue siendo la gran atracción [ES-753] |
If everyone were to decide to head over to Santurce, would you all go to Santurce? 

Probably.

Travel behavior

The discussions in the four focus groups revealed a lot about individuals' travel behavior and their attitudes toward travel choices. Among the subjects explored were attitudes toward driving, traveling alone or accompanied, and modal choice.

Attitudes toward driving

Attitudes toward driving ranged widely within each group, with some people claiming to enjoy driving, some indifferent, and others claiming to not enjoy driving at all. While the secretaries were content to leave it at that, one of the medical workers (male) announced that “in certain cases,” later revised to “most,” “women don’t know how to drive” [CM-417-419].

This theme was amplified by the office workers. One such worker (male) even let on that:

There’s a little more respect when it’s a guy who’s driving on the street, because you say, naaah, it’s a woman, forget her, I’m going to cut her off.

This attitude was not found among the students, who manifested an interesting sex-neutrality about driving.

Office workers frequently complained about driving. One found transit more pleasant (in theory) because “one doesn’t need to drive” [OF-67]; driving “affects your emotional state” (afecta a tu ánimo [OF-124]) and subjects ones to constant “cut-offs” and “nicks” (cortes de pastelito and guayasos [OF-182]). For some, driving was enjoyable as long as it was uncongested; congested roadways rapidly took the joy out of the experience [OF-424-425].

Though the students were split as to whether they preferred driving or being driven, they noted a growing preference for people asking to be driven [ES-277]. One student used to enjoy driving until she had two accidents; she now prefers being driven [ES-274]. Even though many people prefer to be driven, “everyone loves their car” (todo el mundo le encanta su carro [ES-297])—especially the cocolos, youths from poorer families who invest all of their money in their cars (and in their cars’ sound systems) [ES-348-350].

Traveling alone or accompanied

Most of the participants expressed a clear preference for traveling with someone else in the car. The secretaries began by explaining the safety benefits: in case of accident or breakdown, someone else could help (as well as keep the person safe). But as the conversation went on, one admitted to a second reason: company.
Also, when you travel with company, well, let’s go, because you’re talking to the other person, and even if there’s a traffic jam, you’re paying attention (to the other person); but when you go alone (S2: it makes you want to sleep, it makes you want to sleep) (S1: you get desperate, the jams make you desperate), you get desperate and (S?: Oh my God, you see that you’re not moving [laughs], oh my God) now you’re hungry, and they’re waiting for me.

This theme was repeated by the office workers; one male worker even developed a special coping strategy when traveling alone (screaming with the windows rolled up and the air conditioning turned on [OF-1098]).

In general, most participants especially noted that they enjoyed traveling with their spouses; the few exceptions involved different attitudes to shopping more than attitudes toward driving.

Students also highlighted the safety aspect of traveling in groups: when together, “nothing is going to happen,” as “everyone waits on the other.” [ES-140-142].

Modal choice

What are the reasons people give for making their modal choices? Though there were few surprises here, the responses nonetheless paint a picture of rational people making rational choices based on criteria that are sometimes not well understood by those not of this culture.

Reliability—the ability to plan on arriving at one’s destination before a certain time—is a key phrase used by participants in the groups—yet it is not the only concern. One not only needs to arrive on time, one needs to arrive well-composed at one’s destination.

The secretaries were quite practical in their discussion of modal choice. The lack of reliability in the transit system made cars a necessity for many; once families became dependent on the car, different family members needed their own cars. For example, students at the university “needed” cars of their own, because their parents wished to avoid getting caught in the traffic jams afflicting Rio Piedras. Mothers needed cars to go to the supermarket to buy milk and bread (apparently a daily pattern), or to pick up school supplies. Many secretaries who drove to work gladly used the Metrobus to get around at lunch time, as it was quicker and easier than driving within the central city area. One secretary knew of one car owner who commuted by bus to Hato Rey because of a dislike of congestion, but others thought this quite unusual [SEC-282-286]. One other would prefer to have a viable transit option “in consideration of what could happen on the highway,” a view likely shared by others [SEC-606].

The medical workers shared similar views, but emphasized the necessity of arriving at work well-composed. One worker enjoyed taking the público in the AM, when it was uncrowded, but strongly disliked this mode in the PM, where crowding and early mode retirement (i.e., the fact that públicos ceased operations by about 6:00 pm) made her return journey unbearable [CM-65]. Another expressed her problem with públicos in strong language:
If it rains, with all my rain gear and umbrella, I'm going to arrive soaked, that is, in bad spirits, and I'm wet, and I'm dirty, and I don't arrive on time, and when I get to work wet, dirty and without time (to clean up), and the boss is going to say to me “like, look, you, and look at the time” and all that, and I'm about to explode (laughter), and I'm, look, it's better if I just drive.

The medical workers also used the term “comfort” to describe transit modes, though their meaning was not so much the physical comfort of the mode as much as the ability of one to sleep later; a more comfortable mode was one that let people leave their home later.

The office workers tended to describe their attachment to their cars in different terms. Having one’s own radio was cited frequently, as well as general issues of privacy. An interesting concern in a culture in which proximity may imply a need to be “social.” One man described being “accustomed” to being stuck in traffic—a view not shared by many of his colleagues.

Walking vs. driving

One of the primary modal choices people make is whether or not to walk. An interesting case of this occurred with two secretaries who lived nearby in Santurce. One of these drove even though her walk was actually shorter than her drive. Again, the issue of composure was primary:

S: Oh, why do I prefer (driving)? I don't know. It's more comfortable. Habit (S: it's safer). Comfort. You've got air conditioning (S: safer), comfort. You don't sweat. When you walk, the wind (S: mmm hmm), you arrive all sweaty (S: if it rains, you get wet), if it rains, all of those things. The cars on the highway sometimes splash you as well (S: get you dirty).  

Ah, por qué prefiero—no sé, es más cómodo. Costumbre (S: más seguro). Comodidad. Uno viene con el aire (S: seguro), la comodidad, sí, no sufre, cuando uno viene a pie, el viento (S:mm hmm), uno viene sudado (S: y llueve, te mojas), sí llueve, todo este tipo de cosas, los carros que pasan en la carretera pues a veces lo mojan a uno (S: te ensucian) sí, sí.

The above exchange is especially noteworthy given a pattern fairly typical in the groups: while one person talks, another plants the themes for the first to confirm. In this case, the second secretary’s repeated mention of safety was ignored, while her other points weren’t. An obvious interpretation is that safety concerns were not playing a role in the first secretary’s modal choice decision.

The issue of safety was raised again among office workers. These workers debated the safety of walking in Hato Rey, with one worker attempting to convince another that it was not safe to walk alone in this district. The group was also mixed regarding walking in their home neighborhoods; some felt safe, others weren’t sure, and one felt quite unsafe after her sister had been assaulted.
The students claimed to walk only from their cars to their destination (the Plaza San José in the old city) [ES-482]; one considered it "absurd" to walk given the city's organization (or lack thereof) [ES-492]. This same person, however, walked in Condado without great fear.

In general, though, walking was seen as an activity more than a transportation mode [ES-516]. Given the choice between walking in their neighborhoods (for example, accessing a transit system) and walking in the city (from one point to another), a curious thing occurred in the group. At first, the students expressed that they would rather walk in the city if it meant having transit stations located closer to their homes. Then, they decided as a group that in fact, they would feel safer walking in their neighborhoods (a known area) than between two points in the city. This change of opinion was sudden, accompanied by strong statements of belief. This process of attitudinal formation suggests that any further research into hypothetical situations or not-as-yet-built infrastructure take into account the transitive nature of unformed opinions, and the kinds of arguments that lead people to ultimately embrace decisions different than they might indicate at first.

Bus vs. público

The primary reason for choosing between bus and público, according to secretaries, medical workers, and office workers, is one's choice of route. If one needs to be dropped off at a specific point along a público route, that mode is preferred. If one needs to get to a place served by an AMA bus (and the bus passes first), one takes the bus.

All other things being equal, most people suggested that they would take the first vehicle (bus or público) to come along. The price difference was noted; one medical worker knew of someone who would prefer to wait the extra hour if it meant saving a peseta (a quarter).

One significant factor that could affect mode choice was that of carrying packages. One student suggested that públicos were a far better option for people carrying items as riders would be less likely to be robbed of their goods (if for no other reason than that of being dropped off in front of one's home) [ES-206]. Though others didn't make this direct point, members of other groups did mention públicos (and not buses) in the context of shopping in Rio Piedras and Santurce.

Punctuality vs. frequency

There was considerable disagreement as to whether punctuality or frequency was of greater importance in a transit system. Some felt that punctuality was a greater good, as one could plan on the basis of it. Others felt that frequency was a better criteria, as the penalty for lateness would not be as great. In general, secretaries, office workers, and medical workers all used fifteen minutes as an example desired frequency. Lower frequencies—even every 20 minutes—were not looked upon as favorably [OF-1010]. One secretary explained that she could "play" with a fifteen minute gap [SEC-611], but any longer and she'd start to feel uncomfortable. An office worker argued in favor of 15 minute frequencies, but "in truth" every fifteen minutes, not a variable gap [OF-995]. Another office worker noted that the thing she liked most about the Aqua Expreso was its 15 minute frequency; in case she missed one boat; she could "count on" the next [OF-1003].

By no means was there consensus on the issue of punctuality vs. frequency. Several people in the different groups would be willing to live with reduced frequency if schedules could be
met reliably. Others responded to these comments with two general questions: what if the bus passes (a passive construction that can also refer to the situation of one arriving late to the bus), or what if it passes full (with no room) [CM-450]?

Need for a car

One of the more interesting areas of modal choice to emerge from this study was the identification by participants as to why one “needed” a car. All of the workers—the secretaries, office workers, and medical workers—qualified the need for a car in terms of the lack of a reliable transportation system (one that “arrives”). Both secretaries and medical workers also noted the role congestion plays in making cars a necessity; dropping family members off at their destinations exposes one to the risk of getting stuck in additional traffic jams [SEC-144 and CM-141]. The effect described is iterative: the lack of reliable transportation forces people into cars; the number of people now in cars makes it increasingly difficult to drop passengers off, leading to even more cars.

One office worker cited a different reason for needing a car: moving to a suburban location not served by transit [OF-36]. One student, speaking perhaps tongue-in-cheek, noted that, with bus stops spaced so far apart (or far from one’s origin point), one needed a car just to get to a bus stop [ES-469].

One of the medical workers commented that the need for owning a vehicle has led to the car’s being converted into a status symbol [CM-46]. The notion of automobile as status symbol is discussed in a later section of this report.

Would use transit if...

Under what conditions would people use transit? Transit planners are well aware of the difficulties involved in asking this question of non-transit users; the answers given are often far more positive than the results of actual behavior. An advantage of focus group technique is that interviewees’ responses can be probed to uncover underlying meanings and caveats. Such probing led to some intriguing results in this case.

One secretary at first spoke of “having the opportunity” to use “a very effective system,” but then noted that she needed to, on occasion, run errands after work—a difficult proposition if one is riding buses, in her view [SEC-206]. Others, upon viewing a photo of a group of metro riders enjoying an uneventful (and somewhat spacious) ride, reacted spontaneously:

But if the people were like that here, I tell you, I think no one would use their car (S2: I think no one would use their automobile).

I think it would be better to travel like that all the time.

To go to work so comfortable—can you imagine that? You’ve got to spend on gas, you wouldn’t need to spend that, forget about it (S: mmm hmmm).

This view was echoed later in the same group:

pero que si aquí fuera así la gente, te digo, yo, yo creo nadie usaría el carro (S2: yo creo que nadie usaría su automóvil) [SEC-517]

Yo creo que mejor caminaría así, todo el tiempo [SEC-518]

Para irme al trabajo tan cómodo, tú te imaginas eso, uno tiene que gastar gasolina, no tiene que gastar, olvidate (S: mmm hmmm) [SEC-520]
My experience, if I had a transport system that assured me that it would pass every 15 minutes without fail, that I could depend on it, I would leave my car, I'd definitely leave it. I don't have kids, they're in the university; I'd travel alone from home to work, from work back home. If the necessity arose, then I'd drive the car. But in consideration of what could happen on the highway, if my car gets damaged, bad experiences, the gas (S2: your traffic jams), the traffic jams—that is, I'd prefer to catch the transit, I'd travel in transit, if it gets me there, and I knew that it wouldn't fail on me, that it would always comes by.

One secretary noted a potential problem: most people need to travel at the same time. She explained, though, that a reliable, regular service meant that one could simply wait for the next vehicle to pass if the first one were full [SEC-523]—a rather generous offer on her part.

Many of these comments were echoed in the other groups. One medical worker also noted that, if there were a good system, everyone would use it at the same time [CM-41]. Another worker answered in much the same way as the earlier secretary: a frequent system meant that one could merely wait for the next vehicle [CM-48]. This same worker noted that in a city like New York, one lives running to catch the subway, but that one only needs a car to go out on weekends—a rather interesting characterization.

Also like the secretaries, one medical worker spoke of having a reliable system in terms of what she'd be able to avoid:

These medical workers defined a “good transportation system” as one that was “comfortable”—meaning a workable schedule (reliable and frequent) and sufficient seating capacity [CM-458-460]. As one person explained, if they're going to pay a dollar, they want a seat [CM-460]. This point appeared to be important to the group, as it elicited much animated discussion: the lack of sufficient seating (and the fact of being packed in) was cited repeatedly as a problem with current transit.
The office workers mostly focused on system reliability. Some of them criticized routes that were “supposed to be” every fifteen minutes but weren’t [OF-228-231]. The fact of actual reliability would apparently induce some to take extraordinary measures:

S1 If there were reliable transportation, I’d parachute in from Bayamón and not drive (laughter).  

Si hubiese transportación confiable yo vengo de Bayamón en paracaidas y no gulo (risas)  

[OF-419]

Adherence to schedule was repeatedly cited by office workers [OF-976-981], as was frequency of every 15 minutes [OF-1012-1019]. Higher frequencies—such as every five minutes—were rejected by one worker as “impossible,” but even Metrobus was criticized implicitly for not quite being as punctual as claimed [OF-1019].

One office worker explained another aspect of a transit system they would use—a parking/access area located in a place where congestion begins, such as by Señorial on the route in from Caguas. This parking would need to be secured (patrolled and controlled). Still, the implication is that this person would only use public transit in the presence of congestion [OF-1026]. This same person then admitted to the real benefit of a good transit system: getting rid of some traffic to make the drive in much easier [OF-1028]! This point was wryly responded to by another worker, who argued in favor of a exclusive bridge built to her house for her use only [OF-1057].

The students had a different set of concerns. One student at first showed little interest in having a better transit system, then changed her mind if this system were more like Boston’s [ES-151]. What would this mean? First, that transit stops would need to be located very near destinations, and second, that a different class of person would need to use the system. This latter point was stressed by the students—they would need to see a different class of users if they were to feel better about using transit themselves [ES-458-466]. And they wouldn’t want to have to walk far to use transit [ES-467]. One student offered this cautious assessment:

F: At the very least, we wouldn’t use it… (in a lower voice) a lot; but, if it’s a good system, hey, people will get used to it.  

por lo menos nosotros, no lo usariamos—(en voz baja)—mucho; pero, si es un sistema bueno, pues, que la gente se acostumbre.  

[ES-641]

Global perceptions

Participants in the focus groups also made statements about general phenomena, such as security, the fear of being assaulted, gender differences and status issues, even station location. Together, their comments on these global issues lends insight into factors of great importance affecting public perceptions of transit options.

Security

What makes a place feel safe? There were quite a number of opinions voiced among the different groups, though most themes were repeated.

The secretaries emphasized light and people. A safe place to them is one that is well lighted [SEC-539-542], with no hidden dark niches [SEC-545], plenty of escape routes [SEC-546], open space [SEC-552] and plenty of people [SEC-554-555]. Police or other guards and
plenty of movement were also noted. Of especial interest was this contrast between Plaza las Américas and Santurce:

I know that we're all at Plaza las Américas, that if a Puerto Rican shouts, everyone will look to see "Who shouted? What's going on?" But in Santurce, at 10:00 or 9:00 at night, I know that, if you shout, watch out to see if anyone hears you—if someone hears you, they're not going to check it out, "I didn't hear anything, and it's not my problem (S: uh huh).

The medical workers also identified shopping centers as feeling safer than other areas, at the same time that they noted that even churches had been the site of crimes [CM-277]. Like the secretaries, they also identified the presence of light repeatedly as a key component of safety [CM-284-287], as well as guards [CM-292], unblocked visibility [CM-289], and the presence of many people [CM-280]. Also like the secretaries, they spoke highly of Old San Juan, a “well-lighted,” “pretty” place, with “everyone in harmony” and everyone enjoying themselves [CM-279].

The office workers focused specifically on the Paseo la Princesa in Old San Juan as an example of a relatively safe place: full of life, movement of persons, charming, open, well-traveled, and well-guarded [OF-889-900]. At the same time, it was noted, one didn’t carry money or purchased goods when one went to Paseo, unlike a trip to Plaza [OF-903]. Though the office workers didn’t mention lighting, they did stress that a safe place has plenty of escape routes (salidas, or exits) [OF-913-914]. The lack of visible police was cited as a reason for not feeling safe in Rio Piedras [OF-904].

The students, like every other group, sought safety in numbers—both the presence of others and, in their case, themselves traveling in groups [ES-399 and ES-140]. They also spoke of the presence of security guards [ES-386], cleanliness [ES-390-398], and of a place being “closed” (cerrado) [ES-425]. After they discussed aspects of security, one student mentioned lighting—a point that caused another student to comment “ahh, that’s right” (ayyy, es cierto) in a tone that implied that it was both central and, up to the moment, forgotten [ES-428-429]. The students then described Paseo la Princesa in terms of its lighting, “millions of lights,” the “most illumined site in Puerto Rico” [ES-442-443]. Finally, the students talked about the class of person: obviously, they felt safer in a place visited by “everyone” (todo el mundo) [ES-399] than in a place frequented only by the lower classes [ES-448].

Assaults

The fear of assault is a primary social fear occupying the minds of many residents of the San Juan Metropolitan area. It was mentioned spontaneously in all groups. One secretary spoke of a mid-day robbery in Hato Rey, while others spoke of the dangers of having one’s purse cut away. One medical worker was robbed twice, another was the victim of a carjacking, a third was rescued by a passing bus. One office worker reported that “many employees” had been robbed on the streets of Hato Rey, leading some to travel only in group, some to travel only by Metrobus (during lunch hours), and some to travel only by car. The students saw the danger in walking to or waiting for a bus, with assaults likely in either case.
One office worker called Rio Piedras “very given to assaults” [OF-803]; another felt unsafe waiting there for transit [OF-481]. One student won’t walk in Santurce for fear of assaults [ES-69]. Assaults are an especial concern at night, judging from the numerous comments linking assaults with darkness.

Who assaults? The office workers noted it could be anyone, even the best-dressed of people [OF-635-636]. The students described the danger of drug addicts: generally young males, dressed “normally,” but standing nervously with shifting eyes [ES-527-540]. These “cacos” are neither the very poor nor those who dress in oversized “gang-style” clothing, but they are perceived as the real threat [ES-541-544].

Given the situation of the fear of crime, it’s no surprise that the students in general would prefer to live in gated communities [ES-679-683]; it’s “safer to live like that” [ES-685].

Gender and status issues

Driving a car is not merely an exercise in transportation; it is a social statement with apparent impacts on one’s social status. Though the all-female secretary group did not mention status with regard to cars, the issue did arise in the other mixed-sex groups. One male medical worker noted how owning a car in Puerto Rico had become a status issue; he was promptly reprimanded by a female who pointed out that he lived within walking distance of his job, yet he drove every day! [CM-38 and CM-50]. This same male worker even ventured that being stuck in traffic had itself become a status symbol [CM-38]!

One female office worker noted that a man needed a car “to get a girl” [OF-454], but that, once married, he could say good-bye to his sports car for a more practical minivan. The connection between youth and vehicles was reflected as well in another comment that, when one turns 16, the first thing on one’s mind is getting a license—and a car [OF-1081].

The students also spoke about this youth/car nexus. They spoke about the cocolos, youth from generally lower-class families who invest all of their money in a car—“turning a Toyota into a BMW,” according to one youth [ES-301]. Status was seen as a driving force behind these cocolos [ES-345], though it was pointed out that a cocolo’s car was his only property [ES-351].

Status issues appear tied up with gender issues; no one mentioned status in terms of women drivers. Women expressed their need to drive (and men referred to women driving) in practical terms; one medical worker cited the dual roles faced by many working women:

F2 There are many women that have gone out to work, and we have dual tasks—and so two hours that I lose getting around are two hours I don’t have to take care of things at home.  

| hay muchas mujeres que hemos salido fuera a trabajar y tenemos doble tarea y entonces dos horas que yo pierda en estar transportándome pues son dos horas que dejo de hacer mi tarea en la casa |

[CM-49]

Women drove because they needed to, but other reasons were cited for men driving:

F1 But usually the Puerto Rican man doesn’t like to ride as a passenger, he likes to drive.  

| Pero usualmente al hombre puertorriqueño no le gusta ir de pasajero, le gusta conducir |

[CM-422]

M Yes, of course.  

| Sí, claro |

[CM-423]

F Of course.  

| Claro |

[CM-424]
Because he feels in charge of the situation, it's like that.

Yes, it's machismo.

Medical workers, office workers, and students all suggested that husbands (or fathers) usually drove when traveling with wives or the entire family. Some men argued that women don't know how to drive, though some women disputed this assertion [CM-414 and OF-440-444]. One woman accused men of being backseat drivers [OF-439]—an interesting sex-role reversal (judging from the distorted perspective of North American stereotypes). One man, cited earlier, even suggested that male drivers actually treat cars driven by women with less respect than cars driven by men [OF-448]. One husband expressed a contrarian view—he preferred to ride in the back seat so that he could read [CM-428]. The students admitted to no gender-specific behaviors among their peer group. They did note a tendency in families for fathers to drive, though one explained that her father generally drove only if the family was making a long trip out on the island [ES-289].

Night

Nighttime was described or mentioned usually in the context of crime or other personal danger. The secretaries, when referring to night, spoke of darkness, assaults, insecurity, and solitariness. The one mention by medical workers involved a carjacking. The office workers mentioned the possibility of assaults on the bus as depending on the neighborhood at night; they also spoke negatively of Rio Piedras at night (especially as compared to Old San Juan). For the students, nights meant abandoned areas (such as Hato Rey), a lack of transportation order (people running red lights), darkness, and the possibility of someone coming to assault one. One mentioned nighttime in a non-negative manner—his mother usually walked the neighborhood at night in the company of friends.

Location of transit access

How do people wish to access transit? A number of opinions and issues emerged. When presented with a choice—having transit access convenient to home, but inconvenient to work, or the opposite—the secretaries, after much discussion, settled on the latter (convenient to work), on the basis that one needed to arrive to work on time (implying the need to arrive at one’s building early in order to deal with elevator-induced delays) [SEC-627]. The office workers, on the other hand, did not discuss the point before offering their opinions: that convenience to home would be preferable “as one doesn’t always go only to work” [OF-1054]. The students offered a fascinating glimpse into the process of attitude formation; they started out with the opinions expressed by the office workers, but changed to embrace the opinion advanced roughly by the secretaries. What changed the students’ mind? After noting how convenient it would be to have transit access near one’s home, one student suggested that one is normally safer walking in one’s own neighborhood than walking in the city—people and places are better known. This point led to a brief discussion, in which it was noted that stations can also bring problems, such as undesirables and noise. The students concluded their discussion strongly convinced that they would prefer that transit directly serve destinations as opposed to their homes [ES-651-664].
What is even more interesting is that this conclusion matches earlier but unrelated comments they had made, which spoke of the need for transit to be located at most a block or two away from one’s final destination (Aqua Expreso being a prime example of a transit service that did not meet this condition) [ES-642].

**Socioeconomic status**

As has been repeatedly mentioned in this analysis, the issue of socioeconomic status was an underlying issue in many supposedly innocuous comments. One of the medical workers specifically cited the problem with Rio Piedras being “the population” [CM-314], as did some of the office workers. One office worker linked “economically very disadvantaged” people with the dirtiness, smell, and sweat of the públicos. Undocumented immigrants, mostly from the Dominican Republic, were spoken of in somewhat compassionate terms (as “escaping a situation”), but still looked upon as duplicating in Puerto Rico the poverty they had attempted to leave behind [OF-949].

Among all the groups, the students were the most sensitive to socio-economic status. They clearly noted that transit systems in other cities draw from a wider range of riders [ES-113]. They were able to divide the better-off classes into finely-stratified groups (the “millionaires” with their established “last names,” the higher class, the upper-middle class, the middle-middle class, and the lower-middle class), but resisted repeated requests to define the stratification of the “lower” classes [ES-328-336]. They directly related their potential interest in using a transit system to the class of person using that system [ES-451-459]. And they recognized the strength of economic prejudice, compared to racial prejudice:

M: There’s a thousand times more racism toward money than toward [color].

| hay más racismo mil veces hacia el dinero que hacia [el color] — |

[ES-554]

A “Puerto Rican” place

Finally, what makes a place Puerto Rican? There was some divergence of opinion about this question, though people seemed a more important determinant than any singular aspect of physical design.

Some medical workers, for example, claimed that Plaza las Américas was not Puerto Rican, though they may have been referring to the fact that its mix of stores has tipped more toward American chains [CM-341-344]. Rio Piedras was seen as very Puerto Rican, despite its Dominican population [CM-345-349], though no real reasons were offered for this perception. In general, though, the medical workers cited the culture, the presence of all classes of people, and the ownership of a place as all elements of “puertorriqueño.”

The office workers dwelt less on this theme, but seemed to agree in some senses with the medical workers regarding Plaza: the stores were American, but it was the meeting place for Puerto Ricans [OF-956-959].

The students held an identical view. To them, Plaza may have been *physically* American, but was *spiritually* very Puerto Rican, and entirely because of the people. The following exchange was highly illuminating:
The identification with noise, shouting, people communicating, an intensely social environment, was further elaborated by the group. It wasn’t a preference, it wasn’t good, it wasn’t bad: it was normal [ES-598].

Reaction to materials

Three photos were shown to the participants of the groups conducted in Puerto Rico (that is, all except for the students). The first of these photos depicted a train entering a newer, “modern” station of the London Underground. The second of these photos was of an elevated station in a neighborhood of New York City, with three women separately awaiting a train. The third photograph was taken inside a London Underground train, and featured a number of people sitting quietly, many reading. The photos are attached as an appendix to this report.

The use of photos is an example of “situational associations” spoken of earlier in this report. By focusing attention—and comments—on a standard artifact, such situational associations
permit the identification of noted differences in how target groups view relevant facts, as compared with the researcher (or with project management). They also allow for a level of detail in describing transit options that might otherwise be missed in a general conversation. Finally, they permit participants in the focus groups to “project” onto the images concerns and perspectives that otherwise might not be made explicit.

The first photo generated the largest number of comments.

<table>
<thead>
<tr>
<th>Sub-categorizations</th>
<th>Secretaries</th>
<th>Medical Workers</th>
<th>Office Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The Train</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have to board fast (to avoid getting caught in doors)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very fast</td>
<td>Speed</td>
<td></td>
<td>Speed</td>
</tr>
<tr>
<td>What if brakes fail?</td>
<td>Not safe when train passes</td>
<td>Train can hit kids when running</td>
<td></td>
</tr>
<tr>
<td><strong>The Station</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A lot of noise</td>
<td></td>
<td></td>
<td>A tunnel</td>
</tr>
<tr>
<td>Commotion</td>
<td>Not kept clean</td>
<td></td>
<td>Dirty, paper (on floor)</td>
</tr>
<tr>
<td>Dark</td>
<td>Underground</td>
<td></td>
<td>I don't see graffiti</td>
</tr>
<tr>
<td>The drop-off</td>
<td></td>
<td></td>
<td>Dirty</td>
</tr>
<tr>
<td>If it were better lighted (the drop-off)…</td>
<td>No security rail (repeated)</td>
<td></td>
<td>Well lighted</td>
</tr>
<tr>
<td>If that edge were lit, it wouldn’t be so scary</td>
<td></td>
<td></td>
<td>Where’s the exit?</td>
</tr>
<tr>
<td>The unlit hole</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Quality of space</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Closed space</td>
<td></td>
<td>Not very wide</td>
<td>Claustraphobia</td>
</tr>
<tr>
<td>Insecurity—closed in</td>
<td></td>
<td>Little room if more come</td>
<td>Very closed (repeated)</td>
</tr>
<tr>
<td>Like a tunnel (repeated)</td>
<td></td>
<td>Narrow</td>
<td>Wide</td>
</tr>
<tr>
<td>Very closed-in</td>
<td></td>
<td>Space is small</td>
<td>Big</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A closed space</td>
<td>If more people, not so wide</td>
</tr>
<tr>
<td></td>
<td></td>
<td>What if the lights go out</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Closed—no air</td>
<td></td>
</tr>
<tr>
<td><strong>Positive</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Must have a/c</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Experience of waiting</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fear</td>
<td></td>
<td>Few people</td>
<td>A little solitary</td>
</tr>
<tr>
<td>If one needs to wait alone…</td>
<td></td>
<td>People waiting to get to work</td>
<td>Very solitary</td>
</tr>
<tr>
<td>Solitary</td>
<td></td>
<td>Wrong train</td>
<td>Very unsafe</td>
</tr>
<tr>
<td>There’s practically no one</td>
<td></td>
<td>No police</td>
<td>Desolate</td>
</tr>
<tr>
<td>Unsafe if only a few people</td>
<td></td>
<td>Not very safe</td>
<td>Solitary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>You don’t see persons</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Insecure</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>No guards</td>
</tr>
</tbody>
</table>
### Distractions

<table>
<thead>
<tr>
<th>(Shopping) to entertain yourself</th>
<th>Loudspeakers with music</th>
</tr>
</thead>
<tbody>
<tr>
<td>A kiosk to entertain you</td>
<td></td>
</tr>
<tr>
<td>You get bored waiting</td>
<td></td>
</tr>
</tbody>
</table>

**What would happen**

<table>
<thead>
<tr>
<th>(People) remove screws</th>
<th>An easy area for assaults</th>
</tr>
</thead>
<tbody>
<tr>
<td>Publicity of sabotage</td>
<td>Unsafe</td>
</tr>
<tr>
<td>Sabotage (being pushed)</td>
<td>Guards would create employment</td>
</tr>
<tr>
<td>The movie “Money Train”</td>
<td>Limited exits = more victims</td>
</tr>
<tr>
<td>The movies (showing people being pushed)</td>
<td>If you’re pushed… Trusts open air more</td>
</tr>
</tbody>
</table>

### Sabotage & attacks

| Spray paint (graffiti) | It will break down |

### Vandalism

<table>
<thead>
<tr>
<th>Use or Non-use</th>
</tr>
</thead>
</table>

### Operation/Maintenance

<table>
<thead>
<tr>
<th>First impression: doubtful</th>
</tr>
</thead>
<tbody>
<tr>
<td>I won’t board</td>
</tr>
<tr>
<td>Would ride it immediately</td>
</tr>
<tr>
<td>Would wait 10 years before boarding</td>
</tr>
</tbody>
</table>

### Will ride

<table>
<thead>
<tr>
<th>Would ride</th>
</tr>
</thead>
</table>

### Comparative

<table>
<thead>
<tr>
<th>Better than Rio Piedras, with its heat</th>
</tr>
</thead>
<tbody>
<tr>
<td>It looks comfortable</td>
</tr>
<tr>
<td>Something new</td>
</tr>
</tbody>
</table>

### What would enhance

| Well, if they put shopping there… |

---

Overall, security concerns dominated the discussion of the three groups. All of them referred to the space as “closed” or “closed in,” and spoke of it feeling “solitary.” Many felt very uncomfortable with the drop-off; they did not like the dark shadows, they feared being pushed (apparently a favorite theme of the movies), and some feared for children. Some would like to see some kind of barrier between train and passenger.

The second photograph, that of the elevated station, attracted lesser comment, but generally more-positive in tone:

### Sub-categories

<table>
<thead>
<tr>
<th>Secretaries</th>
<th>Medical Workers</th>
<th>Office Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Train/Transit System</td>
<td>The Train/Transit System</td>
<td>The Train/Transit System</td>
</tr>
<tr>
<td>A very fast system</td>
<td>Seniors would use this system</td>
<td>Like a monorail</td>
</tr>
<tr>
<td>People standing means it’s fast</td>
<td></td>
<td>Lack of seats means it’s fast</td>
</tr>
</tbody>
</table>

---

**Response to Photo #2—Elevated Station**
Security concerns were raised here, as in the last time, though they primarily dealt with physical, as opposed to social, concerns. Being open was seen as a plus, in the sense of allowing people to watch the local neighborhood (and presumably be watched). It is interesting to note that no one used the term “solitary” to describe this space (compared with the first photo), even though the first photo actually had more people present in the station.

The third photo portrayed the interior of a train, most likely in an off-peak hour. Responses were generally very positive, leading to some sighs of longing among those seeking access to such a system.

<table>
<thead>
<tr>
<th>The Station</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>It's more appealing—open air</td>
</tr>
<tr>
<td>Open</td>
</tr>
<tr>
<td>Not so closed in</td>
</tr>
<tr>
<td>Not very safe</td>
</tr>
<tr>
<td>Wind</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
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<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Passengers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riders are workers and students</td>
</tr>
<tr>
<td>Passengers seem safe, distracted, calm—but clutching purse tightly</td>
</tr>
<tr>
<td>It's possible they have cars</td>
</tr>
<tr>
<td>They could be leaving their cars to enjoy reading</td>
</tr>
<tr>
<td>It's possible the system is so good and efficient they've left their cars behind</td>
</tr>
<tr>
<td>Are students (because they're reading)</td>
</tr>
<tr>
<td>Are relaxed, tranquil, okay—safe</td>
</tr>
<tr>
<td>No children</td>
</tr>
<tr>
<td>Sub-categories</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td><strong>The System</strong></td>
</tr>
<tr>
<td><strong>General reactions</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Comparison to Puerto Rico</strong></td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Concerns</strong></td>
</tr>
<tr>
<td><strong>Inside the train</strong></td>
</tr>
<tr>
<td><strong>Space</strong></td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Safety</strong></td>
</tr>
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<td></td>
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<tr>
<td></td>
</tr>
</tbody>
</table>

- 89 -
Of the three groups, the secretaries were the most enthusiastic, though all described the train in generally positive terms. Two points are worth emphasizing: a lot of attention was paid to the fact that everyone had a space (and even standees had adequate hand-holds), and that most participants identified the travelers as being accompanied—when the researcher would have guessed they were traveling alone.
SUMMARY OF THEMES

What themes emerge from the constellation of focus groups? A brief listing of major themes must include the following.

1. The importance of peer or reference groups.

Participants constantly touched on the importance of who is encountered in the course of daily life. Frequently, these concerns emerged only after a series of probing questions. While most expressed comfort with the idea of a place where “everyone” was, many felt uncomfortable being the only representative of their social class in an area (or transit mode). The students, as adolescents, are naturally more attuned to this kind of social inclusion/exclusion, but it was found, in varying degrees, throughout the groups. It apparently makes quite a big difference.

2. The role of reliability.

Participants consistently expressed the need to be able to “count on” or “depend on” their transportation. Among the chief failings of current transit, for the groups interviewed as part of this study, is its inherent unreliability. Group members were also quick to seize on discrepancies between “supposed” reliability and “real” reliability. Many identified a fifteen-minute time horizon as the maximum allowable time period they would be willing to accept to wait for transit.

Reliability is more than adherence to schedule and frequency; it means having space on board, as well as hours of operation that allow people flexibility. Service to Viejo San Juan was criticized for ending too early in the evening, much as was público service in Rio Piedras.

3. The importance of composure.

A transit system that is merely reliable will not be sufficient to attract enough riders from their cars, if the groups are any indication of their peers. The importance of composure was stressed by many a participant—almost exclusively female—in making the choice to not use transit even when the person became transit-dependent. Someone working in a commercial office needs to arrive to work in good condition—clean, sweat-free, neat, and ordered. The crowding conditions that describe many públicos and bus routes, combined with the heat of non-air conditioned vehicles or stations (as well as any possible walking), make transit an impossibility for many workers. Planners of Tren Urbano and any connecting systems must understand the importance of composure to the self-concept and comfort of this target group.

4. The process of attitude formation.

In several instances the parallels among the groups gave insight into the process of attitude formation and the major points on which opinions changed. The further implication of this
point is that opinion polling might all too easily capture unformed opinions without realizing the fragility of these opinions.

A case in point is the situation regarding transit access. Both the students and the office workers began by favoring station locations (or other transit access) near their homes, but perhaps at some distance from their final destinations. Though the office workers left it at that—they moved on to the next topic of discussion—the students heard one of their number voicing a doubt: he felt it safer to walk in his neighborhood, a known quantity, than walking about in the city, with its threats. Not only did the entire group change its mind upon hearing this argument, they changed their mind with great conviction.

5. The importance of the social.

Puerto Ricans are a very social and sociable people, at least as the members of the different groups described each other. They enjoy sharing each other’s company, whether in the car, in the mall, or wandering the Paseo of the old city. There are many facets to this social orientation, not the least of which is its immediate impact on feelings or perceptions of safety. People reported feeling safer in environments filled with people, but filled with the right kind of people (socio-economic class once again). They want to be watched (by guards, civil and official) as well as to watch others. They enjoy spaces that are at once “closed” (controlled access, known entrance and egress) and “open” (spacious, airy, with many visual distractions).

One aspect of the social nature of Puerto Ricans might have tremendous implications for the design of transportation demand models. Many, if not most participants, reported a preference for traveling with someone in their cars—being accompanied literally changes one’s perception of the traffic jams that would otherwise drive more than one crazy. If this is the case, then it follows that demand models would need to account separately for those traveling alone and those traveling accompanied, given how the same person’s valuation of trip time seems to diminish when accompanied.

6. The role of walking.

Walking is an inherent part of any public transit system. Yet it does not appear as a major transit mode in any of the groups interviewed. Most people apparently view walking as a necessary evil (to get from car to destination) or as a social activity (evening walks in the neighborhood or within Old San Juan, or strolling around the shopping mall to see what’s interesting), not as a desired transit mode. The case of the secretary who spent more time driving than she would have needed to spend walking is an example, and can be best understood not in terms of security (she ignored repeated references to security made by another secretary) but in terms of composure—she did not want to arrive at work all sweaty or wind-blown. When people did talk of walking (or being outside), rain and wind were frequently mentioned—elemental forces that could rapidly dishevel someone.

7. Being driven vs. driving.

Not everyone admitted to wanting to drive. While men especially were identified as “drivers,” there were exceptions who preferred to read. Many women, on the other hand,
described driving as a means to an end, one that was necessary but not necessarily enjoyable. There clearly exists a population of people who would prefer to be driven, especially when faced with congestion. Many of these people have special needs, though; if they’re women, they need to run errands and spend as little time as possible in transit. If they’re men, they may wish to have at least a seat so they can read in peace.114 This general area could form the profit from more extensive research, as it suggests a ready market for new transit services.

8. Security and the fear of assaults.

There can be no question that the fear of assault is one of the primary motivating factors influencing decisions as to urban form, transportation choice, and even choice of activities within the San Juan Metropolitan Area. The fear of assault is greatest at night, especially in solitary situations, though many claimed it was equally likely in mid-day Hato Rey on a bustling sidewalk. Different participants described the potential assailants as young, nervous drug-users or as well-dressed professionals. The participants projected fears of assault onto the photos which they discussed; they read their degree of safety on the faces of those they could see (or not see) in the photos.

There were some surprises in how people viewed spaces. Many reported judging a space by the number of exits or escape routes it provided. The feeling of being trapped seemed to strongly influence people’s response to space. Light was mentioned as a key variable, yet somehow easily forgotten. People generally felt better in nicer, well-lit, well-traveled, yet somehow controlled spaces. They wanted to be with other people, too.

114 There is no argument that women as well might wish to read in peace; the point is that the evidence derived from the focus groups suggests the possibility that men give up driving so that they can sit and read; women appeared more disposed to give up driving for a larger set of reasons.
IMPLICATIONS TO MARKETING STRATEGY

The above discussion suggests a number of immediate implications to an evolving marketing strategy for Tren Urbano. Given the nature of the focus group research process, however, a word of caution is in order: the conclusions presented above, as well as the strategies suggested below, should be taken as hypotheses based on careful observation of the sample data. Like any hypotheses, these should be tested at the level of specificity and rigor appropriate to the scale of decisions that will be made based on these suppositions.

Marketing Mix

A number of implications to the marketing mix may be gleaned from this study.

Product

The largest number of implications may be drawn as to the actual design of transit services. If the goal is that of selling transit services to the modal-choice market, the following aspects of the transit product should be considered.

1. It might prove wise to offer parallel services, one cheaper (but less reliable and less frequent) targeted at price-sensitive customers, and one more expensive, but offering clear and consistent service standards. The establishment of such a “premium” service might be necessary to attract a sufficient proportion of middle class users to establish (and effectively position) the service as a viable option for modal choice riders.

2. This “premium” service will need to meet customer expectations of service frequency and capacity. When customers expect a fifteen-minute headway, they are framing headway in terms of their actual experience of waiting time, not scheduled waiting time. Given the facts of bunching, the implication is that programmed service frequencies will need to be greater than four trips an hour if the maximum wait time is kept to fifteen minutes. On the positive side, if this standard can be met, it may not be necessary to publish detailed schedules or schedules that depict the programmed headway: the mere guarantee of a maximum fifteen minute wait may be sufficient information for the intended user.

3. This service will need to respect the importance of composure. Given this need, público technology, as currently configured, cannot be an adequate nor acceptable mode through which new riders could or should be expected to access Tren Urbano. Mini-buses, on the other hand, if properly air conditioned and festooned with seating, can serve a far better role.

4. Stations will need to offer protection from wind, rain, and heat. The same people who need to arrive at work composed will likely not take to a transit system that subjects them to strong winds, rain, the crush of people, or any sweat-inducing activity.
5. Station will need to offer more than just transit access. Stations should have entry plaza areas, brightly lit, with established entry points, fountains, shops, eating, and perhaps even cinemas. A space such as this can serve as the primary waiting area for trains or buses, whose arrival can be indicated with flashing lights (a la Washington, DC) or electronic signs with sufficient time for passengers to pay their fares and move on to the platforms. Stations designed this way may better justify the expense of patrolling them, provide a mix of daytime and nighttime use, and help serve as a sponge for over-capacity crowds at peak periods (by providing patrons with multiple desired activities).

6. Night service will need to be carefully planned. Fear of being stranded is a major deterrent to transit use as currently exists. Back-up services (such as a higher-priced straggler’s van following ten minutes behind a bus) should be carefully planned and implemented.

7. Information technologies should be exploited for their interactive capabilities. People feel safe in the presence of surveillance, but they also feel safe when they can see and be seen. Stations can exploit this tendency, and create a more entertaining system (another necessary quality identified by some participants), by installing not only video cameras in each station, but a series of large-screen monitors showing activity in the other stations. The creation of a single “virtual station”, in which everyone can theoretically be seen by everyone, might make potential riders feel far more secure—and far less alone—than other alternatives. Given the interest expressed as well in exhibitions and music, a special stage can be constructed at a principal station for live performances, which are then broadcast (both sound and image) to special screens in all of the other stations.

8. A crowding-avoidance strategy should be developed. Disney in particular understood how to develop transit the middle classes would love: he pushed the crowding off the transit vehicle and managed it as a cue. Some careful strategy to accomplish this with any new transit mode (especially if combined with the suggestion above regarding station amenities) might preserve the transportation mode’s comfort and image for modal choice riders, as well as help that system better manage peaking.

9. Design special facilities for young children. Mothers especially would appreciate (and likely use) facilities designed to be child-appropriate, including special seats and perhaps a special, glassed-off platform area (to protect children from running and falling into the vehicle right-of-way).

Price

As suggested above, the primary price decision hinges on whether or not it makes more sense to have parallel services priced at a substantial differential in order to better serve the two distinct markets that demand transit. In addition, some other price strategy hypotheses may be offered.

1. Group travel may be encouraged through group pricing. There may be some notable advantages to promoting group travel (namely, people feel safer), and it might be an especially viable way to encourage ridership at night.
2. Pricing should match the amenity. As one participant expressed, if one is going to pay a dollar, one wants a seat. To some degree, riders will need to be clearly told what to expect for the price of their ticket.

3. Congestion pricing in the morning can help distribute the flow of users. Given that many potential riders are already accustomed to leaving home far in advance of work hours (to either beat the rush or to undertake the commute in rush conditions), pricing can encourage these people to stick close to their current departure times. At the same time, the transit services will need to have in place the physical facilities to receive people early at their destinations (for example, coffee bars in Hato Rey).

Distribution channels

Distribution channels normally refer to the means by which a product is distributed. Applied to problems of transit, it can mean either the way in which tickets are distributed or the way the transportation service itself is routed.

1. Establish satellite stations at the “edge of congestion” and provide shuttle service direct to main transit stations. These satellite stations should feature controlled parking (some fee may be charged). These stations can be the primary means through which many people access an urban rail (or bus) system.

2. Don’t (fully) abandon Metrobus. There will still be a need for lunchtime shuttle services within Hato Rey, and to connect workers in this region to the Tren Urbano for trips to other central city locations.

3. Take advantage of motor vehicle registrations to sell tickets (or passes) to transit. It might be possible to negotiate an additional required fee for automobile registrants in the metropolitan area that at the same time gives them some kind of access (i.e. unlimited or limited pass) to transit services. Such a program has worked successfully at the University of Washington in Seattle, where all those purchasing a parking permit pay an elevated fee but receive a pass valid on a number of transit routes. Such a program might encourage transit use and provide an effective means for funding transit operations—as well as be politically viable.

Communications

A coherent communications strategy is a vital element of any marketing plan. While such a strategy normally depends on a better-elaborated segmentation and positioning strategy, a few initial passes may be offered.

1. Take advantage of the themes identified through market research. This study has identified a large range of expressions, words, phrases, and ideas with which residents of the San Juan Metropolitan Area characterize transportation. A campaign that promotes “confiable” (reliable) and “nitido” (neat, or composed), and contrasts this against “desesperado” (desperate) and “disastre” helps define transit services in terms meaningful to the target markets.

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2. **Focus on congestion and roads, not cars.** The automobile is an important part of many people's identity. It would be a mistake to target the automobile as the competition; rather, a communications strategy should focus on congestion and roads as transit's competition.

3. **Use radio creatively.** Several participants mentioned the importance of radio as the primary communications media relating to travel. Transit services should not only use this medium for promotional purposes, they should sponsor road advisories (and remind those stuck in traffic that they could have arrived by now).

4. **The names (and logotypes) of transit services should follow, and not lead, the market positioning strategies adopted for these services.** The transportation market isn't necessarily interested in a given mode or agency; it is interested in certain attributes (reliability, comfort, convenience). The means by which new services are identified should therefore follow the market positioning exercise. This point is elaborated below.

### Segmentation strategy

For the marketing mix to be better targeted, managers of transit services will need to better segment the market for such services. This study suggests that there indeed exists a ready-made market for transit among modal-choice customers, but that this segment's needs are quite specific (reliability and composure). Further study of how this group may be better identified is warranted at this point.

### Positioning strategy

Even in the absence of a more detailed segmentation strategy, some tentative statements may be made about a proposed market positioning strategy for new transit services in metropolitan San Juan.

1. **Transit, if designed as suggested above, should be positioned as reliable.** Given the need to arrive on time, and the unpredictability of road conditions, grade-separated transit services can exploit their reliability and establish themselves as the "natural," business-like choice.

2. **Transit should be positioned as the "social," "safe" alternative.** Once again, if the above recommendations are implemented, transit can position itself as the safe, "watched" way to get around San Juan, as the mode where "someone is looking out for you." This can set transit apart from the dangers of traveling alone at night solo in a car that might break down—a fear voiced by a number of participants.

3. **Transit services should be clearly enough differentiated so that the "premium" services spoken of above can be positioned as the "everyone uses it" service.** "Everyone," as was explained earlier, does not necessarily mean everyone; it does imply the full range of social classes, with special emphasis on the middle. Failure to pay attention to this point can result in wide-scale class abandonment of the transit mode, with potentially disastrous results for the future expandability of any new system.

4. **Improved transit services should be clearly differentiated from AMA.** Though some planners might be tempted to "improve" AMA, the clearly negative public image associated with AMA will likely impinge negatively on public acceptance of any transit service associated
with this name. In purely marketing terms, though AMA enjoys high “brand recognition,” it also suffers from negative acceptance—a trait difficult and expensive to overcome.

5. **Tren Urbano should be renamed following the adoption of a clear positioning strategy.** The service’s new name should reflect the key service attributes identified by the positioning strategy. The current use of the name “Tren Urbano” should be treated as the name of the project, not the name of the service (a common distinction in many industries—witness the transformation of “Chicago” into “Windows95”). The current name and logo does little to establish the service as meeting the needs of the modal choice market. A positioning-driven name can describe a class of service independent of mode. As an example, a service name intended to describe a range of modes that offer quick, well-connected trips could be named “El Rápido” (*Red de Acceso Público Integrado*—Integrated Public Access Network)—a name that clearly establishes speed as its defining characteristic.¹¹⁶

The development of a market positioning strategy for transit services in metropolitan San Juan will clearly depend on further market research. The primary question to be explored necessarily will be how physical facilities (and services in general) can be designed to make modal choice riders feel comfortable while at the same time encouraging all users to adopt high standards of behavior. Places like Centro Medico and Paseo la Princesa demonstrate that a place can be all-inclusive without alienating the well-off or excluding the indigent. An effective market positioning strategy will need to learn from this example.

¹¹⁶ This name is suggested for illustrative purposes only; the choice of name can only be properly made following completion of the service positioning exercise, an activity beyond the scope of this report.
What can managers and planners of new transit services in San Juan do to develop, implement, and be guided by an effective market positioning strategy? Such a strategy, to be effective, requires that decisions as to product and service design be made with constant reference to the marketing implications of these decisions. The following points can aid top management to fully exploit the benefits of market research in the process of developing new services.

1. **The commitment to a marketing strategy must be made by project leadership.** Those who bear the primary responsibility for the development of new services must commit up-front to the development and implementation of a formal marketing strategy, and must further commit to making planning and service-design decisions on the basis of this strategy.

   This *initial* commitment is not to a specific strategy; rather, it is a commitment (i.e., the willingness to invest financial and managerial resources) to *developing and implementing* such a strategy. The elements of this strategy are further explored in the following points.

2. **The primary (i.e., first) element to be decided is that of identifying and targeting market segments that show the greatest promise of meeting the service's financial, social, and political goals.** While it is true that public services need to be made available to the general public, there are compelling public reasons to target and refine services to meet the specific needs of segments of this public—especially when significant public support for transit services derives from the desire of taxpayers to reduce the impact of traffic congestion in their lives (either by seeing such congestion reduced or by having a means to circumvent congested roads). If transit services are meant to compete in the mode choice market, then they will need to identify those segments of that market which could be served most effectively and feasibly.

   The current study has begun the process of profiling the mode choice market. The research undertaken to date suggests the existence of several market segments worthy of further exploration. These segments include:

   - “Secondary impact drivers,” frequently younger, who would normally be *dropped-off* by parents or relatives but who instead must own or drive a vehicle *so their parents or relatives don’t get stuck in further congestion*. This group makes daily commutes; their pm commute may actually precede peak congestion periods.
   
   - “Hate-to-drive but have-no-choice drivers,” frequently women, who feel uncomfortable traveling alone, dislike congestion effects, and distrust their vehicles (or road conditions). These drivers make daily commutes during peak times, and frequently must run errands after work.
• "Would prefer to read drivers," men and women who'd rather leave the driving to others and have some free time to read their newspapers or whatever. This group requires seating and some small degree of personal privacy. This group also commutes daily.

There are likely many other segments that can be devised and targeted. Management will need to identify the size of each segment, their various price and service sensitivities, and their preferred means of modal access.

3. For the targeted market segments, a specific and coherent list of required service attributes must be developed. This list of service attributes must describe the specific and entire experience a customer will have from the decision to use the service to the person's arrival at their ultimate destination. This list of service attributes must describe or outline a service concept in terms meaningful to the targeted customers, and should be based on both the research presented in this report and further research undertaken to identify targeted market segments.

4. Management must then commit to a market positioning strategy on the basis of the preceding choices. Once a "customer-derived" service concept (or concepts) is elaborated, management must then undertake a market positioning exercise, most likely with the aid of marketing strategy specialists, to devise and commit to a positioning strategy that will then serve as the primary standard with which to generate and evaluate system and service design decisions. Due to the imperative nature of the market positioning exercise, functional heads (of the different design and development sections) should be involved directly in the management exercise; these same heads should be kept fully appraised (and should participate in relevant presentations) of the prior steps—though it is their full participation in the positioning exercise that is most crucial.

The marketing literature refers to a number of techniques that have proven valuable in integrating marketing imperatives with operations or engineering concerns; the effective implementation of the market positioning strategy may require the use of one or more of these techniques.117

5. Management must then guide project or service development on the basis of its chosen positioning strategy. Management, of course, will be free to change, adapt, or otherwise modify its chosen marketing strategies as experience, new data, or changing market conditions dictate. However, the extent to which management refers to and builds on its chosen strategies is the extent to which the entire organization can better advance those strategies; one of the chief benefits of a clear positioning strategy is not just its power in communicating to customers, but its power in communicating within the organization; it makes explicit the level of expectation held by management regarding the many choices that must be made in translating a service concept into a viable, operating entity.

6. Management, on the basis of its chosen strategies, must then begin a formal exploration of means to enhance customer value. The financial efficacy of the proposed transit services will depend in part on the extent to which potential users value the service and the further extent to which additional or overlay services can generate supplementary revenues. A clear positioning strategy can aid management in identifying the kinds of ancillary services and joint developments that make practical and financial sense, that build customer loyalty, and that leverage the service’s investments in facilities and infrastructure. Market research, both that undertaken in this study, and that to be undertaken in conjunction with the further refinement of a market segmentation strategy, can generate any number of possibilities for leveraging customer value.

There is clearly ample need for further study of the potential market for transit services in San Juan. If managers and planners of transit services dedicate themselves to the focused process of identifying, understanding, and targeting likely segments of this market, they will likely reap large rewards, both to the projects they direct and to Puerto Rican society at large.
ANNEXES

1. Transit modes in the San Juan Metropolitan Area

2. Invitation letter to office managers in Hato Rey

3. Photos used in focus groups:
   - Photo #1: Inside subway station
   - Photo #2: Elevated station
   - Photo #3: Inside metro vehicle
ANNEX 1
Transit Modes in the San Juan Metropolitan Area

In addition to the private passenger automobile, there are four primary transit or paratransit modes operating in the San Juan Metropolitan Area. Taxis, a fifth mode, are relied upon primarily by tourists; they were not mentioned once in the course of the four focus groups conducted as part of this study.

Metrobus is a “premium” bus service now operating along two principal corridors: Rio Piedras to Old San Juan (Route #1) and Bayamón Center to Hato Rey (Route #2). Route #1 is privately contracted; the other route is contracted to the Metropolitan Bus Authority (AMA). Metrobuses charge a fare of 50¢ and offer relatively high frequencies during operating hours. Route #1, which runs through the central city areas of Hato Rey and Santurce, uses exclusive bus contraflow lanes, enabling movement even when surface roads are generally congested.

AMA buses are the municipal buses run by the AMA transit agency. Routes for AMA buses, now being restructured, are generally circuitous and aim for wide coverage as opposed to convenient connections. AMA buses run on generally infrequent schedules, and at that are known for not meeting even these schedules (i.e., runs are not attempted or completed). Fares are considered low at 25¢.

Públicos, known by a variety of names (detailed in the body of the report), are generally private vans which connect stations or town centers with other stations (or other town centers). While they generally follow fixed routes, they are at liberty to deviate from these routes to let passengers off where these passengers indicate. Públicos are the primary transit mode “on the island,” and they serve a role in connecting outlying towns with the metropolitan area. Fares range depending on the route, but frequently begin in the 75¢ range. Públicos follow no fixed schedules; few if any run after about 6:00 pm. Públicos are generally classed into two types: those driven by their owners, and those driven by licensed drivers.

Aqua Expreso, the famed “agua guagua,” is a ferry service that connects the Old City with Hato Rey and with Cataño, a western suburb. Service on this mode was recently re-established; though the service resulted in large financial losses, these losses were less than the amount that would need to be paid back to the US Government if service were permanently suspended. Frequencies had been every 15 minutes throughout the day; the author was unable to verify that these frequencies are still being met.
Estimado Señor:

Por este medio me gustaría solicitar su cooperación en una investigación que estoy realizando en el Instituto Tecnológico de Massachusetts (MIT) sobre la movilidad en San Juan. Según entiendo, la congestión automotriz sigue empeorando, afectando en muchas dimensiones la vida urbana. Estoy investigando cómo los trabajadores del sector comercial de la ciudad perciben la situación del transporte y sus varias alternativas.

Para efectos de mi investigación, me gustaría identificar e invitar a algunos empleados de oficina que participen en una discusión sobre la movilidad. Estas discusiones tendrán una duración de no más de dos horas (incluyendo un almuerzo gratis). Se está planeando realizar una discusión con secretarias y otra discusión con oficinistas ("clerks"), dado la prevalencia de estas dos clases de trabajadores en Hato Rey. La reunión con las secretarias está planeada para miércoles, 6 de diciembre y la reunión con los clerks está planeada para viernes, 8 de diciembre. Las dos reuniones empezarán a las 12:00 del mediodía y terminarán a las 2:00 de la tarde.

Mucho le agradecería su cordial asistencia en:

- identificar empleados (ya sea secretaria u oficinista) que ahora dependen del automóvil para su movilidad que quieren participar en estas discusiones y
- permitir a estas personas que participen en una de las discusiones, dado que involucraría una hora más allá del almuerzo.

Los resultados de este estudio serán compartidos con los oficiales y planificadores del Departamento de Transportación de Puerto Rico para servir como "voz del pueblo" en calificar y modificar las varias opciones que existen para tratar el problema de la congestión en San Juan. La privacidad y anonimidad de cada participante serán estrictamente protegidas y no serán compartidas con el departamento. A la vez, esta investigación tiene la posibilidad de impactar positivamente en el desarrollo de soluciones viables a los problemas de la movilidad.

Le voy a contactar martes o miércoles para confirmar su cooperación en este estudio.

Agradezco de antemano su valiosa colaboración en este asunto.

Sin más que referirme, le saludo de la manera más cordial.

Atentamente,

Alan Hoffman
The caption to this photograph reads "Modern station platforms are brightly-lit, faced with easy-to-clean materials and as vandal-proof as possible, but Londoners are still lacking in litter-consciousness, as this photograph of a platform at Stockwell shows." It is instructive to note that many in the focus groups felt the station was not lit enough, or at least not lit in all the correct places.
Photo #2: Elevated station\textsuperscript{119}

\textsuperscript{119} from Bruce Davidson, \textit{Subway} (New York: Aperture, 1986).
Photo #3: Inside metro vehicle

\[\text{from Day, A Source Book, p. 94.}\]
BIBLIOGRAPHY


