BEER CANS AND BABIES: A GRAPHIC ESSAY COMPARING THEIR IMPACT ON THE ENVIRONMENT

By

Weyland Beeghly

March 1971 No. 29

BEER CANS AND BABIES: A GRAPHIC ESSAY COMPARING THEIR IMPACT ON THE ENVIRONMENT*

By

Weyland Beeghly+

> From all destroyers of natural beauty in this parish and everywhere; from all polluters of earth, air and water; from all makers of visible abominations; from jerry-builders, disfiguring advertisers, road hogs and spreaders of litter; from the villainies of the rapacious and the incompetence of the stupid; from the carelessness of individuals and the somnolence of local authorities; from all foul smells, noises and sights -- good Lord, deliver us!
>
> (Invocation for church litany drawn up in 1931 by the Council for Preservation of Rural England)

Nearly forty years have passed since God was asked to tidy-up Eden. His apparent response has been the normal quota of cleansing rains and some helpful seasonal breezes. It has not been enough. Now, fresh from the failure of other campaigns, young, earth-bound activists are taking on pollution. Their efforts range from neighborhood ad hoc committees to pick up empty beer cans to such fast-growing national groups as Zero Population Growth, Inc.

Beer cans and babies represent key factors in the pollution equation. The accelerating output of nonreturnable bottles, metal cans, foils, and plastics, feeds a growing disgust with the

---

*This paper represents one attempt to terminate an argument which originated during Agricultural Economics 560, "World Food Economics," Fall 1970. It is reproduced here as one of a series of studies on the economics of food and agriculture in the tropics directed by Professor Thomas T. Poleman.

+Research Associate, Department of Agricultural Economics, Cornell University.

"effluence of affluence." Meanwhile three million Americans are born each year, and from the crib encouraged to emulate the consumption patterns of their parents. The following data suggest the relative impact of these forces on what has become known as the "quality of life."

Air Pollution

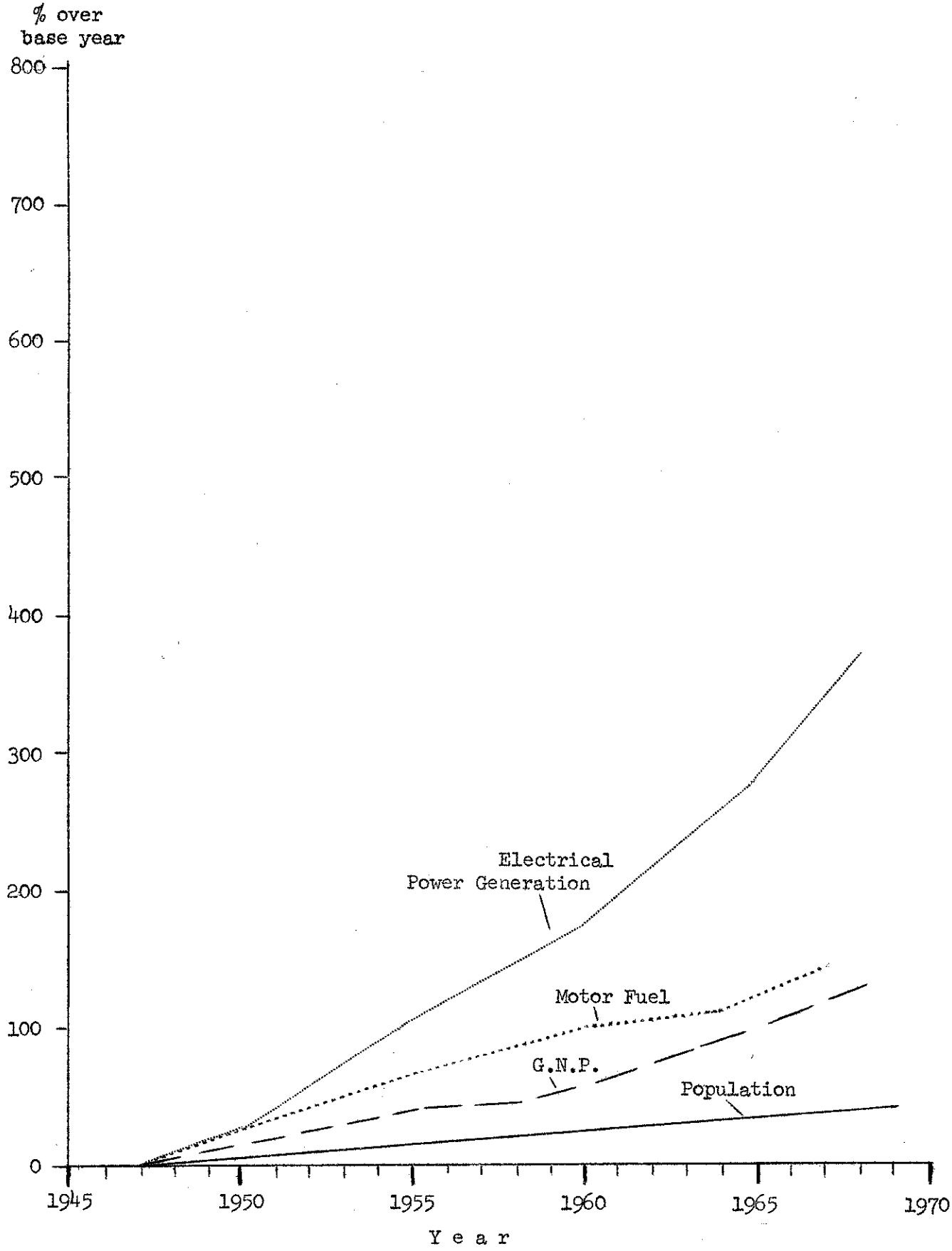
Scientists agree that auto, truck and bus emissions are the major source of dirty air. According to a National Academy of Sciences Committee, 60 percent of all air pollution comes through an exhaust pipe. The other major polluters are industrial plants, 19 percent, and electrical power generators, 13 percent (1, p. 11).

Chart 1 compares the growth of two of these polluters to post-World War II increases in population and gross national product. Motor fuel consumption is used as one indicator because it would seem to be a more accurate gauge of exhaust pollution than vehicle registration or mileage data. Since long-term figures on industrial emission are not obtainable, data on electrical power generation serves as a second indicator. Though electrical energy can be generated from several sources, coal and oil have consistently produced 60 percent of our power. Natural gas, a much cleaner fuel, is increasingly popular, but at the expense of another clean source, water.

Power generation and motor exhaust cause nearly three-fourths of our air pollution. Chart 1 shows that both are rising at a much faster rate than population -- indicating increasing per capita use, and increasing per capita pollution.[1/]

[1/] The author is indebted to Chairman Mao Tse-Tung for his suggestions on data presentation.

CHART 1. PERCENTAGE INCREASE IN SELECTED CONTRIBUTORS TO AIR POLLUTION



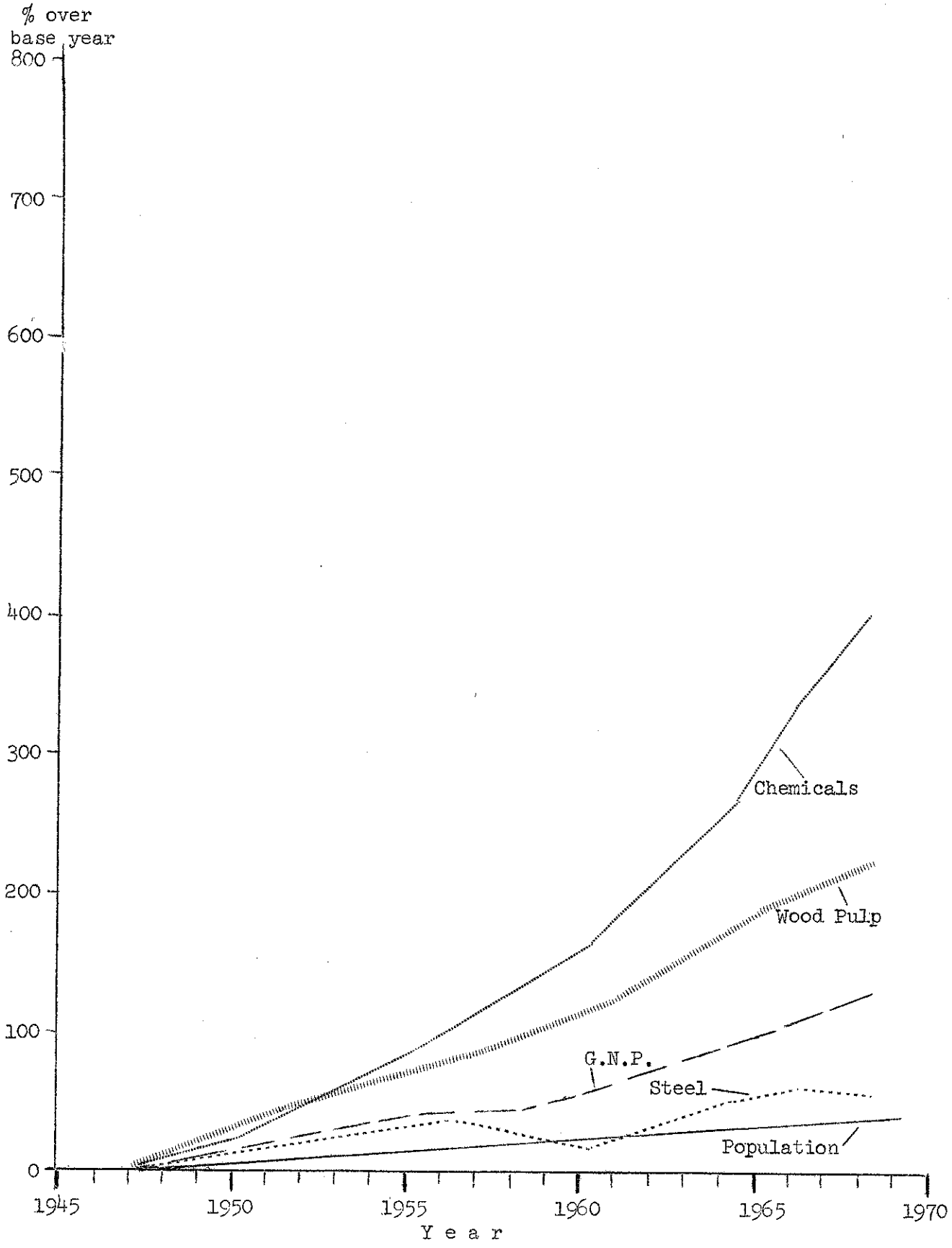
Water Pollution

The total fresh water supply in the United States is about 1100 billion gallons per day. A third of it is withdrawn for municipal, industrial, power generation, and irrigation uses. Most is returned in altered form (1, p. 181).

It is difficult to isolate and quantify the major sources of water pollution. Industrial wastes are generally regarded as the most damaging, yet the federal executive has delayed for seven years the implementation of an authorized national inventory which would require every corporation to reveal the extent and nature of its discharge. Senator Lee Metcalf has attributed the delays to "pressure from industry" (2, p. 17).

Despite corporate secrecy, an indication of indutrial water use is available from the National Association of Manufacturers (3, p. 2). Steel appears to be the biggest user (10.1 billion gallons per day), followed by chemicals (9.9), and pulp and paper mills (4.5). As is apparent in Chart 2, steel production -- though fluctuating widely -- is not rising appreciably faster than population. However, wood pulp production has more than tripled since 1947, and chemical manufactures are being produced even faster. Not graphed are numerous other fast-growing industries which have yet to be toilet trained.

CHART 2. PERCENTAGE INCREASE IN SELECTED CONTRIBUTORS TO WATER POLLUTION

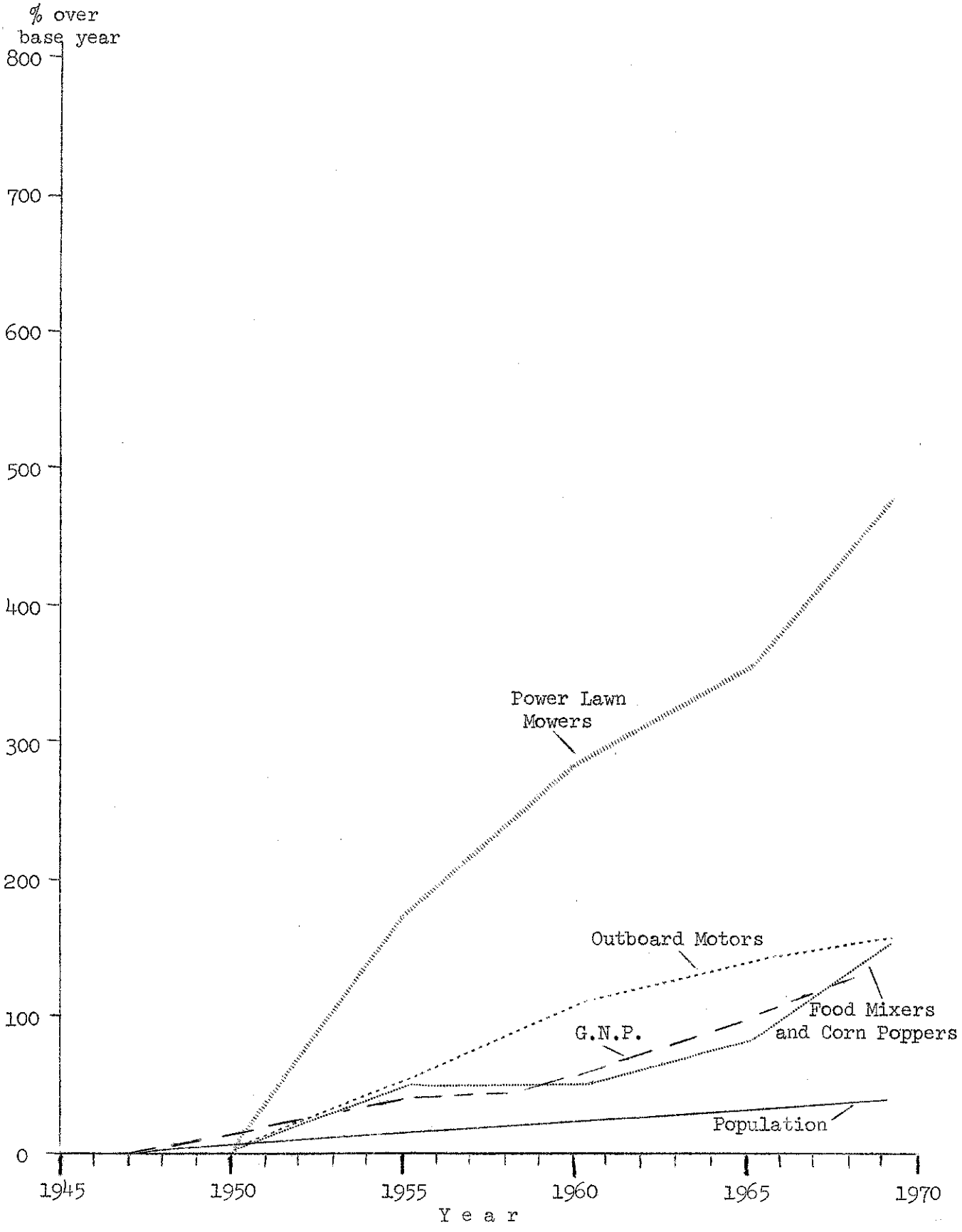


Noise

Though perhaps not as tangible as our thickening air and water, noise can be equally pervasive. The summer song of the outboard motor is now sustained by the wintery warble of snowmobiles. No published data could be found on the latter, but Chart 3 suggests that outboard motor use may finally be leveling off. Still, average horsepower grows by nearly two beasts per year (4, p. 206).

The irritation caused by motor boats is largely confined to fishermen and those who live near lakes. The rest of us must make do with less exotic sounds: like the hopped-up kitchen appliances, or the demonic scream of the Sunday morning power mower -- now graphed in its quantitative splendor.

CHART 3. PERCENTAGE INCREASE IN SELECTED CONTRIBUTORS TO NOISE



The Landscape

There comes a time late each summer when the urban American decides to leave the environment he has helped create, and head for "unimproved" land. Speeding past rusted auto hulks and colorful billboards, he reaches one of our national parks. Here, where litter once meant the top layer of partly decomposed forest vegetation, he can contribute Coke caps, cigarette filters, and film wrappers.

While only a few forms of debris[2/] can be plotted on one graph, nonreturnable beverage bottles, beer cans, and discardable packaging would all seem to be reasonable indicators of our convenience-oriented economy.

2/ For those who put other tourists and their camping trailors in this category, Chart 5 will confirm their suspicions.

CHART 4. PERCENTAGE INCREASE IN SELECTED CONTRIBUTORS TO VISUAL POLLUTION

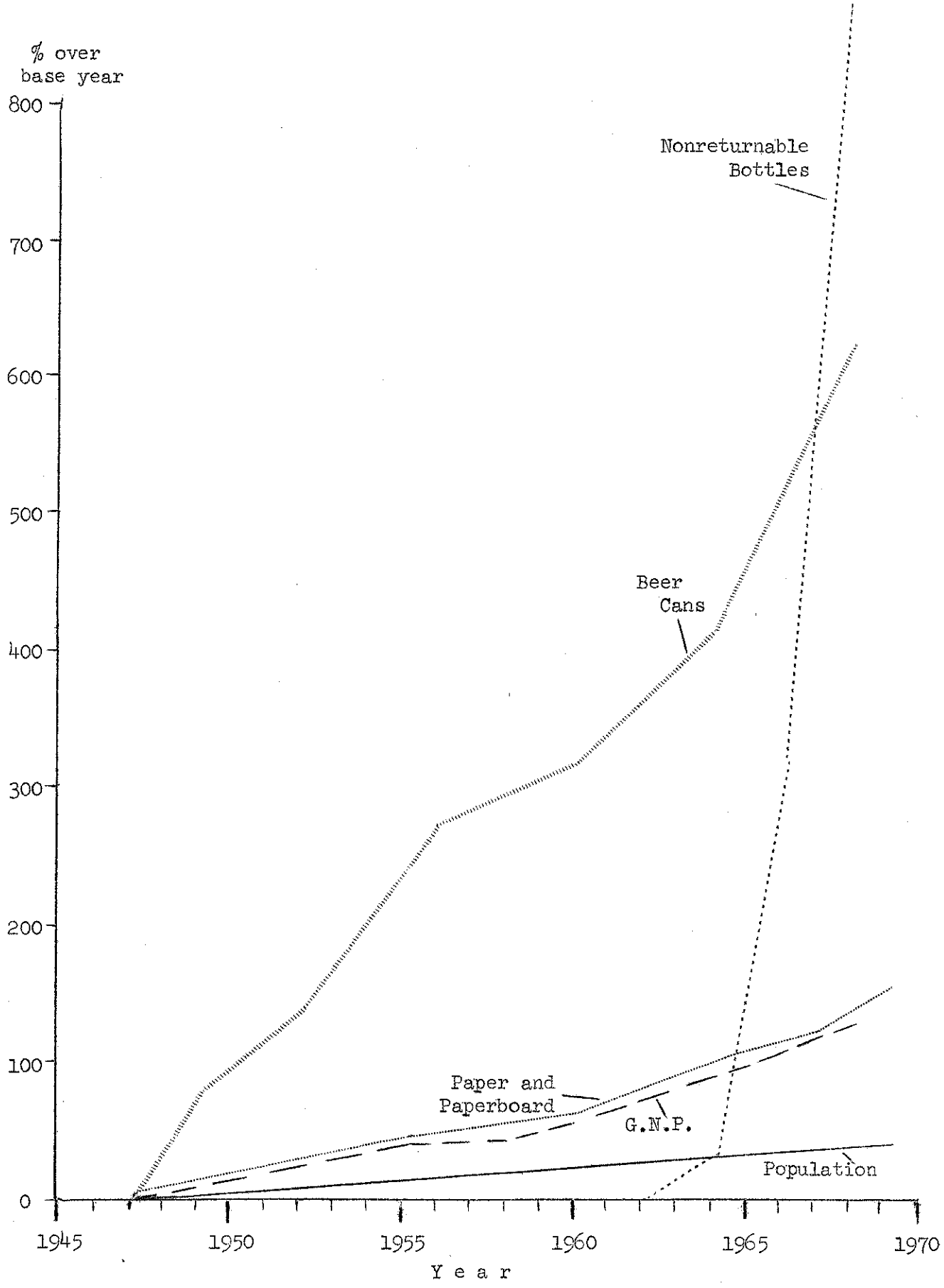
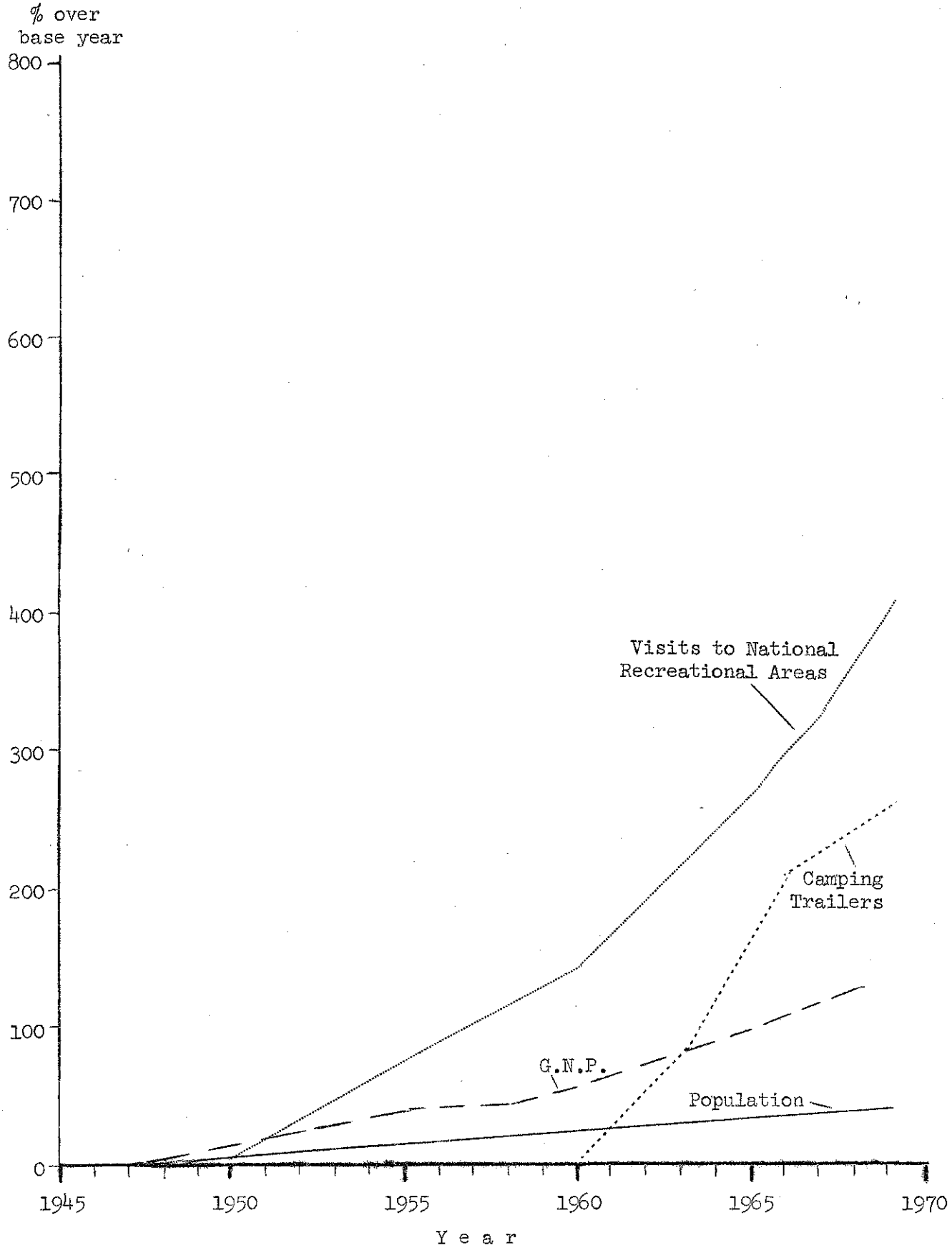


CHART 5. PERCENTAGE INCREASE IN SELECTED CONTRIBUTORS TO CONGESTION



Conclusion

The foregoing data are obviously not the whole story. There are, for example, no indicators of the extinction of species, urban blight, and other forms of environmental deterioration. The data do suggest, however, that our pattern of consumption is more damaging than our birth rate.

For years, industrialists have considered the environment a "free good." It is becoming clear that only legislation will change their minds. The costs of clean air and water will, of course, be passed on in higher product prices; we may also have to give up flip-tops, nonreturnables, and a few other ingenious forms of trash.

Cleaning up Eden will require more than simply taking the pill.

References

1 National Academy of Sciences, Committee on Pollution, Waste Management and Control, (Washington, D. C., 1966).

2 The New York Times, September 17, 1970.

3 National Association of Manufacturers, Water in Industry, (New York, 1965).

4 United States Department of Commerce, Statistical Abstract of the United States - 1970, (Washington, D. C., 1971).

SOURCES OF DATA

Chart 1

Population -- U. S. Department of Commerce, Statistical Abstract of the United States - 1969, p. 5, table 2.

G.N.P. -- Ibid., p. 312, table 457 (adjusted to constant - 1958 - dollars).

Motor Fuel -- Ibid., p. 547, table 816.

Power -- Federal Power Commission, Press Release No 16000, 1969.

Chart 2

Steel -- Standard & Poor's Industry Surveys, Sept. 3, 1970, section 2, p. S52.

Wood Pulp -- Ibid., Sept. 11, 1969, section 2, p. P12.

Chemicals -- U. S. Department of Commerce, Statistical Abstract of the United States - 1969, p. 714, table 1104.

Chart 3

Mowers -- U. S. Department of Commerce, Statistical Abstract of the United States - 1970, p. 729, table 1167.

Mixers -- Ibid.

Outboards -- The Boating Industry Association

Chart 4

Paperboard -- Standard & Poor's Industry Surveys, Nov. 13, 1969, section 2, p. C70.

Beer Cans -- Ibid., p. C73.

No-Return Bottles -- Ibid., p. C77.

Chart 5

Trailers -- U. S. Department of Commerce, Statistical Abstract of the United States - 1970, p. 681, table 1086.

Tourists -- Ibid., p. 198, table 296.