



The Role of Childhood Context and Experience in Shaping Activity-Travel Choices in Adulthood

Prof. Chandra R. Bhat

(Paper is jointly authored with Kamryn Long, Denise Capasso da Silva, Felipe F. Dias, Sara Khoeini, Aarti C. Bhat and Ram M. Pendyala, Prof. Bhat's PhD student)

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Abstract

To what extent do experiences in childhood and parental influences shape mobility choices and behaviors in adulthood? This is the central question that this research seeks to answer through an analysis of a unique survey data set that includes variables describing a number of contextual factors from the individual's childhood. The study presents a joint bivariate ordered probit model of vehicle ownership and transit usage in adulthood as a function of childhood influences and experiences, while controlling for other socio-economic and demographic variables. The study uses the 2014 Who's On Board Mobility Attitudes Survey (WOBMAS) data set. The results show that childhood experience (both direct and parental influence) variables are significant in explaining both vehicle ownership and transit use propensity – thus confirming the hypothesis that choices in adulthood are shaped, at least in part, by opportunities, experiences, and influences accumulated in childhood. However, when comparing the size effect of childhood experience on current adult vehicle ownership and transit-use behavior (relative to the effects of current adult sociodemographics and built environment variables), we found the former to be very small relative the latter. In general, based on this study's findings, it is rather uncertain whether interventions in childhood (directly or through parents) would be able to bring about significant shifts in choices later in life. What appears to have happened historically, based on the evidence gathered in this study, is that effects of childhood experiences and especially parental influences fade with age – and it is the prevailing socio-economic characteristics and built environment attributes that shape choices in adulthood.

This study is a unique examination of the influence of childhood experiences on adult travel behavior that controls for other demographic and transportation-related/built environment effects. Future research can shed additional light on the influence of childhood experiences through a more extensive capture of childhood experiences in activity-travel surveys as well as through a better representation of the built environment context in the analysis. Examining the relevance of early experiences also opens the door to further generation or cohort specific differences in mobility, as well as a disentangling of true "cultural" parenting practice variations across generations from a simple "distance from childhood" fading effect. The availability of surveyed responses at multiple stages of life, including dynamic demographics and attitudes such as income or changing values should be pursued for further behavior analysis and forecasting.

Keywords: vehicle ownership, transit use, childhood influences, traveler behavior, attitudes and perceptions.

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Speaker's Biography

Prof. Chandra R. Bhat is a world-renowned expert in the area of transportation and urban policy design, with far reaching implications for public health, energy dependence, greenhouse gas emissions, and societal quality of life. Methodologically, he has been a pioneer in the formulation and use of statistical and econometric methods to analyze human choice behavior. His current research includes the social and environmental aspects of transportation, planning implications of connected and automated smart transportation systems (CASTS), and data science and predictive analytics. He is a recipient of many awards, including the 2017 Council of University Transportation Center (CUTC) Lifetime Achievement Award in Transportation Research and Education, the 2015 ASCE Frank Masters Award, and the 2013 German Humboldt Award. He was listed in 2017 as one of the top ten transportation thought leaders in academia by the Eno Foundation. He is also a top-cited transportation engineering researcher (web of science h-index of 50), and was listed in the most cited researchers in civil engineering by ShanghaiRanking's global ranking of academic subjects 2016 by Elsevier. He is the Editor-in-Chief of Transportation Research – Part B.

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*** All Interested Are Welcome ***

For further information, please contact Prof. William H.K. Lam at Tel. 2766-6045.

Free Admission. Please reserve your seat with Ms. Tiffany Szeto by email: tiffany.szeto@polyu.edu.hk.

Certificates of attendance will be provided to participants who attend the whole seminar.