

# **Driving by Choice or Necessity?**

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## **Driving by Choice or Necessity?**

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#### **Abstract**

From just about all accounts, Americans are driving more than ever, not just to work but to shopping, to school, to soccer practice and band practice, to visit family and friends, and so on. Americans also seem to be complaining more than ever about how much they drive – or, more accurately, how much everyone else drives. However, the available evidence suggests that a notable share of their driving is by choice rather than necessity. Yet the distinction between choice and necessity is not always so clear. The distinction is important, though, for policy makers. For necessary trips, planners can explore ways of reducing the need for or length of the trip or ways of enhancing alternatives to driving, and everyone benefits if the planners are successful. For travel by choice, the polic y implications are much trickier and touch on basic concepts of freedom of choice. The project summarized in this paper first develops a framework for exploring the boundary between choice and necessity and for categorizing the reasons for and types of excess driving and then uses qualitative research techniques to test and refine this framework. This research contributes to a deeper understanding of travel behaviour and provides a basis for developing policy proposals directed at reducing the growth in driving.

## **Keywords**

Travel behaviour, travel choice, non-work travel, qualitative research, International Conference on Travel Behaviour Research, IATBR

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#### 1. Introduction

From just about all accounts, Americans are driving more than ever, not just to work but to shopping, to school, to soccer practice and band practice, to visit family and friends, and so on. Data from the Federal Highway Administration suggests that total kilometres of vehicle travel on roads in the U.S. has been increasing at an average rate of 4.9 percent per year since at least 1970, implying an increase in vehicle kilometres travelled (VKT) per person of 2.7 percent per year, from 8,710 to 15,686 VKT per person per year in 2000 (Handy, 2002). Americans also seem to be complaining more than ever about how much they drive – or, more accurately, how much everyone else is driving. Congestion regularly tops the list of issues of greatest concern to residents of metropolitan areas in the U.S.

Yet the available evidence suggests that a notable share of their driving is by choice rather than necessity. Families go for "Sunday drives" to get out of the house or see the wildflowers. Shoppers drive long distances in search of the ultimate bargain at the outlet mall. Drivers may choose a longer route because it requires less starting and stopping or has more interesting scenery. Mokhtarian, et al. (2001) have recently shown that travel has an intrinsic utility, "a desire to travel for its own sake, and not just as the necessary means to the end of accessing a desired activity location." They conclude that this utility is likely to lead to travel in excess of what is necessary for mandatory and maintenance activities. Other evidence also suggests a significant amount of driving beyond what is necessary. Handy and Clifton (2001) found that as much as 50 percent of driving associated with trips to the supermarket can be attributed to the choice to shop at stores other than the one closest to home.

The distinction between choice and necessity is not always clear, as the supermarket example highlights. What if that more distant supermarket offers some product, service, or quality that the closest supermarket doesn't? In that case, the shopper might consider the longer trip necessary. What about driving the kids to school or to soccer practice? Today's parents might argue that such trips are an absolute necessity. The distinction between driving by choice and by necessity is further complicated by the fact that day-to-day decisions about travel are shaped by long-term decisions about residential location, job location, and activity participation. Each one of these decisions involves some degree of choice, although some individuals have more choices than others, depending on their constraints of income, social ties, knowledge, etc. But once these decisions are made, they create a certain necessary level of daily driving and may considerably narrow the flexibility in trip frequency, destination, mode, and route.

The distinction between choice and necessity, though not always clear, is important for policy makers. For necessary trips, planners can explore ways of reducing the need for or length of the trip or ways of enhancing alternatives to driving, and everyone benefits if the planners are successful. For driving by choice, the policy implications are much trickier and touch on basic concepts of freedom of choice: "What we need to do is make certain that we're able to get [energy] resources... into the hands of consumers so they can make the choices that they want to make as they live their lives day to day," proclaimed White House spokesman Ari Fleischer in May 2001 (The White House 2001). An understanding of the boundary between driving by choice and driving by necessity can help to clarify these philosophical issues and define the policy alternatives.

The goal of the research summarized in this paper was to explore the choices that individuals and households make about driving for non-work activities, in particular, the boundary between driving by choice and driving by necessity, and through this exploration contribute to a deeper understanding of travel behaviour and provide a basis for developing policy proposals directed at reducing the growth in vehicular travel. The paper first proposes a conceptual framework for categorizing what might be called "excess" driving by the reasons for excess driving and the type of excess driving. The paper then summarizes results from a series of focus groups held in Austin, TX in May and June, 2002 designed to look for examples of and test alternative ways of asking about different categories of excess driving. Finally, the paper concludes with a discussion of questions for further research.

## 2. Proposed Framework

The distinction between driving by choice and driving by necessity is not entirely clear. One way to clarify this distinction is to ask, in what ways are people driving more than they really need to, thereby generating what might be called "excess" driving? As a starting point, excess driving is defined here as driving beyond that required for household maintenance *given* choices about residential location, job location, and activity participation. The required level of driving can be defined more specifically as the minimum number of trips using the shortest routes to the closest destinations possible and using modes other than the car as often as possible. Excess driving is then defined as driving above and beyond the required level and can be generated by the choice of longer routes, farther destinations, greater use of the car, and more frequent trips than the minimum required. Excess driving would be generated, for example, by choosing to take a more scenic but longer route to get to work, choosing to shop not at the closest supermarket that meets one's needs but at a more distant one, choosing to take the car to the swimming pool when one could easily bike, or driving to the supermarket

during the week because one forgot something important when one shopped on Saturday. Note that the timing of a trip does not generally contribute to excess driving distance, although it may influence the time spent driving (if trips are made during peak traffic hours) and it may be correlated with choices about frequency, destination, mode, and route and thus with levels of excess driving. Of course, these minimum requirements can be difficult to define, particularly the minimum requirements for destination and frequency. The closest supermarket may not meet one's needs, or one may have certain dietary requirements that necessitate a trip to the supermarket for fresh food more than once a week. Each individual has her own set of minimum requirements, given her own needs and constraints, that is not readily observable.

A series of reasons for the four types of excess driving (more frequently, longer route, more by car, farther destination) fall along a choice-necessity continuum (Table 1). This continuum can also be thought of as the degree of responsibility assignable to drivers, or the consciousness of their excess-driving choices. Driving purely for the sake of driving anchors the choice end of the continuum, while driving deemed essential for household maintenance (work, food shopping, healthcare) anchors the need end. However, even seemingly necessary trips might involve some element of choice, with respect to route, mode, destination, or frequency. The continuum thus defines elements of choice and elements of necessity rather than a clear distinction between the two.

At the pure choice/full responsibility end of the continuum is the value that drivers derive from the act of driving itself. Next in the continuum is the value that drivers derive from the activities they can participate in while driving – watching the scenery, listening to the radio, getting out of the house, clearing one's head, etc. Mokhtarian, et al. (2001) have found significant evidence for these motivations in a majority of the population, although participants in their study found it difficult to distinguish between the value of travel itself and the value of the activities while travelling. The "positive utility" of driving might lead to the choice of longer routes (cell A2 or B2 in Table 1) and farther destinations (A4 or B4) than are necessary, either to extend the time spent driving or to enable more time for activities that one enjoys while driving. The positive utility of driving might also generate more driving trips than are necessary (A1 or B1), driving trips that are purely optional, such as a Sunday drive in the country. As Mokhtarian and Salomon (2001) have articulated, for these kinds of trips, driving itself is the purpose of the trip. Even for some trips that involve a destination, driving is the primary purpose of the trip, and the destination is of secondary importance, nothing more than an excuse for the drive. The positive utility of driving might also contribute to more use of the car than is necessary (A3 or B3). Of course, even without any positive utility of driving, most individuals choose driving because it is faster and thus has less negative

Table 1 Reasons for Excess Driving vs. Type of Excess Driving

Type of Excess Driving					
Reason for Excess Driving		More Frequently	Longer Route	More by Car	Farther Destination
Value of traveling itself	Α	A1	A2	A3	A4
activities while traveling	В	B1	B2	В3	B4
Variety seeking	С	C1	C2	C3	C4
Habit	D	D1	D2	D3	D4
Poor planning	E	E1	E2	E3	E4
Misperceptio ns	F	F1	F2	F3	F4
Lack of Information	G	G1	G2	G3	G4

utility than other modes. For most people, any positive utility to driving is likely to be frosting on the cake, so to speak.

A desire for variety comes next on the continuum. Variety-seeking behaviour may influence the choice of routes (C2), the choice of destinations (C4), and the frequency of trips (C1), leading to driving in excess of that required. "Variety is the spice of life," goes the saying, which may apply to even mundane aspects of life such as the choice of where to shop or which street to drive or how often to get out of the house. If individuals become bored with their usual choices, they may opt for longer routes or more distant destinations; if individuals get bored with their surroundings, they may opt for more frequent trips. Of course, if the usual choices are not the closest or shortest, then variety seeking behaviour could work to

decrease excess driving. However, given the general tendency to minimize travel distance when possible, variety seeking is likely to increase driving for most people on most occasions. As Mokhtarian and Salomon (2001) have noted, it is difficult to distinguish between the positive utility of travel and variety seeking as motives for choosing longer routes, more distant destinations, or more frequent trips, that is, whether the motivation is a desire for more time in the car or for variety in scenery. It can also be difficult to distinguish between pure variety seeking behaviour and variable needs that might lead an individual to choose different destinations on different occasions. In the latter case, variable needs lead to variable levels of minimum required driving, which affects the level of driving that could be defined as excess. It is also possible that variety seeking leads to different choices about modes (C3). Someone who usually drives may decide to take the bus one day, just for change, thereby decreasing excess driving. Someone else who usually bikes may decide to drive, thereby increasing excess driving. Mode choice is probably less influenced by variety seeking than choice of destination, route, or frequency, however.

The continuum then moves towards less intentional factors that can contribute to excess driving: habit, poor planning, misperceptions, and lack of information. At this end of the continuum, drivers are not consciously choosing to drive more than they need to, but they could make different choices that would reduce their driving. The Travel Blending Program, described by Rose and Ampt (2001), focuses on the potential for reducing driving by raising awareness and providing information. In a pilot study, driving declined by about 10% after participants were made aware of alternatives to their current patterns of driving. For excess driving due to habit, individuals are largely responsible. Individuals may regularly travel longer routes (D2), visit more distant destinations (D4), and drive rather than use other modes without thinking about their choices (D3), even when they are aware of alternatives. Habit may also contribute to more frequent trips than necessary (D1), for example, when an individual makes a weekly trip to the bank or a daily trip to the bakery. For many people, choices made by habit may come to seem a necessity, the idea that "I've always done it that way, so I have to do it that way."

For excess driving due to poor planning, individuals are still also largely responsible. Poor planning may lead to more trips for a particular activity (E1), for example, extra trips to the supermarket to purchase forgotten items. Poor planning in terms of the inefficient coordination of trips for different activities may also lead to more total trips as well as trips to more distant destinations (E4), for example, when an individual makes separate trips to the supermarket and the pharmacy, rather than linking these trips into one chain, or, better yet, using the pharmacy at the supermarket rather than one located across town (assuming both meet their needs). Poor planning of trip chains can also lead to longer routes if a driver

backtracks to reach destinations in the chain (E2). Poor planning might also lead to more use of the car than is necessary (E3), if, for example, taking the bus to work is a viable option for an individual who can just get herself out of the house by a regular time each day. A factor closely related to that of poor planning is poor anticipation of needs. New needs for goods or activities emerge all the time, some of which can be foreseen and some of which can't. For those that can, individuals can reduce their driving by anticipating that need and taking care of it as part of an existing trip rather than making a separate trip later on.

From this point onward in the continuum, it becomes difficult to blame the individual for excess driving. Misperceptions and lack of information are the final two reasons for excess driving, and in neither case can the individual make different choices without some help. Misperceptions might include an individual's incorrect belief about what is the shortest route (F2), the closest destination (F4), or the quickest mode (F3). In this case, the individual believes he is making the choice that minimizes driving when he is not. Misperceptions might also influence the frequency of trips (F1), if, for example, an individual wrongly believes that a store is open until 10 but really closed at 8 and so is forced to come back the next day. Lack of information may have a similar effect. In this case, the individual simply doesn't know about other alternatives that would minimize driving. Again, he believes he is making the choices about route (G2), destination (G4), mode (G3), and frequency (G1) that The Travel Blending Program targets misperceptions and lack of minimize driving. information, as well as habit and poor planning, to help individuals make choices that simultaneously meet their needs and eliminate excess driving (Rose and Ampt, 2001). Efforts by public agencies to provide information about routes, destinations, and modes to the general public also aim at these sources of excess driving. For example, parking information systems in European cities that direct drivers to the nearest available parking help to reduce excess driving in congested areas.

## 2.1 Gray Areas

This framework leaves many significant "grey areas," where it is hard to pin down exactly what constitutes travel by choice versus travel by necessity. Two factors in particular that contribute to levels of driving but were excluded from the definition of excess driving presented earlier may merit further consideration: assessment of destination attractiveness and choice of activities.

According to travel behaviour theory, individuals choose the option that provides them with the greatest utility. For destination choices, researchers assume that utility is determined by the cost of reaching the destination and the attractiveness of the destination. As defined above, excess travel occurs when the cost of travel is at least partially, if not wholly, offset by benefits of travel, in the form of the value of travelling itself, the value of activities while travelling, or the desire for variety. The individual's assessment of the attractiveness of potential destinations was taken as a given. However, some of the qualities that contribute to the attractiveness of potential destinations are clearly more important than others. A shopper might choose a more distant supermarket because she likes the atmosphere better there, another shopper might choose it because it offers better prices, and a third might choose it because she feels safer there. If travel costs were to go up, the atmosphere-oriented shopper might choose a closer supermarket, while the price- and safety-oriented shoppers might continue to shop at the more distant store despite the higher travel cost. Should all qualities contributing to the attractiveness of a destination qualify as contributing to the necessity of that choice and thus to the necessity of travel? Or should the more expendable factors, the ones with higher cross-elasticities with travel costs, be considered in defining excess travel? The difficulty is in knowing where to draw the line between necessary and unnecessary qualities.

In addition, excess driving was defined earlier as driving above and beyond the minimum required, *given* choices about residential location, job location, and activity participation. Residential location and job location are relatively inflexible in the short run and may be highly constrained even in the long run and so seem appropriate to exclude from consideration in defining excess travel. However, choices about activity participation may be quite flexible, at least for some activities on some occasions. It may be appropriate, then, to also consider activity choice to some extent in defining excess driving. Again, the challenge is in deciding where to draw the line. When I run out to the supermarket after the kids are in bed to get a pint of ice cream, is that a necessary or an optional activity? Signing the kids up for piano lessons and the local soccer league, are those necessary or optional activities? What appears to be a question of choice to an observer may be perceived as a matter of necessity by the individual. Finding an objective way to make these distinctions may simply be impossible.

## 3. Focus Group Results

As a first step toward testing and refining this framework, we held three focus groups at the University of Texas in May and June 2002. Although the focus group technique does not yield statistically significant results, it is ideally suited for exploratory research such as this (Clifton and Handy, 2001). The purpose of the focus groups was three-fold: to look for evidence of these categories of excess travel, to test alternative ways of asking about excess

travel, and to look for other issues or themes related to excess travel.

Participants were recruited through an email message sent to a random sample of university employees, including faculty, staff, and student employees. The groups ranged in size from 7 to 10 participants. The sessions were held on campus during the lunch hour, and boxed lunches were provided to participants as a recruiting incentive. Participants were asked to complete a one-day travel diary survey prior to the focus group session and a short one-page survey at the beginning of the focus group. The travel diary included two additional questions designed to foster discussion in the focus groups: for each trip, participants were asked "If you could have, would you have 'teleported' to this place?" and "For this trip, how flexible was the destination? The activity?" We facilitated the discussions ourselves, using a prepared discussion guide that asked about travel on the day of the diary survey as well as more general patterns of travel (Appendix A); these questions were modified somewhat after the first focus group in an attempt to improve the effectiveness of the second and third focus groups. The discussions were audio taped and then transcribed. Using these transcripts, we coded the comments of the participants according to the framework described above to identify examples for each of the cells in Table 1 and looked for other important themes and patterns.

One of the challenges in sorting out the magnitude of different categories of excess travel is that the categories are not entirely independent. First, individuals can have multiple reasons for driving more than they need to. For example, poor planning may mean that an individual has to make an extra trip to the store, but a desire for variety leads him to choose a more distant store. Another individual may derive value from activities while driving and have a strong desire for variety, leading both to more trips and longer routes than are necessary. Second, one reason for excess driving can impact another reason for excess driving. For example, an individual may initially choose a longer route because he enjoys listening to the radio while he drives, but eventually the choice becomes habit. Clearly, a lack of information can contribute to misperceptions or to poor planning. As a result, it was not always possible to differentiate excess driving according to these independent categories.

Another challenge is to find ways of identifying excess driving due to misperceptions and lack of information. Individuals are unlikely to be aware of misperceptions they hold or information they lack. Thus, simply asking them about their choices is not a particularly effective way of determining whether they drive more than they need to for either of these reasons. On the other hand, they may be able to think of examples where they later learned they were wrong or came across new information that would have changed their choices and reduced their excess driving. One approach might be to challenge them on their assumptions: are you certain that this is the shortest route? Another approach might be to provide them

with complete information about the available choices to identify gaps in their information and then to ask whether their choices would change in response to this new information. We did not test either of these approaches in the focus groups, but instead focused on reasons for excess driving other than misperceptions and lack of information.

The focus group discussions offer interesting illustrations of the proposed framework but also demonstrate the complexity of distinguishing between choice and necessity. Findings on the value of driving itself, the value of activities while driving, variety seeking, habit, and planning and their impacts on trip frequency and route choice are discussed first (the intersection of rows A through E with columns 1 and 2). Because they were much sparser, findings with respect to impacts on mode choices and destination choices (columns 3 and 4) are presented separately. Finally, findings on the gray areas of activity choice and residential location choice are offered.

#### 3.1 Value of Driving Itself

At one end of the continuum of reasons for excess driving is the value of driving itself. In the focus groups, we looked for evidence of the value of driving itself as well as the impact of this value, if any, on the amount of driving. In response to questions about "teleporting," the value of physical travel in general was more evident than the value of driving in particular. Beside the value of activities while traveling, discussed below, the separation in time and space that physical travel enables provides an important benefit:

It gives you the chance to unwind a bit before you get there

A couple of examples of the value of driving itself, specifically, did emerge, however. One participant talked about the enjoyment of a "cathartic drive" on the weekend, while a motorcycle rider described his enjoyment this way:

Yeah. I enjoy driving, it's a mental exercise as much as a thing of transportation because you are vulnerable to automobiles on a motorcycle. You get on and you remember that you have to be aware of everything around you because no one else is going to watch out for you. You don't have a big cushion of metal around you.

Contrary to common stereotypes, the enjoyment of driving did not seem to vary consistently with gender. The participant who expressed the greatest enjoyment of driving and the participant who expressed the greatest displeasure with driving were both women. Overall, age also did not seem to play a role, although as suggested by another participant, a particular individual's enjoyment of driving can change with age:

...when I was younger I enjoyed driving just for the fun of it but I always felt like it was kind of juvenile in a sense and I've only, at you know about 70 years old, I got over that.

Separating the value of driving itself from the value of activities while driving proved difficult. One way we approached this problem was to ask participants if they would still enjoy driving if they couldn't do the things they enjoy doing while driving, such as looking at the scenery or listening to the radio. In one group, the participants responded,

If you couldn't see anything or listen to music, no.

It wouldn't be worth it.

These statements suggest that it is the activities while driving that they value rather than driving itself; the kinds of activities mentioned are discussed below. Whichever the source of enjoyment, the level of enjoyment clearly depended on several factors. First, participants enjoyed driving more or less depending on the destination of the trip. In general, trips associated with optional activities were more enjoyable than trips associated with going to work, although the transition time between home and work was also important for some participants. When asked about the kinds of trips they would choose to "teleport" rather than drive, participants responded:

It's the have-tos, you know, that yes, let's just get there and get it over with.

I'd much rather, specifically to get to work, fall out of bed and bingo, be there, going to the store, those kinds of things. But usually going to see friends is when, I enjoy driving.

The only thing that I didn't want to teleport was my walk to school in the morning, the transition time between home and work

Another important factor influencing the enjoyment of driving is the conditions in which the drive occurs, in particular, levels of traffic. This factor may partly explain the lack of enjoyment of driving to work, which tends to occur during peak traffic hours. Rather than the increase in travel time that results from congestion, participants seemed to be reacting to the fact of traffic itself and the frustrations associated with not being able to move freely. Several participants, including one bus rider, raised this issue:

It doesn't matter if I'm a few minutes late, but I'm just sitting there just going, "somebody move."

So I can go right and go through this back neighborhood and go all the way around and avoid the traffic. Which probably I get home later than I would if I sat and waited.

[When the bus driver takes the surface street rather than the freeway] it's not saving me any time... it's just psychological. When they take the right instead of the left I start getting all excited.

Not surprisingly, then, participants talked about the enjoyment of driving in the country rather than the city. This enjoyment undoubtedly has to do with scenery (as discussed below) but is also tied to traffic conditions:

I drive a lot just for pleasure. And it's never in the city. It's always away from the city

I, since I live out in the country now, I'm doing more pleasure driving, taking the back roads.

It's country. It's always country

There's something about getting in the car and getting out on a country road.

Another important factor is season. Participants talked about taking drives in the country in the spring to see the wildflowers or the fall to see the colors, but season came into play in other ways, too. One participant who drives a convertible doesn't enjoy driving when it gets too hot, not surprisingly. On the other hand, summer seems to be a time when participants feel like getting on the road:

I definitely wouldn't do it in the winter for any reason whatsoever. I do like warm summer nights.

The most obvious contribution of the value of driving itself on excess driving is on the generation of additional driving trips (A1). Most participants admitted to driving for the sake of driving (or for the sake of activities while driving, as discussed below). In these cases, driving is the activity, and any other stops along the way are ancillary to the drive itself:

And I've always driven just for pleasure. If I want something to do on the weekend, invariably it will involve driving somewhere, whether it's Marble Falls, or Lake Buchanan, or Johnson City. I'll just go away.

A lot of times there is no destination. It's just a drive. I'll just drive and work my way back around until I get home. Never, maybe stop for a drink or something, never stop at a park, never stop anywhere. Just go

At the same time, participants talked about making fewer of these pleasure trips as traffic conditions in Austin have gotten worse. In other words, traffic may be leading to a decrease in excess driving:

I used to make them a lot more than I do now. As Austin changes I do lots less of that.

But you can't [drive for fun in Austin] anymore, literally because your life is at stake. People are angry. They are aggressive. They don't look. They don't use signals. They don't do anything. And it's not, it's not leisurely anymore. It's more of a life and death situation basically. And consequently I would just rather not have anything to do with it if I could manage to do it.

When I lived in Kansas I did that all the time. You know, get out on a country road and go visit a town that I had never been to. That was fun but I would never really consider doing that anymore here. It takes too long to get out of town.

If everyone else is teleporting then I might drive because I do enjoy driving.

In addition to trip frequency, the focus groups produced evidence that the value of driving itself is tied to route choice (A2). However, the direction of causality is more the reverse of that hypothesized: it's not so much that participants choose longer routes because they enjoy driving, rather that participants choose longer routes to avoid traffic and thus to enjoy driving more:

But since I don't want to stress out on 35 I take MoPac, which is longer but I enjoy it better.

Sometimes I'll take a slower street because it's more relaxing and because I'm not that anxious to get to work. There's a crossing guard that always waves at every car.

It takes longer in terms of mileage but it's so much more pleasant. But, if I don't have to be in a hurry I just sort of look at the entrance to the highway and think, ahh, forget it. Then it's actually really fun to go. It takes longer but it's a beautiful drive going over Mt. Bonnell and so on. It's very nice.

## 3.2 Value of Activities While Driving

Activities while driving seem to provide more value to participants than driving itself. The discussions produced examples of several different kinds of activities the participants enjoy while driving, and everyone seemed to enjoy something about driving on at least some occasions. Only one participant said she would teleport all her trips if she could, but even she came up with things she enjoys about driving.

Looking at the scenery, from the natural landscape, to buildings, to the traffic itself, was the most common activity mentioned:

Yeah, I'm saying the scenery is usually the reason why I get out.

So, if I'm not specifically going someplace, you know, that I need to be there in a hurry or a deadline or whatever, then I enjoy the drive, just to see what's out there...

So, I'm always looking, it's more than driving, but, you know. I'm always looking for flowers, trees, shapes, things, architecture in particular.

I get up early enough to see the sun come up and that looks really nice coming up around Austin. Going home I see the sun going down as well.

I really like architecture too so when I see homes that, you know, and this place is just, Austin is great.

I watch the traffic itself.

You know, you always watch people do the lane hopping. I get a kick out of other drivers, how they drive, who's on the phone and who's jamming out like I am.

Participants also described their enjoyment of watching for changes in the scenery or seeing their reighbours or otherwise keeping tabs on the community:

I get to go through downtown and see how they are doing on the new city hall and see anything that's new or different as I come up here to the University.

But, uh, when I'm making short little trips in my neighborhood, I like driving around my neighborhood to see what's going on. If I teleported to the local grocery store and I teleported to my daughter's school, then I wouldn't know what was happening in my neighborhood. I wouldn't see whose houses were for sale or if someone had just moved in. That sort of keeps you up with what's going on in your own area.

Yeah, and when you work fulltime you don't have, I mean, I know all of my neighbors but we don't get to have a lot of interaction so seeing them and waving hello and all of that is sort of, and you know a little better about what is going on. I like it from that standpoint.

A desire to get to know the community, often associated with house hunting, provided another motivation for driving:

I forgot about that but that's part of what motivated some of our trips when we were trying to check out different areas of the city to buy a house. We did a lot of that kind of thing.

We did a lot of that right before we bought a house, for about a year, every weekend we would just kind of go drive around.

Learning how to get from here to there taking the back roads and stay off 35 and MoPac. I kind of like it. I really do like it, the wildflowers and the scenery, old houses, you know. I see myself doing more pleasure driving now.

Other participants mentioned sight-seeing trips for out of town visitors:

The only time I really want to go driving, would be like when I have guests in town. Because I'm not from around here and most of my family is in other places, so they come and visit and so we go to kind of see the sights.

When job candidates come into town in January and February I'm often assigned to drive them around Austin and show them the place so I show them various neighborhoods and take them up on Mount Bonnell, drive them out to Lake Travis and have a drink at the Oasis. I'm sort of the tour guide.

One participant described the value of talking with his son when they are in the car together, just about the only time during the day when they can talk:

I really enjoy, especially the after-school part when I pick him up and the drive home is kind of the only time, I've got him sitting still and we can actually talk. It's a chance for us to kind of go through the day and see how things are. I really enjoy that.

Another participant talked about the value of thinking while driving:

I do a lot of thinking time when I'm driving. I think about, okay, on my way to work, what do I need to do when I get there. What are things that I left yesterday undone. Then I'm driving to meetings and I'm thinking about okay, well, what happened in the last meeting and how did this...so I use a lot of thinking time in the car, which is probably dangerous when you think about it.

When asked about talking on cell phones while driving, however, few participants would admit to this practice, and those that did said they keep it to a minimum. Whether these responses were honest or not is not clear, but the participants seemed well aware of the safety concerns associated with cell phone use while driving.

The contribution of these different activities to excess travel varies considerably, however. Looking at the scenery, getting to know a community, and sight-seeing clearly generate additional trips (B1) and often contribute to the choice of longer routes (B2), sometimes generating significant amounts of excess travel. According to one participant,

...often times I would go the long route through Marble Falls, thirty minutes longer because there was less traffic and it's more scenic and it's just much more pleasure to drive that way for myself, just to be able to see nice scenery... And I did that every week, one or two days a week.

But other activities – keeping tabs, talking, thinking – do not themselves generate new trips or lead to the choice of longer routes. Instead, these activities seem to be more of a way of compensating for the negatives of driving, of making the time spent driving more useful and enjoyable. The compensation value seemed especially clear for listening to tapes or to the radio, particularly to the news and to the local National Public Radio (NPR) station, KUT:

Well, I listen to tapes. I carry a bunch of tapes with me, learn languages, or whatever, just something to keep going. I have to have something. Because, if I don't distract myself then I get angry, you know, people cut in front of you, you know, look both ways to see if anybody is coming and if they are coming they pull out in front of the one car that is coming. So I really have to mellow myself out or by the time I get to work I'm furious or home, either way.

I don't listen to music, but I listen a lot to NPR on the way to work and on the way home, catch up on news and ignore the traffic as much as possible.

I rely on NPR a great deal because I don't always have time to read the paper because of my schedule, so, I really appreciate, that, to me is not wasted time that I've got listening.

That's when I listen to the news. It's the only time that I do that. It's the only time I have to actually listen to the news....

Of course, listening to the radio may lead to more time in the car even if it doesn't lead to more time driving:

I enjoy listening to KUT. But, I only travel fifteen minutes in the car so. Like this morning, there was some story, I can't even remember what it was but I got to the garage before it was over and I didn't get the end of the story. I could have sat in the garage like some people do. I notice people, they are probably listening to the end of the story.

Clearly, deriving some positive utility from such activities while driving does not always lead to more frequent trips; the activities that participants enjoy are often not sufficient motivation on their own for a trip. Deriving some positive utility from driving does not always lead to longer routes. Even so, a little positive utility may be enough to lessen the motivation to find ways to reduce driving.

## 3.3 Value of Activities While Driving

Variety seeking was not directly addressed in the focus group questions, but was a possible reason that participants might have offered for choosing longer routes (C2), different modes

(C3), or more distant destinations (C4), or for making additional trips in the questions about trip flexibility (C1). The clearest example of travel generated by variety seeking was trips to get out of the house, in other words, to seek variety in location, a change in scenery; in this case, greater trip frequency led to excess driving (C1). Several participants talked about this kind of motivation, although it was sometimes difficult to distinguish from the value derived from looking at the scenery:

I have an elderly mother and I take her out. She can't walk around so we drive and go look at things. It's kind of nice to go out and see the flowers and things like that.

I do a lot of recreational driving I guess on the weekends in terms of, I'll get bored and say, oh, I'll go to Home Depot and look around and see, or just little places just to get out of the house, clear my head, especially if I'm working on something or if I'm writing. Sometimes I just need to leave for an hour.

I like being outdoors and I like being out of the city. I don't like to stay in the house if I can help it.

Participants also talked about the satisfaction of curiosity as a motivation for driving trips. This motivation is closely related to both the desire for variety and the desire to get to know a place but seems to represent something slightly different – an outcome of the driving trip but not really an activity along the way or at the destination:

Yes there is, a curiosity of what's on the other side of the road, curiosity of what's there.

I used to travel more in my work and when I would get to a new place I would want to see it.

When I first moved to Austin I did, from living in Minneapolis, I went out just to drive just to get myself lost and force myself to find ways around, Austin... I spent a lot of time finding ways to get around. ....places I like to live in the future, maybe places to buy a home, how a neighborhood feels, I do a lot of that still.

On the other hand, these "getting out of the house" trips often seemed to be driven more by a desire to get away from people at home than by a desire for a change of scenery:

I don't drive for fun out and about, nearly as much as I used to. In college you know you are in a dorm room and you want to get out and explore everything. But, the more that I've liked where I've lived, the less I will go out and just drive around.

Not anymore, but I used to do that, drive around, but that's when I had more people living with me and so I think that had something to do with it too. It was more of an escape than whereas now I have other escapes.

Even when I was twenty years old, if there was some anxiety between me and my spouse, that was my, that was my calming agent. I would say, okay, I'll be back in a little bit. Or even just raising kids. I'll be back in a little bit. Just go out in the country, drive right back, thirty minutes later I'm just fine. It calms me.

In contrast, other participants claimed that they would rather be home than anywhere else, pointing to the importance of the home environment as either an encouragement or a discouragement to excess driving:

I mean it really is just once we're in the house, kind of a personality thing. I just don't want to go back out and face the world. I'm in my little safe haven with my dog and my husband and I'm good.

Although most participants talked about a desire for better scenery or the avoidance of traffic as a motivation for choosing longer routes (as described above), rather than a desire for a change of scenery per se, one participant pointed to variety as a motivation (C2):

Yeah. When I lived out in Bastrop there were a lot of times that I took a totally different route just because I wanted to see something different that morning, or that afternoon. It had nothing to do and time and distance...

#### 3.4 Habit

Habit proved hard to separate from other potential reasons for excess driving. Some of the driving associated with he value of activities while driving had clearly become habit for participants, but not to the point that they would continue it if they no longer derived value from those activities. Another type of habit had to do with variation in choices, for example, the habit of taking a different route a couple of times a week or the habit of using surface streets when the freeway is backed up (D2). Again, habit alone did not seem sufficient for the participants to continue these practices in the absence of other benefits from these choices. The frequency of trips to the supermarket also seemed to be a matter of habit (D1), but there was no indication that these habits led to an excessive number of trips. A direct question about habitual behaviour might have succeeded in identifying other impacts of habit on travel.

## 3.5 Poor Planning

When asked about grocery shopping, participants admitted to extra driving because of poor planning in two ways. First, they didn't always anticipate all their needs, leading to emergency trips beyond their regular shopping trips (E1) or to the lack of any kind of regular shopping schedule. Second, they often didn't stop on the way home but instead went home

(E1 and E2).

first and then back out, thus missing an opportunity to reduce driving through trip chaining

Yeah, that's true. A big grocery, once a week, but even between there, yeah, milk, bread, goodies.

I go big, big shopping once a week and then usually about one time other during the week there needs to be some emergency supplies brought in that we've run out of.

That's it, you bet. It can be really bad choices of stuff too. Like, uh, I've got no cigarettes. I know it, I'll go home first and then drive back and drive right by the place, because I get focused, I want to go home. Then I have to turn around and go back. That's, boy, that's at least two or three times a week when I could have avoided having to go back out, almost borderline lazy. I don't know what it is. It's, you know...I worry about it, but I get over it.

I'm irregular too. I'm single and I can't get on a schedule. I can't go out there and buy a big load of groceries by myself because they might spoil or go bad on me. So I go when I need it.

But participants also described spontaneous needs that they could not have anticipated, although "desires" might be a more accurate label than "needs."

Probably at least three times a week. Just run up there because on the spur of the moment we want some particular thing, get ice cream and popcorn. I have two young children so they want snacks.

You can't plan for cravings.

Not all participants made extra trips in the face of such cravings, however. In particular, participants living outside of the urbanized area and thus farther away from stores indicated that the inconvenience of shopping deterred extra trips for them. These participants preferred to go without rather than drive to the store. Although distance seemed to be the biggest deterrent, traffic also discouraged extra trips:

We live far out and we just do without. It's at least ten or twelve miles to the grocery store and I'm not going to do that.

Well, I know in my case that if I, because I don't live, I mean there's no grocery store in our town so if I don't get it on the way home then I have to go without. So if I'm making a cake and I don't have any flour, well, we're not going to have a cake. We're just going, forget that one. Or if I need peaches and we only have pears, well, we're going to have pears, cause we don't have it. So, you know, in that case I don't make any extra trips because it's just too far. It makes no sense to go for one thing.

If I'm out of butter, if I'm out of milk, if I'm out of sugar, we borrow. Our neighbors borrow, we don't want to jump in the car and wind through, get down to Bee Caves, it's just not worth it. It's not worth doing that. So I don't make, just jump in, what we call impulse buys.

Because it used to be easier just to jump in the car and go pick up that extra milk I forgot or my mom needed something or whatever. But now I have to weigh it against, do I really want to get back out in that, I mean, getting out of my driveway is a major operation... I don't want to go back out there. No, forget it. So, I just don't, I do my once a week I hit all the stores, in fact that was the day I wrote it down.

On the other hand (ironically, in view of the fact that higher-density urban areas are generally considered more environmentally benign than low-density suburban/ exurban sprawl), for or those who live near a store, making an extra car trip is "no big deal":

Our store, the store we go to is only about half a mile from our house and we live on a cul-de-sac so it's easy to get out of the driveway and it's a low traffic area.

I think there's something to be said about being further away from the grocery store and, making me, forcing you to plan better. Like my location, I can go whenever I want. It's no big deal, so I don't plan as much. I do some basic but there's still that, if I happen to forget something I can run down the street, no big deal.

A lack of constraints on time also led to less planning and thus excess driving for one participant, a part-time employee:

I feel like I'm cheating... it makes no sense for me to go home and then go all the way out to the groce ry store and then turn around and come back. Since I've got the extra time, I just go and do it.... And of course I'm out there when nobody else is. So I'm toodling to the grocery store and thinking nothing about it.

At the same time, a few participants said that because they plan, they believe they don't make extra trips:

I would say I probably couldn't do it less if I planned, because, I plan... So it's really one big shopping every two weeks and one little shopping. I don't think I could do it any less really.

Other participants described efforts to efficiently chain their trips because of the distance to store or out of a desire to avoid traffic:

The nearest store from my house is three or four miles away. So, I stop to think, do I really need to do this? Now what else do I kind of need to do in the next couple of days and I'll wind up being gone for two hours when I could have run my one trip for

the one thing that I really needed to do in twenty minutes, because I've gone to five stores because it's all, I want to get it out of the way. Fight traffic once.

I go whenever we need things because I'm in town, in Leander and it's easier for me to go to Wal-Mart or HEB from there and pick up some things rather than driving from my house...

I tend to choose my destinations in a way that I can go out and do all the driving and traveling at one time rather than mix up the trips. I'd rather not go out and just keep getting in that scene if I don't have to. So I gear myself up for one big trip.

I plan once a week on Saturdays. But, I never, I rarely stop on my way home because to me stopping at the grocery store at the way home is like getting into another traffic jam, it's just people. So I don't want to stop and do anything, I just want to go straight home

The question of planning can get even more complicated, involving issues of laziness, expectations, and even storage:

I also do without for the reason of laziness. Partly also I try to teach my kids it's a virtue. "Dad, we want ice cream." Just tough luck, this is how you grow up. But it does tend to promote a sort of attitude where you want to have everything on hand so my kitchen is a mess. It's always a mess, probably because I'm one of the people that goes less than once a week to the store so I buy large quantities of stuff and I have to have somewhere to put it. There's always a pile of potatoes and beer, so it won't fit in anywhere. So I drive less as a result, but it's also irritating in other ways

#### 3.6 Mode Choice

Although a notable share of partic ipants regularly used modes other than driving, examples of excess driving because of the choice to drive when other options were available were rare (Column 3). For many participants, particularly those living outside of the urbanized area, transit, walking, and biking were not considered a realistic option, and some had no bus service in their area at all (at least that they were aware of):

I'm locked into car by location... [there is] no bus from where I live.

I've got to drive because I live out in the middle of the country. I have no, in fact I don't have a nearest cross street.

Now, my home is much further so it's not on a UT bus route so it's not much of an option.

For others, the extra time involved in taking the bus meant that they did not consider transit an option; they were not willing to spend the extra time travelling:

I have flexibility ... if I rode the bus it would take three times longer... I choose to spend that extra hour each day at home. I take my motorcycle or car...

But if I were to take the bus, I would have to leave a full hour earlier than that. I'm not really willing to give up an extra hour on either side really to do that.

But in a few cases, participants admitted that the time difference was not so great; that they drove rather than taking the bus (or bike) because of a lack of planning (E3) or because of laziness:

But I find that I will do, I would ride my bike more or take the bus more if I planned ahead more and allowed the time or allow, you know, even to do errands I would do it more if I thought about it sooner and so it's partly just laziness and thinking ahead.

I definitely could have taken the bus, which is something, I have to leave the house about twenty minutes earlier to take the bus,

...but I drove. Because if I take the bus then that's going to be thirty minutes to get here. If I drive it's going to take me fifteen, max. And, yeah, fifteen minutes doesn't seem like that much or I could have planned to take work on the bus but it's just...

...but if I'm going from my house to anywhere else, it's just not convenient. I would have to walk five or six blocks, okay, I'm lazy. Five or six blocks to the bus stop. I guess it's not that far.

Not surprisingly, weather also played a factor in the choice to drive, with a number of participants indicating that either hot or cold weather discouraged them from walking or taking the bus:

Short trips where I could walk but I'm too lazy because it's hot.

When it's 50 degrees outside. ... I was born and raised in Austin, that's cold...

The focus groups also produced evidence that the value of activities while travelling by other modes is often a contributing factor in choosing that mode. For example, a bus rider said,

That's one of my great joys in life is to have time to read the paper and that's when I have the time [when I'm riding the bus].

Other participants talked about their enjoyment of the scenery and fresh air while walking, but also about the value of the exercise they get when they choose to walk. However, most of the walking trips that participants made on the day they completed the travel diary were on

campus, where driving wasn't an option. In other words, these walking trips did not replace driving:

Walking from the garage to my office... I get a little exercise, very little, and see what's happening along [the way]. So part of the walking is to just see things...

I like getting out and walking. For me, just for the exercise and the fresh air. If I could walk to work I would but it's ten miles, a little too far, but anywhere on campus I love to walk, and any short distances, just for the exercise.

#### 3.7 Destination Choice

Examples of excess driving due to the choice of destinations (Column 4) were also hard to identify. The value of driving itself and the value of activities while driving often contributed to visits to distant destinations (A4 and B4), but these destinations were not the motivation for the trip; as described earlier, driving was the primary activity. In these cases, the visit to the distant destination cannot fairly be tagged as the reason for excess driving. Variety seeking seemed to have a connection to the choice of supermarkets beyond the closest one (C4), but participants were mostly seeking variety in products rather than variety in the destination more generally. Some participants regularly chose the store that offers the greatest variety in products, while others chose different stores for the different products they offer:

Yeah, well, uh, I go to Whole Foods Market on 6th and Lamar most often. And then Wheatsville is actually my closest store but I, very often I will choose Whole Foods over Wheatsville because it has more variety.

Well, if I have to make a stop on the way home during the week, which is just a short little fill in thing, uh, I stop at the Randalls because it's right on the thoroughfare right past, going past my house. But on the weekends when I go shopping, I usually opt for HEB because I think the prices are better. And it's about the same distance from my house. If I'm entertaining or want, cooking a special meal I'll probably go to Central Market.

The benefits of habit in the choice of supermarket (D4), particularly the benefit of knowing the store and the products it offers, were also noted by participants:

I know where the toilet paper aisle is at the HEB at Hancock Center. I don't want to go looking anywhere else. I know where it is and I want to go there. It's habit, routine...

I'm guessing that most people have their favourite grocery stores or their favorite shopping centers or malls or stuff like that. So, I mean, I usually stick with the same thing when I'm coming into town specifically for a certain purpose then I know that I

can get the best produce at Central Market. And I know I can get what I need, you know, at the mall. Everything is one stop shopping there. And, so, I mean, I usually stick with the same thing.

But knowledge that a more distant store carried particular products contributed to the decision to shop at the more distant store; in this case, a lack of knowledge might have limited excess driving rather than increasing it (G4):

Mine would be the closest, about 99% of the time. If it's [presentation] ... that I'm concerned with, then I'll go to a different one just because I know that I can guarantee that the fruits and vegetables are there. Sometimes it's variety too. If I want something specific the HEB by my house doesn't always cater to that big a variety. I've learned, obviously you can't go to this one if you are looking for this item. I don't mind driving across town if I know that they are going to have shrimp like that.

#### 3.8 Activity Choice

Few participants admitted to flexibility in the activities they participated in on the day they completed the travel diary. Optional activities included going out to eat and driving to the swimming hole, for example. Other participants said that they had flexibility as to participating in an activity on that day but that it had to be done sometime. But most participants seemed a bit at a loss to come up with activities that were not necessary, a reaction implicit in these comments:

I could shop less if I did less eating.

I'm an American citizen and I'm just busy, busy, busy. The less time I'm on the road the more time I have to participate in whatever activities.

There's the inflexibility of being married. You have to go where your spouse wants to go. [All laughing]

The shopping associated with food cravings described earlier might also be considered optional. The fact that some participants chose to do without rather than make the extra trip to the store helps to support such a designation. But participants at least jokingly insisted that, for example, satisfying a craving for chocolate was a definite necessity. These findings suggest that defining excess travel for a given set of chosen activities is probably appropriate, or at least they do not establish a basis for defining certain activity choices as contributing to excess driving.

#### 3.9 Location Choice

Residential location choice was also taken off the table as a source of excess driving. However, the focus group discussion produced interesting examples of the trade-offs between commute distance and exurban living that participants were willing to make. Several participants made a conscious choice to live farther away despite the commute distance as well as the poor access to stores and services. These participants recognized that their choice leads to more driving but were willing to pay this price to live outside of the urbanized area:

Because I live, not in twn, the idea of teleporting is real nice because I wouldn't have to drive for thirty minutes or forty minutes... I wouldn't want to live in Austin though so, that's the choice that I make.

I know in our case I've always lived in a small town and when we moved, we moved farther out in the country.... Now, cows are our neighbors. ...that was a conscious choice... So, we have no neighbors. There's something to that. That's the choice that we made, even though that meant a thirty/thirty-five minute ride into Austin every day. So, lifestyle choices.

Others have moved or are considering a move in order to reduce commute distance:

Yeah, I used to live down south... and I didn't like having to allocate one to two hours of time each day for the commute. So we moved to much closer. It's about a fifteen, ten minute drive to work.

Another participant highlighted the connections between residential location choice, job choice, and job location, and efforts to compensate for commuting:

I did work at a job that was ten minutes from my home, which is far south. But I was a little bit bored so I chose to take this job that was more interesting even though I was aware that I would be commuting longer. And so, because I chose that I decided to make the best of the commute, you know, by reading, listening to books on tape or thinking or other things in the car. However, uh, now I'm thinking about moving. Either closer or maybe to another city.

For the participants in these focus groups, all of whom work at the University of Texas, located in the centre of Austin, the choice to live outside of the urbanized area necessitated more driving than those who chose to live more centrally. The result can only be considered excess driving if the choice to live farther away is considered optional. But that approach would also require some judgment about what distance from work is necessary.

#### 4. Conclusions

When we asked focus group participants at the end of the discussions if they drive more than they want to, the response was an unambiguous yes from everyone. When we asked if they drive more than they need to, the response was also an unambiguous yes from all but one or two participants. These results point to an apparent paradox: people drive more than they would like to yet they are not doing so entirely out of need. The discussions themselves point to two explanations for this paradox. First, people like some of the driving they do but not all of the driving they do, and the driving they would like to eliminate is generally the driving that they need to do. All of the participants could point to regular or occasional driving trips that they like to make and wouldn't choose to "teleport." As one participant put it,

I don't think anybody really wants all of their transportation to be [by "teleporting"]. Or all the [by driving] as well

Second, people are often too lazy to do the planning it would take to reduce their driving, or they never stop to think about ways they could reduce their driving. Several participants told stories about convoluted sequences of trips or extra trips that they clearly recognized now as inefficient. The enjoyment that some participants derive from driving might also help to explain their failure to take advantage of opportunities to reduce their driving. The focus group discussions point to some level of excess driving for everyone, and significant levels of excess driving for some.

Besides providing evidence of excess driving, this initial exploration of the question of driving by choice versus necessity suggests the need for further research to categorize the potential sources of excess driving, develop effective techniques for identifying excess driving, and quantify both the amount of excess driving and the contribution of various explanatory factors. Future efforts should focus on ways of distinguishing between the value of driving itself and the value of activities while driving and on ways of searching for excess driving caused by habit, misperceptions, and lack of information. The grey areas associated with destination choice and activity choice merit further consideration, as do the even greyer areas associated with residential location choice and job choice. We are planning two follow-up studies to address these questions: a series of in-depth one-on-one interviews that we will use to further refine the conceptual framework, followed by the development of a survey instrument that we will use to quantify the different categories of excess driving and test the individual and community-level factors that influence excess driving. A better understanding of the magnitude of excess driving and its sources will help in the formulation of policies designed to slow the growth in vehicular travel.

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## **Appendix A: Focus Group Questions**

- 1. Let's start with the "teleport" question Thinking about the trips you took the day you filled out the diary, were there any trips you would NOT have teleported? Why?
- 2. Would you want all of your travel to be instantaneous, if you could? Why or why not?
- 3. What kinds of things do you enjoy doing while you drive?
- 4. Is your desire to do these things ever your primary motivation for going for a drive? Can you give me some examples?
- 5. If you couldn't do those things say it was dark, the radio was broken, and you couldn't roll down the windows would you still like driving? What is it about driving that you would like?
- 6. Let's talk about your commute trip for a minute. Is there any flexibility in the route you use? Do you always use the same route? Why do you choose the route you do?
- 7. Now let's talk about the flexibility of your activities. Were there any activities that you said were at least somewhat flexible? Could you have NOT done that activity that day? Could you have done it at a different time? Or was it flexible in some other way?
- 8. How about the flexibility of your destinations. Were there any destinations that you said were at least somewhat flexible? What other options did you have for destinations? Why did you pick the one you did?
- 9. How about flexibility in mode driving, transit, walking. Did you have any flexibility in your mode for any trips?
- 10. Now, something like grocery shopping. We all have to do it or have someone do it for us. But some of us go to the store a lot more than others. How often do you do regular grocery shopping?
- 11. How often do you run to the store because you forgot something? Ran out of something? Decided you needed a little dessert...? Could you shop less if you did a better job of planning?
- 12. Let's talk about your choice about where to live. Obviously, where you live determines what kind of commute you have, what kind of access you have to supermarkets, whether or not you have the option to take the bus or walk, and so on. How important was transportation in your decision about where to live?
- 13. Do you drive more than you need to? In what ways?
- 14. Do you drive more than you want to?