

# Travel Survey Methods

TRB Committee ABJ40

## Keeping an Eye on CPOs (Cell-Phone Only)

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Based on 2003 National Health Interview Survey (reported by Stephen Blumberg, CDC), young adults with children are LESS likely to be cell-phone-only than young adults without children. The prevalence of cell-phone-only within the 21-34 age group is shown right.

21-34 Year Olds Cell Phone Only		
	Percent	SE
<b>Overall Living:</b>	<b>6.7%</b>	<b>0.3</b>
<b>Alone</b>	<b>16.5%</b>	<b>1.0</b>
<b>Unrelated Adult Roomates</b>	<b>10.3%</b>	<b>2.2</b>
<b>Related Adults/No Children w/ Children</b>	<b>6.3%</b>	<b>0.5</b>
<b>w/ Children</b>	<b>4.6%</b>	<b>0.3</b>

## Focus on Transportation Data

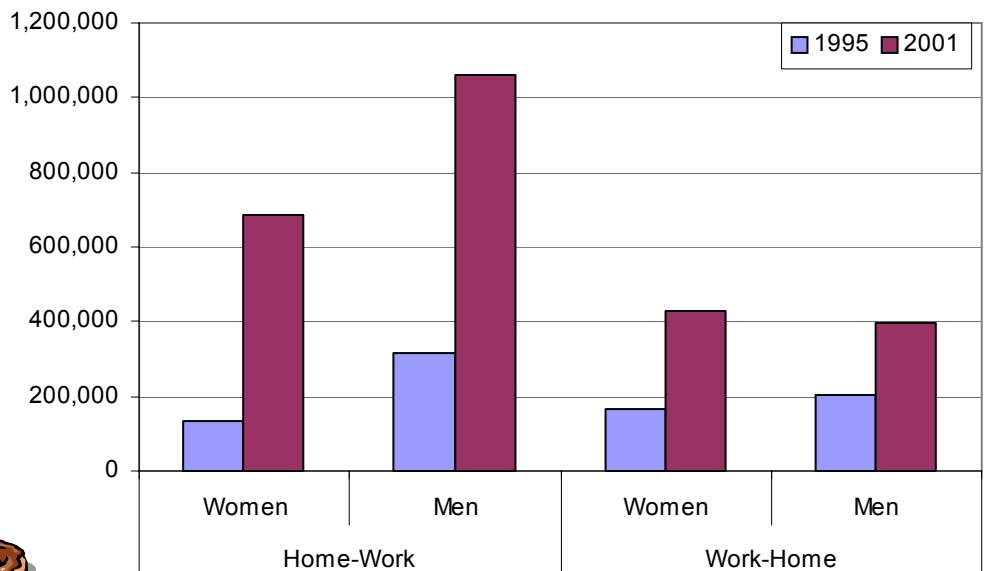
### Did you know?

Just since 1995, over a million and a half more stops for coffee or a meal are made during the morning commute by weekday workers. Men are making more stops than women, especially men in families with grown children.

The "Starbucks effect" shows how difficult it is to project trends in travel. These kinds of stops change the commute route, length, and perhaps departure time for someone substituting breakfast on the road for in-home breakfast/coffee.



Number of Daily Trips within Weekday Work Chains to Get Meals/Coffee



Source: 2001 National Household Travel Survey

## New Concepts in Household Travel Surveys: Ten Years After

The "New Concepts in Household Travel Surveys" conference was held in Irvine, CA (1995) to develop a research agenda for future quality improvements. At the 2005 Annual Meeting of TRB, a presentation session was developed to do something we don't always take time to do: look back and see how well the travel survey methods community has done to address critical issues that were identified. Now 10 years later, what have learned? What have we improved?

The three big areas of attention—survey methodology, non-response, and new technologies—still have core questions that have not been adequately addressed in the past decade. Some of the issues are addressed in the NCHRP Standards Project (NCHRP 8-37 not yet published), while other comparative studies have not been funded.

Here's an overview of the critical research issues from 1995 that remain in 2005:

### Survey Methodology Issues

- Trip-Based vs. Activity-Based vs. Time-Use Surveys: which provides the better data?
- Panel Surveys vs. Cross-Sectional Surveys: what are the costs and benefit trade-offs?
- What about continuous surveys? Multi-day/ multi-week surveys?
- Sample Sizes: what is the appropriate size for pilot surveys? Which sample stratification schemes best meet our needs?
- How do we overcome item non-response pertaining to missing trips? Can we develop post-survey adjustment factors from GPS, and if so what demographic strata should we use?
- What are the guidelines for data transferability and synthesis of data?

### Non-response Issues

- What type and direction of bias occurs because of the lower non-response rates and how does it affect trip estimates?
- What is the relationship between travel survey mode (i.e., interviewing method) and non-response? Do we know which modes of surveying are effective in reaching different sorts of non-respondents?
- What is the effectiveness of responsive design on reducing non-response? Are there standards for this emerging practice?
- What standards exist for post-survey non-response adjustment, and how common is that in travel surveys?

### Technology Issues

- How can the growing use of cell phones (especially in place of land-lines) be accommodated in household sampling?
- How far have we come in terms of online geocoding?
- Is there a perception of invasion of privacy with GPS—What types of households are more and less likely to accept a unit?
- Have the cost/benefits of passive GPS vs. diary recordings been explored?
- Have the cost/benefits of vehicle-based vs. person-based GPS been explored?
- Can GPS data be used to impute...missing trips, missing journeys, trip durations, trip times, and trip purposes?

Overall, it looks like we still have a long way to go...

**1995:**  
*"The Internet should not be used for commercial purposes..."*

**2005:**  
*Spam-filters, pop-ups, E-Bay, Amazon...*



## Attitude, Opinion and Transit Surveys by Donna Murray, Research Subcommittee Chair

As consumer transportation decisions are viewed more as lifestyle/values decisions than commodity decisions, there is a growing interest in attitude and opinion research for transportation planning applications. These types of surveys provide valuable information when conducted through rigorous methods and applied in appropriate instances.

The "Attitude, Opinion and Transit Surveys" subcommittee will benefit greatly from close collaboration with the qualitative methods subcommittee. Qualitative methods are often used in designing questionnaires and further exploration of findings. Unfortunately, because qualitative methods are perceived as less rigorous, a great deal of this type of research is being conducted by transportation professionals and consultants without a true research background.

Feedback channels (such as complaint data) are often confused with or substituted for research. "Focus groups" are being performed by untrained "facilitators" and being put forth as the desired methodology before research objectives are even defined.

Even TRB is guilty of perpetuating the impression that everyone is a researcher. An individual who may have conducted a survey in grad school becomes the expert. It's a simple equation – Bad research is worse than no research. Traffic checkers, modelers, planners are not necessarily researchers. How one asks the question is as important as the question being asked.

Customer satisfaction research is relatively new to the transportation industry. Measuring customer satisfaction is more than a putting out a simple "report card" with smiley faces and five point scales. Even more, how agencies handle satisfaction data is critical to success. Today's business enterprises deal more and more with "Voice of the Customer;" integrating research data and other non-scientific feedback channels. This poses it's own challenges for researchers. It becomes a bit like comparing apples and oranges...

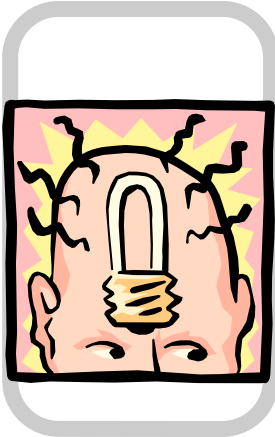
The fuzzy data of attitudes and opinions requires expertise in analysis and recommendations. It's important that we work together to ensure that the right data is collected properly, analyzed thoroughly, and that meaningful, actionable recommendations are formulated. Again, these types of surveys provide valuable information when conducted through rigorous methods and applied in appropriate instances.

Just organizing this subcommittee is the first step in raising the bar and getting the research community to sponsor and highlight better research at all levels. Additionally, it is my intention to work with the qualitative methods subcommittee, to hold workshops on Sunday at TRB; and, my next step is a call for papers. Look for it soon!

*Look for heartfelt descriptions of the challenges in research from each of the five research subcommittee chairs in upcoming Newsletters*

**To get involved in the research subcommittee on Attitude, Opinion, and Transit Surveys, contact Donna Murray, Chair at:**

**Donna Murray [dmurray@wmata.com]**



## Committee Roundtable:

**Kara Kockelman, Associate Professor in  
Civil Engineering and Transportation,  
University of Texas-Austin**

I. Several students and I are embarking on a location choice survey, of recent movers in the Austin region, and we would appreciate feedback on our draft survey instrument, before its dissemination. If anyone is interested in suggesting new questions (& modifying existing questions), we really appreciate their contacting me (at kcockelm@mail.utexas.edu, or 512-471-0210), so that we can forward that to them.

II. My projects have recently resulted in Texas-wide phone interviews, MOMB, & focus group surveys on the public's perception of toll roads and various transportation policy trade-offs. The phone interview survey results are contained in TRB paper #05-1857. (And I can send anyone who is interested the survey instruments and/or the results of phone & MOMB surveys, as described in my student's MS thesis.) The MOMB survey and focus group results will be described in summary papers and reports during the coming 8 months.

**Please send a SHORT description of activities and current research to:  
Nancy McGuckin, Editor  
N\_McGuckin@Rocketmail.com**

## Mid-Year Meetings Announcement

Travel Survey Methods committee will have two mid-year meetings to increase the opportunities for members and friends to participate.

### Transportation Planning Applications Conference

Portland, April 24-28, 2005  
<http://www.trb-portland-05.com>

Committee Meeting, Tuesday, April 26,  
5 - 7pm  
Location/ Agenda to be announced.

### Commodity Flow Survey Conference

Boston, July 8-9, 2005  
<http://trb.org/conferences/cfs/>

Committee Meeting Day/ Time to be announced.

**Coming  
Soon!**

*An updated committee web page:*

**ABJ40 (A1D10)  
Travel Survey Methods**  
<http://trb.org/directory/comm>

## Get out your Calendars! Upcoming Conferences and Workshops

- CMOR Government Affairs Workshop, April 12-13, 2005 Washington, DC  
[http://cmor.org/govt\\_affairs\\_workshop05.htm](http://cmor.org/govt_affairs_workshop05.htm)
- CMOR Respondent Cooperation Workshop, April 14-15, 2005 Washington, DC  
[http://cmor.org/resp\\_coop\\_events.htm](http://cmor.org/resp_coop_events.htm)
- Transportation Planning Applications Conference, April 24-28, 2005, Portland, OR  
<http://www.trb-portland-05.com>
- Census Data for Transportation Planning Conference, May 11-13, 2005, Irvine, CA  
[www.TRB.org/Conferences/CensusData](http://www.TRB.org/Conferences/CensusData)