

0.6 percent of the sort of donors who volunteer at hospital and other medically supervised blood banks show blood elements that suggest they may be carrying the disease. The needles that drug addicts use help spread the serum hepatitis; infectious hepatitis spreads in the fecal matter encountered in crowded and unsanitary housing.

Tests of blood samples to screen out hepatitis carriers might seem an obvious way out. But such tests (SN: 6/13, p. 584) are still in a developmental stage. (One of the most interesting of the current experiments involves the use of plasma from prison volunteers given hepatitis in 1951, preserved by freezing for two decades, and taken out of storage for the current work.) Even well-organized and scientifically competent medical center blood banks still have not standardized hepatitis screening tests. Small commercial plasma collectors have scarcely heard of them.

The Academy report suggests that the presence of a supervising physician might reduce the hepatitis hazard and also give the donor the sort of protec-

tion ethics demands. The physician could elicit the donor's medical history—even a simple "Ever have jaundice?" could be useful. The physician could also tell the donor, without confusing medical jargon, that repeated immunization involves the risk of such mysterious autoimmune diseases as lupus erythematosus or lethal diffuse vasculitis at some future time. Another useful moderate reform: careful continuous records of donors and a city-wide record that would prevent derelects from showing up at one collection bank after another.

A more basic reform is implied but not spelled out in the Academy report. The question concerns why commercial unlicensed and unsupervised plasma collection centers are permitted to operate. Such fly-by-nighters get by under the "short supply" qualification of interstate commerce law. The National Institutes of Health Division of Biological Standards, which administers the law's application to biological products, permits unlicensed collectors to operate because there is a wide demand for a limited supply of plasma. □

leadership supports it," says Charles Williams, staff director of the National Goals Research Staff.

Williams points out that alternative development is feasible because "economic viability is less and less dependent on geographical factors." Since Government and the private sector are increasingly engaging in long-range planning, factors such as population density can be taken into account.

In order to affect population redistribution several means are being considered: industrialization of rural areas, building new communities such as Reston, Va., and Columbia, Md., and development of existing small cities. Dr. I. P. Halpern, another member of the goals staff, maintains that rural industrialization or building new cities are less viable means than developing existing small towns and cities. The experimental new cities will not accommodate anticipated population growth, and rural industrialization, he believes, is not feasible.

A recent study by Richard Irwin of the Census Bureau's Population Estimates indicates the feasibility of developing the small towns as alternative population growth centers. During the period of 1960-66, all major metropolitan areas grew at the average annual rate of 1.7 percent. But counties in nonmetropolitan areas that contained a small city (25,000 to 50,000) and a major highway artery grew at the rate of 1.5 percent—only slightly less. Nonmetropolitan counties that contained a small city but no major highway grew at an annual rate of only 0.9 percent.

This type of study indicates the feasibility of encouraging population growth in nonmetropolitan areas where small cities have access to the massive interstate system now being completed in much of the country. Such cities are in optimal positions to benefit from a national policy of population redistribution if the concept takes hold. □

DEMOGRAPHY

Population and national goals



Hagerstown Chamber of Commerce

Hagerstown, Md.: Small cities are a likely target for population dispersal.

A consequence of the industrial revolution has been worldwide urbanization. Labor, capital, resources and markets have bundled together for more efficient production in development of the industrial society. The resulting high population densities have led to the development of the megalopolis—urban and suburban sprawl creating the East's Bos-wash, the Midwest's Chi-pitts and California's San-san.

As Census Bureau computers cough out preliminary results of the 1970 census the continuing trend toward metropolitanism in the United States is once again being statistically confirmed. "The rural areas are con-

tinuing to decline in population," reports Conrad Taeuber, the associate director for Demographic Fields at the Census Bureau, "and very rapid growth in the suburbs is clearly apparent."

The rural population decline is due primarily to industrialized agricultural production.

"There is nothing to indicate that it won't continue this way," says Taeuber.

The Nixon Administration, which has been focusing on the long-range development of American society, has been questioning the inevitability of such projections. "These trends are reversible if an alternate vision of the future can be developed and strong

TEKTITE II

Subsurface science

The message may have been lost amid the excitement of underwater adventure and female aquanauts, but the primary mission of the Tektite II project beneath Great Lameshur Bay off St. John in the U.S. Virgin Islands is scientific (SN: 3/7, p. 240). The basic purpose is to demonstrate whether certain kinds of marine research can be done better by scientist-divers working from a permanent undersea habitat than by scientists working in the traditional ways from the surface. A companion goal is actually to accomplish some useful research. Work along both these lines is progressing well, as indicated by preliminary summary reports