

One of the greatest intellectual and moral needs of mankind is to find a workable rationale for continuity in times of change. We cannot live in peace and progress in a world of abrupt and sudden and cataclysmic change if, at the same time, our era is characterized in the words of Peter Drucker, as an Age of Discontinuity.

The workable rationale I suggest for conceptualizing continuity in change is bound up in the ~~xxx~~ notion of interdependence. It is a notion relatively new in our world lexicon, but suddenly it has appeared in almost every recent article or book one reads on world politics or economics. Interdependence is involved in every current discussion of world development, trade, or monetary policy. No one even attempts to analyze or prescribe for the present world problems of food or fuel or environment without focusing on the concept of interdependence. It haunts the current detente between the great powers, the search for lasting peace in the Middle East. Where mention of it is lacking at times, say in the sad situation in North Ireland, it may in reality be the hidden agenda of an ultimate solution.

Even the poets allude to it: "No man is an island" - the inspiring theme of John Donne.

Interdependence is a thought and a theme that runs counter to many of our shibboleths of the past: nationalism, ethnocentrism, rugged individualism, empire, cold war, East and West with never the twain meeting, declarations of independence. How did interdependence so suddenly emerge as an idea whose time has come? ~~Part~~ Partially, I believe, it came as a response to new and unprecedented challenges that burst upon the world scene in recent years. More fundamentally, it represents a kind of modern Copernican revolution that involves a new way of looking at our world. I have been impressed by the fact that this new look is a fallout of the Space Age, whose most important result was not close-up pictures of the moon, but a new look at the world from afar, there it floats in the black void of space, blue and brown, flecked with white clouds, in the words of Lady Jackson, Barbara Ward, our "Spaceship Earth".

In the past, our vision of the earth was dominated, even in the age of exploration, as a world of immense distances, of infinite resources, "the treasures of the Indies and of Cathay" of widely different varieties of mankind, flora and fauna, in a word, a world of immensity and variety and difference.

Now, when asked what impressed him most in viewing the earth from the moon, one astronaut said: "I could put up my thumb and blot out the whole earth". Viewed as a small spacecraft, the passengers as crew, it is not a large step to understand their interdependence in all they do, living together interdependently on a planet with limited resources and growing needs. In fact, there are few serious human problems today whose impact and significance are not global, requiring, therefore, a global solution as well. I offer a small list: war and peace, human development, population, food, energy, ~~transport~~ trade and commerce, communications, crime, arms control, drugs, environment, literacy, the use of the seas, atomic technology, monetary systems, agriculture, air transport, health.

In every one of these items, global considerations are needed to describe their full reality, and in each of them, we have a concrete example of the modern interdependence of nations and mankind globally.

In the past, each of these problems or opportunities would have been viewed solely in the national or local perspective. Today, any local or national response to any one of these realities would be both inadequate and largely useless.

For example, in the area of world peace, recent months have seen us all focused on the Middle East. The land involved was miniscule, some few miles of barren sand wastes in the Sinai and some rocky hills on the Golan Heights. In the distant past, it would have been a largely local struggle. Today, it involved billions of dollars of military equipment, the most sophisticated on earth, provided to each side, by the two mightiest military powers on earth. The tensions it generated risked sparking a global conflict and did, indeed, precipitate an oil embargo which, in turn, threatened the whole Atlantic Alliance, nearly ruined Japan's economic miracle, dislocated fuel prices to an extent that will

involve massive shifts in world capital balances, created a fertilizer and food crisis worldwide, possibly will mean massive starvation in the underdeveloped world and consequent political and economic chaos among the third ~~world~~ world's billions of peoples. The geography involved was only a few hundred square miles of poor land, but the repercussions were worldwide and of almost cataclysmic proportions. The earth will be reverberating from these crises for years yet to come. All of these concatenated developments both illustrate and are illuminated by the ~~mix~~ notion of interdependence.

However, as in the case of other great seminal ideas, this notion of interdependence is useful only if translated into the world of ~~reality~~ reality, to help understand real problems, to elaborate realistic solutions, to change mentalities and cast world views into a more meaningful perspective for a better world.

For this reason, it would be helpful to translate global interdependence into terms of a specific and urgent modern problem which, like all other such problems, both illustrates the reality of inter-

dependence in a graphic way and provides a frame of reference in which to demonstrate how interdependence at work can bring hope to an otherwise hopeless situation. In turn, this exercise involves a totally new perspective to life on Spaceship Earth, a perspective that is applicable to other global problems.

I would like to focus now on the global food problem, not because it is the most important problem facing mankind -- man does not live by bread alone -- but because it is present, urgent, and itself interdependent upon other global problems, such as human rights, development, population, fuel, pollution, agriculture, trade, monetary balances, and a host of others relating totally to the future of life on this planet.

The food situation on this planet has never been more precarious than at present. ~~Food demand is up 50% since twenty years ago, while~~
~~world food stocks as of last Summer stood at 27 days of world need,~~
~~compared to a 95 day supply fifteen years ago.~~ Food was, of course, the almost total concern for primitive man, but never before has the
for survival
whole matter of sufficient food/been cast in such monumental world

proportions. Food demand is up 50% since twenty years ago, while world food stocks as of last Summer stood at 27 days of world need, compared to a 95-day supply fifteen years ago. Climate has complicated the situation. With some perceptibly cooling in the Northern polar latitudes (the expansion of the circumpolar vortex), there has occurred a series of floods in the United States, Pakistan, the Philippines, and Japan, with unusual drought conditions North and South of the equatorial line from Nicaragua through the Sahelian belt of Sub-Sahara Africa through the Wallo region of Ethiopia and into India's Maharashtra Province.

This climatic change had a disastrous effect on food production. I have visited some of the Sahelian countries where the desert is moving South about 30 miles a year. In the refugee campus around Nouakshott, Timbuktu, and Gao, one sees hundreds of thousands of Tuaregs who have lost all of their herds and are despondently dependent on a minimal amount of rice, wheat, and corn flown in daily on military air lifts. In those incredibly torrid and sandy spots, one sees the fact of hungry

desperation and realizes that human suffering transcends the grim statistics. People starve and die, not numbers.

As this is happening in the underdeveloped world, we in the developed world are consuming almost a ton of food grains annually while the poorest barely subsist on 400 pounds a year. We only consume 150 pounds of our grain directly as bread and pastry products, the rest going into the production of meat, milk, and eggs. The poor consume all of the grain directly in bread, chapattis, and tortillas. Affluence has doubled meat consumption during the past ten years in America. Since it takes seven pounds of grain to produce one pound of beef, more grains are fed to animals in America than is consumed directly in the poor nations, thus further complicating the food crisis. Now the face of interdependence begins to appear. For example, a quarter of a pound less of beef a week per person in the United States would free over ten million tons of wheat a year for a hungry world, and contribute to American health, too.

Only three countries are exporting substantial amounts of grain today, the United States, Canada, and Australia. One might pray that the climactic changes will not affect these breadbaskets of the world as they have Russia. The Russian wheat deal with America forced prices up threefold, even before the oil shortage. In the past, America kept about 60 million acres in reserve. Now it is all in cultivation.

At this point last year, the oil crisis arrived. As a further indication of interdependence, we had an immediate fertilizer crisis. Several developments are worthy of mention. Japan, the supplier of one-third of the fertilizer to South Asia, had to decide during the oil shortage to concentrate on producing autos for export ~~or~~ or fertilizer. Autos won. The United States in the middle of a price control program quietly put an embargo on new export contracts for fertilizer last October. To complete the picture, one must realize that while oil and natural gas convert to nitrogenous fertilizer on a one-to-one basis, a pound of fertilizer used with the new genetic strains of food grains converts to ten pounds of grain.

As a result of these interdependent developments, India, for example, is almost a million tons short of fertilizer this year, which translates ~~xxx~~ into a shortfall of ten million tons of grain. While this is happening, more fertilizer than India needs is being used on lawns, golf courses, and, ironically, cemeteries. In the other underdeveloped nations, always short of capital, increased fuel and food prices will cost an extra 15 billion dollars this year, more than almost twice ~~xx~~ the total assistance ~~x\$8~~ (\$8 billion) they receive annually from all sources.

In the past, interdependence was seen in political terms as the third world was wooed by the Western and Socialist countries with various assistance schemes. Now that detente has arrived among the great powers, that motivation must be replaced by a new sense of interdependence. Some call for self-interest since we are moving ~~xxx~~ into an age of shortage of industrial materials that mostly come from the third world, oil being only the tip of the shortage iceberg. Now the banana countries, the copper producers, the bauxite group are beginning

to join the OPEC group in forming cartels to raising prices, so x they can pay for the spiraling costs of fuel and food.

These developments have given rise to a new category among the 77 countries of the third world, namely the 35 to 40 countries who have nothing with which to bargain, neither raw materials nor industrial potential, India, Bangladesh, Sri Lanka, and Pakistan, the Sahelian countries of Africa, and some Caribbean nations. This is the fourth world, comprising almost a billion people who will go under without an additional three billion in aid this year.

Norman Borlaug, winner of the Nobel Prize, recently returned from India where he saw farmers with containers waiting not hours, but days, for non-existing fuel with which to operate their well pumps. Without this pumped water, their crops died. For us in the developed world, the fuel shortage meant inconvenience. For those in the fourth world, it means death.

If we viewed the world as truly interdependent, and all men as brothers, we would not allow this to happen. Some will say there is

not enough money to help, but this rings false in a world that spends over 200 billion for armaments each year. Others will say that the OPEC countries should help, and indeed they should, but we must approach the whole problem globally, not piece-meal.

In the face of such dismal discontinuities ~~in~~ on the world scene, we are witnessing a whole spate of pessimistic and doomsday predictions.

I assume you are acquainted with the thrust of the "Club of Rome's" computer study that predicts either zero to minus growth or worldwide catastrophe, politically, economically, socially. A much discussed recent study in America, "An Inquiry into the Human Prospect" by Robert L. Heilbroner, asks in the very first paragraph, "Is there hope for man?" and, by and large, the answer throughout the book is "NO". His second opening paragraph puts the case fairly well:

"In another era such a question might have raised thoughts of man's ultimate salvation or damnation. But today the brooding doubts that it arouses have to do with life on earth, now, and in the relatively few generations that constitute the limit of our capacity to imagine

the future. For the question asks whether we can imagine the future other than as a continuation of the darkness, cruelty, and disorder of the past: worse, whether we do not ~~x~~ foresee in the human prospect a deterioration of things, even an impending catastrophe of fearful dimensions". (p. 13)

At this point, I need not ~~xx~~ repeat to this audience the recent prediction of C. P. Snow that before long, we of the West will be watching millions of people engaging in food riots and dying on television.

I have not indulged in this discussion of food and interrelated problems ~~x~~ to scare the audience, but to underline the proposition with which I began, namely that we must urgently develop a new Weltanschauung, a world perspective based upon the interdependence of all mankind on this relatively small spacecraft with very finite life resources. I am not a prophet of gloom and doom. Neither am I am micawber who believes that somehow everything will get better and turn out ~~abright~~ all right. It will, I believe, but only if we change

profoundly, only if interdependence passes from an idea to a fruitful and operative reality.

We in the West began this century, theologically speaking, with strong Pelagian tendencies. With the scientific and technological revolutions spurring us on, we believed that we could do all things of ourselves, on our own selfish and insensitive terms, whatever the consequences to others. We created, in short order as history runs, a world of incredible global discontinuities and injustices. One could always sense racial prejudices, but ~~today~~ today billions of people are automatically and ~~uncontrollably~~ uncontrollably suffering geographic prejudice. If a child is born in the North, he or she faces an ever-lengthening life characterized by increasing health, education, economic and social well-being. If born in most of the Southern parts of our globe, he or she will face a short life, illness, illiteracy, hunger, abominable housing, hopelessness. We worry about overproducing Ph.D.'s; many of them never enter a school. We speak of heart and kidney ~~transplants~~ transplants; they never see a doctor from birth to death. Half

of them will die before the age of five. We are often overfed and overweight, they are undernourished from birth, often suffering brain damage therefrom. We speak often of second homes; they live in cardboard or mud and wattle huts. We travel anywhere on earth, now supersonically, in hours; they are trapped in urban or rural slums. We spend more annually on foolish armaments, devilishly devised to destroy life than they have available to maintain life.

And yet, we are fellow travelers aboard a common spacecraft, ever more intimately interdependent. The decision of an Arab sheik, a Japanese industrialist, and American governmental bureaucrat leaves them without water and fertilizer and, consequently, without food. A decision between the great powers to end the cold war removes the one foolish reason that motivated most of the aid they received -- so it starts diminishing drastically just when the need is greatest. For example, this year, in a fit of pique against OPEC actions, our House of Representatives overwhelmingly refused the replenishment promised to IDA. Our Senate is now trying to repair the damage. Our ~~is~~ food

program for overseas was cut two-thirds with most of the third remaining going to Indochina, Korea, and Israel where military considerations dominate. Our Secretary of Agriculture does not want to replenish world food stocks, because with a good harvest, we can more profitably sell food grains on the world market. I speak of these dismal facts in my own country because I know it best. The picture here in Europe is hardly better, if one is looking for a global spirit of human interdependence instead of nationalistic selfishness.

After several generations of foolish optimism created this present world scene, we are now, in the face of worldwide crises -- inflation, shortages, pollution, trade balance, etc. -- seeing a new swing to pessimism, again theologically a recrudescence of ~~Manichaeism~~ Manichaeism that sees man as essentially evil and capable mainly of destroying himself and his world. Again, Hielbroner expresses this position well towards the end of his book on the human prospect:

"If I nonetheless publish these thoughts, with all their potential mischievousness, it is for two reasons. The first is that the weakest

part of the humanitarian outlook, both philosophically and pragmatically, has been its inability or unwillingness to come to grips with certain obdurate human characteristics. As a result we find buried within the 'humanist' appeals a conception of human nature that is often as reactionary, in the sense of ascribing an inherent element of evil to man, as that of the most unthinking conservative

"My second reason for advancing these views relates to the first.

I have tried to take the measure of man as a creature of his socio-economic arrangements and his political bonds. It may be that from some other perspective the prospect for collective human adaptation would seem brighter. But from the vantage point of this book, a failure to recognize the limitations and difficulties of our capacities for response would only build an architecture of hope on false beliefs". (Ibid., pp. 123-4)

One is always in danger of oversimplifying when casting world views in definite categories, but I think that whether or not one likes the characterizations of Pelagianism and Manichaeism, there is little doubt that pessimism rather than optimism is the order of the day. If I had

to characterize my own position, it would be one of Christian and cautious optimism. Theologically, I have good reasons for optimism. It is my reading of the unwillingness of the affluent and powerful of this world to change, to begin to think interdependently, that makes me cautious. It is my hope that if we develop a new world view, really understand our current situation on this troubled planet, we will begin to create a better world as the new millennium approaches. Rather than think of ourselves as, in Heilbroner's words, "creatures of our socio-economic arrangements and political bonds", I would hope that we might indeed create new interdependent socio-economic relations, and new political ones, too. Rather than simply looking at ~~and~~ the difficulties and limitations of our capacities for response, I would prefer to look at the new opportunities and creative responses that interdependence would suggest. I am not blind to the evil and greed in man, but there is, with God's grace, something almost never mentioned in these studies -- an enormous reserve of good will to be mobilized. However, I also believe that God's grace both proceeds and follows upon

some effort of our own to create a new world where justice and equity are the prelude to peace.

Sometimes a picture is worth a million words. Take the view of the earth from the moon, which reduces the size of our spacecraft. Instead of 3.6 billion people, difficult to imagine, think of a crew of five persons, each representing a segment of humanity. The person representing us and our world, mostly Judeo-Christian, white, Western, affluent, has the use of 80% of the available life resources and amenities aboard our planet. The other four crew members must share the 20% that is left. The situation, though inequitable and unjust, is still deteriorating. Our crew man is increasing his share to 90% at the moment, leaving $2\frac{1}{2}\%$ for each of the other crew members.

Now I ask you -- given the fundamental interdependence of a spacecraft's crew -- can you imagine much peace or order or good life aboard this spacecraft. The other crew members are not just uneasy and frustrated, they are outraged, as well as hungry and hopeless, since our person seems to have the only lethal weapon aboard. If our person,

we ourselves, do not begin to perceive the utter injustice of the situation, and begin to organize the use of these finite resources in a more just fashion, he will ultimately, inevitably be overwhelmed by some manner of violence.

My thesis is that we have every theological, philosophical, and humane imperative to change, to respond, and we can find creative ways of doing so, and we must if we wish peace, as well as survival.

At this juncture, I believe I should advance some concrete proposals so that you do not think me a utopian dreamer or impractical theologian. My proposals are necessarily in shorthand, but they are spelled out at greater length in my book, "The Humane Imperative" to be published next month by the Yale University Press.

First, for interdependence to become a central concern in the Western World, somehow it must be related to the key theological and philosophical principles that characterize our culture today.

1. Theologically, we might begin by answering the question of Cain in the book of Genesis: "Am I my brother's keeper?" I hope we

answer "Yes", especially since Our Lord gave us a most specific mandate:

"Whatsoever you do for these, My least brethren, you do for Me". No discontinuity here and no question who are our least brethren in today's world.

Beyond these specific imperatives, it seems to me that the movement to ecumenism in our times, new understanding between and among Christians of various Christian churches first, and then a broader religious understanding between Christians and non-Christians, is a most important underpinning for unity among the great majority of earth dwellers who believe in God -- first the sons of Abraham: Muslims, Jews, and Christians, and then the other great religions of the world: Hindus, Confucianists, Buddhists, Shintos, animists, and others. Nothing so cements world dwellers together so much as belief in a supreme being who has established a moral order binding on all of us who believe in Him, ~~whatever~~ whatever we call Him.

2. Philosophically, the unity of mankind is best manifested in our times by a commitment to human dignity and human rights, to be

observed always and everywhere. The United Nations Universal Declaration of Human Rights, spelled out twenty-five years ago under the leadership of Eleanor Roosevelt and Rene Cassin, was indeed a high mark of declaration that in our day must be ever more matched by reality -- even though all will admit we are yet far from the mark. Interdependence will be meaningless until we show in practice that justice to men everywhere is our goal, and injustice everywhere will meet condemnation by the human community. We are far from achieving this goal, but at least we have agreed on the road map.

3. The material realities of food, housing, and health are important because they provide the indispensable material context within which human dignity may be a reality and not a travesty. As one who has worked for more than a decade with the Rockefeller Foundation on the Green Revolution, I can assure you that we can feed the world if we really decide to do so. Population growth will have to level off because the net addition of 70 million people a year puts ~~a~~ an intolerable burden on possible agricultural productivity advances. Actually, every developed

country controls its population, so that development and population strategies must go hand-in-hand. But this can be done if we determine to do it. Actually, it is a lot less difficult than putting a man on the moon and we have done that.

4. There are more illiterates today than twenty years ago. But during these years, we have developed technologies that now make it possible to teach everyone in the world -- using the best of teachers and the latest teaching ~~xxxx~~ techniques. This involves synchronous satellites, miniturized data banks, computers, television, miniturized atomic energy, Xerography, and various other techniques. But all are at hand. We have only to use them to create a university of the world.

5. The political organization of the world would seem nonsensical to anyone visiting us from outer space. As Lord Franks said many years ago, our problem is not East and West, but North and South. I would suggest a tri-regional global North-South configuration for future development. The three regions would be the Orient, Europe together with Russia and its satellites, and the Western Hemisphere, all mostly

interested in developing the resources South ~~x~~ of them -- the developed teamed up with the underdeveloped, the strong strengthening the weak with an infusion of capital and technology with the multinational corporations perhaps being ~~xxx~~ most helpful in the process. Not that this would impede normal East-West trade relationships, but at least each region would deal with the others totally and from a position of strength. Certainly this would be better than the present foolish situation in the United Nations with almost 150 nations as large as China and as small as Gambia, each with an equal vote. Each of the three regions would come together economically easier than politically, ~~xx~~ but eventually a tri-regional political alignment would be more rational, especially in liberating for development the enormous financial and technological resources now wasted on armaments.

6. The greatest enemy to all of these proposals is nationalism, a kind of historical insanity that deeply afflicts ~~x~~ us all. Rather than fight nationalism lodged so deeply in our bones, I would prefer to bypass it. What I am suggesting is that each human being be given

the option of dual citizenship. All ~~are~~ are, in fact, citizens of the country in which they were born. Why not give everyone the additional option, in this largely interdependent world, of opting for dual citizenship -- world citizenship, in addition to national citizenship.

Everyone opting for world citizenship would have to produce some evidence of their dedication to world justice and peace, some perception of the interdependence of all mankind on spaceship earth today. I think all of us will be surprised to see how many of the younger generation will opt for dual citizenship and work for global justice. This expectation, I trust not vain, is one ~~of~~ of my main reasons for personal hope today and for the world tomorrow.