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## **Colliding Modes of Transportation: Issues of Inequity and Unsustainability**

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### **Abstract**

Decisions about how we transport ourselves are considered a matter of personal choice and in North America, the majority "choose" the private automobile. Yet, transportation infrastructure is a matter of public policy and greatly affects individual choice. After approximately 90 years of mass-production, the role of the car in the destruction of cities has been well established, as has the ecological unsustainability of its present (over)use. More recently, sociologists have identified that the automobile increases and entrenches social inequities. Consequently, this raises questions about the democratic and liberalizing qualities historically associated with the car. This paper examines the connections between social inequity and ecologically unsustainable auto-centered planning in Toronto, Ontario, a city in the process of re-inventing itself. Transportation alternatives that reduce social inequity and ecological unsustainability are also considered.

On considère généralement que les moyens de transport que nous utilisons font l'objet d'un choix personnel. En Amérique du Nord, la majorité des gens « choisissent » l'automobile. Toutefois, en matière de transport, l'infrastructure est affaire de politique publique et elle oriente grandement les choix individuels. Après environ 90 ans de production de masse, il a été clairement démontré que les automobiles jouent un rôle destructeur des villes, tout comme la non-durabilité écologique de son utilisation (ou sa surutilisation). Plus récemment, des sociologues ont établi que l'automobile augmentait et ancrerait les inégalités sociales, ce qui soulève le problème de l'attribution des qualités démocratiques et libératrices qui y ont longtemps été associées. Dans cet article, l'auteure examine les liens entre les inégalités sociales et la planification urbaine non-durable écologiquement et centrée sur les automobiles qui prévaut à Toronto (Ontario), une ville en restructuration. Des solutions de rechange qui réduiraient les inégalités sociales et assureraient la durabilité sont aussi examinées.

### **Keywords**

Transportation, cars, social equity, ecological sustainability, urban planning

### **Introduction**

Shortly after moving to Toronto in 1989, my husband and I began using bicycles, complemented by public transit, as our primary means of transportation due to the traffic congestion and parking problems common to downtown. By

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1990, we had sold our car. In 1992, and again in 1996, I was hit by a car while cycling. As I learned, a near brush with death can be very politicizing. Turning personal anger and fear into political action is a common theme for many activists.

In August 1996, following a two-week period in Toronto in which two cyclists were unjustifiably arrested for participating in a mass ride and two cyclists were killed by trucks, I helped to co-found Advocacy for Respect for Cyclists (ARC). Over the following two years, ARC participated in a coroner's investigation into cycling fatalities and injuries in Toronto. The report that was released in September 1998 revealed that my personal experience was not unusual but indicative of a larger problem. Nearly 14% of all collisions resulting in personal injury in Toronto involve cyclists who account for less than 5% of traffic. "This data therefore suggests that there is a disproportionate representation of bicycles in traffic collisions relative to their numbers on the road" (Lucas 1998: 7). Of the 47 cyclist fatalities, 81% involved a motor vehicle.

Many people are discouraged from cycling because of this information. Others feel the issue is so critical to societal and ecological well-being that discontinuing cycling is not an option. Although (over)use of the car is widely recognized as a contributor to unsustainability, its contribution to inequity is seldom made so explicit. Yet – as will be demonstrated in this paper – the latter linkage is quite strong. It is primarily the social inequities resulting from the ecologically unsustainable auto-dominated North American environment, which makes cycling a political act and cars the natural focus for cycling activists. This is true even in Toronto, which has received much international acclaim as a well planned, well managed, liveable city.

### **Toronto: A City That Works**

Although it may seem that there is little to distinguish Canadians from our American neighbours, the well-being of our cities offers one important difference. In contrast to American cities, "the inner areas of Canadian cities usually have attractive residential precincts, a strong pedestrian presence in the streets and a vital mixture of shopping, commercial and other activities, often along thriving, dense corridors with frequent, well-utilized transit services" (Raad and Kenworthy 1998: 14). Other differences noted by Raad and Kenworthy include lower car use, higher travel by cycling and walking, fewer urban freeways and parking lots, denser suburbs with high-density nodes, and better suburban transit.

Contrary to the North American belief in the importance of privacy and space, the most livable cities are quite dense. Newman and Kenworthy (1989) compared cities around the world and found a significant relationship between urban density and car ownership. In the densest cities, walking is a viable mode of travel while in the least dense cities the long distances between destinations result in high automobile use. In cities with densities in the mid-range, such as Toronto, built prior to the invention of the automobile, car use is lower and transit use higher than in most US cities. In fact, "the Toronto Transit Commission boasts the highest ridership per capita of any system in North America" (Raad and Kenworthy 1998:18).

Although vehicle ownership in Toronto increased dramatically between 1960 and 1980 (from 34% to 56%), its proportion to population is still low by North American standards. Use of public transit also rose in this same time period and urban density remained fairly stable (Newman and Kenworthy 1989: 3). This seems to indicate that although many Torontonians purchased cars, city planners and politicians did not dramatically alter the physical shape of the city to accommodate them. By contrast, the low-density planning for the municipalities around Toronto resulted in high auto ownership. In 1991, 51% of households in the downtown core had no access to a motor vehicle while in Scarborough, a close suburb, only 4% could manage without a car (Joint Program in Transportation 1991). Unlike most U.S. cities, Toronto's vehicle ownership cannot be predicted by income. In 1996, Toronto's average individual annual income was \$31,559 while Scarborough's was \$23,562 (Statistics Canada 1998). Mobility without a car is possible within Toronto, and in fact, is usually more efficient.

One explanation for this contrast between American and Canadian cities is the differing political values which "can be partly traced to the dominance of social liberalism in Canada versus economic conservatism in the United States" (Raad and Kenworthy 1998: 14). Collective goals have historically been of great importance to Canadians. A second explanation, perhaps arising from the first, is the Canadian trend to "large-scale coordination of land use and transportation" (Raad and Kenworthy 1998: 18), which has enabled the urban growth challenges to be addressed more effectively. Municipalities were amalgamated and an upper tier of government established to co-ordinate regional-scale services and infrastructure while lower tiers remained to address issues of local concern. One of the first of these regional agencies, the Municipality of Metropolitan Toronto, created in 1953, has been "hailed as one of the most innovative and successful experiments in urban governance in North America" (Raad and Kenworthy 1998: 18).

On January 1, 1998, this "experiment" ended when the Ontario provincial government imposed amalgamation upon the city of Toronto, eliminating the local tier of government to create a "megacity." Although priorities differed – sometimes dramatically – between the Metro and local governments, Toronto's downtown core did remain strong, if not always flourishing, throughout its governance under Metro. For many years, architects and planners from across North America viewed the former city of Toronto as an urban success story; maintaining a vital, liveable downtown core while most American cities experienced great deterioration. Toronto provided an example of an urban form in which living without a car is no significant disadvantage. For reasons to be explored more fully below, it is crucial for cities to restrict automobile use so that social inequities and ecological unsustainability are also reduced.

### **The Case Against the Car**

About 90 years ago, Ford began mass-producing the automobile for private use. Since that time, North America, and much of the industrialized world, has so radically overhauled its transportation infrastructure that any alternate transportation choice has been virtually eliminated. As with almost every other

public institution, transportation has been taken over by private, primarily corporate, interests. The only choice that many North Americans have is what type of car they will drive, not what form of transportation they will use, be it car, bicycle, walking, or public transit. "That motor traffic curtails the right to walk, not that more people drive Chevies than Fords, constitutes radical monopoly" (Illich 1973: 51).

One danger of a radical monopoly is that, just as it physically curtails alternatives, it numbs the imagination to possibilities. It also inhibits the ability to properly evaluate the effectiveness of the current situation. The environmental degradation that results from automobile (over)use is widely known and there is a general consensus that the use of cars as the primary mode of transportation is ecologically unsustainable. Yet the public is desensitized to the long list of costs the automobile occasions: loss of life (exceeding homicides each year in Toronto); injuries; hospital, police and fire services; oil wars; global warming; smog; ozone depletion; habitat loss; resource depletion; urban sprawl; traffic congestion; noise, among others. These negative effects of the car on *all* humans and the rest of nature are largely ignored, so it is not surprising that the role of the automobile in increasing social inequities is also often overlooked.

### **The Role of the Automobile in Increasing Social Inequities**

Freund and Martin's (1993) "The Ecology of the Automobile" is one of the most exhaustive sociological works to date which examines the social and political implications of the automobile. In particular, the disenfranchisement of many groups throws into question the democratic and liberalizing qualities historically associated with the car. "Being transport-disadvantaged is clearly not a status that is equally or randomly distributed among groups in societies. A major empirical study of transport in Buffalo in the mid-1970s found that females, the elderly, the unemployed, and low-income persons were disproportionately carless" (Freund and Martin 1993: 45). Similar studies, certainly of this scope, have not been conducted in Canada.

Although it is important to focus on why, within an auto-dominated society, some have access to cars while others do not, it is important to keep in mind that it is possible to plan an environment in which living without a car is not a disadvantage. Yet even within cities which have good public transit and some amenities for cyclists and pedestrians, such as Toronto, a comparison of the safety measures in place for car occupants and non-car occupants is revealing. As expected, it is car occupants who die or are injured on highways. Within urban centres this situation is reversed: more people outside of cars are killed than within cars. Of the 964 traffic fatalities in Metropolitan Toronto from 1987-1997, 55% were pedestrians or cyclists (Metro Transportation 1998). Those who travel outside cars do not have the same opportunity for reaching their destination alive as those travelling by car. And, as Freund and Martin have shown, those travelling outside of cars are more likely to be members of historically oppressed groups.

### **Auto-Dominated Transportation Effects on Women**

There is perhaps no group for whom the automobile as a symbol of emancipation is more important than for women. But the car, like every other technology created by men, has not served women well. The automobile made suburban development possible, which, prior to the rise in automobile ownership, virtually enslaved women to their homes. Women have historically relied "more heavily on public transportation services than men do for a variety of reasons, including the lower incidence of car ownership" (MacGregor 1995: 31). Yet each year, more women are travelling by car and there is a corresponding decline in their use of public transit. Since women represent a majority of riders, this trend is a matter of some concern to the Toronto Transit Commission (TTC). "Increased auto availability, especially for women, and related demographic and socio-economic trends define the major problem facing the transit industry during the 1990s" (Transplan Associates Environics Research Group Limited 1991: 11). This statement is indicative of a problematic assumption about the operation of public transit: that it is inferior to private transportation and is reliant on captive riders, such as women.

If one examines the rise in women's vehicle ownership from the standpoint of equity alone, it can only be seen as a positive advancement for women. It makes sense that women, as would any oppressed group, strive to get every advantage enjoyed by men. Yet one group striving for equality with another does not shift the paradigm necessary to ensure a more equitable society. Ivan Illich defines a just society as "one in which liberty for one person is constrained only by the demands created by equal liberty for another. Such a society requires as a precondition an agreement excluding tools that by their very nature prevent such liberty" (Illich 1973: 41). Society, and in particular, women, have not been served well by the transportation tools and housing developments designed by men. Potentially powerful linkages to achieve social change exist between feminism and transportation.

### **Auto-Dominated Transportation Effects on Children and the Elderly**

Children and to a lesser extent, the elderly, have fewer options than women for increasing their automobility. As the dominant group's automobility increases, the mobility and freedom of those who do not drive cars decreases. Freund and Martin describe a study of British children by Hillman, Adams and Whitelegg (1990), comparing 1990 to 1971, that found the range in which children are permitted to walk has decreased substantially. "The principal reason given by parents for the decreased independent mobility of their children was increased street traffic" (Freund and Martin 1993: 54). The elderly also face significant physical barriers to travel without a car. "Public transit is often not accessible and walking is made more dangerous by traffic conditions that favour the auto, including wide roads that have brief green lights for cross streets" (Freund and Martin 1993: 55).

These barriers that especially affect the young and elderly are reflected in pedestrian traffic fatalities where, as revealed by population statistics, these

age groups are overly represented. In 1991, 33% of Ontario's total population were under age 15 or 65 and over (Statistics Canada 1998). In 1996, 46% of the 929 pedestrians killed in Ontario were under age 16 or 65 and over (Ministry of Transportation 1996: 7). Within urban areas the percentage is consistently higher even though these age groups comprise only 27% of Toronto's overall population. In Metropolitan Toronto in 1997, 56% of the 79 fatalities were either cyclists or pedestrians despite the fact that these travel modes accounted for a mere 8% of daily trips made by Toronto residents (Joint Program in Transportation 1991). Of the 44 pedestrians and cyclists killed, 61% were under age 18 or over 65 (Metro Transportation 1998).

Safety in North America is perceived as an individual responsibility, thus safety messages are targeted at individuals who are considered most at risk, regardless of the inequity of who it is that is most at risk. A notable Ontario traffic safety program for children is Elmer the Safety Elephant, developed in 1947 by a Toronto police inspector "in response to community concerns over the increasing number of collisions involving children" (Canada Safety Council 1998). Elmer conducts school visits to impart safety rules based on a study which concluded that typical childlike behaviour, such as "running" and "momentary excitement," were the "hazards" causing most traffic collisions. This popular program, ingrained in children growing up in Ontario, instills the false belief that it is children behaving like children that is hazardous, rather than the inappropriate use of deadly equipment (cars) by adults within close vicinity to children playing. Although it is wise to try to prevent children from a danger that exists, it makes little sense not to address and eliminate the harm.

According to Ivan Illich, "speed is one of the means by which an efficiency-oriented society is stratified" (Illich 1973: 38). For years, Canadian medical researchers have documented the relationship between vehicle speed, high traffic volume and pedestrian death. These physicians recommend not individualized safety messages but more passive, humane approaches to road safety such as physical environment changes aimed at slowing down and reducing motor vehicle traffic.

### **Auto-Dominated Transportation Effects on Racial and/or Ethnic Groups**

Racism can be, and has been, expressed through transportation infrastructure. Ursula Franklin (1992) notes that under the leadership of Robert Moses, between the 1930s and 1960s, the bridges and underpasses of New York parkways were designed "...quite low, intentionally specified by Moses to allow only private cars to pass. All those who travelled by bus because they were poor or black or both were barred..." (Franklin 1992: 71). It takes a rare observer to notice the cruelty of such designs even after they are in place. MacGregor (1995) points out that the built environment, if it is considered at all, is typically conceived of as a benign, anonymous backdrop to everyday life. Yet this infrastructure has been designed by real people with biases and prejudices which can be expressed through a powerful medium. Just as people must adapt to weather conditions beyond the control of the individual, so it is necessary to operate within the constraints and preferences of those who have produced

the built forms within which we live.

In the U.S., generous federal highway and housing development subsidies have entrenched racial and class separation, and subsequent racism and classism, by encouraging the proliferation of affluent white enclaves outside of city cores. In the U.S., urban sprawl is often referred to as "white flight," a term which does not accurately describe Canada's settlement patterns that reveal the racial mix in the suburbs is similar to that in the city. The old city of Toronto actually has a slightly lower immigrant and visible minority population than its suburbs (Statistics Canada 1998).

Although racism certainly exists in Canada, governmental urban policies have made efforts to prevent settlement patterns that fragment along racial and class lines. In fact, "major interventions at all levels of government in Canada managed to curtail the flight of middle class families to the suburbs. The combination of deliberate investments in transit systems, public housing and parks, and the preservation of social services and quality education, maintained the social and racial diversity and liveability of Canadian inner cities" (Raad and Kenworthy 1998: 15). Although Raad and Kenworthy's analysis is accurate, it is important to note that transportation and its relationship to race in Canada remains largely unexplored.

Historically, data by race are collected more systematically in the U.S. than Canada. Because of this we know that African-Americans make fewer trips by automobile than other Americans. According to the U.S. Census Bureau, in 1987, "29 percent of African American households were without a car, truck, or van, while only 11 percent of all households were without a vehicle" (Freund and Martin 1993: 46). In Canada, many public institutions make a deliberate decision not to collect racial data. Statistics Canada collects information on immigrant and visible minority settlement patterns but because the racial mix is quite comparable between downtown Toronto and its suburbs, it is not possible to draw any strong connections between residence and race as can be done in the U.S.

In Los Angeles, in 1994, a mass transit advocacy organization called the Bus Riders Union was one of the first to use the term "transit racism" (Mann 1996: 2). The union took the LA transit authority to court on the grounds that a transit fare increase and service reduction for only buses would cause irreparable harm to low-income, Black and Latino riders. At the same time, service improvements were underway for the suburban rail system that served the primarily white and affluent. In 1996, the Bus Riders Union won this landmark civil suit which determined that the LA transit authority was violating the 1964 civil rights act creating a separate and unequal transit system based on race.

To explore connections between race and transportation in Toronto, a more sensitive measure than residence is needed, such as an examination of vehicle ownership and public transit use by race. It is possible that such a study would not replicate the LA experience. However, it is too early to conclude that transit racism does not exist in Canada, as this has yet to be adequately demonstrated.

## Auto-Dominated Transportation Effects on Low-Income Groups

Public investment in private automobiles has had a particularly detrimental effect on the poor. As auto subsidies have increased, public transit has correspondingly deteriorated. Although costs for both the car and public transit in Canada rose during the 1980's, "transit fares increased almost three times as fast as auto operating costs from 1990 to 1995" (Pucher 1998: 27). In Toronto, the TTC obtains "80 percent of its operating budget from its passengers" (Hall 1998), mostly from low-income people.

A 1998 TTC travel diary study of 809 Torontonians showed that of the 682 households that revealed their annual income, 52% of the 273 households earning less than \$40,000 use the TTC. By contrast, of the 409 households with an annual income of more than \$40,000, 36% use the TTC. As it is unlikely that those in households earning less than \$40,000 can afford a car, it is important to note that close to half (48%) of low-income respondents are not using the TTC (Creative Research International Inc. 1998: 533). This may be an indication that the TTC is too expensive for low-income people.

Despite the fact that poor people drive less than the wealthy, "auto transport consumed a higher *proportion*, over twice as high, of the incomes of poorer families than of the incomes of better-off families" (Freund and Martin 1993: 48). This is due to a phenomenon called underpricing – those who are not driving are subsidizing those who do. Litman (1998) analyzed a seemingly endless list of criteria (i.e. impacts of oil tanker spills, parking-lot runoff, lost surface permeability, etc.) into three categories of underpricing: internal variable costs, internal fixed costs and external costs. The driver pays for the internal costs only while external costs are borne out in the aggregate. "These include costs of roadway and parking facilities not charged directly to users, congestion impacts on other road users, accident risks borne by other road users, and environmental damages" (Litman 1998: 38). Litman estimates that external costs constitute 32% of the total costs of automobiles, costs paid by everyone, whether they drive or not.

Ursula Franklin refers to technological expressions of injustice, such as governmental subsidies for private automobiles or the low bridges designed by Robert Moses described earlier, as divisible benefits designated by governmental bodies whose obligation it is to provide indivisible benefits. Taxation systems exist so that government will "attend to those aspects of society that provide indivisible benefits – justice and peace, as well as clean air, sanitation, drinkable water, safe roads, equal access to education" (Franklin 1990: 70). Franklin asserts that reversing global environmental deterioration will not happen unless governments safeguard the world's indivisible benefits or the "common good." Eliminating all private automobile subsidies would be a good place to start.

More important than cost, and arguably the most crucial impact of auto-centered transport, is the risk of injury and death. Two British studies found that mortality from traffic "accidents" – technically now termed "collisions," partly due to their predictability – is "socially distributed along class lines" (Freund and Martin 1993: 49), especially for child pedestrians. "Children of the two

lowest social classes had a mortality rate from motor vehicle traffic accidents that was 3.2 times higher than the rate for children of the two highest classes" (Freund and Martin 1993: 49). So, in addition to all the other ways in which the poor are paying for an auto-dominated society, they are also paying with their lives. "Poor people and people of color are subsidizing our addiction to the automobile. They pay the highest social, economic and environmental costs and receive the fewest benefits from an automobile-dominated transportation system" (Holmes 1997: 22).

## Toronto: A City Under Stress

Although doomsday scenarios are unhelpful, it is difficult to avoid the fact that Toronto is presently under a great deal of stress, mostly due to the current provincial government's implementation of anti-urban policies. Upon amalgamation, all provincial investment in municipal transit systems was eliminated. Raad and Kenworthy (1998: 20) predict that "transferring responsibility for funding these services to municipalities is ultimately a plan to have them chipped away." Provincial funding is more stable and so is more appropriate for controlling indivisible benefits such as public transit. "Transport, like education and other vital societal activities, is far too critical to be left to the vagaries of the profit-driven market place" (Freund and Martin 1993: 183). Yet this is precisely Toronto's current predicament worsened by recent budgetary decisions.

The new city of Toronto's annual budget for 1999 is 5.6 billion dollars (City of Toronto Budget Information 1999). Of this, the Transportation Capital Works program budget is \$122 million, increased from \$109 million in 1998. The 1999-2002 transportation budget for new projects totals \$901,805 million (M) which falls into two categories: 1) funds for pedestrian infrastructure, cycling facilities and traffic calming, and 2) projects which facilitate motorized traffic. The first category receives \$27,812M, which leaves \$873,993M or 97% of the budget for the second! (Toronto Council Budget Committee 1999).

Roads and public transit function in relation to each other yet the budgetary process keeps the two separate. Their unequal roles in advancing the public good are rarely made explicit with the result that there seem to be no safeguards in place for the TTC. While the budget committee increased the transportation budget to cover the new costs of maintaining expressways – another new funding responsibility transferred from the province – it slashed the TTC's capital budgets to \$446M from \$533M in the previous year. Since most TTC costs are recovered from the fare box, the actual net cost to taxpayers in 1998 was \$164M. This decision forced City Council to approve a 10 cent fare increase to cover the shortfall. As David Gunn, the former TTC chief general manager noted, "fare increases affect ridership in a statistically predictable fashion. If the fare goes up a dime, for example, the TTC can expect to lose 4 million riders a year" (Hall 1999).

In contrast to Vancouver and Montreal, Toronto's public transit system has experienced repeated fare hikes and service cutbacks throughout the 80s and 90s resulting in a large TTC ridership loss. "Toronto has suffered the largest loss of transit riders of any Canadian city. This suggests the importance of public policy differences in explaining the variation in transit use among

cities" (Pucher 1998: 20). Budget decisions such as these erode the liveability and density of the city, and the alternative to private automobiles. So, Toronto's downtown core, which has offered the possibility of living car-free without feeling disadvantaged, is under threat.

### Alternatives

The problems associated with auto-dominated transport have been documented since the early sixties, most notably by Jane Jacobs (1961). The solutions have just as long of a history but there is renewed interest in the topic as the detrimental effects of the automobile become increasingly difficult to ignore. What follows is not a comprehensive list of the many strategies that urban planners, environmentalists, urbanologists, and others have developed but only a brief mention of those that may have most relevance to reducing social inequity and ecological unsustainability in Toronto.

1. Tear down the Gardiner expressway. Evidence continues to mount supporting a phenomenon first documented by Jacobs (1961). Contrary to popular belief that closing roads would result in congestion nightmares, much existing traffic actually "disappears." Many American cities, such as Boston, Seattle, Portland and San Francisco, are presently engaged in transforming their inner cities and have begun by eliminating their waterfront expressways.

2. Increase funding for public transit. Building new roads only exacerbates the serious backlog of existing streets requiring repair so redirecting this money to the TTC would ease that problem. A dedicated gas tax for public transit, such as already exists in Montreal and Vancouver is also recommended. Imposing a ten-cent freeway toll would cover the immediate TTC shortfall.

3. Increase funding for traffic calming. This more holistic approach to traffic planning considers all possible types of traffic, and even social interaction, on public streets. Its primary function is to slow motorized traffic down, not by speed limits, traffic lights or enforcement but through road design which makes drivers "feel" like they should not be driving quickly. In Toronto, there is a backlog of traffic calming requests but because of the tiny amount set aside for this work, only one or two projects can go ahead each year on an extremely piecemeal basis. "Experience has shown that it is most effective if widely implemented, so that motor traffic problems are not simply diverted to nearby streets" (Lowe 1990: 22).

4. Increase funding for bicycle and pedestrian infrastructure. The benefits of cycling and walking have been well documented for individual, societal and environmental reasons. "Cities renowned for bicycling in both Europe and North America all have extensive networks of on-street bicycle lanes and supporting facilities like bicycle parking" (Komanoff and Roelofs 1993: 63). Toronto also needs wider sidewalks, "pinched" intersections, priority lights at intersections for cyclists and pedestrians, tree-lined boulevards with seating, and other amenities, which are associated with increased walking and cycling.

### Where will the money come from?

Jane Jacobs, in her book "The Death and Life of American Cities" notes that we have a process in place where cities are gradually eroded by auto-centered planning. To counteract this, she suggests we need to be "making conditions less convenient for cars. Attrition as a steady, gradual process would steadily decrease the numbers of persons using private automobiles in a city" (Jacobs 1961: 363). She suggests that improvements for cyclists and pedestrians should come out of the same money that is now being spent on eroding conditions for these groups such as widening roads and narrowing sidewalks.

In Toronto, the 9% of the transportation capital works budget for new roads is 80 million dollars. If just this amount went towards public transit, cycling and pedestrian facilities, a gradual but important step would be made to stop the erosion occurring due to auto-centered planning. By making a solid commitment to the most socially equitable and ecologically sustainable forms of transit, Toronto could once again become an urban success story.

### Conclusion

Sociologists have historically studied social inequity while overlooking ecological unsustainability. In the case of the private automobile, the links between the two must not be ignored. In a society with weak commitment to ecological sustainability, the race to attain the lifestyle of the most privileged makes sense. However, when both social equity and ecological sustainability are considered simultaneously, it becomes clear that the goals of one cannot be reached without the other. "What does sustainability mean in the context of transportation, social justice and the environment? By making public mass transit, bicycling, and walking the primary modes of urban transportation, and designing urban spaces to accommodate people, and not automobiles, we can reduce suburban sprawl and inner-city abandonment, while protecting public health and environmental resources" (Holmes 1997: 27).

### References

- Canada Safety Council. 1998. *The Elmer Story*. Ottawa: Canada Safety Council. Accessed online: <http://www.safety-council.org/elstory.htm>.
- City of Toronto Budget Information. 1999. "1998 Capital and Operating Budgets and 1999 Capital Budget and (Proposed) Operating Budget." Toronto: City of Toronto. Accessed online: <http://www.city.toronto.on.ca/ourcity/budget.htm>.
- Creative Research International Inc. 1998. "Table B: Total Household Income Before Taxes in 1997." *T.T.C. Market Tracking Study (#907-98)*. Toronto: Toronto Transit Commission.
- Franklin, U. 1992. *The Real World of Technology*. Concord: House of Anansi Press Limited.
- Freund, P. and G. Martin. 1993. *The Ecology of the Automobile*. Montreal: Black Rose Books.
- Hall, J. 1998. "Toronto still 'best in transit'." Toronto: *Toronto Star*. Accessed online: [http://www.thestar.com/back\\_issues/ED19981106/toronto/](http://www.thestar.com/back_issues/ED19981106/toronto/)

- 981106NEW01\_CI-TORTRANS6.html.
- Hall, J. 1999. "TTC Transit fares could jump 25 cents: Proposed cuts by city blamed." Toronto: *Toronto Star*. Accessed online: [http://www.thestar.com/back\\_issues/ED19990210/toronto/990210NEW03\\_CI-TC10.html](http://www.thestar.com/back_issues/ED19990210/toronto/990210NEW03_CI-TC10.html).
- Hillman, M., J. Adams, and J. Whitelegg. 1990. *One False Move: A Study of Children's Independent Mobility*. London: Policy Studies Institute.
- Holmes, H. 1997. "Just and Sustainable Communities." In *Just Transportation: Dismantling Race and Class Barriers to Mobility*. R. Bullard and G. Johnson, eds., Gabriola Island, BC: New Society Publishers.
- Illich, I. 1973. *Tools for Conviviality*. New York: Harper and Row.
- Jacobs, J. 1961. *The Death and Life of Great American Cities*. New York: Random House Inc.
- Joint Program in Transportation. 1991. "The 1986 and 1991 Transportation Tomorrow Survey. Summaries of Metropolitan Toronto Planning Districts 1 and 15. Demographic Characteristics." Toronto: University of Toronto. Accessed online: [http://www.jpint.utoronto.ca/region/tts86\\_91.html](http://www.jpint.utoronto.ca/region/tts86_91.html).
- Komanoff, C. and C. Roelofs. 1993. *Case Study No. 15: The Environmental Benefits of Bicycling and Walking: National Bicycling and Walking Study*. Washington: U.S. Department of Transportation. Federal Highway Administration. (Publication No. FHWA-PD-93-015).
- Litman, T. 1998. "Driving Out Subsidies: How better pricing of transportation options would help protect our environment and benefit consumers." *Alternatives Journal* 24(1): 36-42.
- Lowe, M. 1990. *Worldwatch Paper 98: Alternatives to the Automobile: Transport for Livable Cities*. Washington: Worldwatch Institute.
- Lucas, W. J. 1998. *A Report on Cycling Fatalities in Toronto 1986-1996: Recommendations for Reducing Cycling Injuries and Death*. Toronto, Ontario: Regional Coroner for Toronto.
- MacGregor, S. 1995. "Deconstructing the Man Made City." In *Change of Plans: Towards a non-sexist sustainable city*. M. Eichler, ed., Toronto: Garamond Press.
- Mann, E. 1996. *A New Vision for Urban Transportation: The Bus Riders Union Makes History at the Intersection of Mass Transit, Civil Rights, and the Environment*. Los Angeles: Strategy Center Publications.
- Metro Transportation. 1998. "Metropolitan Toronto Fatal Collision Statistics: 1997." Toronto: Metro Transportation Traffic Data Centre. [Brochure].
- Ministry of Transportation. 1996. *Ontario Road Safety Annual Report: 1996*. Toronto: Publications Ontario.
- Newman, P. and J. Kenworthy. 1989. *Cities and Automobile Dependence: A Sourcebook*. Hants, England: Gower Publishing Company Limited.
- Pucher, J. 1998. "Back on Track: Eight steps to rejuvenate public transport in Canada." *Alternatives Journal* 24(1): 26-34.
- Raad, T. and R. Kenworthy. 1998. "The US and Us." *Alternatives Journal* 24(1): 14-22.
- Statistics Canada. 1998. "Statistical Profile of Canadian Communities: Census '96." Accessed online: <http://ww2.statcan.ca/english/profil/>.
- Toronto Council Budget Committee. 1999. *Transportation 1999-2003 Capital*

- Works Program*. Memo to the Strategic Policies and Priorities Committee. Toronto: City of Toronto.
- Transplan Associates Environics Research Group Limited. 1991. *STRP Report #1-2. The Implications of Demographic and Socioeconomic Trends for Urban Transit in Canada, Phase 2: Potential Strategies*. Toronto: Canadian Urban Transit Association.

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