New Perspectives on Non-Motorized Transportation

A white paper for participants of the

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Transportation Choices:
The Important Role of Walking and Biking

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NEW PERSPECTIVES ON NON-MOTORIZED TRANSPORTATION

Introduction: Non-Motorized Transportation—Emerging Policy Issues

In our suburbanized, automobile-dominated transportation environment, several issues have converged to call greater attention to the role of non-motorized transportation (NMT)—walking and bicycling—in our communities and daily lives.

Aggressive advocacy and increasing public support have demonstrated strong public support for accommodating and promoting NMT. Over the last two decades, there has been a change in the driving forces that have led to an increased interest in NMT. The traditional arguments for investment in NMT infrastructure focused on creating mobility options—within the conventional transportation economics context of cost-effectiveness in multimodal comparisons. However, this transportation utility perspective has been considerably broadened through the amalgam of NMT advocacy with lifestyle and environmental interests concerned with the negative consequences of suburban sprawl and auto dependency.

Most recently, these motivations have been supplemented by promotion of “active transportation” as a public health measure in light of the so-called obesity epidemic and by rolling back the trend towards chauffeuring children to school through creating “safe routes to school.” As suggested in Figure 1, the combination of the accessibility, recreation, heath, and auto-dependent sprawl concerns has enlarged the policy space for NMT. A range of new programs—federal, state, and local—are supporting a robust array of community planning initiatives, standards development, as well as a more serious professional focus on the values, costs and benefits, and appropriate roles of walking and biking in society.

Figure 1. The policy space of NMT
Key policy issues
From a policy perspective, the subject of NMT presents a bit of a dilemma. Statistics are spotty and the literature appears to be heavily populated with advocacy. The interpretation of available information on NMT resembles the blind men and the elephant: engineering analysts focus on mode split; elected officials see NMT in terms of community quality; user groups focus on facility issues; the public health community seems NMT in relationship to the obesity epidemic; transportation researchers are concerned about the lack of data and analysis. The material that follows touches on many of these issues and has been built on a sample of the easily available literature. It is not intended to present a documented academic perspective—rather it focuses on big issues and identifies some of the key policy concerns.

A scan of the current programs, dialogue, research, and activities suggests several major technology and policy themes, including:

• *A better understanding of current NMT use, its modal role and impacts*—What is the role of NMT transportation in a multimodal transportation system today? Should it be viewed within the context of multimodal work-trip transportation, as recreation, or as part of local community development? What are the compelling reasons for altering that role? What is the impact of increased NMT uptake on automobile use and related externalities? Is this a service, cost, or lifestyle issue?

• *Factors in NMT use (mode choice)*—What is the state of knowledge regarding impacts of facilities, land use, demographics, and lifestyle on use of NMT—urban versus rural? What are the key socioeconomic, urban design, and engineering factors that contribute to the support and encouragement of greater walking and biking? What public policy/investment intervention will have the most leverage in encouraging increased NMT?

• *International comparisons*—How significant are the differences across culture and geography? Are differences within Europe as big as those between Europe and North America? Can this be ascribed to transportation policy or to other less-transferable socioeconomic factors?

• *NMT in context of community quality, planning, and design*—How will increasing levels of accommodation of NMT improve community quality? Should the focus be on work trips, or on more local non-work travel, such as school and recreation trip-making? Should NMT be part of an integral multimodal facility—streets with wide curb lanes—and therefore a justifiable use of multimodal funds or be accommodated through the provision of designated bicycle lanes and separate trails? Would these different approaches affect the logic of using federal or state multimodal funds to implement the improvements?

• *Safety and health issues*—Given the state of knowledge about relationships of urban form and facilities, NMT, and health, what is the likelihood that promotion of NMT will have health benefits? Since walking and cycling are already common forms of recreation and support a healthy lifestyle, do they deserve public support on those grounds alone (outside any cost-benefit comparisons with other modal investments)?

• *Children’s access to school as a key context for NMT*—Why has walking and biking to school declined so precipitously without any apparent increase in risk to children? What would be the impact of reversing this trend? Is this of federal interest?

• *Key public policy issues and government roles*—What is the proper role of transportation agencies at various levels of government in promoting a mode with a very small market share? Should highway funds be used to improve or promote a mode with a primary orientation toward recreational trips? What is the equity in using federal highway user fees for non-motorized transportation or using federal funds focused on a few locales? What is the likely incidence of costs and benefits, opportunity costs, or disbenefits of such investments?

The subsequent material provides some background for consideration of the above questions. There is considerable room for research, experimentation, and demonstration.
I. Basic Statistics

When viewed in the context of conventional multimodal national transportation statistics, NMT represents a small portion of total travel. As indicated in Figure 2, between 5 and 6 percent of work trips are by walking and less than 1 percent by bicycling (except in large cities and certain university settings). As shown in Figure 3, compared to the 1970s, for example, Americans walk and bicycle less—and drive more.

![Figure 2. Mode split to work](source: 1995 NPTS)

However, statistics developed for transportation agency policy purposes tell only part of the story. Most walking and biking is for exercise and recreation, and changes in usage and their relationship to community quality have a range of implications beyond aggregate transportation statistics.

![Figure 3 - U.S. Mode Share for Journey to Work, 1960-2000](source: U.S. Decennial Census, Supplemental Survey: Journey to Work, Census 1960 to 2000)
Walking
About 9 percent of all trips are by foot. The Nationwide Personal Transportation Survey shows that, overall, walking dropped from 9.3 percent of all trips in 1977 to about 5 percent in 2000—about 3.8 million. About 4–5 percent of walking trips are for work. Adults make only 21.2 percent of their trips of one mile or less by walking, while the length of the average walking trip is well below that of the average work trip.

Walking is, of course, an integral activity in virtually all travel modes, and travel surveys typically do not always include these short but important links.

While statistics vary, 40–60 percent of walking trips are for social and recreational purposes. Almost three quarters of adults claimed to have walked, ran, or jogged outside for 10 minutes or more at least one day per month, and they averaged 13 days per month—and 60 percent of these reported at least 30 minutes of activity.

Bicycling
About 1 percent of all trips are by bicycle. In the traditional bicycling advocacy, there has been a heavy emphasis on biking as commuting, though commuting by bike is not a significant component of either biking or commuting. According to Metropolitan Council data, even in the Twin Cities—within a relatively NMT-oriented state—less than 2 percent of adults and 6 percent of children ride a bike. Bicycling to work accounts for less than 1 percent of work trips.

Bicycling is overwhelmingly used for recreation—up to 90 percent of bicycle trips—which is why urban and suburban rates do not differ substantially. Bike use is principally by males (61 percent) and children (50 percent).

NMT in Big Cities
The patterns of use and related issues for NMT in larger urbanized areas and central cities are distinct from NMT development in residential or mixed-use subareas. Walking to work holds a modest share as shown in Figure 4.

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Boston</td>
<td>5.2</td>
<td>4.1</td>
<td>0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>Chicago</td>
<td>4.1</td>
<td>3.1</td>
<td>0.2</td>
<td>0.3</td>
</tr>
<tr>
<td>Philadelphia</td>
<td>5.3</td>
<td>3.9</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>New York</td>
<td>6.2</td>
<td>5.6</td>
<td>0.2</td>
<td>0.3</td>
</tr>
<tr>
<td>Seattle</td>
<td>3.6</td>
<td>3.2</td>
<td>0.5</td>
<td>0.6</td>
</tr>
</tbody>
</table>


However, in larger central areas, walking is an obvious competitor for accommodation in access and commercial life. By contrast, bicycle use varies substantially with culture, weather, and other factors. According to a Minnesota Department of Transportation (Mn/DOT) survey, in the Twin Cities, only about 1 percent of work trips are by bike (although 8–10 percent of bike trips are for work). Not surprising, frequency is irregular and weather-dependent, and 5 percent of cyclists account for about 50
percent of total bike trips. Trips are short (compared to auto trips—on average, less than 4 miles) and more than half are on roads, typically arterials, not neighborhood streets (5–7 percent on bike paths, 10–15 percent on sidewalks).

There are a few notably bicycle-oriented (and typically university) communities in the United States (Madison, Palo Alto, Davis, Boulder, Eugene) with rates five times (or more) the national average.

II. Factors in NMT Mode Choice
Behavioral research regarding NMT use patterns is modest. It may be presumed that—like other modes—the use of NMT modes for work trips is determined in part by socioeconomic factors—in combination with land use-patterns—including:

• Health, age, and impairments to use
• Accessibility of work-trip destination (distance, modal networks)
• Availability of other modes
• Weather

For both walking and biking, there are substantial differences by age, reflecting auto ownership, availability of time, and other factors. The Florida statistics of Figure 5 are suggestive of the potential impacts of an aging population.

However, other factors—unique to NMT—also appear to be influential. Though pedestrian and bicycle-use patterns and policies are often dealt with together as NMT, a Federal Highway Administration (FHWA) study suggests that there are important differences in user groups and their modal decisions. Regarding the initial inclination of mode choice, personal safety and security access, and aesthetics appear to be important for walking. For biking, while safety is important, the availability of special facilities (bike lanes, system continuity, and parking and transit access) are important. Yet almost a quarter of pedestrian trips take place in the absence of sidewalks, and bike lanes are available for a tiny proportion of cycling trips.

To date, research appears inconclusive about any cause–and-effect relationship between the creation of supportive infrastructure and programs, and the potential for substantial modal shift. Nonetheless, there is
a strong advocacy for retrofitting communities with some of the key features that appear to be associated with greater NMT participation, such as:

- Traffic-calming measures to incentivize and accommodate NMT, especially in residential neighborhoods
- Land-use arrangements and neo-traditional urban design oriented to NMT (rather than cars)
- Restrictions on motor vehicle use
- Provision of bicycle facilities
- Better traffic and bicycle education of both motorists and non-motorists
- Enforcement of traffic regulations protecting cyclists

III. International comparisons

International statistics show wide variation with the United States at the low end of the spectrum. As shown in Figure 6, some European countries display much higher use of NMT. The European context seems to display substantial contrasts with some countries following the U.S. pattern of increased auto mobility and related reductions in transit use and NMT, while others exhibit substantially greater reliance on NMT. In the Netherlands, Denmark, and Germany, there has been a coordinated set of initiatives to promote cycling and walking to work, adapting the urban transport infrastructure to support NMT through specific and extensive facilities on a network basis, coupled with aggressive traffic calming and regulation, and with various different approaches to separate bike paths versus accommodation on multiuse streets.

<table>
<thead>
<tr>
<th>Country</th>
<th>Car</th>
<th>Transit</th>
<th>Cycling</th>
<th>Walking</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>39%</td>
<td>13%</td>
<td>9%</td>
<td>31%</td>
<td>8%</td>
</tr>
<tr>
<td>Canada</td>
<td>74%</td>
<td>14%</td>
<td>1%</td>
<td>10%</td>
<td>1%</td>
</tr>
<tr>
<td>Denmark</td>
<td>42%</td>
<td>14%</td>
<td>20%</td>
<td>21%</td>
<td>3%</td>
</tr>
<tr>
<td>France</td>
<td>54%</td>
<td>12%</td>
<td>4%</td>
<td>30%</td>
<td>0%</td>
</tr>
<tr>
<td>Germany</td>
<td>52%</td>
<td>11%</td>
<td>10%</td>
<td>27%</td>
<td>0%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>44%</td>
<td>8%</td>
<td>27%</td>
<td>19%</td>
<td>1%</td>
</tr>
<tr>
<td>Sweden</td>
<td>36%</td>
<td>11%</td>
<td>10%</td>
<td>39%</td>
<td>4%</td>
</tr>
<tr>
<td>Switzerland</td>
<td>38%</td>
<td>20%</td>
<td>10%</td>
<td>29%</td>
<td>3%</td>
</tr>
<tr>
<td>UK</td>
<td>62%</td>
<td>14%</td>
<td>8%</td>
<td>12%</td>
<td>4%</td>
</tr>
<tr>
<td>USA</td>
<td>84%</td>
<td>3%</td>
<td>1%</td>
<td>9%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Source: Pucher and Lefevre, 1996

There is some controversy about the transferability of this experience to the United States—given the substantially different densities, urban structures, automobile restrictions, road operations, and strong bike/pedestrian orientation within the culture.

IV. NMT and Community Quality

An important theme in U.S. transportation and community planning is the appropriate role of modes. This theme is addressed in various ways in policy and practice as well as in advocacy and literature. The point of departure for such discussions is that NMT transportation has a key functional role that it can play within a multimodal transportation system that, if successfully facilitated, can have significant benefits. These benefits are in the same classes as those related to other modes in the multimodal palette, including:

- Accessibility for the carless
- Reduction in auto ownership
• Reduced cost of transportation
• Synergism with neo-traditional land-use patterns, such as denser land use and grids
• Energy and pollution reduction
• Improvement in sense of community

The Range of Settings and NMT Planning Elements
These objectives have coalesced in a set of increasingly standardized recipes for context-sensitive community planning. These are applied in two settings: first, new community development on the urban fringe and retrofits of existing commercial centers and residential neighborhoods (largely suburban) where special facilities are needed; second, in existing major urban centers, where pedestrian facilities are likely to exist but lack certain supportive amenities.

In residential communities and mixed-use areas, the prescribed elements of good pedestrian and bicycle infrastructure include a combination of planning, design, and promotional actions, such as:

• Enhanced network continuity and connectivity (including the arguments regarding trails vs. lanes)
• Safety measures for both on- and off-street facilities, including special signalization, markings, and signage
• Adequate and secure parking and seating
• Comfort amenity and information (signage, lighting)
• Operational maintenance (snow-and-ice control)
• Promotion and education

Where new or reconstructed communities are the focus, more aggressive program elements are advocated, such as:

• “Calmed” roadway via speed limits, operations, and reconstruction design standards for improved bike/pedestrian accommodations and strong enforcement of safe driving
• Promotion of street grids for reduced traffic and improved connectivity for bike and pedestrian access
• Integrated, mixed land use supporting convenient bike and pedestrian access
• Land-use balance to shorten work trips and to accommodate NMT work trips
• Design amenities to make NMT travel more varied and interesting at street level

In existing larger urban centers, there is normally a range of outstanding, unmet transportation needs with which NMT must compete—often in the absence of compelling data or standards. Many downtowns already have substantial pedestrian loads and density, and, therefore, the issues are focused on the competition for pedestrian and vehicular space. In such environments, space for bicycles is typically a secondary priority and solutions may move towards auto-free zones. Here, the opportunities to add special facilities are highly constrained and a key priority is likely to be intermodal accessibility and integration.

While the overall modal impacts and other social benefits may be modest, the minimal negative consequences and the clear benefits directly to users, combined with the popular support for improved urban design and traffic calming, appear to generate considerable support and limited opposition to modest cost improvements.
V. Health and Safety
There are significant issues with NMT safety—often as a byproduct of their multimodal context. Non-motorized modes have relatively high crash injury and fatality rates per mile of travel as shown in Figure 7.

![Figure 7—Fatality Rate by Mode (2003)]

<table>
<thead>
<tr>
<th>Mode</th>
<th>Fatality per 100 m VMT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public transit</td>
<td>0.75</td>
</tr>
<tr>
<td>Passenger cars and trucks</td>
<td>1.3</td>
</tr>
<tr>
<td>Walking</td>
<td>20.1</td>
</tr>
</tbody>
</table>

Source: STPP

Pedestrian Safety
National statistics show 8.6 percent of all trips by foot, but 11.4 percent of traffic deaths are classified as pedestrian. Though the number has declined, there were almost 5,000 pedestrian deaths in 2003. Most pedestrian fatalities in 2004 occurred in urban areas (72 percent), at non-intersection locations (79 percent), in normal weather conditions (89 percent), and at night (66 percent). More than two-thirds (69 percent) of fatalities were males, 8 percent were children 15 and under, and 15 percent were over 70.

Bicycle Safety
Bicyclist fatalities have also declined during the last decade, from more than 1,000 in the ’70s to more than 600 in the last few years. Almost 90 percent of the bicycle fatalities were male, more than one-third of all bicycle fatalities involve riders 5 to 20 years old, and 41 percent of nonfatal injuries occur to children under the age of 15. The drop in rates shown in Figure 8 may simply reflect the fact that people are walking less.

![Figure 8—Fatality Trends](source: Traffic Safety Facts NCSA, NHTSA, 2003)

<table>
<thead>
<tr>
<th>Year</th>
<th>Pedalcyclist</th>
<th>Pedestrian</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>816</td>
<td>5,649</td>
<td>111</td>
<td>6,576</td>
</tr>
<tr>
<td>1994</td>
<td>802</td>
<td>5,489</td>
<td>107</td>
<td>6,398</td>
</tr>
<tr>
<td>1995</td>
<td>833</td>
<td>5,584</td>
<td>109</td>
<td>6,526</td>
</tr>
<tr>
<td>1996</td>
<td>765</td>
<td>5,449</td>
<td>154</td>
<td>6,368</td>
</tr>
<tr>
<td>1997</td>
<td>814</td>
<td>5,321</td>
<td>153</td>
<td>6,288</td>
</tr>
<tr>
<td>1998</td>
<td>760</td>
<td>5,228</td>
<td>131</td>
<td>6,119</td>
</tr>
<tr>
<td>1999</td>
<td>754</td>
<td>4,939</td>
<td>149</td>
<td>5,842</td>
</tr>
<tr>
<td>2000</td>
<td>693</td>
<td>4,763</td>
<td>141</td>
<td>5,597</td>
</tr>
<tr>
<td>2001</td>
<td>732</td>
<td>4,901</td>
<td>123</td>
<td>5,756</td>
</tr>
<tr>
<td>2002</td>
<td>665</td>
<td>4,851</td>
<td>114</td>
<td>5,630</td>
</tr>
</tbody>
</table>


Safety-related Technology
FHWA, together with states, communities, and user associations, has developed a range of engineering and educational resources ranging from helmet promotion, operational guidance, and design standards for bicycle lanes and crossings. The U.S. Department of Transportation (USDOT) co-sponsors a Pedestrian and Bicycle Information Center that provides a wide variety of safety-related resources and provides a clearinghouse for NMT-related engineering, encouragement, education, and enforcement topics.

NMT, Health, and Obesity
It has been said that with sprawl and the sedentary lifestyle, physical activity has been engineered out of daily lives. Indeed, there has been considerably publicity about the American weight problem—linking the measurable increases in average weight to a range of health problems. Some interest groups appear to
have drawn oversimplified linkages between suburban sprawl, lack of suburban NMT facilities, and health. While the obesity figures are not questioned, the direct causality linkages of health to obesity, obesity with land use, and land-use and the NMT with either health or obesity are unclear. Certainly, the linkage of physical activity with health is well-understood and positive. But it is difficult to determine what it takes to promote NMT in particular. Several recent reviews of the current literature have been unable to draw any clear conclusions about the impact of land use and NMT facilities on physical activity (as distinct, for example, from socioeconomic and lifestyle factors).

Despite the lack of causal evidence, the headlines on obesity have proven to be a valuable mechanism to focus greater public attention on NMT with 20 state legislators considering bills designed to increase access to walking and bicycling. One result of this dialogue has been powerful alliances between interest groups promoting health, active transportation, context-sensitive design, limitations on auto dominance, and building the business case for healthy, active, livable communities.

VI. Children’s Access to School

The health and safety issues converge on the issue of children access to school. Historically, walking and biking were substantially focused on school children reflecting their lack of modal options, the short trips, and the liberation from parental chaperoning. However, as shown in Figure 9, today only 14–16 percent of children’s trips to school are on foot, down from 50 percent in 1970. Even with short trip lengths (one mile or less), children make only 35.9 percent of their trips to school by walking. The negative impacts of this reduced level of walking to school have been the major drivers behind the movement to reverse this trend:

- The parental burden associated with driving children to school
- The safety issue of increased traffic near schools
- 20–25 percent of a.m. congestion is caused by driving kids to school
- Reduction in walking and biking as a health activity

![Figure 9 - Active Transport to School Among Youth 6 to 8 Years of Age](source)

Source: 1969 Nationwide Personal Transportation Survey (USDOT, 1972) and 2001 National Household Travel Survey (2005)

**Key Factors: Real and Perceived**

An increase in walking and biking to school is gaining popularity as an objective of transportation policy at the local and state level. The decline in walking and biking to school has been blamed on a number of factors—but several of them are questionable. The principal parental and public concern appears to be safety—even though this concern is more an expression of changing risk attitudes than a matter of fact. It is true that average distance to school has increased slightly as has traffic near schools. However, neither
inclement weather conditions nor violent crime rates for older children have increased over this time—leaving safety and distance as the key issues.

Concern with safety may be more of a parental perception than real—part of a contemporary general social heightened sense of risk regarding children. Statistics indicate that the pedestrian injury/death rate declined 51 percent from 1987 to 2000 among children ages 14 years and under; the corresponding bicycling injury/death rate declined 60 percent as illustrated in Figure 10. This suggests that the principal challenge may be substantially perceptual—requiring education and confidence building in parents rather than a matter of changed context.

![Figure 10 - Rate of Pedestrians](source: Traffic Safety Facts, 2002; Traffic Safety Facts, 1995)

These findings suggest that a set of related strategies may be relevant to help reach this objective including:
- Behavioral (e.g., promotion)
- Operational (e.g., crossing signals, guards)
- Engineering (drop off and pick-up routes)
- Greater use of the Internet (instead of heavy text books)
- Enforcement (e.g., slower speed limits)

Combination of these elements has proven very effective. Indeed, Marin County, California, was able to improve rates of walking by 64 percent after implementing a safe-routes-to-school program.

**The Federal Safe-Routes-to-School Program**

Many of the above issues have converged in safe-routes-to-school programs (SR2S). Begun as an indigenous movement first in northern Europe, the United Kingdom, and Canada, and spreading to the United States in a series of communities and coalitions (Bronx, Marin County, Portland, Arlington, and others). The concept of the SR2S was formalized through a National Highway Traffic Safety Administration-funded model program over the last several years and attracted strong congressional support as a formal program within the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).
The SR2S program is designed to encourage walking and bicycling to schools, and to make it safer and more appealing. The program provides $612 million dollars to be apportioned among the states over five years to support promotion, safety, and planning with three major components: infrastructure, non-infrastructure, and a coordination and clearinghouse function.

For infrastructure related projects, eligible activities are the planning, design, and construction of sidewalk improvements, traffic calming on- and off-street, and crossing improvements in the vicinity of schools. Between 10 and 30 percent of the funds must be spent on “soft” activities, including public awareness outreach, and traffic education and enforcement in the vicinity of schools. In addition, each state must have a full-time coordinator for the program. Finally, FHWA intends to support establishment of a national, nonprofit organization to promote the program and establish a national safe-routes-to-school clearinghouse.

A related non-motorized transportation pilot program is designed to demonstrate whether NMT can be developed, such that NMT carries a “significant” portion of travel in a network context as part of a multimodal transportation solution. Each of four selected communities (Columbia, Missouri; Marin County, California; Minneapolis-St. Paul, Minnesota; and Sheboygan County, Wisconsin) is funded at more than $6 million to conduct before-and-after measurements of the impact of NMT facilities development and promotion on mode split, congestion, energy usage, health, and environmental features.

VII. Public Support and Public Policy

NMT as a Federal Aid Program
Most pedestrian and bicycle facilities are developed as part of community development and redevelopment with private and local government resources—sometimes with limited state support. However, public opinion demonstrated increasing support for bicycling and walking within the context of state and federal multimodal transportation programs, including funding and implementation of shared use paths, sidewalks, and on-street facilities. Many states led the way in these developments. Under congressional instructions, FHWA worked with professional and interest groups to develop a more accommodating policies and standards regarding the appropriate use of federal aid, rebalancing the needs of the dominant motorist through “due consideration” of other modes. In addition, FHWA has been continuously conducted safety- and design-standard studies during the last decade, and working in partnership with a range of federal agencies.

Programmatic support for NMT through the eligible use of federal highway funds for multipurpose “transportation” (where trips have an origin and destination) has become increasingly widespread. FHWA funding for pedestrian and bicycle projects—as uses of flexible federal aid programs such as Enhancements and STP funds—increased by an order of magnitude during the 1990s to over $400 million/year during TEA-21. Still, this represented a tiny proportion of the total eligible funds, reflecting that fact that states and municipalities that control or influence use of these flexible sources have other competing needs or restrictions on the use of state funds needed to match federal aid.

During the last decade, the recreation and health dimensions have become increasingly important and generated support for NMT among a wider range of interest groups. Nonpublic community health and lifestyle foundation resources and associations have sponsored pilot research and demonstration activities. These grassroots efforts have helped generated congressional support for special NMT-related state and federal programs, such as the SR2S program. In addition, investments supporting pedestrian and bicycle use have been built into more general community development and environmental improvement activities outside of “transportation finance.”
Future Policy Research Initiative
The transportation policy issues set forth at the beginning of this paper are raised—but not resolved—by both the available data and analysis—and by the lack thereof. NMT is seen alternatively within a competitive multimodal context—as a specialized mode for special user groups, or as an accommodation for an active, healthy lifestyle. Each perspective has different policy implications and suggests different roles for various levels of government.

While there is a widening consensus that areas with strong support and accommodation for NMT have experienced qualitative improvements for NMT users, the evidence of reduced auto dependence or other direct socioeconomic benefits from the NMT travel is limited. In addition, the relative importance of various policy levers is unclear. The precise role of infrastructure and non-infrastructure approaches in promoting increased NMT is not well-understood, much less demonstrated. Much of the supporting evidence is cross-sectional and anecdotal.

The above uncertainties notwithstanding, the strong popular support, plus the obvious association with an active, healthier lifestyle—in the context of limited negatives, is encouraging. On these grounds alone, it appears that NMT is evolving towards a more integrated role in both transportation and community planning. Taken together, these trends emphasize the importance of a more organized approach to research, case studies, and pilot programs that can provide a firmer basis for well-grounded resource allocation.
2006 Oberstar Forum

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