

pletely uneconomical solution because of excessive transportation costs. In any event, simple answers wholly unrelated to any factual demonstration should not blind us to the complex task confronting us with urban solid wastes.

The deep-seated problem of these wastes lies in the fact that the producers of consumer goods, as far as is apparent, have rarely if ever given a thought to the residual wastes which their products inevitably create. The time has arrived when this linkage between producer and disposer must be forged—or else society will be submerged in the byproducts of all the attractive materials, foods, and equipment which it now only partially consumes. The rest is consigned to the public official, to the nearest roadside heap, swamp, park, valley, or highway borrow pit. The listing of these byproducts of modern living are impressive. Each of them should pose a challenge to the producer. The official responsible for disposal should not be left alone “holding the bag” literally and figuratively.

Scrap iron and steel are generated at a rate of 12 to 15 million tons a year. About a third of this is in derelict automobiles. The amount of these being recovered is declining substantially. Salvage of other metals is still relatively high.

Paper products reaching the market annually are of the order of 30 million tons. About a third of this is salvaged to make new paper. Some 15 percent only of rubber products are reclaimed—approximately 260,000 tons.

The case of plastics poses an increasing problem in disposal. Of the 8 billion pounds produced each year, only 10 percent is recovered.

To these astronomical amounts we must add each year 48 billion cars, 26 billion bottles and jars, 65 billion metal and plastic caps, and a vast array of other packaging materials—virtually all of which, after use, lands in the lap of the refuse collector.

In searching for escapes from this dilemma of society, several avenues of attack must be opened. Some effort must be expended to match the technology and imagination of the producer of the sources of urban wastes in the area of disposal. Secondly, the producer must devote increasing attention to the disposal implications of the long list of things he sells. Thirdly, more satisfactory and economical processes for disposal and recovery must be developed.

One does not often include the farm in discussion of solid waste problems. Yet, the accumulation of the excreta of farm animals has become an acute issue in many areas. The mass production of poultry and waste resulting from the large feedlot finishing of beef cattle are additional examples of situations, where it is sometimes assumed that rural areas are free from waste difficulties.

In similar fashion, mining presents solid waste disposal issues of great magnitude. One estimate indicates that in 1963 more than 3.3 billion tons of waste rock and mill tailings were discarded near mine sites. In other collateral operations, mountains of slag, ash and other waste materials attest to the industrial activity of our country as well as to unresolved problems of waste disposal management.

It should be reasonably clear that not all of these solid wastes can be either collected, disposed of or salvaged in the same way. Their amounts, their diverse character, their potential value and their places