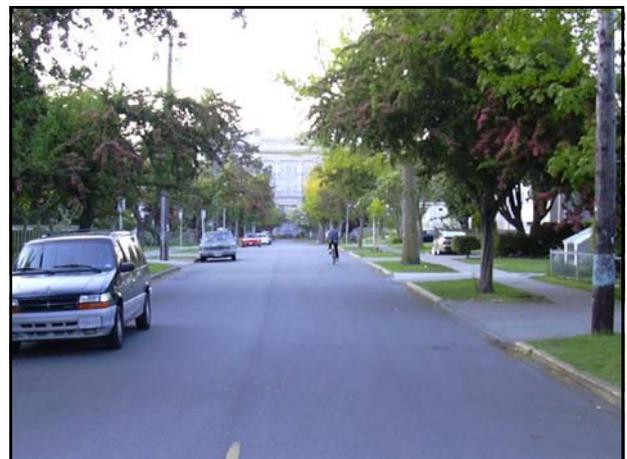
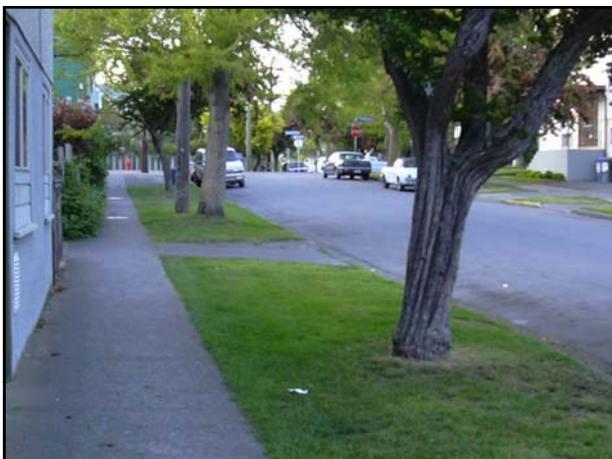


Economic Value of Walking

Todd Litman
Victoria Transport Policy Institute
Walk 21, 2006
Christchurch, New Zealand
30 October 2006





Walking and Walkability



This presentation investigates the value of **walking** (the activity) and **walkability** (the quality of walking conditions). Most analysis also applies to cycling.



Active Transportation: A Terrific Product

- Fun
- Fitness and health
- Huge potential market
- Affordable
- Consumer cost savings
- Equitable
- Reduces congestion
- Road and parking cost savings.
- Energy conservation.
- Reduced pollution.
- Economic development.
- Livability
- Community cohesion/safety
- Good looking legs



Active Transportation



People want active transportation. Market surveys indicate that people are willing to pay extra to live in more walkable communities and near cycling trails.

Substantial shifts from driving are possible with suitable transport and land use policies.

How Transport is Measured

- **Traffic** - Vehicle travel
- **Mobility** - Person travel
- **Accessibility** - People's ability to obtain desired goods, services and activities



Conventional transport evaluation primarily measures motor vehicle conditions:



- Traffic speeds and congestion delay
- Roadway Level-of-service
- Vehicle operating costs
- Vehicle crash rates
- Parking convenience

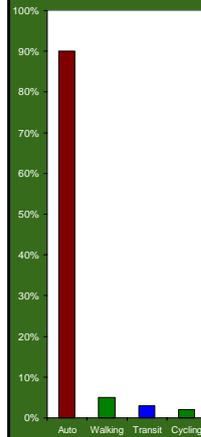
This helps justify roadway improvements.

Active Transportation Tends to be Undervalued

- Difficult to measure
- Short distances
- Used by disenfranchised populations
- Low cost
- Lack of respect
- "Will take advantage of itself"



What is more important, active transport or driving?



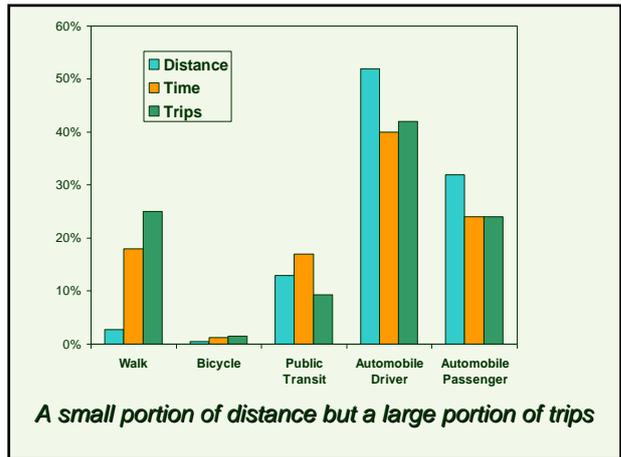
Conventional transport evaluation indicates that automobile travel is far more important than active transportation, providing **15 times** as many person-trips and **50 times** as many person-miles.

From this perspective, walking and cycling are minor modes of travel, and so deserves only modest public support.

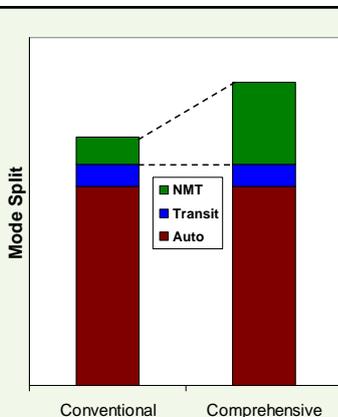
What is more important?



Would you rather lose your ability to drive or your ability to walk and bike?



A small portion of distance but a large portion of trips



If, instead of asking, "What portion of trips are **only** by active transport? We ask, "What portion of trips involve **some** active transport?" the portion of active transport typically increases 2-6 times.

Nonmotorized Evaluation

To their credit, many planners support greater investment in nonmotorized planning than their evaluation tools justify. They intuitively know that walking and cycling are important in ways that are difficult to measure.



Better evaluation methods can justify even more nonmotorized improvements.

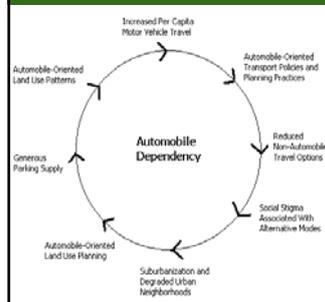
Building For People or Cars?

Automobiles make wonderful servants but terrible masters.

Design your community for people, and then accommodate motor vehicles. Don't design communities for automobile traffic and then try to accommodate people.



Tradeoffs



Automobile-oriented improvements often degrade active transportation conditions. Undervaluing nonmotorized transport tends to bias planning decisions toward automobile dependency and away from multi-modal accessibility.

Automobile Dependency Vs Smart Growth

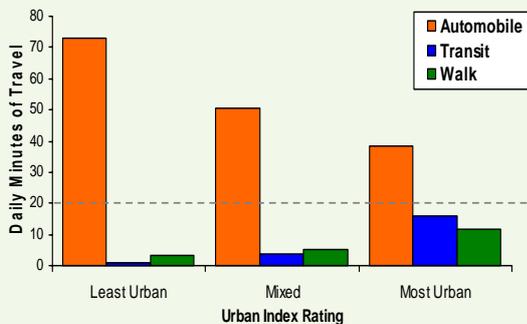


Smart Growth (Density, Design, Diversity)

- More **compact**, infill development.
- **Mixed** land use.
- Increased **connectivity**.
- Improved **walkability**.
- **Urban villages**.
- Increased transportation **diversity**.
- Better **parking management**.
- Improved **public realm**.
- More **traffic calming** and speed control.



Land Use Impacts On Travel



Economic Benefits



Improved walkability and increased walking provides various economic benefits. The total value is the sum of these benefits.



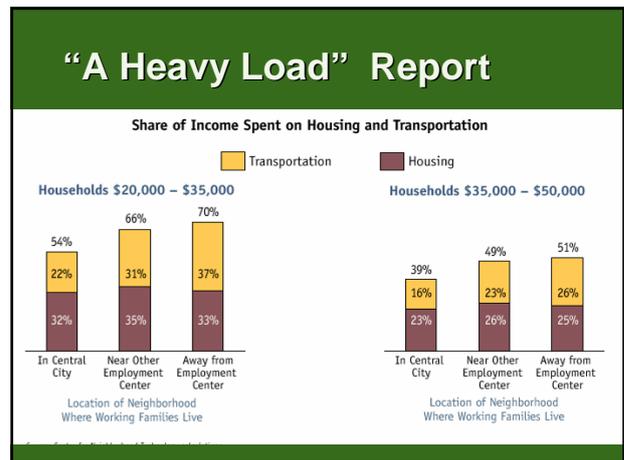
Cost Savings

Active transportation provides affordable transport that save consumers money.

Households can often save thousands of dollars annually by reducing their vehicle ownership and use.

Annualized Transportation Costs

| Automobile | | Public Transport | | Non-motorized | |
|------------|----------------|------------------|--------------|---------------|-------------|
| Roads | \$500 | Roads | \$50 | Shoes | \$50 |
| Parking | \$1,500 | Fares | \$600 | Paths | \$30 |
| Fuel | \$1,500 | Subsidies | \$150 | | |
| Vehicle | <u>\$3,500</u> | | | | |
| | \$8,000 | | \$800 | | \$80 |

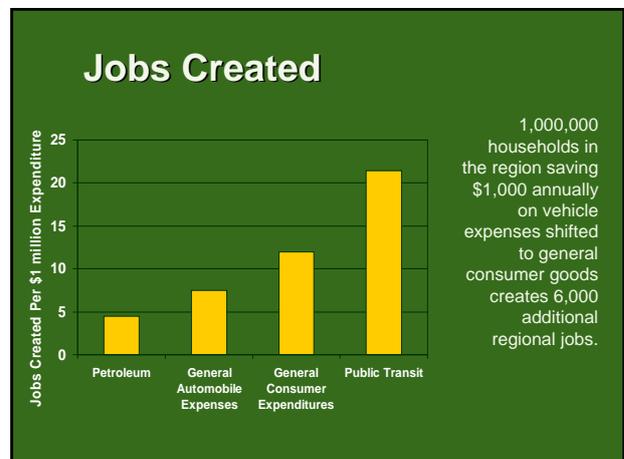


Economic Development



Walkability supports economic development:

- Retail and employment centers are affected by the quality of their pedestrian environment.
- Can affect residential property values.
- Urban revitalization.
- Economies of agglomeration (increased economic productivity).
- Vehicle cost savings - shifts consumer expenditures from automobiles to more locally-produced goods.



Most Drivable Cities

Most Drivable Cities

1. Corpus Christi, TX
2. Brownsville, TX
3. Beaumont-Port Arthur, TX
4. Pensacola, FL
5. Fort Myers-Cape Coral, FL
6. Oklahoma City, OK
7. Birmingham, AL
8. El Paso, TX
9. Memphis, TN
10. Tulsa, OK

Average Income \$25,558

Least Drivable Cities

1. Los Angeles, CA
2. San Francisco, CA
3. Chicago, IL
4. Denver, CO
5. Boston, MA
6. Oakland, CA
7. Detroit, MI
8. New York, NY
9. Seattle-Everett, WA
10. Washington, D.C.

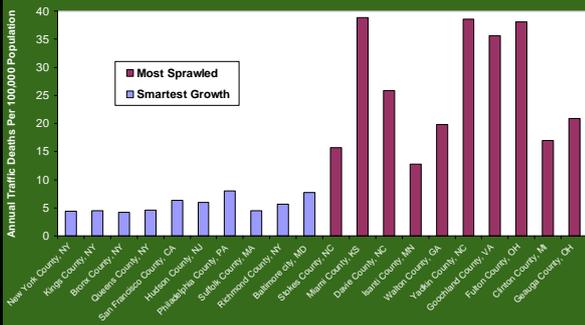
Average Income \$40,077

Health Benefits

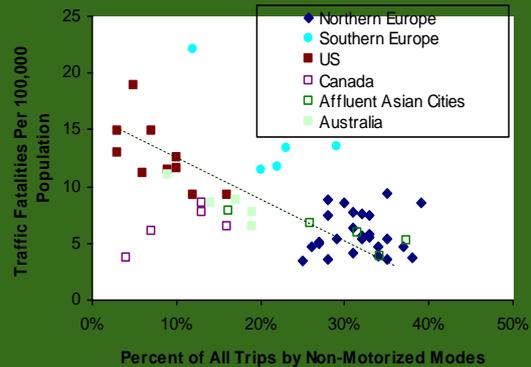


- Recommended minimum: 30 minutes of moderate exercise a day, at least 5 days a week.
- Although there are many ways to be physically active, active transportation is one of the most common, and improving active transportation conditions is a practical way to increase physical activity.

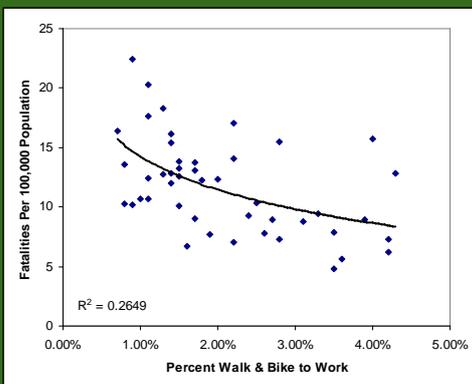
Safety Benefits



Safety Benefits



Safety Benefits



Reduced Externalities

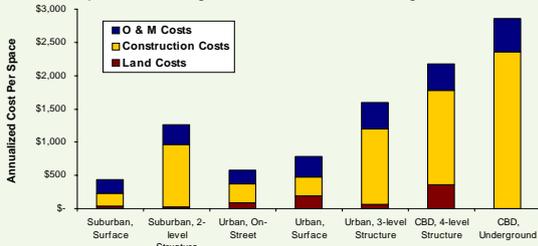


Shifting travel from automobile to active transportation helps reduce:

- Traffic congestion
- Roadway costs
- Parking problems/costs
- Crash risk imposed on others
- Energy consumption
- Air pollution
- Noise
- Per capita pavement & sprawl

Parking Facility Costs

Most people never purchase parking spaces as a separate item, and so underestimate their costs and the potential savings from more efficient management.

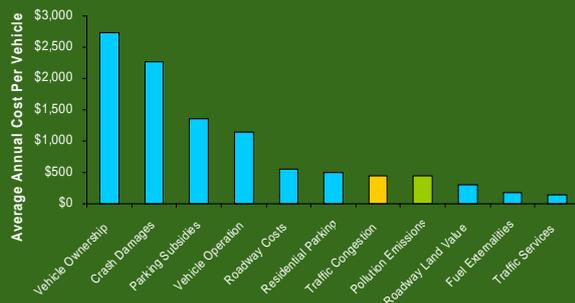


Energy Conservation & Emission Reductions



- Substitutes for short trips, during which engines are cold and inefficient.
- Supports transit travel and smart growth land use patterns.
- Helps reduce total per capita vehicle travel.

Comparing Costs



Community Livability



Community Livability refers to the environmental and social quality of an area as perceived by residents, employees, customers and visitors.

Streets that are attractive, safe and suitable for walking and cycling increase community livability.

Community Cohesion



The quantity and quality of positive interactions among people in a community as indicated by:

- Neighborhood friends and acquaintances.
- Community connections.
- Community involvement.

Equity

Active transportation helps achieve equity objectives:

- A fair share of public resources for non-drivers.
- Financial savings to lower-income people.
- Increased opportunity to people who are physically, socially or economically disadvantaged.
- Basic mobility.



Basic Mobility



Certain goods and services are considered "essential" or "basic":

- Emergency services (police, fire, ambulances, etc.).
- Essential services (health care, food shopping).
- Education and employment (commuting).
- Public services and utilities (garbage collection, utility maintenance, etc.).
- Freight delivery.
- Social activities.

Priorities

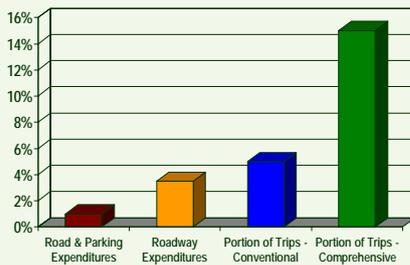
Current

- Private automobile
- Meter taxi
- Public transport
- Cycling
- Walking

Sustainable

- Walking
- Cycling
- Rapid Transit/Large Bus
- Mini-bus
- Rideshare vehicle (car and vanpool)
- Meter taxi/Carsharing
- Private automobile

Active Transportation Share of Transportation Expenditures and Trips



Comprehensive Analysis

| Planning Objectives | Improve Travel Options | Incentives To Shift Mode | Expand Roads | Alternative Fuels |
|-------------------------|------------------------|--------------------------|--------------|-------------------|
| Congestion reduction | ✓ | ✓ | ✓ | |
| Roadway cost savings | ✓ | ✓ | ✗ | |
| Parking cost savings | ✓ | ✓ | ✗ | |
| Consumer cost savings | ✓ | ✓/✗ | | |
| Better mobility options | ✓ | ✓ | | |
| Improved traffic safety | ✓ | ✓ | | |
| Reduced pollution | ✓ | ✓ | ✗ | ✓ |
| Energy conservation | ✓ | ✓ | ✗ | ✓ |
| land use Objectives | ✓ | ✓ | ✗ | |
| Improved public health | ✓ | ✓ | | |

✓ = Supports Objective

✗ = Contradicts Objective

Implications



More comprehensive and objective evaluation of walking would:

- Increase funding for walkability improvements.
- Justify shifting some urban road and parking space to sidewalks and paths.
- Support "smart growth" policies that emphasize land use accessibility and multi-modal transport.
- Support more traffic calming and speed controls.
- Justify policies and programs that encourage walking and cycling, particularly as a substitute for driving.



Resources: www.vtppi.org

- Economic Value of Walkability
- Quantifying the Benefits of Non-Motorized Transport for Achieving TDM Objectives.
- Managing Nonmotorized Facilities
- Active Transportation Policy Issues: Background
- Whose Roads? Defining Bicyclists' And Pedestrians' Right To Use Public Roads
- Online TDM Encyclopedia