

the subway for nighttime movement and consequently for shorter hauls by truck on the city streets?

The reaction of the subway planners to this has been close to outrage. If the subway were to have multiple use, then planning of items such as curvature of track, weight on rail, and equipment would require consideration. Furthermore, other uses could immediately be considered such as mail and small-parcel movement.

I do not think that it would be unreasonable to request that post offices be built along corridors to improve utilization of public investment. Furthermore, there is no reason why water, electric power, and telephone facilities could not be built along the same corridors so that public investment could be shared. If you have seen how streets are dug up for telephone lines and then for gas lines and so forth, you can appreciate the advantage of commonality of investment.

This is not now being considered, and the reasons are unknown. Without even the use of the subway, rail movement of trash has not had very sympathetic reaction. We have been willing to perform a service at a total cost that we believe is less than the out-of-pocket costs for the city, which is normally a reasonably good economic argument; and we have not been asked to bid on the service. This raises a question when we talk about the requirements for transportation. Are we dealing with economics, or do we have a whole host of political and social arguments that must be dealt with?

A NATIONWIDE RETAIL ORGANIZATION

Stanton P. Sender

I would like to describe the operations of Sears, Roebuck and Company as shipper of goods in the urban areas. The first part of my remarks will provide some statistics about the firm, and the second part will describe the changes that the firm is making in movement of goods in the urban and other areas.

Sears has approximately 850 retail stores, 1,900 catalog sales units, 11 catalog order plants (the twelfth is being built in Columbus, Ohio), and 600 warehouses. We also have a number of catalog sale merchants. Sears buys over 150,000 different items from approximately 20,000 suppliers. The 1969 published net sales of \$8.8 billion represents a volume of freight that would cover a 4-lane highway between New York and Chicago, covered to a depth of 10 ft.

More than half of all items listed in the Sears catalog did not exist 20 years ago. More than a third of all items did not exist 10 years ago. Most of these products could not have been made then because the necessary materials or manufacturing processes were not available. For example, let me refer to the trash situation. Our newest product is called a trash compactor. Six cans of household garbage can be placed in this small device that can be installed next to the dishwasher. We feel that the ecological problems of trash can be solved better by compacting it into small packages that then can be handled by the garbage men in neat packages and sent out to the local landfill to be disposed of or burned.

Sears' transportation expenditures are more than a quarter of a billion dollars a year. More than half of this is accounted for by inbound transportation on purchases. This is the merchandise shipped to Sears by suppliers, and it consists of goods, supplies, and equipment. About a quarter of Sears' transportation dollar goes for home delivery of merchandise purchased by customers. Approximately 10 percent is expended for postal service charges to deliver catalogs to customers. The remainder is cartage expense for moving goods between stores and warehouses. Approximately 50 percent of Sears' transportation dollar goes to common carriage, approximately a fourth for private and a fourth for contract carriage. The contract carriage operations

are the fastest growing part. They are now slightly over a fourth and may reach 40 percent by 1975.

That is the general picture of the firm and its transportation operations. The important thing to note is that urban goods movement involves a line-haul transportation from the manufacturing source to the warehouse, a cartage operation from the warehouse to the store, and a delivery operation to the customer's home. There has been some talk about new devices for substituting communications for transportation. Sears for several generations has had a catalog sales operation that involves only 2 steps: the source to the catalog plant, which is essentially a large warehouse, and from there to the customer. The customer need not leave his home; he can order from the catalog by mail or by telephone, eliminating the intermediate step of going to the store to pick up the goods.

Sears is also using containers in distribution channels to a large extent. The use of containers in Sears is practically a way of life. Containers permit merchandise to be consolidated for shipment sold in units, minimize handling or loading expense, and eliminate lost or mismatched orders. The same container is used to ship returns from the selling units back to the catalog plants.

Sears also uses night deliveries. We find that, where they are used, they produce more efficient runs because the transportation time is less in the evening and service is improved.

There was a day when every Sears store had its own warehouse and its own delivery truck. This is no longer practical for the following reasons: high cost of building and maintaining many small warehouses; increasing inventory holding costs; increasing transportation rates on small shipments; and difficulty of maintaining an assortment of merchandise demanded by customers.

Just a few years ago there was one color for shirts and refrigerators; now they come in many colors. This involves a great merchandising problem. Whereas before we stocked white shirts and white refrigerators, now we have to stock many, many more because of the variety demanded by the customer.

To provide that variety, as well as for other reasons, we have gone to the distribution concept involving consolidation of the number of warehouses and enlarging of the service areas. In the Cleveland area, for example, a new distribution center is being built to serve stores in a 75-mile area. I want to emphasize that this is part of the urban movement of goods. Instead of moving from the Sears store, goods are moving from a distribution complex 75 miles away.

It is almost commonplace that most new retail facilities are not being located in what is known as the inner city; they are being located in shopping centers or in the suburbs. It has also been noted in many retail circles that there is a synergistic effect in having shipping centers that contain more than one store. The feeling is that the shopper prefers to go to an area where, if an item cannot be found at one store, it can probably be found at another. The result of this is that there are larger shopping centers and fewer individual-store shopping centers that were popular a few years back.

I have discussed with a number of retailing people the possibility of being able to shop by cable TV—of the customer viewing merchandise through a television set and ordering and being billed through the television set. Catalog sales, which are now really sales to suburbia, are a fast-growing part of the Sears business. Still, it seems that the housewife prefers to leave her home and go to a store simply to get out of the house. Generally, it is the feeling in retailing that shopping by communications is longer ahead than the next 10 years.

There is a growing trend to encourage the customer to take his purchase with him instead of having it delivered. I think this will be an increasing trend because of the higher cost of making deliveries.

Sears and others are looking into the home built-in appliances. This new type of major appliance is a compact multi-appliance, drop-in unit that is sold and built right into the house or into the apartment, thus eliminating delivery.

A number of stores are also considering whether to combine the movement of repair parts and the movement of service and whether the delivery men should also be the

servicemen. Should you send out one man in a truck with a washer-dryer and a second man in a second panel truck to plug it in?

In a retailing magazine called *Stores Magazine*, a columnist, who is a vice president, predicted that free retail parking facilities in parking lots of suburban shopping centers will totally disappear by 1980 and that not only will retail parking facilities downtown be posting charges in 5 to 10 years but also parking facilities for all types of traffic are likely to disappear. He says that the retailing industry should plan for the customer who will shop primarily by public transportation. Assuming that he is correct, it would indicate to me that beyond that time there will be a greater growth of shopping by phone or by cable television and that this will essentially cause considerable delivery problems for the U.S. Post Office or United Parcel Service.

THE U.S. POSTAL SERVICE

Ronald B. Lee

Probably because of the post office's traditional place in the President's cabinet it has been overlooked when basic industrial problems, such as moving goods in the urban environment, were discussed. For this reason, I welcome the opportunity to discuss some of these problems. My remarks deal with the practical problems involved in moving 85 billion pieces of mail a year, the institutional constraints under which we operate, and some of the things we are doing to solve the problems and remove the constraints.

PROBLEMS

The first practical problem is the immensity of the U.S. Postal Service. There are 44,000 facilities, many of which are located in the center of urban areas. Almost a quarter million vehicles move the mail. Some are contract-owned and some are our own. The latter collect mail, shuttle it between branches and the main office, and to a limited degree move it between cities. The U.S. Postal Service employs 730,000 people who work in 32,000 post offices. However, the 75 largest of these employ half of those 730,000, so that our urban presence is extensive indeed!

In addition to these problems of sheer size, the Postal Service has significant network problems. These are problems not only in intracity movements but also in the intercity links that end up being metropolitan problems when they get to the other end. Incidentally, we spend three quarters of a billion dollars annually buying intercity transportation from railroads, air carriers, and private trucking concerns with whom the Postal Service contracts directly.

Mail by and large does not move by rail anymore. In 1940, there were approximately 10,000 trains in this country on which mail moved. You have seen pictures of the arm that used to swoop the mail bag from the car, the mail already having been sorted to that particular crossroad. Today, there are less than 300 mail-moving trains in the United States. In 1940, mail volume was 27 billion pieces; today it is 85 billion pieces. This represents a 97 percent decrease in rail transportation and a 210 percent increase in mail volume. With the prolonged but basic alteration in the transportation network, new problems appeared. It now became necessary to do more distribution in post offices that had been ideally located for a rail-oriented transportation system but were not well suited to an air and highway operation.

Congestion is a major factor in impeding intracity movement. It particularly hampers our outgoing mail operation. In the first place, we are out on the street every evening during the peak of the rush collecting mail from boxes and building chutes and