NEGATIVE POPULATION GROWTH

THE NPG FORUM

The Kingdom of the Deaf

by Lindsey Grant

This is the fifteenth and final essay in the NPG FORUM series devoted to a cross-disciplinary study of the question: what would the optimum population of the United States perhaps be? We have enlisted professionals in different disciplines to address that question. We have asked others to show the magnitude of the problem of changing the present pattern of demographic growth, and to suggest how it might be done. References to those writers in this paper refer to their papers published earlier in this series.

This essay pulls together some of the conclusions that have been reached and suggests how, through the use of "foresight" and a cross-disciplinary approach, our nation might learn how to address the population issue in terms of the impacts of different demographic futures rather than — as at present — through the lens of single-issue moralistic preconceptions.

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It Can Happen Here

To be more precise: it is happening here.

Even as this study was being written, American women's fertility has moved back up from 1.8 to 2.0 children, making most of the population projections we have used look very conservative. Moreover, new legislation (see below) will sharply increase immigration for the foreseeable future. Taken together, these rates would lead to a population in 2080 between 409 and 558 million.[1] The rates will change again, of course (and not necessarily downward), but the projection shows the direction in which we are presently heading.

There is a sardonic irony in current policies. The enthusiasm of the Reagan and Bush administration for consumerism, taken together with their indifference or outright hostility to population limitation, is hastening the end of the era when their "Texas" view of consumption is supportable for any but a tiny fraction of the population. They are, in effect, encouraging the unrestrained growth of two of the three variables that determine the size of environmental and resource problem — population and per capita consumption — leaving technology as the only tool with which to address those problems.

In the process, the nation is limiting its options for the future and foreclosing the pursuit of what — if we stopped to think — would be the optimum.

Let me get personal, to illustrate the point. I am in favor of policies that would discourage the use of private cars (by making their users pay their real social and environmental costs) and would promote the use of public transportation. This is not because I like to ride buses. Anybody who has waited in the snow for a homebound bus that never came, or caught a winter cold from a fellow passenger sneezing in his face, is not likely to idealize buses. On the other hand, I love my car. An automobile, more than a horse or a sailboat, is a ticket to freedom, and I have spent a lot of happy time on the back roads of America. Not necessarily a big car. My puritan streak rebels, and besides, I like little cars.

If I were to select the optimum transportation — in isolation from other considerations such as the environment or the energy transition, or the real world of snarling traffic jams — I would unhesitatingly choose an automobile.

I advocate buses because I recognize that we are past the population level that will tolerate my optimum mode.

We are being forced to make more and more of those less than optimum choices. We may not even recognize them as compromises. Necessity conditions us so deeply to think of the **possible** that we seldom distance ourselves sufficiently to ask "What is **desirable?**" If we would recognize that society already makes the demographic bed in which it must lie, and that we have the option of making the choice consciously

rather than inadvertently, then perhaps we can begin to pursue the ideal, rather than choosing among unsatisfactory alternatives.

There are demographic consequences from most of the decisions that we take, and the population change engendered by a decision on — say, immigration or welfare policy — may imperil the pursuit of policies in some entirely different area, such as the integration of Blacks into mainstream American society (Briggs), or the protection of the environment (Ehrlichs), or the preservation of the cities as good places to live (Speare and White), or the productivity of the Chesapeake Bay (Tennenbaum and Costanza), or the preservation of the Western high country from continued savaging (Brownridge).

How Many Americans?

The two most visible and perhaps the controlling restraints on population are energy and food. Environmental problems set a limit to the scale of economic activities, but it is not easy to say exactly where that line lies. Some very crowded places can prosper, particularly if they are surrounded by water or less developed countryside to absorb their effluents. Witness the success of South Korea, Taiwan, Hong Kong, Singapore and Japan.

These places all depend on a benign and open world economy to enable them to exchange their products for energy and food. In a sense, in a world trading system, they are the "world cities", trading with the "world countryside."

However, the assured availability of cheap energy is running out for all of us. In the present energy transition, because of the scale of its economy, the United States will be a major determinant as to how abrupt the worldwide transition will be, or how smooth. Moreover, unlike those island economies, the United States does not have the luxury of simply assuming that food will always be there. We are the world's residual food supplier, and neither we nor the food importers have anywhere to turn if that source is imperiled.

Energy. It is no wonder, then, that four of the authors in this study, quite independently, identified energy as a key factor determining optimum U.S. population. They employed different reasoning but came to somewhat similar conclusions. The Pimentels come up with the range from 40 to 100 million. Costanza reaches a "prudently pessimistic" estimate of about 85 million at current per capita consumption levels, or twice that with a more energy conserving "European" style of consumption. Similarly, the Ehrlichs propose a range from 70 million, if we choose to remain profligate, to 135 million if we do not. Werbos, in the most detailed energy analysis, offers a wider possible range, depending upon the progress of technology. He starts with a "pessimistic" figure of 60 million — which is the point at which direct solar energy would be needed for baseline electric power, driving the cost substantially upward — and puts the upper limit at 125-250 million, depending upon the performance of new technologies, but with the cautionary note that environmental problems could be mounting at the upper end of that range.

Werbos also underlines the immense capital cost of adjusting in coming decades to the energy transition, beginning with oil. For that reason, he advocates population policies that would hold down the growth of demand, plus national policies that would contribute to the rate of capital formation and enhance the productivity of labor. He believes that, as a nation, we are paying for the luxury of supporting the present pattern of differential fertility, in which the poorest and the least educated are the most fertile, and their children generate disproportionate social costs and transfer payments. He believes that wiser policies concerning immigration and fertility would lead toward something like the Bouvier "hard" scenario and an immediate slowing of population growth.

Notice that all four writers assume that "optimum" means renewables, conservation, the end of the fossil fuel era and no nuclear power. The view of fossil fuels is driven by environmental constraints and by the fact that they are exhaustible and, therefore, transitional. If we face a mounting energy crisis, we also face an opportunity, since the ways we produce and use energy lie at the heart of many of our environmental problems.

Some readers may interpose that nuclear power can fill the gap. This would be to confuse the **possible** with the **desirable.** Given the dangers of nuclear energy that Werbos has so eloquently stated, would the world not be a better place without it, even if — because of a failure of population policy — we wind up without that option?

One might add that power from nuclear fission is also transitional because of the limits of uranium deposits, unless we go to the breeder reactor, which raises all the problems of safety and control in a much more concentrated form.

Agriculture. The Pimentels also point to the agricultural limits on optimum population. We are mining our soils, drawing down the nation's groundwater supplies, and damaging the environment through concentrated use of fertilizers and pesticides. They recommend a 50-60% reduction of inputs, in order to address those problems.

Farmland is limited. Some of it is too erosive for sustained cropping. Given the energy future already described, there will be competition with biomass for energy. Improved strains may possibly lead to yields comparable to the present, even with less intensive inputs. Prudence would set this as an upper limit, however. The optimum population resulting from these calculations may be as low as half the present population.

Humans and the Biosphere. By definition, the nation is past the point of sustainability — and therefore overpopulated — at the existing levels of population, per capita consumption, and the uses of technology. The proof lies in the documented deterioration of our environment: water, soils, air, wetlands. Beyond that, however, in these essays we have not come up with calculations as to exactly **how** overpopulated.

Proponents of conservation believe they have the cure. The problem with their "solution" lies in the trade-offs I mentioned in the introductory essay. Indeed, we could live an environmentally benign life with a lot more people, if we cut consumption to Chinese levels (and, incidentally, managed our environment better than the Chinese are doing.) The question, of course, is: "Is that optimal? If not, where on the consumption scale is the optimum?"

The technology buffs propose more technology, but — even when the investment costs are known — one needs to answer the question: "Which would be the better way? to meet a particular problem with a given technology, at such and such a cost? and with the "solution" itself generating certain by-products? or should we reduce the demand side through population policy, with the prospect of addressing multiple problems with one solution?"

There are different combinations of population, consumption and technology that could, for instance, bring us back to desirable limits on ozone, acid precipitation sources, and greenhouse gases. Various scientific explorations underway, such as the acid rain study now moving toward completion,[2] will perhaps lead to a better understanding of the variables and may help a future effort to put a number on "optimum population", but it is beyond the reach of this exploratory study.

We have put together some of the parts. Tennenbaum and Costanza have demonstrated why the Chesapeake would benefit — and so would we — if there were fewer people pressing on it. Brownridge has made a similar case concerning the high country of the West.

The Ehrlichs have dramatized the Unites States' obligations to a shared planet. We are introducing a disproportionate share of the pollutants that threaten the Earth, and so — for our own good and that of others — we are under particular pressure to reduce the perturbation that we generate.

Labor Force and Population Size. Vernon Briggs is concerned about the well-being and productivity of the labor force. He does not make an estimate of optimum population, but his views as to present immigration and U.S. fertility would, if continued, lead to something like Bouvier's "hard" scenario, and an eventual turnaround in U.S. population growth.

Labor productivity is perhaps the most difficult area in which to attempt to calculate a theoretical optimum population, and Briggs was wise to avoid it. There are too many variables and value judgements. In principle, the optimum productivity (and, theoretically, earnings) might perhaps be one of those famous Japanese factories, with robots and three or four supervisors, where they operate at night without even leaving the lights on. But what happens to the displaced workers? and who would buy all the goods produced? and are maximum production and consumption optimal? We are in danger here of circling back to the fallacy for which we criticize GNP as a measure of well-being: the belief that bigger is necessarily better.

Those of us who try to define "optimum population" will probably need to rely on some vague and intuitive feeling that optimal is the point at which workers earn a "decent" reward for their labor, and at which there is little or no involuntary unemployment.

National Security. Binkins does not try to derive an optimum figure from the security standpoint. He does, however, make the case that the Census "lowest" projection (which leads to a U.S. population plateau for the next half century and then an accelerating decline) is compatible with U.S. security interests through 2040, which is as far ahead as he thinks one can look. He observes that manpower considerations do not stand in the way if a population turnaround would enhance the national security broadly defined: a successful energy transition; a healthy agriculture; a skilled and contented labor force.

Given the expense of modern arms, one wonders if the nation could afford to keep many more of its people under arms, as we did in World War II. A P-51 Mustang fighter cost less than $52,000 in 1944, complete. An F-15E costs about $24 million, without the weaponry. Even in the narrowest military sense, national security in the modern world may depend upon capital, technology, skilled labor, and energy resources more than on manpower.

This brings us back to the question of energy, and it dramatizes the importance, in the real world, of an exercise such as this one. If a present or future Saddam Hussein succeeds in the old dream of uniting the Arab world, we will soon need his permission to embark on a military or peace keeping mission, not just in the Persian Gulf, but anywhere, or even to assure the flow of energy for our own economy. Our ships and airplanes and equipment operate on oil, and oil is increasingly becoming a monopoly of the Arab world. If you are interested in national security, managing the energy transition is a more important issue than manpower.

If we and the other industrial nations had had the foresight and the political nerve to begin to address the energy transition a decade or more ago, when it became apparent that oil was a dwindling natural resource, we would not be so vulnerable now to the ambitions of a Middle Eastern dictator, and we might now be able to save billions of dollars and an unpredictable number of human lives.

Moreover, by slowing down the rate at which remaining world petroleum resources are drawn down, we would have been in a better position to make a more orderly and less crisis-laden transition from reliance upon petroleum as an input for agriculture, transportation, power and industry.

A population policy will not save us the pain of the energy transition. The oil is being depleted faster than demographics can keep up. It would, however, help.

One Nation, Indivisible. American public opinion seems to be, right now, at the rather primitive stage of feeling that it is too crowded where one happens to be, but people could of course go somewhere else. I hope that the essays on the cities, the Chesapeake, and the high country will demonstrate that the big cities are indeed too big, and it is a myth to believe that the extra people could somehow be transported to the countryside or the "wide open West".

Population is not a local affair. It is a national issue, fed in large part by national policies and attitudes.

In all these essays, we have not really come to grips with the intangibles and the things that make up the "quality of life". Some of the them were touched upon in the first essay. These will perforce be left to some later study, and perhaps the best way to approach them is to identify them, and then to consider what population densities would help achieve them, as Speare and White have suggested.

What we **have** done is to identify some of the more tangible limits that will define optimum population. At the very least, what comes clear is that a smaller population, and the lower levels of immigration and fertility required for its achievement, would benefit us in some of the critical areas of national policy.

I will try to avoid making impossible claims for population policy. The population of the United States in 1900 was just passing 75 million—less than one-third of the present population—and yet we had already stripped most of the forest cover east of the Mississippi. We had inflicted damage on our settled farmlands from which they have yet to fully recover. Our urban population was tiny by today's measure, and yet they already suffered from poor water quality, waste disposal problems and air pollution. And, for all this damage, we were a poorer nation than we are today.

Population policy is not the only issue, but it may be the condition precedent to achieving the better world that most of us seek.

Having said all this, let me try my hand at a figure for optimum population: about half the present level, or 125-150 million, achieved over the next century.

This target lies within the population range of most of the estimates in this study. It is ambitious, but not completely impossible. By allowing a century, the target becomes achievable (if unlikely). As I will explain, a shorter time frame would generate severe transitional problems.

It reflects optimism that we will learn to make better use of multiple energy technologies, including the wind, and that we will continue to find ways of diminishing energy inputs without serious deprivation. The timing is consistent with the transitional availability of coal, which will almost certainly be needed to accommodate the time lag involved in a shift to renewables. There are combustion techniques, such as coal gasification, that would substantially mitigate the environmental impacts of using the coal.

My target also reflects the hope that we can sequester more of the land from direct human exploitation, both for our own future good and for the preservation of a biosphere not totally dependent upon human goodwill and prudence.

I am quite prepared to raise my target if technology justifies more optimism, or downward if — as we learn more about the web of connections in which we live — it becomes clear that even fewer is better.

As a nation, we are not likely to get there. Not, at the least, for a long, long time. (Barring a catastrophe, even Leon Bouvier's "hard scenario" would leave us still with 87% of the present population in 2080.) We may decide, along the way, that we don't want to go there, because we have learned to accommodate more people in a benign environment, because we decide that other goals such as accommodating persecuted or hungry foreigners are more important than optimizing well-being in the United States, because we are simply unwilling to pay the price in social engineering that might be necessary to achieve optimum population, or — most likely — because of inertia.

However, if for any of these reasons we do not try to head in that direction, we have been warned.

Transitional Benefits

The reader may have noticed a curious harmony. Some writers in this series have addressed a future optimum population. Others have focused on current issues. In both approaches, however, the prescription is the same: sharply limited immigration aimed at acquiring skills in short supply; and a levelling of fertility to bring the poor and less educated on a par with the educated and more affluent.

Take, for instance, the example of labor. Briggs has argued for these remedies as a way of stopping the pauperization of the poor and helping more Blacks enter the economic mainstream. I have argued for them as a way of enabling society to concentrate on the better education and integration of smaller cohorts. Speare and White argue for them as a way of addressing the problems of the cities. Binkins says that the military needs skills, not raw labor, to man modern weapons. Werbos argues the need for highly productive labor, with high savings, coupled with a reduction in the costs to society of an unemployed underclass, as a way of accumulating the capital needed to finance the forthcoming energy transition.

All of these are transitional arguments, but the effects would be to slow and eventually reverse population growth.

Moreover, there is another reinforcement. Education and jobs for women rank at the top of Dr. Weeks' ways of achieving lower fertility.

I do not know whether this is fortuitous or whether it reflects a larger underlying unity that I do not understand. It does serve, however, to widen the support for a population

turnaround. You do not need to select an optimum population to play this game. If you are concerned about any of the issues that have been raised in this study, you have reason to advocate the policies that point us in the direction of the optimum.

Excruciating Choices

The transitional and the long term optimum might part company if a serious effort were launched to reach an optimum population much below 150 million in the next century. As I have noted, Bouvier's "hard" scenario would lead to a population still larger than 200 million in 2080. The Census "low" projection uses the same fertility (1.5) and net immigration (300,000 per year). It is less optimistic about improvements in life expectancy, yet it is still nearly 200 million in 2080.

The only Census Bureau projection that would take population below 150 million in the next century is the low "zero immigration" scenario (Series 28 in the 1988 study cited by Bouvier). With fertility at 1.5, it would lead to a population of 147 million in 2080, declining by about one per cent a year. The name is misleading. Because of emigration, there could still be immigration in these assumptions, but it would gradually decline as emigration declined.

To translate these mathematics into policy terms: immigration would not contribute significantly to U.S. population growth if we limited gross annual immigration to 200,000 at first, gradually declining to about 100,000. These figures are generous by most world standards, but they are stringent indeed in terms of recent American experience.

I have elsewhere rebutted the argument that the United States needs more immigrants or higher fertility to take care of the old (themselves the legacy of the "baby boom") a generation hence.[3] Throughout these essays, we have reiterated the importance of persuading the poor and the less educated to bring their fertility down to the level that presently prevails among the educated and the middle class, or about 1.5 children. Nevertheless, a fertility drop below 1.5, particularly if it is sudden, would skew the population structure toward old age so dramatically as to cause some severe transitional problems. The "one child family" is indeed a desperate remedy.

This leaves the tightening of immigration, below Bouvier's "hard scenario" and the Census Bureau's "low" projection of 300,000, as a necessary element in moving the population much below 200 million in anything but a remote future.

Simcox has observed that this would leave national policy makers with some excruciating choices. Indeed it would, and as a nation we seem to have a hard time making tough choices. It is not simply that the cumulative voice of many interest groups tends to drive immigration up rather than down. There is a genuine moral dilemma as to whether, rich in a world that is largely poor, we can justify restrictive immigration policies. I have resolved that dilemma to my own satisfaction.[4] In a world of nation states, we have neither the authority nor the ability to save the rest of the world. The Ehrlichs have pointed out that we could make matters much worse by increasing our population to reduce theirs. I would do more to help other countries address their population problems, but we have a responsibility to our own people, and to our descendants.

As we watch environmental and social problems unfold, and as the energy transition comes to the crunch, our society may come to realize that choices must be made. If so, this study helps to understand the choices.

What Can Be Done?

We have seen that population momentum is a mighty force, and that any change in direction will take most of a century to become apparent. We have also learned, however, that demographic change is not simply in the hands of fate or the Gods, but that conscious social policy can affect it.

John Weeks has described ways in which fertility can be influenced. Many of them center on raising the educational levels, the dignity and sense of self-respect, and job opportunities for women. If more direct motivation is needed, it can be provided through incentives and disincentives such as priorities in jobs, educational opportunities and education for small families, taxation policies that discourage large families, and even direct payments for not having children. The means to limit child-bearing must be available, and women must know about them. Leadership is essential, and it must come from role models and those in authority.

These are some of the means, but they alone are not sufficient. We are unlikely, as a society, to devote such efforts to population limitation until we become aware of the ways that population growth will hinder the pursuit of other goals, and we need to become aware that we may be influencing fertility when we undertake policies that are superficially unrelated.

Enter "foresight" and the processes for handling complicated and interconnected issues.

The Uses of Foresight

How do we get a better fix on causes and connection in complex systems?

As a nation, we have come to resemble a pugnacious collection of single interest groups. Our political discourse sounds like deaf men in a pit, shouting insults at each other.

Perhaps, and oddly enough, we have come to this point from an excess of self-righteousness. It is very easy and satisfying to promote a social objective into an absolute moral principle. Environmentalists oppose the development of power plants (particularly if they are nuclear). Few of them consider the connection between population and demand, or the need for sufficient power to run the economy. Civil

rights activists call others "racist" if they disagree with a particular formula to bring minorities into the mainstream. Right-to-lifers dismiss as "murderers" those who disagree with their proposals.

However, in human affairs few if any principles are absolute. Even the First Amendment has its limits. Good and reasonable objectives collide. When they do, "white hats" are pitted against each other, each absolutely certain of his total moral superiority.

I would like to persuade those antagonists to see the connections between their objectives and other social desiderata, e.g.

— to encourage those **environmentalists** to recognize that their proposals may cause the poor to freeze until we can develop energy alternatives, and to broaden their advocacy to include a population policy to address the fundamental source of demand.

— to persuade the **civil rights activists** that there are also other goals to protect. "Affirmative action" and "equal opportunity" for all (including the majority) are a see-saw balanced on a moral knife edge. There may be ways of achieving the first objective while limiting damage to the second. For example, if we could revamp the educational system and the children's attitude toward it, we might help them become more competitive in the modern world. A new look at immigration might ease the competition for entry-level jobs, and the activitists might also take a new look at fertility among the poor, to give a smaller cohort a better chance.

— to bring the **right-to-lifers** into the population debate. Some or all of the arguments for a turnaround in U.S. population growth might strike them as reasonable. If they also understood that, historically, abortion has been — but is not necessarily — a principal method whereby population growth had been controlled, then perhaps they could be enlisted in the search for policies to influence fertility. Opposition to abortion implies either a commitment to other methods of birth control or an indifference to the well-being of the children who are born unwanted or in desperate circumstances. One can hardly take refuge in the advice to "just say no." For individuals, it is good advice, but it is folly to think that it will significantly affect the pregnancy rate of poor young girls, unless a lot of education and social training and other opportunities go with it.

The enemy is one-track thinking. The effort to address population change has been particularly vulnerable to it. Any proposals to intervene deliberately in human fertility have long been in conflict with the Biblical injunction to "be fruitful and multiply", and now they have become ensnared in that most explosive of current U.S. moral and political issues: abortion.

In this embittered environment, the process of "foresight" used in this study offers some hope of a return to moderation and good sense, by requiring that issues be addressed in terms of their consequences rather than of preconceived moral absolutes.

If the debate were re-cast in these terms rather than in moral absolutes, perhaps the Bush Administration would find heart to address the population issue.

The Environmental Protection Agency's Science Advisory Board has discovered that policies in one area generate consequences in other areas. It has found that "Changing Federal policies in sectors not traditionally linked with environmental protection could provide cost-effective environment benefits that equal or exceed those that can be achieved through more traditonal means. Environmental considerations should be an integral part of national policies that affect energy use, agriculture, taxation, transportation, housing, and foreign relations."[5]

The same thing could be said about population considerations. I wish they had said it.

On occasion, the U.S. Government has tried to engage in that kind of thinking: the Rockefeller Commission report of 1972; the **Global 2000 Report to the President** of 1980. Neither had identifiable effects upon national policy, because their conclusions were not connected with other current policy issues.

There have been a few stalwart proponents of better ways of making the connections. In Congress, Senator Albert Gore, Jr. has been a tireless advocate. With various cosponsors, he has introduced his Critical Trends Assessment Act into successive sessions. The most recent version is S1345, introduced in 1989. Like its predecessors, it has died in committee.

If our governmental processes are ever to catch up with a fast changing world, public advocacy groups and the citizenry would do well to learn about and advocate such reforms. Dull as these "process bills" may sound in competition with our daily TV fare, they are more important.

There is one process already available, but it has never been used for the big decisions, and it has fallen into disuse even for the smaller ones. The Environmental Policy Act of 1969 specifically made the connections that we have been talking about in this study, and it required the preparation of environmental impact statements (EIS) to examine those connections before decisions are made.

That Act included population, but the bureaucracy left it out in preparing the implementing regulations, so the population impacts of proposed actions have seldom been considered.[6]

We would have a process for bringing demography into our national thinking if that Act.

- were vigorously enforced, and
- if the regulations were amended to require that population be considered among the impacts, and
- if the Act were extended to include Congress rather than only the Executive Branch.

The process of examination would force our society, case by case, to ask the question: What is optimum population? If the participants in this present study are right, it would lead to a wide acceptance of the concept that population has gone too far already. I can hardly imagine, for instance, that in a debate over energy policy there would be much support for the idea that we need more people. If I am wrong, then it will come out in such debates.

The Kuwait crisis and the energy issue provide a dramatic example of why we need some way to put the issues together. In the midst of that crisis, and with the budget impasse staring at them, Congress took time out in October 1990 to pass the Immigration Act of 1990 (S358), and the President signed it. Census projections suggest that, even without that law, the country's population will rise by about 25 million during this decade. The new law will add perhaps 5-10 million more, by increasing immigration quotas and promoting future chain immigration.[7] The bill also generates immediate new budgetary costs for the federal and local governments. The question did not arise as to whether it is a good idea to bring in more oil consumers precisely when we are coming to recognize the fragility of the petroleum supply, nor did the connection between increased immigration and the effort to reduce government expenditures.

Another example, if one is needed, is the new Department of Transportation (DOT) "national transportation policy."[8] This "plan" was produced, after months of labor, in February 1990.

There are environmental constraints on the ever-increasing use of fossil fuels. We must prepare for the transition away from petroleum, in any case; the Geological Survey warns that the country's remaining petroleum resources total just 16 years' present consumption rates. Our dependence on the Persian Gulf is increasing very fast, which has fundamental foreign policy and national security implications. DOT should have been asking itself "How does transportation policy relate to these issues? what should we be planning? can we simply go on building highways forever? if transportation is the principal driving force in generating the energy demand that causes these problems, should we not be looking at how to control that demand? and if population size is a major element in the total demand for transportation, does DOT not have an interest in policy proposals that affect the two demographic variables of immigration and fertility?"

Did DOT address these questions? Hardly. The report touched on the environment only with a promise to minimize the destruction of wetlands. None of the other connections was addressed, and there was no indication that DOT had thought ever to be in touch with the Departments of State of Defense, the Geological Survey, or anybody else.

This is indeed the kingdom of the deaf.

The interdependence of issues requires that these acts be put together, but the connections are not always so glaringly obvious. Let me take the rather mundane example of the Washington METRO.

Few people relate transportation to demography, but it can affect, not just where we live and work, but the level of fertility itself.

If the population impact had been addressed when the METRO subway was being planned, some population sociologist would perhaps have had the chance to point out (as Dr. Weeks has done) that fertility declines when women have jobs and the dignity that goes with self-support. There is a circular connection between poverty and high fertility. Anybody who is interested in ameliorating the isolation and alienation of the Blacks in the inner city should have had an interest in where the subway went.

What has happened? The Metro is nearly complete, but the last part of it — still with no completion date — is the "Green line" into Anacostia, the part of the city where it is most needed. If jobs have fled the inner city, we have yet to help connect the inner city residents with the jobs. Different priorities would have helped to address, not just the poverty and fertility, but — as a result — the violence and drug traffic that bedevil the inner city. Because we have not yet learned to think across issues, the planners did not weigh these implications in their choice of construction priorities.

The process of foresight is not all-seeing. It cannot pretend to draw a map of the future. Nobody has been very good at prediction, yet, and the outlook for improvement is not very good, given the growing complexity of mankind's manipulation of the environment.

The object, rather, is to get away from the single minded pursuit of sometimes conflicting goals. Better foresight would help our society to see the connections, to weigh the effects of demography on the pursuit of other objectives, and to understand how other policies might influence demography.

It can help us apply what vision we have to the issues before us.

Coda

The skeptic, comfortable in his affluence, seeks to put off remedial action with the argument that more study is needed.

Humans seldom have the luxury of knowing all about a problem before they must do something about it. The nation is hardly likely to agree on a fixed number for optimum population, if even a group of rather like-minded specialists have not, but I think that we have made a pretty strong case that, whatever it is, it is smaller than the present population and much smaller than the population levels toward which the are presently heading. And the policies that would lead to an eventual turnaround in population growth are the same

ones that would help us to address major social and economic issues now confronting us.

Change has accelerated, and vast forces are set in motion that cannot be easily directed. With population, it may take half a century or more to turn growth around. If there is good evidence that we are already too big, even immediate action may not be fast enough to achieve the optimum for generations to come, and delay compounds the problems and worsens the choices.

As the Pimentels have described with respect to energy, human impacts on the environment have grown to the point where they may even exceed natural processes. This awesome power imposes corresponding responsibilities. As a tribe, the human race needs to learn an "unnatural" way of thinking. We are genetically conditioned to perceive and respond to sudden and fast-moving emergencies (such as a charging carnivore.) We need to become sensitive to vaster but much slower changes, such as those in our environment. We need to establish baselines from which to measure change, and to condition our behavior to deal in a much longer time frame.

The professional optimists reassure us that the human mind can solve any problem. Robert Costanza warns us, more prudently, that we had better use our minds to avoid problems before they become traps, and we are already at least part way into the population trap.

The time is long past when, with Mr. Micawber and various economists, we can afford simply to hope that "something will turn up."

I wonder if anybody is listening, out there in the kingdom of the deaf.

Footnotes:

1. Leon F. Bouvier, **The Impact of Immigration on U.S Population Size** (Washington: Population Reference Bureau, 1981). The two figures are based upon annual net immigration of one and two million, respectively.

2. National Acid Precipitation Assessment Program (NAPAP), 722 Jackson Place NW, Washington DC 20503. Review draft September 1990; final report scheduled 1991.

3. Lindsey Grant, "Too Many Old People or Too Many Americans?" NPG FORUM series (Teaneck, NJ: NPG, Inc., 1988).

4. See my concluding chapter, "How Many Americans?", in David E. Simcox et al, **U.S. Immigration in the 1980s: Reappraisal and Reform** (Boulder: Westview Press, 1988).

5. Environment Protection Agency Science Advisory Board, "Reducing Risk: Setting Priorities and Strategies for Environmental Protection" (Washington: EPA, September 1990). Recommendation 8, p.23.

6. For a detailed discussion of the methods and history of foresight, see Lindsey Grant, **Foresight and National Decisions: the Horseman and the Bureaucrat** (Lanham, MD: University Press of America, 1988).

7. See "Updated Estimates of Immigration Under Current Legislative Options, 1991-1995" (Center for Immigration Studies, 1424 16th Street NW — Suite 603, Washington DC 20036; March 1990) for projections of the five-year impacts of different legislative proposals then before Congress.

8. **Moving America. New Directions, New Opportunities: A Statement of National Transportation Policy Strategies for Action** (Washington: U.S. Department of Transportation, February 1990).

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