Historically, there have been two major population shifts in industrialized countries. The first of these was an outgrowth of the industrial revolution, which enabled large numbers of farmers to move to the cities. The cities became the focal point for culture as well as manufacturing, and the place to seek the “good life.”

In the United States, a second major migration occurred following World War II. This migration was from the cities to the suburbs. Both people and industry moved to the suburbs for the same reason they originally moved to the cities -- for the good life, i.e., jobs and a comfortable lifestyle.

In the past forty years, the suburbs have grown immensely, but the “good life” does not appear as obvious as it once was. Jobs are disappearing in some areas at record rates and the quality of life is deteriorating.

**The Cities**

The abandonment of the cities by the middle class appears to be a continuing phenomenon. This has led to a downward spiral in the quality of life in the cities. There is nothing on the horizon that gives any reasonable hope that this will change. In fact,

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**THE FUTURE: Reverse Migration**

by Bob Rosenthal

"Universities will be totally different than they are today. A few of the more dynamic universities that take the lead in this field will become national resources educating one hundred thousand students, if not a million students, in a single semester."

So writes Bob Rosenthal, the newest member of the Homer Hoyt Institute’s Board of Directors.

Mr. Rosenthal’s comments are part of a think-piece in this ASI News Special Supplement that focuses on the impact of information highways, particularly its role in facilitating growing divisions between cities and suburbs. Although his discipline is not urban land economics, I think you will find Bob’s perspective to be exceptionally insightful.

Bob Rosenthal is, by education and training, an engineer. He is among the nation’s leading inventors -- and one of the top 100 patent-holders in the history of the United States. He heads Futrex, Inc.; Sortronics, Inc.; Star Leasing; and BOCR, Inc.; and specializes in applying the latest technological and scientific discoveries to the development of business products. His diversity ranges from the design of manned spaced vehicles to instruments for measuring body fat. His latest development is a non-invasive test for measuring blood sugar content in people with diabetes.

While the Homer Hoyt Institute normally draws its Board of Directors membership from the Board of Directors of the Homer Hoyt Advanced Studies Institute, which draws its board members from the faculty of the Weimer School, we are delighted to reach outside the real estate academic community to fill a position with this outstanding individual who has an expertise in the transfer of science to engineering applications and who, in the tradition of Homer Hoyt himself, has an exceptional breadth of vision.

Maury Seldin
President, HHI/ASI
perhaps I'm pessimistic, but I see nothing except chaos, further crime, and poverty in the urban center.

**The Suburbs**

The suburbs, including the edge cities, also have shown that they are sensitive to their own types of problems. Perhaps the largest problem results from the escalation of land values that makes home buying next to impossible for the job entry generation. In the 1950s, single-family, free-standing homes could be purchased for approximately two to three times the yearly salary of recent college graduates. Today, in the suburbs it is not uncommon to be talking about six times salaries; obviously, a difficult -- if not impossible -- barrier for many young people to climb over.

Moreover, the spillover of crime from the cities, school drug problems, and traffic saturation have made the suburbs less desirable than they once seemed to be. And yet, for the past forty years the "gospel" has been that the suburbs, because of their quality of life, would be the employment centers and the residential centers for the future. I now question this basic premise.

**A True Story**

In the early 1960s, the start of the "high technology age" dawned upon America. Sputnik had been launched by the Russians; the American space program was in its heyday.

At that time, I joined Fairchild Industries in Hagerstown, Maryland. In Hagerstown, we had a major production facility with thousands of employees building airplanes. After being in Hagerstown for less than one month, I wrote a memo to the president of Fairchild predicting that the Hagerstown operation of Fairchild would go out of business within a limited period of time.

The basic message of the memo was that in order to compete in a high-tech world, you must have outstanding engineers and scientists. To hire such people required access to good educational facilities (particularly graduate college level), good cultural activity, as well as an extensive infrastructure of supporting companies. Without all three, no company could become a high-tech leader. And Hagerstown didn't have any of these.

Within a decade, Fairchild was forced to close its flagship Hagerstown facility. The reason? Fairchild simply couldn't attract the talent necessary to compete in a facility that was on the wrong side of the Appalachian Mountains.

**Luring High-Technology Companies**

Traditionally, high-technology companies could only survive in areas that had three basic characteristics:

- Excellent educational facilities needed for advanced training of scientists and engineers.
- Good cultural facilities in order to satisfy the intellectual appetite of the highly educated "technocrats."
- Good infrastructure of small companies to support and supply the high-technology company.

In the last fifteen years, one of these three prerequisites has been all but eliminated. That prerequisite is the need for a major infrastructure of supporting companies for the high-technology leader.

The reason it is no longer needed is the advent of Federal Express and other overnight delivery services. Literally, any part, component, book, etc., can be received from anywhere in the United States by 10:00 a.m. for a modest price. Technology -- high-speed commercial package movement -- has eliminated the infrastructure requirement.
Similarly, the United States is at the brink of another technology break-through that will eliminate the other two barriers. Within the next few years we will have "fiber optics super highways" - - - a means of effectively allowing unlimited data, information, and images to be economically transferred between any places on Earth. Accompanying this ability will be an enormous reduction in the cost of such communications.

To illustrate this, recent announcements concerning marriage of long distance phone services with cellular phones are ushering in a new era of totally different types of communications. Literally, these "personal communication systems" (PCS) will allow individuals to communicate from anywhere to anywhere at prices close to the cost of a local phone call.

Moreover, the fiber optics highway allows transfer of two-way communications links, including the often promoted multi-media capabilities. Although I work on an everyday basis with multi-media, it is impossible for the human mind to envision what this capability will do for our society within the next ten years. Certainly, such obvious things as home shopping, high quality university education located in any small town that would desire, access to the Library of Congress and other informational storage depots, and transfer of holograms in the most realistic fashions are all just tips of the iceberg.

Recently I saw a demonstration of a "live play" in an old, small-town movie theater. This live play was actually being performed in a city almost a thousand miles away, yet on the stage in the small movie theater we saw not a two-dimensional illusion of this play, but the actual play. Each actor was "there" via hologram technology and looked as real as if he was actually on that stage. If you didn't know that this was a demonstration of technology, you would truly believe that the entire live theater was occurring right there - including the miscues (e.g., the mischievous little smiles that one actor gave to another).

**The New Migration**

All of us as parents want the best quality of life for our children. Today, I think it's generally recognized that the quality of life in the suburbs is not what it used to be. Certainly, many of us long for the simpler times of life in the small town.

Thus, I predict that the next five to ten years will see a major migration from the suburbs to the small towns around America. This migration will be led by the high-technology industries. They can now go to these places because the infrastructure (FedEx, etc.) is there. There will be the education facilities and there will be the cultural attractions.

So which small towns will succeed? The answer to that is quite simple: Those that grab the brass ring early enough on the Merry-Go-Round ride. Saying this differently, those smaller cities that recognize they truly have something special to offer - - - high quality of life - - - will win the high-technology companies. These cities will pursue with tenacity the growth of fiber optics communications. These cities will import first-class university programs into their local school system. These programs will feature two-way multimedia where the student and the professor can interface. These cities will become cultural oases, taking Kennedy Center and Metropolitan Opera shows and putting them on "live" as far as the local audience is concerned.

And I truly believe this will happen quite quickly.

**Other Impacts of the Reverse Migration**

The migration to the suburbs forced a vast change in America. It required the development of the interstate highway system, the major expansion of airlines, the predominant use of the car as opposed to public transportation.
Similar dramatic changes will occur as a result of the Reverse Migration. Just a few examples: I believe that the commercial airline business, at least for the business traveler, is a dying industry. The fiber optics highway -- the ability to almost scratch the person who is in a town a thousand miles away through advanced communication links -- will all but stop airline use except for vacations.

Universities will be totally different than they are today. A few of the more dynamic universities that take the lead in this field will become national resources educating one hundred thousand students, if not a million students, in a single semester. The slower-to-recognize universities will slide into more sedate roles, certainly no longer being the centers for where industry and government would go for mini-courses. Such mini-courses instead would be held in the local conference rooms using the fiber optics highway.

Other examples of fundamental change perhaps could be best emphasized by a simple analogy of one of the most dying industries in America. The private airplane is almost as obsolete as the dinosaur. Sales in the 1990s represent perhaps 5 percent of the sales just forty years ago. (Living in the suburbs all but eliminated the small airport, and eliminated discretionary income that was needed for housing). And yet, with the movement of industry to the small towns, small airports will blossom once more. And the newly available discretionary income will rebuild a new type of light aircraft industry. It is not unreasonable to believe that instead of selling a few thousand airplanes as the total industry did last year, hundreds of thousands if not millions of airplanes will be sold each year.

**Do You Want Some Evidence?**

If I were you, I would say, “Put up or shut up” concerning my belief in the small town. Let me describe how I “put up.”

Based upon my conviction, two years ago I built a factory for one of my companies in Hagerstown, Maryland, on the wrong side of the Appalachian Mountains. By use of Federal Express and low-cost communication links to the Washington, D.C., area, I have found that this factory is highly efficient.

One illustration of the advantage of moving to such a small town is the productivity output. Although we pay competitive wages, we get approximately 150 percent as much output per employee as we get from a similar factory we have located in Montgomery County, a very wealthy suburb of Washington, D.C. Absenteeism is essentially zero, interest in furthering careers is very high, and this “satellite factory” has proved to be a very profitable investment.

Similar examples are the Saturn car facility located in Tennessee, and the new Mercedes plant being located in rural Alabama. Those facilities will succeed for the same reasons we are succeeding in Hagerstown.

**A Liar or a Fool?**

Perhaps there is not yet enough time yet to decide which of the two attributes apply to me. But I am reminded of the story of Noah. Certainly, while he was building the ark, and was telling his neighbors that God had told him there would be a flood, he was considered either to be a liar or a fool. Of course, time perhaps proved him right. However, before it started to rain, he brought forth animals two by two to the ark. His neighbor watched him put two asses as the first animals on the ark. I think it’s a fair assumption that his neighbor thought he was the third one. Of course those neighbors lived (or should I say, died) because they couldn’t recognize the “obvious” future.

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