

Spring 2014

Professor David King
dk2475@columbia.edu

Office hours: Monday 2-4pm, 304 Buell Hall

Transportation and Land Use Planning

Lecture: Tuesday 9-11am, 300 Buell North

Urban sprawl, smart growth, traffic congestion and green cities are ideas that share a common policy linkage: integrated transportation and land use planning. This course is an overview of land use and transportation policy and planning drawing primarily on the United States experience with autos and transit. By introducing theory and principles of urban planning, civil engineering, economics and public policy, students will learn about how to use planning tools, policies and other infrastructure investments to help develop effective places and networks. By the end of this course students will be able to think critically about the transportation and land use implications of accessibility, environmental and urban design policies. In addition, students will understand the mutually reinforcing incentives of transportation and land use systems at local, regional and national scales.

Through the readings, lectures, assignments and class discussion we will explore the following themes of the literature.

- 1) Why do our cities look like they do?
- 2) How does transportation affect land use?
- 3) How does land use affect demand for transportation?
- 4) What tools are used to evaluate urban form and transportation?

Assignments

1. Historical Study of Regional Transportation and Land Use Planning (30%)
2. Research on the value of subway stations (25%)
3. Travel behavior analysis using travel behavior surveys (25%)
4. One presentation of weekly readings (15%)
5. Participation (5%)

Weekly Readings

Week 1 (January 22): What do we know about how transportation and land use interact? History, Trends and Planning Goals.

This session covers the historical aspects of urban sprawl, compact cities, governmental intervention and associated issues. The primary focus is US cities and regions, but some global trends will be discussed.

Videos:

“Community Growth, Crisis and Challenge” (1959) Urban Land Institute. Available:

<http://www.youtube.com/watch?v=c1W3ong7BY>

“Conversation with an Engineer” (2010) Strongtowns. Available:

<http://www.youtube.com/watch?v=P9BUyWVg1xI>

Readings:

Pucher, John (1988) “Urban Travel Behavior as the Outcome of Public Policy: The Example of Modal-Split in Western Europe and North America,” *Journal of the American Planning Association*, 54:4, 509-520.

Millard-Ball, Adam and Lee Schipper. (2011) “Are We Reaching Peak Travel? Trends in Passenger Transport in Eight Industrialized Countries,” *Transport Reviews*, 31 (3), pp. 357-378.

New York City Department of Transportation. (2013) *Making Safer Streets*.

November. Available: <http://www.nyc.gov/html/dot/downloads/pdf/dot-making-safer-streets.pdf>

Week 2 (January 29): Understanding the demand for travel

Travel is a derived demand in that the utility of any trip is largely based on the value of the activities at the ends. People rarely travel only for the sake of travel (recreation aside).

Pisarski, Alan. (2006) *Commuting in American 3: The Third National Report on Commuting Patterns and Trends*, NCHRP Report 550, TCRP Report 110. Washington, DC, Transportation Research Board.

Giuliano, Genevieve. (1995) “The Weakening Transportation-Land Use Connection,” *Access*. Spring.

Ong, Paul and Douglas Miller. (2005) “Spatial and Transportation Mismatch in Los Angeles,” *Journal of Planning Education and Research*, 25 (1) pp.43-563

Cervero, Robert and Michael Duncan. (2006) “Which Reduces Vehicle Travel More: Jobs-Housing Balance or Retail-Housing Mixing?” *Journal of the American Planning Association*, 72 (4), pp 475-490.

Wang, Donggen and Yanwei Chai. (2009) "The jobs-housing relationship and commuting in Beijing, China: the legacy of *Danwei*," *Journal of Transport Geography*, 17. Pp. 30-38.

Week 3 (February 4): Accessibility versus mobility, places versus people

Mobility and accessibility are two complementary concepts for transportation and land use planning that have very different meanings. A shift away from mobility towards prioritizing accessibility in planning will likely have a positive effect on urban form and other planning goals.

Bruegman, Robert. (2008) "Point: Sprawl and Accessibility," *Journal of Transportation and Land Use*, 1(1), pp. 5-11.

Crane, Randy. (2008) "Counterpoint: Accessibility and Sprawl," *Journal of Transportation and Land Use*, 1(1), pp. 13-19.

Melia, Steve, Graham Parkhurst and Hugh Barton. (2011) "The paradox of Intensification," *Transport Policy* (18), pp.46-52.

Cervero, Robert. (2002) "Built environments and mode choice: toward a normative framework," *Transportation Research Part D*, 7, pp. 265-284

Week 4 (February 11): Socio-demographic associations with travel behavior

Blumenberg, Evelyn, Brian Taylor, Michael, Smart, Kelcie Ralph, Madeline Wander and Stephen Brumbagh. (2012) *What's Youth Got to Do with It? Exploring the Travel Behavior of Teens and Young Adults*. University of California Transportation Center Report UCTC-FR-2012-14

Tal, Gil and Susan Handy. (2010) "Travel behavior of immigrants: An analysis of the 2001 National Household Transportation Survey," *Transport Policy*, 17, pp. 85-93.

Chatman, Daniel and Nicholas Klein. (2009) "Immigrants and Travel Demand in the United States," *Public Works and Management and Policy* 13 (4), pp. 312-327.

Week 5 (February 18): Markets, governments and zoning

Levine, Jonathan. (2006) Chapter 2 "Travel Behavior Research and the "Market"" and Chapter 8 "The Demand for Transportation and Land Use Innovation" in *Zoned Out. Resources for the Future*.

Hirt, Sonia. (2012) "Form Follows Function? How America Zones," Planning Practice and Research.(iFrist published July 3, 2012) pp. 1-27.

Hills, Roderick M. and David Schleicher. (2011) "Balancing the Zoning Budget," George Mason University School of Law, Law and Economics Research Paper 11-18.

Week 6 (February 25): Firm location, employment and metropolitan spatial structure

Giuliano, Genevieve, Ajay Agarwal and Christian Redfern.. (2008) "Metropolitan Spatial Trends in Employment and Housing: Literature Review," Special Report 298: Driving and the Built Environment: The Effects of Compact Development on Motorized Travel, Energy Use, and CO2 Emissions. Washington, D.C.. Transportation Research Board of the National Academy of Sciences.

Rossi-Hansberg, Esteban, Pierre-Daniel Sarte and Raymond Owens III. (2005) "Firm Fragmentation and Urban Patterns," NBER Working Paper Series. Paper 11839 (<http://www.nber.org/papers/w11839>)

King, David A. (2011) "Developing Densely: Estimating the Effect of Subway Growth on New York City Land Uses 1900-1950" *Journal of Transportation and Land Use*, 4(2)

Week 7 (March 4): Parking policies: managing the curb

Moutou, Claudine. (2013) "Car Parking Matters: Adapting to Changing Customer Mobility in Neighborhood Town Centers of an Inner City Area of Sydney." *Journal of Urban History* (OnlineFirst January 9, 2013)

Ottoson, Dadi Baldur, Cynthia Chen, Tingting Wang and Haiyun Lin. (2013) "The sensitivity of on-street parking demand in response to price changes: A case study in Seattle, WA." *Transport Policy*, 25, pp. 222-232.

Shoup, Donald. (2006) "Cruising for Parking." *Transport Policy*, 13, pp. 479-486.

Week 8 (March 11): Parking requirements and developer preferences

<http://djcoregon.com/news/2012/08/07/parking-less-apartments-cause-controversy-on-east-side/>

<http://www.myparkingpermit.com/blog/ending-condo-parking-toronto/>

Week 9 (March 25): Travel behavior research, Part 1

Ewing, Reid and Robert Cervero. (2010) "Travel and the Built Environment: A Meta-Analysis," *Journal of the American Planning Association*, 76 (3), pp. 265-294.

De Witte, Astrid, Joachim Hollevoet, Frederic Dobruszkes, Michael Hubert and Cathy Macharis. (2013) "Linking modal choice to motility: A comprehensive review," *Transportation Research Part A*. 49. Pp. 329-341.

Boarnet, Marlon G. (2011) "A Broader Context for Land Use and Travel Behavior, and a Research Agenda." *Journal of the American Planning Association*, 77 (3). Pp. 197-213.

Week 10 (April 2): Travel Behavior Research, Part 2

Walker, Joan L. (2011) "Beyond Rationality in Travel Demand Models," *Access*
Mees, Paul. (2010) "Saturation of Demand for Daily Travel," *Transport Reviews*, 30 (5). Pp. 659-674.

Metz, David. (2008) "The Myth of Travel Time Savings," *Transport Reviews* 28 (3), pp. 321-336.

Whitelegg, John. (1993) "Time Pollution," *Resurgence and Ecologist* 23 (4).
July/August. Available: <http://www.worldcarfree.net/resources/freesources/polluti.htm>

Week 11 (April 9): Designing Streets for People

Week 12 (April 16): Transit Oriented Development, Density and Mode Choice

Chatman, Daniel G. (2013) "Does TOD Need the T?," *Journal of the American Planning Association*, 79 (1), pp. 17-31.

Brownstone, David. (2008) *Key Relationships Between the Built Environment and VMT*, Special Report 298: Driving and the Built Environment: The Effects of Compact Development on Motorized Travel, Energy Use and CO2 Emissions. Washington, D.C..
Transportation Research Board of the National Academy of Sciences.

Week 13 (April 23): Transportation Investment and Economic Development

Haughwout, Andrew F. (2000) "The Paradox of Investment: Can a Productive Good Reduce Productivity?" *The Brookings Review*, Summer. Pp. 40-43.

Wachs, Martin. (2011) "Transportation, Jobs and Economic Growth," *ACCESS* 38, Spring.

Week 14 (April 30): Looking Ahead: Opportunities for Municipal Leadership