

PROBLEMS AND ISSUES IN URBAN GOODS MOVEMENT

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Urban goods movement is a new subject area that is not yet heavily studied, measured, or commonly understood. For proof of little knowledge, witness the fact that we had hoped by the guidelines of other conferences to invite to this conference a number of people that would produce a desired attendance of about 55 or 60 people for a working conference. Instead, acceptance and interest were so high that about 100 people attended. We can see this is a subject of some interest.

There are two kinds of problems that we face, and they have to be kept reasonably separate. First, there are the problems concerned with what is or what may be. These are usually questions of fact, generally in the field of science, and generally concerned with description and with "if-then" kinds of statements. These questions are not value laden.

Second, there are questions of policy, and these are generally concerned with what ought to be done. They are very valuable and provocative questions. They are the ones that start your clock running and whip you every day, but they are separate from the questions of fact. Therefore, what ought to be done about urban goods movement is one set of questions; and how urban goods movement works, how it will change if something is done, and what the consequences of actions and rules may be constitute an entirely separate set of questions. The latter are essentially value free, whereas the former are value drenched.

All of us who have worked in this field for some time have used the terms "goods" and "people." We have given them equal billing. Although they are equal in rhetoric, they are sadly unequal in the amount of information gathered and work that has been done. We know a great deal about people movement but comparatively little about goods movement.

There are probably several reasons for this. Goods movement is not centrally organized. It is a multifirm activity, so there are few records of uniform, area-wide quality. Regulation, as it does apply, and records, as they are required, are generally limited to a few carriers for intercity movements, and these kinds of records are buried fairly deep in the total cost picture of American businesses. The facilities used are not unique or centrally managed.

There seem to be two organizing influences to this vast array of activities that constitute urban goods movement. One is the marketplace, i. e., the sheer matter of costs and economics that organize the industry. The other is the union. There are a number of small operators, owners and carriers with but a single union. As we examine both organizing elements, I hope this will provide a means of developing information that is more descriptive and more reliable.

Intercity records are reasonably well kept, but there is no governmental agency to want or require records for the movements occurring within the city such as from the terminal to the warehouse, to the retail outlet, and thence to the consumer. Whether a ton of goods, a package, a lading, or whatever—there is no single unit to which we can all agree. For a person movement, there is one human you can trace out. For a goods movement, there is a shipment, a part of a truck, and to trace this is a difficult problem.

In the urban transportation studies, we have shown a great deal of interest in the population of trucks and surveys of vehicle movements. The kinds of questions asked have been, Why does a vehicle move? Where does it move? What quantity does it carry? This has led a few investigators to ask, What goods does the truck carry? What is the purpose of the truck trip? Some attempts have been made to trace commodity movement by tracing truck movements, but this has proved to be a very awkward approach.

Moreover, as one begins to look at trucks, one recognizes that goods movements are one thing and truck movements are quite another. Service trucks, repair trucks, family trucks, farm trucks, and garbage trucks do not create a picture as tidy as one would have thought in the first place. Commodities are not trucks, nor is the reverse true.

It seems to me that one way to begin to look at this question of goods movement is to first organize one's point of view. May I suggest a way to do this. Consider that every urban place is a functioning unit made up of a cluster of humans living in cooperative fashion, each person dependent on his neighbor in some degree. This human beehive lives and prospers by interdependency and specialization of task. For this kind of unit to exist, it has to take in and also to export a vast amount of materials. In the process between receipt and export occurs a phenomenon that we might call urban metabolism wherein goods are consumed or transformed. As a single human has to take in food, operate on it, use it for his purposes, and get rid of it, so does an urban place. No urban place can live on the basis of what is on its own subsoil. It has to import its food and raw materials; and generally it exports manufactured products.

This concept is part of our training. If we think of goods movement within urban places as an internal metabolism, I think there are some interesting notions that do come to bear. For example, we can assert that any urban community of reasonable size has to import more by weight than it exports. Conversely, we can see that it has to export more by value than it imports, because labor is added in processing.

How does one begin to keep records at this scale? What is the basis of each community compared with the country and its region? How much raw material does it require? This import-export picture is important for it tells something about the lifelines that support large urban concentrations of people. But this says little about the activities required to move these goods through the processes of internal metabolism, for example, the city-to-city cost of transport in relation to the terminal or transfer costs at the urban end.

It is estimated that nearly half of the total freight bill in the greater New York region goes for internal goods movement. These estimates include no costs for the expenses incurred by consumers who haul groceries and other purchases home by private means, nor do they include costs for piers, freight yards, and other terminals that have to be established in the urban area in order to service goods that arrive by inter-city travel.

Costs of goods movement and people movement are about equal as far as we can determine. It appears that 53 percent of all of the costs of transportation in the Gross National Product goes for moving people and about 47 percent for moving goods. I predict that in the future the costs of moving people will exceed the costs of moving goods for two reasons. The first reason is that, in a highly technological society, we do not increase the output of goods at the rate that we increase the output of services. Accordingly, we are placing more and more of our creative power into service industries, while manufacturing industries are at a level of employment that is fairly constant. Even though their output is rising and they are absorbing more raw material, manufacturing industries do not grow much in employment, and added real income is increasingly used to purchase services. The second reason is that productivity is moving ahead in the goods-movement field at a higher rate than in the person-movement field. Whether these are reasonable estimates or not, they do suggest what we might expect in the future if we think of the system as operating in a metabolic way.

One other point that I would like to make in terms of urban metabolism relates to the problem of waste products. Urban consumption is rising and this is increasing the

wastes generated. Solid wastes, gaseous wastes, and liquid wastes are all straining the absorption capacity of our environment.

Even water and air that pass through the urban area go out contaminated. Certainly, much of the goods that come in go out as waste products that have to be buried, burned, or disposed of in some way. These cycles are not currently closed, and the effects are becoming more and more of a load for a fixed environment to bear. This crucial point is going to change costs, so we have to give a great deal more attention to disposing of urban wastes. I think our calculations show that we are generating about 4.5 to 5 pounds of solid wastes per person per day.

I hope this overview will provoke some concern for the science of the matter, some concern for the facts, some concern for an outlook, and some speculation on ways in which we can deal with technology and with institutions. I hope also that we might consider the extent to which goods movement is a substitutable element, now that coaxial cable information channels are being vastly increased in size, capacity, and performance capability, and whether changes in the institution and in the techniques of living in urban areas will have a serious impact on the goods-movement problem.