



# Are we there yet? Trip duration and mood during travel



Eric A. Morris <sup>a,\*</sup>, Erick Guerra <sup>b,1</sup>

<sup>a</sup> *Planning, Development and Preservation, Clemson University, 2-317 Lee Hall, Clemson, SC 29634, USA*

<sup>b</sup> *City and Regional Planning, University of Pennsylvania, 127 Meyerson Hall, 210 S. 34th Street, Philadelphia, PA 19104, USA*

## ARTICLE INFO

### Article history:

Received 7 October 2014

Received in revised form 20 March 2015

Accepted 4 June 2015

Available online 8 July 2015

### Keywords:

Happiness

Affect

Mood

Trip duration

Travel mode

Commuting

## ABSTRACT

Are longer trips more strenuous or unpleasant than shorter ones? This paper examines this question using data from the American Time Use Survey's well-being module, which queried individuals about the extent to which they felt happiness, pain, sadness, stress, and fatigue during three randomly selected daily activities. Over 22,000 instances of individuals traveling are observed, including their trip duration, mode, purpose, and demographic and geographic information. Each emotion, plus a constructed, composite mood variable, is regressed on trip duration. Overall, the relationship between trip duration and traveler mood is not strong, which is unsurprising given prior findings on the limited impact of activities on mood. However, there is a statistically significant and negative association between trip duration and mood, primarily because of rising stress, fatigue and sadness on long trips. This is particularly true for drivers, while negative emotions do not rise with increasing trip duration for auto passengers. This suggests strain rises as the result of operating the vehicle for long periods, not traveling in an auto per se. Long bicycle trips are more painful than shorter ones, probably due to the physical demands of the mode, and long train trips are associated with less sadness. For commuters, long trips significantly degrade the mood of both drivers and bus riders, in the latter case probably due in part to vehicle crowding and standing. The findings imply that reducing the duration of trips, for example through land use policies that reduce trip distances, or congestion reduction, would have emotional benefits. Policies to promote ridesharing instead of solo driving for long trips may increase traveler mood in the aggregate. Improving bus service or substituting rail for bus for long commute trips may also improve traveler mood.

© 2015 Elsevier Ltd. All rights reserved.

## 1. Introduction

Are long trips annoying? Individuals with antsy children, dinner waiting at home, or traffic-choked commutes might take it as self-evident that they are. However, to date evidence on this question has key limitations. This paper will contribute to the literature on trip duration and mood in a number of novel ways.

A central tenet of travel demand modeling is that individuals prefer to economize on travel time. However, it is probable that individuals enjoy at least some aspects of travel and prefer travel to many other activities, and thus they may not in all cases deterministically minimize travel time (Mokhtarian & Salomon, 2001; Morris & Guerra, 2015; Ory & Mokhtarian, 2005; White & Dolan, 2009). Travel has many positive benefits, including aesthetic enjoyment (watching scenery), the thrill of

\* Corresponding author. Tel.: +1 818 625 3987.

E-mail addresses: [emorri7@clemson.edu](mailto:emorri7@clemson.edu) (E.A. Morris), [erickg@design.upenn.edu](mailto:erickg@design.upenn.edu) (E. Guerra).

<sup>1</sup> Tel.: +1 215 746 8234.

moving at a high speed, the satisfaction of curiosity, feelings of mastery and control, escape from the stresses of work and home, etc. (For a discussion, see [Mokhtarian & Salomon, 2001](#); [Ory & Mokhtarian, 2005](#).) Thus the desire to minimize travel time may be due more to utilitarian factors (travel's monetary cost, and especially the opportunity cost of travel time) and not to the fact that travel itself is an onerous activity.

The body of literature focusing on happiness and travel is growing, and now has merited several review papers ([De Vos, Schwanen, Van Acker, & Witlox, 2013](#); [Delbosc, 2012](#); [Ettema, Friman, Gärling, Olsson, & Fujii, 2012](#)). [Mokhtarian and Salomon \(2001\)](#) find that nearly three times more people report enjoying travel as disliking it. [Morris and Guerra \(2015\)](#), [White and Dolan \(2009\)](#), and [Turcotte \(2005\)](#) find that travel is roughly an average activity in terms of mood, better enjoyed than unpleasant activities like work or housework, but less enjoyed than other activities like socializing, eating or religious participation. [Olsson, Gärling, Ettema, Friman, and Fujii \(2013\)](#) find that subjects in Sweden are relatively happy while commuting. [Kahneman and Krueger \(2006\)](#), however, find that the morning and evening commutes are the 17th and 19th best-enjoyed activities of the 19 they observed. And [Morris and Guerra \(2015\)](#) find that travelers dislike the commute significantly more than other types of travel.

Numerous works have found that in the aggregate auto travel produces more positive feelings than transit travel ([Ellaway, Macintyre, Hiscock, & Kearns, 2003](#); [Ettema et al., 2011](#); [Gardner & Abraham, 2007, 2008](#); [Hiscock, Macintyre, Kearns, & Ellaway, 2002](#); [Jensen, 1999](#); [Mann & Abraham, 2006](#); [Mokhtarian & Salomon, 2001](#); [Morris & Guerra, 2015](#); [Olsson et al., 2013](#); [Ory et al., 2004](#); [Stradling, Carreno, Rye, & Noble, 2007](#); [Tertoolen, Van Kreveld, & Verstraten, 1998](#); [Turcotte, 2005](#)) due to factors like protection from the elements; feelings of power, mastery, control, prestige, and self-esteem; convenience; reliability; privacy; greater control over one's environment (such as climate control); and personal comfort. Other studies have found that walking and bicycling are associated with relatively positive emotions ([Duarte et al., 2010](#); [Mokhtarian & Salomon, 2001](#); [Morris & Guerra, 2015](#); [Olsson et al., 2013](#); [Turcotte, 2005](#)).

A subset of the work done on this topic considers travel duration and emotions. [Hupkes' \(1982\)](#) variant of the subsequently much-debated "travel time budget" theory (for a review, see [Mokhtarian and Chen \(2004\)](#)) holds that there are regularities in the amount of individuals' daily travel because of the relationship between mood and trip duration. He theorizes that trips begin as pleasant, which prompts individuals to undertake them and helps set a minimum floor of daily travel. But he suggests that trips become trying as they drag on, helping to cap travel and impose a daily maximum. However, Hupkes' ideas are purely theoretical in nature.

Empirical work on links between travel duration and mood has focused on the commute trip. Studies have found that lengthier commutes are associated with lower overall life satisfaction ([Choi, Coughlin, & D'Ambrosio, 2013](#); [Morris, 2011](#); [Stutzer & Frey, 2008](#)), and that commute duration is significantly and negatively related to satisfaction with the commute ([Olsson et al., 2013](#); [Ory & Mokhtarian, 2005](#); [Ory et al., 2004](#); [Stokols, Novaco, Stokols, & Campbell, 1978](#)). [Sandow \(2013\)](#) finds that marital separation rates are higher for some groups of long-distance commuters (particularly men). [Páez and Whalen \(2010\)](#) find the average traveler would prefer to be spending roughly 30% less time commuting; this is in part dependent on mode, with auto travelers, and even more so transit travelers, desiring shorter commutes more ardently than active travelers (walk/bike). On the other hand, [Redmond and Mokhtarian \(2001\)](#) find that the mean desired commute time in their survey sample is 16 min, with very few people stating they would teleport to work were it possible, suggesting that the commute, if of moderate duration, does have benefits; however, few survey respondents opted for a very long ideal commute. [Páez and Whalen \(2010\)](#) also find that those with short commutes tend, on the whole, to wish for longer commutes, with 20–25 min being the inflection point where people in the aggregate begin to prefer to have a shorter commute. [Ory et al. \(2004\)](#) find that 49% of their sample expressed satisfaction with their (greater than zero) commute times.

However, these studies examine the broader impact of travel duration on satisfaction with travel and life more generally, not specifically traveler emotions. One might be dissatisfied with one's commute because it detracts from time with family or at leisure, while still finding oneself in a pleasant frame of mind on the trip. For example, the commonly used Satisfaction with Travel scale (used by [Olsson et al., 2013](#)) includes several measures of traveler emotion in its nine questions (asking if the respondent was worried, stressed, tired, bored, and fed up) but conflates these with several question on the trip's overall utility (asking if travel was from the worst to the best, was of a low to high standard, and worked well). A viscerally unpleasant trip in which the rider was standing on a crowded bus might nevertheless be categorized as "working well" if the bus is on time and experiences no delays.

Hence, of greater direct relevance for the purposes of this paper are studies which have focused specifically on emotions during the trip (almost exclusively the commute trip) and their relation to trip duration. [Wener, Evans, Phillips, and Nadler \(2003\)](#) find that shorter commute times for rail travelers in New York are associated with less traveler stress (with the measurement of stress based on traveler self-reports, proofreading tests, and salivary cortisol levels). This was echoed in two other studies, [Evans and Wener \(2006\)](#) and [Wener and Evans \(2011\)](#); however, the latter study does not find that commute duration is associated with significant differences in overall traveler mood. Other studies have also found that lengthy commutes are associated with greater traveler stress ([Gottholmseder, Nowotny, Pruckner, & Theurl, 2009](#); [Koslowsky, Aizer, & Krausz, 1996](#); [Sposato, Röderer, & Cervinka, 2012](#)). [Stokols et al. \(1978\)](#) find longer commutes are associated with higher tension, nervousness, and increased blood pressure, though they find no difference in task performance or arousal. [Kluger \(1998\)](#) finds that the positive relationship between long commutes and stress is mediated by variability in travel time. Longer trips tend to have greater variability, and variability in turn leads to stress. (Other work has found that unpredictability is a major source of commuter stress; [Evans, Wener, and Phillips \(2002\)](#).) [Kluger also finds that some positive emotions are aroused on long trips.](#) [Gatersleben and Uzzell \(2007\)](#) break the phenomenon down by mode, finding that transit is the

Download English Version:

<https://daneshyari.com/en/article/897614>

Download Persian Version:

<https://daneshyari.com/article/897614>

[Daneshyari.com](https://daneshyari.com)