Transportation, Sustainability and the Evolution of the American City

Over the last 10 years, our research team at the University of Connecticut has conducted various studies of the changes in the transportation system and the urban form of a number of American cities. We used historical documentation, including aerial photographs, fire insurance maps (from the Sanborn company), and reports of various kinds to develop detailed digital representations of cities at different periods in time, in some cases going back to the early 1900s. The renowned urban thinker, Jane Jacobs, points to the collective amnesia that results from forgetting how things were and how they worked. This digital reconstruction is an attempt to bridge the gap in our memory of how cities once functioned. Our goal is to better understand how these cities have changed over time, the implications of these changes for cities today and into the future, and the transportation and urban planning policies and practices that have contributed to the observed changes.

In our work, we found that most cities in the USA have followed a conventional approach to planning that is predicated upon accommodating automobile use. Thankfully, a small handful of cities have followed polices that have been less permissive in accommodating automobile use and serve as an important counterpoint. Our analysis shows that the difference in the evolution of these two groups of cities is stark, not just in terms of urban form and transportation use, but also by many measures of sustainability. Those cities that are less auto-permissive are doing much better from the perspective of environmental, social and economic sustainability. This research adds to the evidence suggesting that we need to re-think how we plan urban places and urban transportation, and also provides some important markers toward a more sustainable approach to planning cities.

Biografie:

Dr. Garrick is Professor in the Department of Civil Engineering and co-Director of the Sustainable Cities Research Group at the University of Connecticut. In these roles he has led ground breaking research on i) street networks and their impacts on traffic safety - including bike and pedestrian safety, car travel and the health of citizens; ii) the evolution of parking provision in cities and its impact on the urban fabric of the city and its role in inducing more traffic in cities; iii) the factors contributing to the widening gap between the USA and other developed countries in terms of traffic fatality; iv) the potential societal impacts of autonomous vehicles, and v) the design and operations of streets designed according to shared space concepts.

His research has been featured in such forums as The Washington Post, The Atlantic CityLab, The Guardian (UK), Planetizen, Bloomberg BusinessWeek, FiveThirtyEight.com, Vox.com, StreetsBlog, Mic.com, StreetFilms, National Public Radio and Australian Public Radio. He has twice been invited to serve as a visiting professor at the Swiss Federal Institute of Technology (ETH) in Zürich and has taught classes at MIT, Cambridge University (UK) and The University of the West Indies (Jamaica). Dr. Garrick is the recipient of a best paper award from the Transportation Research Board for his research and is also a 2004 Fulbright Fellow.

Dr. Garrick has consulted with design teams on a range of projects across the USA and in a number of other countries. These projects include planning for post Hurricane Katrina reconstruction in Mississippi and post war re-development in Freetown, Sierra Leone; re-development of a low income community in Kingston, Jamaica; form based code for Lower Merion Township, PA; urban infill projects in Chicago and Richmond, VA; freeway removal planning in Charleston, SC; light rail assessment and design in Norfolk, VA; transit and parking planning in Nantucket, MA; and street design in Storrs, CT.
He was also a lead contributor to the Institute of Transportation Engineering/Congress for the New Urbanism’s Street Design manual, which has served as the model for the new generation of street design manuals that have revolutionized the way American cities and towns design streets. Dr. Garrick has had the honor of working with a number of Mayors from across the country as part of the team of design professionals selected by the Nation Endowment for the Arts’ Mayors Institute on City Design. He is a Fellow of the Congress for the New Urbanism (CNU) where he also served on its national board for eight years.