Transportation in Transition

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Today, our nation is in a transportation crisis that is chronic in nature. It may not be sudden like the gasoline lines of 1974, but it is consistent and the pressures of this crisis are deepening. And because its gradual nature allows people and institutions to adjust, the crisis we experience changes our transportation system more fundamentally than transitory gasoline lines or transit stoppages.

The current picture of public transportation is bleak. Indeed, each new wrinkle in the financial problems faced by the transit industry brings warnings that a breakdown of public transportation service could initiate a domino effect resulting in an urban economic collapse.

There is, however, an alternate view of this bleak period in transit's history. It is our thesis that the crisis is both the death rattle of outdated institutions for delivering transportation service and the painful birth of many new delivery systems. We argue that this "birth" is a process of renegotiating a social contract that for the past 40 years has been the foundation of personal mobility in urban areas. Under that contract the public sector built roads and heavily subsidized the operation of public transportation systems. The private business sector (the employer) provided parking facilities and/or located near public transportation, while the private citizen (the employee) assumed responsibility for getting to and from work by either residing near public transportation and paying a low daily fare, or by buying an automobile. Today, however, the chronic financial problems of the transit industry, the shortage of funds needed to maintain this nation's existing roadway system, as well as the increasing difficulty of all levels of government to fund either system adequately, suggest that the public sector can no longer keep its part of the bargain.

Renegotiating the social contract of transportation is not new. The relationship among the public sector, the employer (shopkeepers, industry, public and private institutions, in short any activity site), and the private citizen has shifted significantly at least twice in the recent past--once with the introduction of mass transit and again with the popularization of the automobile.

The industrial revolution greatly increased the need for travel by concentrating a large number of employees at a single work site. Since the employer and the employee were both bound by the constraint (or "contract") of locating within walking distance of each other, densities became intolerably high and living conditions squalid. The introduction of mechanized public transportation dramatically increased the scope of travel and thus enabled great urban expansion. It also introduced two new parties into the contract equation--the private transportation provider and the public sector--whose new roles reflected changes in the contract itself. Before the introduction of public transportation, the employer could locate anywhere within the confines of the city. Under the new contract, there was a tacit agreement among the employer, the employees, and the transportation provider to locate along transit routes. Transportation was now a product of a new institution--i.e., the private for-profit streetcar company. Remaining intact from the earlier contract was the assumption that the employee bore responsibility for the journey to work.

The public sector, which entered the contract on the grounds that public streets were being used for profit, played two roles: (a) it guaranteed the profitability of a public transportation venture by granting an exclusive or limited franchise that essentially eliminated competition, and (b) it guaranteed the employee a safe ride and a reasonable fare by regulating safety conditions and fare structure. (By the 1920s and 1930s, rigorous efforts to maintain unreasonably low fares almost negated the guarantee of profitability.)

Popularization of the automobile, however, altered those relationships dramatically. Both the employee and the employer were released from the locating restrictions that had bound both parties in previous contracts. It put immediate pressure on the private transportation companies; the public no longer rode buses in large enough numbers to be profitable. The public sector felt pressure from the motorist who complained of severe congestion and long travel times and from low-income citizens threatened by escalating transit fares, or worse, total public transit system shutdown. Finally, the employer began to be pressed to provide off-street parking by both his employees and new zoning ordinances.

The public sector took the lead in renegotiating what might be called the automobile social contract. It responded with highways that allowed both employees (aided by federal housing policies) and employers (spurred by horizontal assembly efficiencies, cheap land, and trucking) to exercise their new freedom to relocate in sprawling suburbs. The public sector responded to the financial problems of private transportation providers initially with subsidies and ultimately with a total acquisition or buyout. By the late 1960s the public sector had almost entirely assumed the role formerly held by the private provider by owning and operating the facilities that carry more than 90 percent of all public transit passengers.

The automobile contract also set up dual transportation systems: one for those who could afford and chose to use automobiles, and the transit system for those who could not or did not so choose. The automobile has afforded Americans unprecedented mobility and locational freedom.

As we enter the 1980s, however, a variety of problems are challenging each of the fundamental assumptions of the automobile social contract and are pushing each of the actors back to the bargaining table to renegotiate the contract. Let us look

at some of those pressures, for within them are the seeds of the new transportation social contract.

Labor accounts for between 67 percent and 80 percent of transit operating expenses. Between 1967 and 1980, transit wages increased 160 percent, while the consumer price index rose 146 percent. In Chicago the average bus driver earns $25 000, excluding overtime, after 3.5 years on the job. With overtime, many earn considerably more. The irony is that these salaries are paid for skills and services performed free of charge by 60 million Americans every day as they drive their own automobiles to and from work. The root of the irony lies on the fact that, when the public sector took over the private systems serving an urban area, it generally took over all of the private providers and consolidated them into one system. The few not taken over soon went out of business.

Consequently, rather than having a labor union threaten one of, say, five transit companies with a wage demand shutdown and thereby risk their jobs by running the company out of business, the union now has a monopoly. In this position it can shut the system down completely with virtually no risk because there is no other system to which a mayor can turn. A shutdown, of course, is economically and politically unacceptable since the public sector has in the social contract guaranteed transportation service to a certain segment of the population.

The exodus of riders from mass transit has not been uniform. The greatest losses have occurred during the off-peak periods, and the pattern has been reinforced by recent ridership gains heavily concentrated during the peak transportation periods. Between 1960 and 1974, this peaking of demand drove the peak-to-base service ratio from 1.8 to more than 2, and this trend shows no signs of abatement. Peak-hour service costs 37-40 percent more to provide than off-peak service. One study conducted during the 1970s estimated that peak-hour service recovered only 47 percent of its operating cost whereas non-peak-hour service recovered nearly 94 percent.

As Americans moved to the suburbs, they tripled the size of metropolitan areas and dramatically increased the number of miles necessary to serve one passenger. For example, if we assume that 5 percent of the population along any route will use a bus, we may expect 250 riders/mile in a hypothetical city of 1 mile^2 with a population of 5000 people. If those same 5000 people spread themselves over 5 mile^2, the bus must either travel 5 route miles to serve the same 250 people or, if it simply retains its old route of 1 mile, reduce its revenue to the equivalent of 50 riders.

The private citizen is also finding difficulty in keeping his or her part of the social contract. It is becoming increasingly expensive to own and operate automobiles.

Commuters have tried to mitigate increased gasoline costs by purchasing higher-mileage cars only to discover that dramatically increased automobile prices, coupled with financing costs, consume a disproportionate amount of their take-home pay. For example, an "average" automobile can now be purchased for about $6500. Assuming a $1500 tradein or downpayment, 3-year amortization, and 18 percent interest, the monthly payment is $180, in addition to gasoline payments of $80-$100/month.

Today, many employers have found that commuting distances are too long and, for some employees, too expensive; relocating or retraining expenses are too high; or public transportation in their new location is lacking, severely limiting their ability to recruit clerical and semiskilled labor. Organizing a company transportation system, often a car, van, or bus pool, has presented the lowest-cost alternative.

The decade of the 1980s, then, has opened with all three parties questioning their commitment to the transportation social contract. Low-cost, uninterrupted access to work may not be as certain as employers once thought. Automobile transportation may not be as economical as employees once found it to be, and the maintenance of public facilities or of service levels by the public sector may no longer be affordable.

In the coming years the public sector must reduce its financial commitments and gain better control over its costs. Scarce public resources will have to be focused more carefully on specific attainable objectives. Greater financial contributions from users will also be required. Options available to meet nearly every one of these challenges fall under the general umbrella of greater use of privatesector providers.

Over the past 20 years, public expenditure on public transportation has been seen as a cure for a variety of urban and national ills: urban blight, urban sprawl, pollution, congestion, unemployment, and the balance of payments deficit due to energy waste. The result of so many societal goals has been that service strategies could never be optimized for a particular objective and failure to achieve one goal could be blamed on achieving several other unmeasured goals. More scarce resources will force, it is hoped, the public sector to answer concisely the question, What do we first want to accomplish with limited available funds?

With a capacity for moving 2000-8000 people/h by bus versus 1000 people/lane/h for automobiles, traditional public transportation is effective at reducing congestion. Congestion is generally a peak-hour problem. Using mass transportation to solve it results in a "peaking problem," unless the definition of public transportation is broadened to include buses and vanpools that use unpaid commuter drivers; subscription buses and "trippers" sponsored by private corporations, operated by private operators for profit, or provided under a purchase of service contract with the public sector; and jitneys.

In addition, the traditional transit system's pricing structure will have to be reorganized to reflect the higher costs of providing peak-hour service. Some may not be able to pay full fare. However, as David Stockman pointed out: Operating subsidies for everyone--rich and poor alike--are a terribly inefficient way to assist disadvantaged groups.

If the public goal is to provide transportation to the disadvantaged, perhaps it would be wiser to identify those individuals and then concentrate our limited public funds on them alone through user-side subsidies. Similar in concept to food stamps, these subsidies could be used on an open transportation market for whatever mode best meets their needs.

A variety of drivers are willing to drive for less than the average public transit wage of more than $12/h. Car, van, and bus pool drivers provide the service free; taxi drivers earn about $5.00/h. As the public sector and private sector, both employers and employees, make greater use of these and other options, the threat of a total shutdown will become less meaningful.

The bargaining position of the employer is also changing. It is likely that one important outcome of a renegotiated social contract will be that transportation in one way or another becomes an employee benefit. Employers depend as much on good transportation as do their employees.

There is substantial evidence that this change is taking place in a variety of forms across the United States.

1. In Des Moines, employers routinely offer subsidized transit passes to employees. The program is so widespread that discounted transit passes are no longer stressed as an employee benefit.
2. In Grand Rapids, Michigan, Transnational Motors, Inc., pays 40 percent of the total premium for employee group automobile insurance.
3. G.D. Searle in Skokie, Illinois, is experimenting with a program of selling used company cars (acquired at fleet prices) to employees to help beat the high cost of automobile ownership.
4. Numerous companies all over the country have implemented car and vanpool programs. At the present rate of formation, the National Association of Van Pool Operators predicts 100 000 vanpools operating by 1985.

Private citizens will have to adjust to the fact that traditional transportation is likely to cost more. To reduce some of those costs, they may have to become vanpool riders or drivers, participate in neighborhood automobile cooperatives, or occasionally rent automobiles or use taxis as alternatives to purchasing second cars.

A variety of private transportation providers may once again become party to the transportation social contract. There is evidence that developers, too, may become party to the contract. In an attempt to make their suburban residential and commercial space more attractive, many developers are underwriting bus or shuttle services or arranging van and carpools.

Given the position and needs of the various principal actors, it is likely that private employers and providers will become much more involved with the direct provision of surface transportation in the future. In the best and worst of extremes, an individual could face a variety of options and a maze of prices depending on the mode, time of travel, destination, and the number of people traveling. The solution to these new transportation problems may define the future role of the public sector. Rather than owning and operating systems, the public sector may become more of a travel information broker, a facilitator, a technical adviser, and a manager of a set of service contracts.

There is little question that the process of renegotiating the transportation social contract has begun. Each party is slowly exploring and carving out a new niche. The process will be long and progress slow. We feel certain that at the outcome, when we speak of public transportation, our concept will have grown to include a range of services and providers: rapid rail, bus, vanpools, commuter clubs, subscription services, taxis, jitneys, apartment shuttles, the private and the rental automobile, each serving the trip length, type, and density that are most cost-efficient.

Changing Concepts of Urban Public Transportation

C. Kenneth Orski

Urban transportation in America is undergoing a major reappraisal. In community after community concerned citizens and local officials are beginning to question the validity of traditional approaches to service delivery and to reexamine the logic of existing transportation arrangements. Although these reappraisals are usually sparked by the need to cut local expenditures and balance local budgets, pressures to reassess the state of local transportation have been mounting for some time. Behind these pressures lies a growing sense of unease about the adequacy of our present urban transportation systems. There is concern that bridges and highways are deteriorating at a faster rate than they can be reconstructed; that the operation of traditional public transit systems is becoming prohibitively expensive; that conventional transit no longer satisfies the needs of a vast majority of urban residents; and that, despite 12 years of sustained national efforts and an infusion of 18 billion dollars in public subsidies, public transit is teetering on the verge of financial insolvency. We are also becoming aware that government can no longer shoulder the full financial burden of taking care of all these problems, and that other resources will have to be mobilized if an effective transportation system is to be preserved.

Emerging from these grassroot reappraisals is a wealth of innovative ideas about the ways local transportation can be more effectively managed, provided, and paid for. By challenging the conventional wisdom, these ideas promise to bring about profound changes in the organization, financing, and delivery of local transportation. These new approaches can be grouped under seven headings:

1. Developer involvement in transportation improvements,
2. Private-sector sponsorship of transportation services,
3. Transportation management associations,
4. Downtown transportation management,
5. Private operation of transit services,
6. Decentralizing service delivery, and
7. Private financing of transit infrastructure.

Running through the seven topics listed above is a common thread that provides a unifying theme for this conference. That central idea is that provision of public transportation is increasingly being regarded as a shared concern and responsibility of the public and private sectors. There is growing support for this position among both private and public leaders. Problems of traffic congestion and parking, access to downtown and suburban jobs, decaying infrastructure, and inadequate transit service, all have immense economic consequences of which the business community is acutely aware. The private sector understands that it must, in its own self-interest, assume an active role in the solution of local transportation problems, lest those problems overwhelm business' ability to function effectively. The business community also understands that a well functioning transportation system can be a positive force for economic development. It can help employers gain access to an expanded labor