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"THE UNIVERSAL CITY OF IDEAS"

Remarks made by

John B. Calhoun

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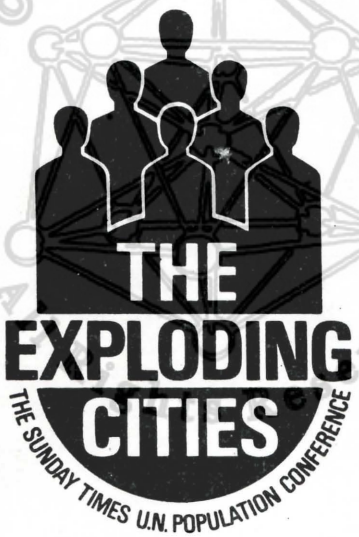

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Dr. John B. Calhoun

Director, Section on Behavioural Systems,

The National Institute of Mental Health, U.S.A.

I want to talk to you today on a theme which I shall call "The Universal City of Ideas". After the luncheon given us yesterday by Mr. Roy Jenkins, I stopped in the Drowgeda gift shop on the High Street. There displayed were three statuettes, one of the dodo, one of the great auk, and one of the passenger pigeon - all now extinct. Accompanying each there was a message: "Are we next?" Before answering that question, before suggesting solutions, we must identify the problem. There is a population problem, but it is not the problem. There is an eco-crisis and a problem of the physical environment of our cities, but they are not the problem. There is a food problem - famines may develop - but it is not the problem.

To understand the problem, to guide us through the choices that will determine the destiny of humanity for the thousands of years to come, we must understand the three evolutionary imperatives: POWER, SURVIVAL and CREATIVITY. All values, priorities and goals derive from these imperatives. It is ours to choose among them. So far as we know, this dim speck in the universe, this speck we call the earth, is the centre of the Universe. It is the only place for which we have any certain knowledge that sapient life has arisen. From the time life first began on the cooling planet, through all of biological evolution, and through the very recent episode of cultural evolution, these three imperatives have dominated - maximise power, maximise survival, maximise creativity. There are no other ways.

Consider power. Following this imperative has always been the easiest route. Its initial success has always been crowned with extinction. Every line of biological evolution has had its Goliaths, early emerged, soon fallen.

Dinosaurs, mastodons, sabre-toothed tigers or giant pigs. Not one has left a descendant. Martial empires, powerful hierarchical and centralised governments, many have come. Of them only stone and bone remain.

Consider survival, however tradition may be worshipped. As life evolved, environments changed. As environments changed, life changed - but not always. Obey tradition, avoid coping and adaptation. Just find a niche where the old way of life can be maintained. Build a wall that wards off all threats. My favourite example is the lung fish of Lake Manyara in Tanzania. The lake periodically dries up. You can drive across its cracked, dry, surface in a truck. Deep below, encased in mud-walled capsules lie the dormant lung fish, some as large as 40 pounds, sleeping out the stressful time, waiting to emerge and renew an age-old way of life after rains refill the lake. So they have survived for millions of years, from the time some of their close ancestors struck out to explore a way of mobile living on dry land. We, too, wrap ourselves in warm blankets of tradition to sleep in a capsule free of the volatile crises pounding outside. We, too, may well sleep through the night of opportunity to keep evolving, awake to an old day forgetting the dreams of what life could be.

The dodo, the great auk, the passenger pigeon - they listened to the joint imperative of power and survival. Power through numbers; enormous concentrations of bodies and brains united in adherence to a narrow tradition-ridden way of life unable to cope with rapid change. And then there are the wildebeaste, thundering herds across the African plains, doomed to the fate of the American buffalo - to survive at the grace of an external will. The power of great numbers, does it always demand a survival that bows to tradition? Our mind's eye goes unseen to the People's Republic of China. Have the reputedly clean cities of Peking and Shanghai exchanged prostitution of the body for a prostitution of the mind? We wait in wonder for the outcome. Unless so great a people - great in history, great in numbers, and great in opportunity - takes up the torch of evolution, the light in this part of the universe must bow to the second law of thermodynamics, dim and fade away. But I am ahead of the story of life. There remains another imperative.

Consider the last imperative, creativity, the hallmark of the weak. The weak also worship tradition. They, too, seek adherence to the old ways of life. The strong remain where conditions are most salubrious to preserving the old life-style. The weak must emigrate - bodily, behaviourally or intellectually. Our more distant ancestors swung from trees. Slightly less distant ones lost that race and won another.

Population pressure forced them out of forest islands to wander across the African plains in search of another patch of forest where they could renew the old ways. Successive losses and successive demands for adjusting culminated in upright walking creatures much like ourselves. So it has been through all of evolution; the weak survive, changed, to open new routes into the future. The meek do inherit the earth.

They are cowards with greater awareness of the meaning of surrounding threats and opportunities. They sooner see the traps their environment and associates set for them. They will more readily figure ways out, figure out ways to avoid being submerged in on-rushing events. Their brains grow. They gain the capacity to acquire, to store, to transfer and to transform information. From the lowly one-celled amoeba to modern cultural man in the aggregate, brain power, the real power, has increased. Increasing awareness and responsiveness is the central theme of evolution that establishes creativity as the prime imperative.

It culminated 50,000 years ago in a two-brained biological man poised at the starting gate of that race, now largely over, we call cultural evolution. One brain, that mass of mush within our skulls, has permitted a flowering to finally an Einstein, a Churchill, a Solzhenitsyn. That other brain, that group of 12, a little more or less, the need meaningfully to relate within a band, early close at hand, but now dispersed, gave the basis of linking each of us with the other more and more, until now our linked hands and minds nearly enmesh the world. H.G. Wells called this the "World Brain". More poetically, Father Teilhard de Chardin called this amalgam of being and thinking the "Noösphere".

Fifty millenia ago, as we started to build the noösphere, we stepped across a threshold into a new kind of space, the space that is ideas, a conceptual space. Every linking of more people together enabled us better to acquire and transfer information and to create ideas useful in helping us to relate to each other and to transform our physical environment into constructs fulfilling our enlarging desires. More ideas permitted more people to survive. More people linked together permitted more ideas to survive. Human members and human worth increased continually. From an initial 4.5. million persons scattered across the earth in small hunter-gatherer bands, the world population has increased nearly a thousand-fold.

A simple trend has characterised this whole increase. The world population has successively doubled. The linking of more people has permitted an ever more rapid increase in population. Each successive doubling has taken only half the time of the prior doubling. The first doubling took 20,000 years. Now it is taking less than 35. With every two doublings of the population, the potentiality, or worth, of the individual has doubled. As beings capable of creating and utilising ideas we are now over 30 times as large as were our ancestors of 50,000 years ago.

Still we may wonder about the increase in numbers of ourselves that has accompanied our increase in conceptual worth. This increase has kept us in crisis. We are a crisis resolving species. That is our hallmark. The losing, weakling, deviants amongst us always have found a way out, beyond the traps that traditionalism fails to see. This coping is culminating in a world brain in which each of us can be a neurone or node. But paradoxes now beset us.

There is not now, nor has there ever been, a population explosion. Each new increase has encouraged the world brain to grow. And yet within the lifetime of some now born there may suddenly be too many people. Once we are all bound effectively into a worldwide information processing network, more individuals will interfere with communication. Like a cancer they will destroy the original beauty of the being.

The right metaphor is hard to grasp. Perhaps we have begun to destroy ourselves even before we have reached the new threshold of our further evolution. "Bash the baby's head." That will do. In America we are becoming plagued by a phenomenon of increasing prevalence, that of child abuse. The child cries out in distress. The parents, never having learned to cope with crises, beat the child to still its woes. Its brain may be so damaged as to prevent its development to normal adult functioning. We as a world society are both child and parent. As a child we cry out for fulfilment, development and participation. As a parent we hush the cries by ignoring their presence, by crushing the up-reaching for fellowship, by failing to develop new ways of dialogue and communication. As another metaphor, our slavish adherence to the second imperative of survival and over-honouring traditions amounts to performing a prefrontal lobotomy on ourselves, of slicing a knife through our brain forever separating the union of emotion and reason.

All this sounds rather gloomy, and yet I remain a confirmed optimist. To be an optimist one must be a sufficient coward to see the problem, the trap and the opportunity. We can focus on families, famine, and favelas

and still fail, still fall into a trap that will preclude further evolution.

The problem is to conceive those ideas and take those actions that will sustain the evolutionary direction of increasing awareness and responsiveness. All else follows.

Fifty thousand years ago no one could have predicted the long, complex, richly unfolding, journey our then established biological brain, and social brain of needing to relate to a few others, would set us in motion to fulfill. Fifty years from now no one will be able to see what journey our then perhaps developed world noösphere brain may permit. It is ours, ours now, to say whether life will embark on this journey. If in this short time, the next 50 years, we fail, we will for ever more doom this corner of the universe to an acquiescence in the second law of thermodynamics, to welcoming a worshipping of tradition and survival only with its inevitable subsiding into a blind, cold, death of chaos from which life arose.

And yet there is a vision of opportunities unseeable. Life is at the end of a springboard from which we need to know little beyond the necessity of launching. The pathway through this necessity still stands clear. A backward glance clarifies it.

Our contribution to evolutionary creativeness has stemmed from two processes. First, we have bound more and more individuals into a single communications network, a brain in which each of us is a node or neurone. This network is successful as a means for metabolising information only to the extent that the individual can, with dignity and freedom, participate in a dialogue of exchange within a community of others. Although present world conditions may seem to belie completion of this linking of all people into a single whole, a long look back at cultural evolution shows that we have nearly completed this part of the journey. Its completion, the completion of the people to people network, will mark the attainment of the upper optimum world population. It looks as though the world population at that time will have reached between 6,000 and 7,000 million, a level that certainly will be reached shortly after the turn of the century. Will we have attained world unity by then, and then what follows?

There can be no answering of that question without considering the second process through which we have contributed to evolutionary creativity. By brain to mouth to ear to brain, from generation to generation, we ever learned better to pass on the myths and legends and hypotheses derived from our experience and insight.

Gradually we developed symbols, writing, books, newspapers, telephones, radio, television and computers to help us store, transfer, and transform information. They are extensions of ourselves, living, evolving prostheses. Trains, and planes, and automobiles, in their role as conveyors of ourselves as receptacles of information, also are a part of the living, evolving environment. So are our cities as an anatomy of a vital body of being. All this is an expression of the fact that evolution has largely shifted from the biologically vital to the prosthetically vital.

This networking of people, and from them the development of information processing prostheses, represents the origin of the universal city of ideas. Once the world-wide networking of people is complete, there will be no further need for more people. The remaining need then will be to maintain crisis, out of which, only, evolution can continue.

In the past, evolutionary crises have been maintained through an ever more rapid rate of population increase. In the future, evolutionary crises can be maintained by a gradual decrease in population. A somewhat mirror-imaging of the past will establish a trend in which each halving of world population will require twice as much time as the prior halving. This is a trend that in 100,000 years should lead to a world population of about that which existed during the Golden Age of Greece.

But of itself, decrease in population is insufficient. Each decrease in population must be accompanied by sufficient enhancement of the capacity of information processing prostheses to continue the evolutionary trend of creatively enhancing awareness and understanding and ability to respond.

We and our companions, the living machines, will gain in capacity for love, empathy, appreciation of beauty, and actions that promote evolution, that combat and delay the death-like entropy predicted by the second law of thermodynamics. For a while, for a hundred millenia, perhaps, we can help synergistic negentropy reign.

Such is the vision from the Maryland countryside.