In January, I sat in the House chamber when Tucson's Colonel Frank Borman and his two companions of Apollo 8 told a joint session of the Congress of their pioneering adventure to the moon. They described a space that is black, lifeless, hostile, desperately cold -- a kind of celestial desert in which man would perish instantly were it not for the complex life-support systems of the space capsule. Those of you who followed the adventure on television remember this event: As the capsule rounded the dead, white face of the moon last Christmas Eve, Captain James Lovell looked from it back to the bright blues and rich browns of our little planet riding through the emptiness and said:

"It's awe-inspiring. It makes you realize just how much you have back there on Earth. The Earth from here is a grand oasis in the blackness of space."

His words led me to reflect on our country and our world, and prompted me to write this essay.

PESSIMISM ON THE RISE

One of America's great strengths has been the fundamental optimism of its people, a kind of national "can-do" attitude about any problems the future might hold. The difficult is done now; the impossible takes a week or two. It is this attitude that might explain, more than anything else, the $500 billion gross national product when I came to Congress and the $900 billion GNP we expect this year.

Yet, for the first time since the early 1930's, America seems to have a serious crisis of the spirit. Large numbers of people are dubious and skeptical, if not pessimistic, about
the years ahead. Despite all our material prosperity, there is real questioning about whether life is really going to be better or more tranquil next year, in the next decade, or for our children.

My work takes me to various parts of the country each year. It's often inspiring and rewarding, but gloom and pessimism are much in evidence. The numbers of people jammed into our large cities are increasingly ominous; courtesy is a rarity between strangers; few stop to aid the victim of a robbery or a heart attack. I see long lines at ticket counters, restaurants and rest rooms, and I have sweated out a two-hour holding pattern above Chicago's airports. But what I see is the obvious. The problem, we all know, is much deeper.

Crime rates soar, and no one really has a solution. Most major cities have schools on double sessions. There is scant progress toward a racially-integrated society. There aren't enough facilities for college applicants. Anarchists threaten the very existence of universities.

In just one year, sanitation workers, teachers, subway workers and police strike or go on slowdown protests in New York. Experts question whether the city is "governable" any longer.

At a time when Americans haven't even begun to bring under control the pressing problems of the people already crowded into cities, we have triggered continuing social and economic forces which will shortly jam even more millions into those cities.

Every major river system in the country is polluted with debris, topsoil, chemicals, pesticides and partly-treated or raw sewage. Lake Erie has been all but choked to death on the pollution of our prosperity. The thin and precious blanket of air that makes Captain Lovell's oasis possible is pumped full of foulness from our automobiles, factories and generating plants.

The people of Los Angeles, already paying record property taxes, were told recently that the rate would triple in five years, lacking tax reforms. A "taxpayers' revolt" is talked about as Federal, state and local outlays for schools, hospitals, roads, sewage treatment plants and other basic services are overwhelmed with growth. Traffic on a major downtown freeway in Chicago was so great that it came to a standstill the day after the new highway opened. In Los Angeles cabbies make better time leaving the freeway and picking their way through local streets to the airport.

I have seen fishing streams and beaches where one had to stand in line or elbow somebody out of the way to get to the water. I have known farmers and cattlemen who
once took a host's pride in allowing their lands to be used for hunting, picnicking or camping survey the trash and damage left behind and tack up "no trespassing" signs. There's more privacy at Kennedy Airport than at a campground I visited on a North Carolina beach last summer.

This isn't the whole story of America today. There are still many places of beauty, quiet and tranquility. There is still a strong feeling of goodwill, and many "welcome" mats are still out. But the things I outlined do exist. They are the symptoms of a fundamental disease which must be recognized and treated or it will get far worse.

A PLAN OF ACTION

If you don't like the picture I have just painted, try this one. Suppose I told you that I have a plan which would guarantee to New York and Los Angeles within a few years:

Reduced local, state and Federal taxes; less crowded streets, freeways and hospitals; room at the beaches,

   streams and ski slopes; single session schools and shortened waiting lists at colleges;
   some genuine hope for lowered crime rates, some measurable progress against pollution.

You'd be interested, of course. Now, suppose I told you that it would do these things not just for New York and Los Angeles, but for Phoenix, Houston, Chicago and every other area in the country. Suppose I told you further that the plan would cost almost nothing in public spending and involve absolutely no governmental controls, and very little legislation. Furthermore, under my plan you might wake up each morning to a newspaper filled with heartening progress rather than the calamity of the day.

Well, I have such a plan. I can't be optimistic that it will be adopted very soon. It's entirely voluntary and it runs counter to some basic attitudes built into our culture. But it ought to be adopted and soon, because it is directed at the basic, underlying causes of nearly all the problems that trouble America as we move into the 1970's.

Here is my plan:

Americans, voluntarily and openly, must face the fact that most of our tensions and our failures are directly due to an unrestrained, spiraling population growth. Every family with two or more children would make a personal, voluntary decision to have
no more children. Every couple with no children or one child would voluntarily agree to stop with the second.

Having done this, we would use science and technology and the resources of government to thin out the cities by making it attractive for industries and people to voluntarily relocate in smaller, middle-sized communities, where people still can be a blessing, not a burden. We would do for this country the one thing which I believe would bring back tranquility and a permanent strength: Stabilize Our Population.

My plan would be helpful on the international scene as well. Our ambassadors abroad tell us that it is hard to sell U.S.-supported birth control programs to other nations. One of the criticisms they get from foreign governments is that the U.S. hasn't done very much to solve its own problem -- so why should it be peddling programs for others? If we were to stabilize our population, we would be the first nation to show the world that the problem can be solved -- and that, it seems to me, would give a tremendous uplift to other nations which are approaching the population problem half-heartedly, if at all.

EFFECTS OF OVERPOPULATION

The dreary statistics of the population explosion have been repeated many times. Some of them were covered in my 1965 newsletter, "A Time Bomb Called Population." Since I wrote that newsletter we have added to our population 9.5 million more Americans. Last year alone there were 3.5 million births and 440,000 additions through immigration, more than offsetting 1.9 million deaths, for a net increase of 2 million in our population. This is easy to write, but difficult to comprehend. These Americans are not just statistics; they are people. They have children and build houses. They want to go to the mountains or the park and on the same day that you do. They take the freeway to work in the morning and their children want into the same colleges and schools as yours. They get sick, and need doctors and hospitals and at the same time as you do. Each adds 120 gallons a day to the local sewage treatment plant and four pounds of solid wastes to be disposed of and 1.9 pounds of air pollutants. Each throws away 250 cans and 135 bottles or jars a year, and you see some of this production every time you go to a beach or walk in a neighborhood park. You wait for some of them at the golf course, the national park, the local lake, the bus stop or the local supermarket.
Individually, they are mostly fine people. But you never get to know them as friends. They are in your way; they make life a little more difficult. And you and I get in their way and cause them inconvenience in return.

Some scientists are beginning to suspect that dangerous and unknown stresses occur on human beings when they are overcrowded and subjected to the strains of complicated overlapping relationships. They know what happens to animals when they overpopulate their habitat, and the implications for man are ominous. There is reason to believe that much of the increased crime, mental illness and some of the other things I have talked about may be products of an overcrowded and overcomplicated existence.

And the total population spirals upward at an ever accelerating rate. It took us 180 years to go from four million Americans to 200 million. By the year 2000 we will have hit 318 million. Since 1950, the world has added one billion people. And since I wrote that 1965 newsletter, the world's population has increased by at least 250 million, or, put another way, by a number greater than the 1965 population of the Soviet Union, or all of Africa, or all of Latin America.

There was no political reason for comparing four and one half years of growth to the Soviet Union -- the two numbers happened to be convenient comparisons -- but in looking back over the preceding sentence, I think it does more than I first intended it to do.

It suggests the truly frightening course down which we humans are hurtling.

If an ultimate calamity were to befall mankind -- and in nuclear weapons we have the tools to manufacture such a calamity -- chances are it will be population, not politics, that will have to be blamed. In short, of the two problems, population and the Soviet Union, population scares me more. If the world could solve, somehow, the problem of overpopulation, our problems with the Soviet Union, or any other country or ideology, would be more easily coped with.

I believe, as a matter of fact, that virtually all of our problems either stem from or are intensified by the sheer numbers of people that are now crowded into the limited living spaces of our Earth. For example:

** It does not take such imagination to see that the foundation of war can be laid in the Asian mud of prospective famine.
** The specter that Latin America's hundreds of millions will double *within the next generation* cannot spell anything but turbulence and misery -- the very atmosphere that invites the spread of Castroism -- for decades to come.

** It is obvious to me that the destruction of wilderness and natural beauty and the pollution or poisoning of soil, air and water are caused by man's numbers overwhelming, at the very time he needs it most, the delicate base of nature that sustains him.

** In America, the problems of poverty, racial strife, transportation; the rotting of our central cities and the formless and ugly sprawl of urbanization -- all so debilitating to the individualism that our country cherishes -- can be traced directly to the problem of overpopulation.

Yet, while the United States spends billions of dollars at all levels of government and in foreign aid programs in an attempt to grapple with individual problems, we still are doing little to get to the basic problem. I take that basic problem to be:

> How can we -- humanely and with a regard for basic human rights -- stabilize the world's population?

For, if we do not, it will surely stabilize itself through catastrophes that may threaten the very existence of all mankind. One thing is certain: *The world's population cannot continue to grow at its present rate.* We are not going to put more people on Earth than the Earth can sustain. If birth rates do not fall, death rates will rise.

There are those who say that science will rescue us, that the world can support almost unlimited numbers of people. Although modern science has done fantastic things, I would answer that there are things it cannot do and will never do: Science cannot add one square foot to the surface of this planet; nor can it add a ton of coal, a pound of uranium, a barrel of oil, or a glass of water.

Experts whose judgment I trust believe that nothing we can do in terms of increased food production will avoid widespread famine in Asia in the next two or three decades. More recently, we have been told that a "green revolution" now going on has so increased crop yields in some of the areas thought to be in danger that it is outdated to speak of famine in the 1970s. Well, that is good news, but if the "green revolution" is not accompanied by dramatic progress in lowering the birth rates in those countries, the problem has only been delayed,
not solved. No one can predict what political consequences will arise from this. As for me, I cannot conceive of millions of people -- people who through mass communications have been given a new, deep thirst for the quality of life you and I enjoy -- resigning themselves to starvation without making a fight for life.

THE ECOLOGY OF MAN

Man is much more than the other animals. His brain is so much larger; he has a soul and a conscience. But man, like the other animals, is a product of Earth, subject to her laws, and he must have a continuing relationship with the outdoors, with nature, or he loses sight of his place on Earth. He must realize that he can tinker only so much with the delicately tuned machinery of this planet, or he will destroy himself, and the planet.

Let me say it another way: Livestock ecologists long have been guided by the concept of the "carrying capacity" of a given tract of land. They know that a certain acreage will support 10 cattle. Up to that number, the grass will be lush, trees will thrive, water will be produced. Animals and plants are in balance. But put 20, 50 or 100 cattle on that land and the grass goes and the topsoil erodes. The cattle die; the plants die; the productive land itself dies.

The Earth has a maximum carrying capacity too. Science does not yet know precisely what it is, but some experts believe that our numbers already exceed the critical point. Let me give you an indicator:

We Americans comprise 6% of the world's population, yet, because of our wealth, technology and enterprise, we use almost 40% of the world's resources. Suppose we could magically bring all the people of the world up to our living standards by tomorrow. A scientist recently computed that the world would then consume about 20 times the iron, copper, sulphur, timber, oil and water it consumed in 1969. Well, the rub is that the planet does not have 20 times its present usable store of resources. In many instances, the margins are very slight. If all the people of the world suddenly began using the same amount of petroleum products used by each American, all the known petroleum reserves in the world would be gone in about six years.

A GROWING AWARENESS

The situation I describe is critical, but is it hopeless? I talk about it because I think something can be done. A start has been made.
What was once a subject off-limits to public discussion has been brought in the past few years into the open air of legitimate and free debate. Presidents Eisenhower and Kennedy both expressed concern. "Second only to the search for peace," said President Johnson in 1965, "it is humanity's greatest challenge."

Some experts, although they admit to their own optimism, are beginning to detect progress. The birth rate in the United States certainly is dropping dramatically. There are signs that the birth rate is falling off in some Asian and Latin American countries. There is no reason to relax, but there is some room to hope.

A giant step in the area of public debate was taken in 1965 when former Senator Ernest Gruening of Alaska, a courageous man, opened Senate hearings on his bill to establish offices of population in both the Department of State and the Department of Health, Education and Welfare.

I introduced a companion bill in the House and, although the bills did not pass, both departments reacted by getting deeply involved in the question of population.

Although there is no way to measure the actual effect of the coordination and spending that resulted, the hearings did accomplish that all-important first step: To identify the problem and bring it into the open.

The discussion continues:

** In January, the President's Committee on Population and Family Planning recommended that the Federal government expand its family planning services to all American women who want them by 1973. It also recommended that Congress create a permanent Presidential Commission on Population.

** The much-publicized debate within the Roman Catholic Church about Pope Paul's continued ban on artificial means of birth control, despite the severity and divisiveness of the debate, is a healthy sign.

What can I do, what can you do, and what can government do about this sensitive and essentially private matter? I don't believe that government can solve this problem, but it can help. I have introduced a bill that would do these main things:

1. Have the Congress and the President declare that it shall be the goal of the United States to encourage, by decent, humane and voluntary means, a
stabilized United States population. This may sound like meaningless words when actions are needed, but no goals can be reached until a problem is identified and a goal determined.

2. Authorize a new presidentially-appointed Assistant Secretary of the Interior to coordinate research and programs having to do with the relationship of population growth and its impact on the natural environment.

3. Create a two-year Commission on Population and the Environment, composed of our most distinguished citizens in private life and public officials, which would, in an impartial, nonpartisan and scientific manner, tell the American people the facts about population growth and its implications, and offer detailed recommendations.

Furthermore, bills introduced by colleagues who share my concern -- bills that would increase foreign aid for birth control programs and enable every American, without regard to his religious convictions, to have the means to voluntarily limit his family through birth control -- will have my support.

OLD ATTITUDES PERSIST

I've talked about some limited things government can do. But no government will, or should, ever undertake to tell people when to have, or not to have children. The solution, if there is one, must come from individuals. If you believe, as I do, that this problem is our chief concern, that it underlies most of the world's major problems, begin to talk about it. You can help change some basic attitudes, for this is where the ultimate answer lies.

We are faced with a formidable set of hostile attitudes. First, we deal with an extremely personal and sensitive area of human relationships, traditionally outside public concern. There are religious attitudes, also, and this is an area I decline to enter. Each American is entitled to be respected for his individual beliefs. Until and unless Catholic doctrine on this subject changes, we can only encourage Catholics to use church-approved methods of birth control and direct some of our research to improving and making more reliable those methods that are sanctioned.

Other people, particularly black militants, see the population movement as "genocide", directed at minorities. The fact is that uncontrolled population growth will eventually wipe us all out, black, white, yellow and brown. Besides, most of the U.S. population explosion is the result of 180 million whites having two or three children too many rather than 20 million blacks having three or four too many. Indeed, one of the myths recently exposed is that of the
"unwanted child." Planned parenthood movements worked for years on the
premise that a solution would occur if we could just insure that every child born
was a wanted child. We now know that even if that goal were achieved, the
population explosion would not be checked. It is the wanted, sometimes badly
wanted, fourth, fifth or eighth child that makes up the bulk of our annual
population increase. In fact, an organization called Large Families of America,
Inc., actually boasts that 23% of America's families raise over 65% of America's
children.

For reasons that are simple and understandable, the large family has a firm place
in our history and folklore. As one of six children -- and the father of six more --
I know the special delights and satisfactions of multiple brothers and sisters,
especially in a rural environment. Until this century, the
nation was underpopulated. Empty lands awaited exploration and exploitation.
When my grandfather first came to Arizona, a family desperately needed a home
full of growing boys and girls; a small community grew stronger and better with
more people. New settlers and large families were welcomed, encouraged and
honored. Our scripture, our literature, our culture -- and our tax laws -- urged us
on.

But, recognizing all of this history, we must also face the fact that the time is
rapidly approaching when a large family, whatever its comforts to the home or
the ego, may be a disaster to the community, the nation and the world. As James
Reston said some years ago, "The history of mankind is strewn with habits and
creeds and dogmas that were essential in one age and disastrous in another."

We face another fundamental American attitude also: the myth that growth is
good business. For 150 years more people truly meant more prosperity, more
markets, more opportunities for everyone. Businessmen and their communities
were built on the doctrine that bigger is always better. If Arizona with two
million people is good, the reasoning goes, Arizona with 20 million people will
be ten times as good. In terms of quality of life, this kind of thinking is
dangerous nonsense. The kind of informal, outdoor, neighborly, spacious kind of
life which brings so many people to our state would be an inevitable casualty of
unlimited growth. There would be in Arizona more signboards than saguaro,
more cars than cottontails, and neon will long have replaced starshine in the
desert.

LIFE IN A 'CLOSED SYSTEM'
In the last 10 years, the great conservation movement has really come alive. A national wilderness system has been established. We've added millions of acres to our national parks. Seashores and lakeshores have been set aside for recreation and wildlife. A huge Federal fund now helps cities and states buy park and recreation lands before they are bulldozed. We have saved a few wild rivers. Despite all this, future generations may never find the outdoor areas every man needs for solitude and recreation and self-awareness -- unless we somehow bring this population growth to a halt. Perhaps the world can find space for some kind of existence for 10 or even 20 billion people instead of the 3.5 billion we have today. But what of the quality of that life? And the relationship of those people to the Earth that supports them?

Which brings me back to Colonel Borman and Captain Lovell and their spaceship to the moon. Scientists call such a craft a "closed system," meaning that everything needed for a long voyage must be carried on board. Nothing can be thrown away. On long voyages everything -- even human wastes -- must be recycled and reused. The Earth is a closed system too. It is our spaceship, and it has everything on board that we will ever have -- all the air, water, metal, soil and fuel. Unlike Apollo 8, however, our spaceship Earth takes on more passengers all the time. At some point, it's got to stop taking on passengers, or the trip is going to be a lot shorter than any of us believed.

Somehow, I can't help but believe that if all mankind could see the Earth as Lovell saw it from the far side of the moon last Christmas Eve, we'd change our attitudes and our policies.

We would again realize that here, on our "grand oasis in the blackness of space," it is man's relationship to his environment and to all other living things that will determine our survival and our happiness.

This newsletter concludes the series, "Preparing for Peace." Copies of the complete series are available on request.