Section II
The Human Project

Chapter IV
(A) Liberating the Future from the Past

INTRODUCTION

The purpose of this chapter is to evaluate a role of information-communication (INFOCO) processes in human development according to the following plan:

(A) Liberating the future from the past
(B) Liberating the past from the future

The programs formulated in statements A and B above, in my view, frame the task of formulating a philosophy of life in the third millennium or, at least, in the 21st century. An examination of the relationship between the past and the future may provide an answer to the question of how we should live in the present. The turn of the 21st century is very rich in the emerging paradigms of many very fundamental fields of life. Some examples will suffice to illustrate the point: the fall of Communism makes way for a New World Order; medicine witnesses healing with the aid of gene therapy; technology sees the emergence of "cyberspace," a new dimension of civilization; in philosophy, modernism becomes transformed into progress with a human face; national economies yield to a global economy; insular societies become network societies.

In this jungle of great changes, both the average person and the professional politician, artist, or technician becomes lost and wonders "What is it all about?" "How does one conduct one's life in relation to all this?" Some are pleased with the imminent changes while others complain and curse: "You can keep your 'interesting times." One thing is sure, that in such "interesting times" the world is integrating, trying to make sense of itself and to avoid conflicts, and is looking at the future with hope. People are coming to the conclusions that science is not the only source of understanding truth and that the life experience of the individual is an equally meaningful source of wisdom.

In the following analysis and synthesis of programs A (liberating the future from the past) and B (liberating the past from the future), we shall outline the task of formulating a sketch of a philosophy of life for the general reader. If this work can provide a meaningful answer to the question of "how to live," then it should be able to reach every curious resident of our planet, every culture and every civilization—not, of course, as an authoritative injunction on "how to live,"

which could not be imposed on anyone by scientific authority, but as a set of general guidelines which each human being himself must choose to either adopt or reject.

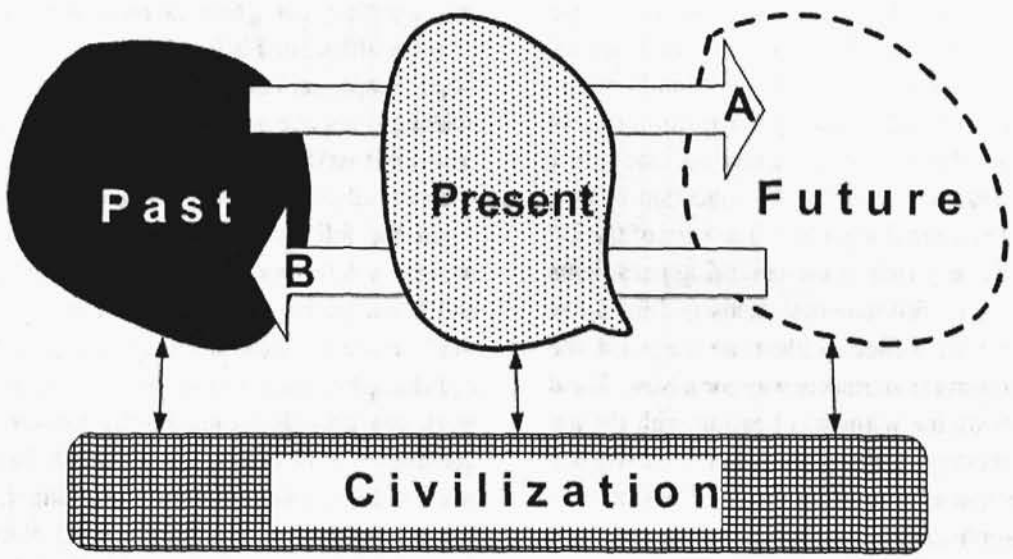
Concurrent with the present trend to integrate, a contemporary philosophy of life should emerge from actual social processes, such as the creation of a global economy and a discussion concerning the need for the formation of an open global society. This need would seem to be particularly important because the Cold War is expected to be replaced by "clashes" among civilizations, which should be minimized. In this regard, I propose to examine and formulate the first foundations of the philosophy of communicated harmony. The basis of this process will be the analysis and synthesis of the degrees of independence and unity of the "past" and the "future." We shall look at their relationship as it regards civilization, rather than in astronomic categories of time. For it is through civilization that we understand the collective way of people's lives, a method which embraces communal life, culture and the infrastructure. Figure 4-1 presents a general model for solving problems A and B.

THE INFOCO SYSTEM AS A MEANS FROM THE PAST

In the year 2000, mankind enters a new age of development, not because the date suggests a rarely encountered place at the end of a millennium—in our case, the end of the second and the beginning of the third—but because we have to deal with change in a paradigmatic system of communication in civilization.

The growth of humanity can be studied from many points of view, including such criteria as climatic conditions, the adoption of tools, productive method and family structures. To my mind, the most significant criterion is the evolution of the

Figure 4-1. Architecture of time ("A" Liberating the Future from the Past; "B" Liberating the Past from the Future)



information-communication system (INFOCO), which engineered the rise of pre-historic man into taking conscious dominance of his own existence. Before we can examine the degree of the eventual "liberation of the future from the past," we must first examine the evolutionary process of man and his "liberation."

The first human, of genus *Australopithecus* (two-legged, with large brain and tools), took form around 2-4 million years ago in East and South Africa. The use of tools straightened man so that 1.6 million years ago our ancestors were already moving about in an upright position (*homo erectus*). *Homo sapiens* evolved in Africa between 130,000 and 120,000 years ago; they had probably begun to spread out into Eurasia about 100,000 years ago, or a little earlier, from that moment when a group of about 200 to 500 people left Southeast Africa (Kenya and Tanzania) and set out for Central Asia, para-social man was formed. Around 70,000 to 36,000 years ago, a stable population was organized respectively in China (68,000 years ago), Australia (50,000 ago), and Europe (36,000 ago). The European line of speaking Cro-Magnon is attributable to the curiosity of mobile man (Burenhult, 2003).

At this time, biological evolution gave birth to cultural evolution, which gave rise to the language of inter-human communication. Thus para-social man became speaking man, a milestone that can be dated around 100,000 years ago (Jones, Martin, & Pilbeam, 1992). We are thus roughly the 3,030th generation of speaking man—that is to say, man using the organized system INFOCO-1.

With the formation of INFOCO-1, mankind started to blossom socially and culturally. After some 94,000 years (since we began to speak as *homo verbalis*), human civilization was born at the rivers Tigris and Euphrates in the Near East with *homo tribalis* who organized a society (tribes).

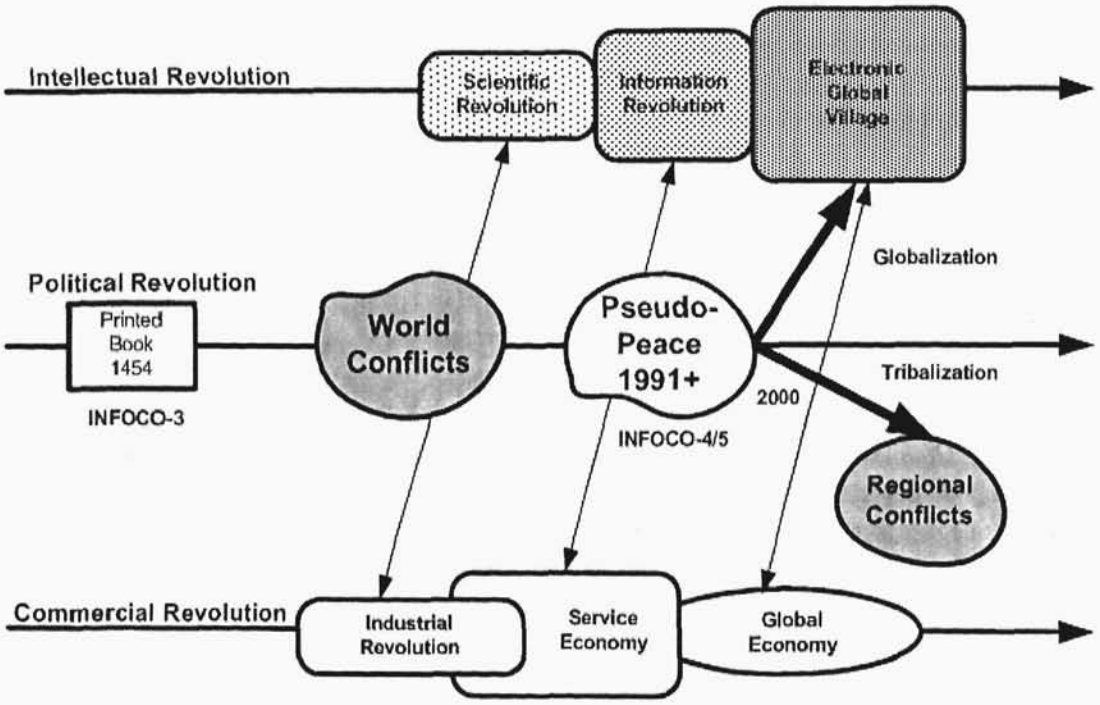
The development of information and knowledge played a determining role in the development of contemporary civilization, particularly in the Western version. Christianity is nothing less than modern ideology. It is a form of emotional involvement and of information, communicated in an organized method among people, motivating its followers to a meaningful life, supported by a defined system of values, parenthetically speaking, binding Christians to our contemporary times.

Already in ancient imperial Egypt, religion was organized within an information system on papyrus, that is, a written language, system INFOCO-2. Yet writing did not make a decisive difference to social communication, since it was known only to a handful of priests, bureaucrats, and merchants. The Christian religion, on the other hand, was organized in books, hand-written and copied by monks (and available to practically no one else. Even Charlemagne struggled with being able to read and write, and eventually gave it up). The vital turn in human communication occurred with the European invention of mechanical printing by Gutenberg in 1454. (The Chinese and Koreans had mechanical printing with woodblocks for centuries before this German print. Even some of the blocks are preserved, primarily of Buddhist texts. Why did it not make a difference? Since Europe in those times was more open to innovation and science than Asia). From that point, the distribution of information among readers began to accelerate. Print type can metaphorically be called the first "computing" device, which organized and started to unite Europe and determined her primacy in the world in the first half of the second millennium. In the second half, primacy was assumed by Euro-America, situated around the Atlantic Ocean. European print gave "birth" to a new *homo libris*, as the next great leap in mankind evolution.

As illustrated in Figure 4-2, "computer arrangement," producing the printed book (INFOCO-3), initiated three interdependent revolutions in the development of Western civilization:

- The intellectual revolution, which gave rise to the exact sciences in the sixteenth century

Figure 4-2. Bifurcation of world civilization (21st century)



which, in turn, produced the contemporary computer around 1961 (Univac 1) and telecommunication networks in the 1990s.

- The political revolution, which led to the English Revolution in 1685-1714 which created the parliamentary monarchy, to the American Revolution (1776-1787), which gave rise to the Republican democracy; and to the French Revolution (1789-1799) which introduced the Republican system into Europe (however briefly). In the 2000th century there prevailed a period of total confrontation of democratic ideology versus militarism and totalitarianism in two World Wars and the Cold War which ended with the fall of Communism and with peace.
- The trade revolution, beginning with the formation of the first private business enterprise (The Dutch East India Trade Company, 1602, dependent on its owners' shares-stockholders), gave rise to the invention of the steam engine (1769), and to industry (the 19th and 20th centuries), the railway (1829), electric power (1866), the private automobile (1908), the airplane (1903), and modern airlines (the 1960s), and consequently led to the age of the service and global economies.

The interdependence of the above-named three revolutions is self-evident. The political revolution commissioned modern armaments from business and industry, which created a market for innovation; that is, it activated an intellectual revolution. This, in turn, influenced the course of both the political and business revolutions, an influence that has been and continues to be conveyed by information and communication. In the second half of the twentieth century, this

gave way to automation and networking, thanks to computers (INFOCO-4) and their telecommunication networks (INFOCO-5).

As a result of the refining of all three revolutions, human civilization has branched out into two divisions: a billion people living in the Electronic Global Village (EGV) (Targowski, 1991) and having so-called "access to the computers," and 4.5 billion people living in manuscript-oriented conditions without such access. EGV dwellers have at their disposal highly complicated computer networks, which influence their lives in much the same revolutionary way as did spoken language sixty-thousand years ago.

What influence this will have on mankind's bio-social development, it is too early to tell; we can only speculate. As a consequence of language, people began to migrate in organized fashion, in search of greater living space and better living conditions, resulting in the rise of Asia, Europe, Australia and America. The computer network, on the other hand, produces the reverse effect. Thanks to telecommunication, man does not have to move physically from place to place. The EGV dweller can satisfy his curiosity and his search for better living options by navigating the ocean of computerized information available, for instance, on the Internet.

Does a person with the computerized system INFOCO-5 have more chance of survival than someone (*homo manuscriptus* or just *homo scriba*) from a manuscript-oriented organization? Will non-organized and noninformed tribal man perish as did *homo neanderthalensis*, which disappeared around 30,000 years ago when confronted with Cro-Magnon Man who, arriving from Asia, operated in symbolic language (Deacon, 1997) (INFOCO-1) and even created art in the form of cave murals recently uncovered in Spain and France? As it happened, Neanderthal Man who indeed, possessed a brain size of 1700 cc and yet communicated by simplistic sounds, had no subsequent influence in the development of contemporary man. Evidently, it is the INFOCO system that has deciding influence on man's greater progress and better organization.

From an optimistic viewpoint, it is *homo electronicus* (McGaughey, 2001) who has more opportunities for development (Grossman, 1995) than *homo scriba*, since the former has more advanced tools to support his/her existence.

CIVILIZATION PARADIGM SHIFTS

Now, with the passage of the year 2000, we find ourselves at the same kind of turning point as the world did 100,000 years ago, when human language arose, and 550 years ago when mechanical printing was invented in Europe. Since then, the deciding factor in human evolution has been INFOCO, whose various changes are illustrated in Table 4-1.

The change in the paradigm, during 2,000th from informational to network communication, is a more brutal change than the introduction of print. Certainly, writing and hand-made books were already known before the appearance of print. The significance of the printed book lies in the fact that instead of reaching only tens or hundreds of readers, information began to reach thousands and in the twentieth century, hundreds of thousands to several millions. Of course, the greatest readership has been enjoyed by popular bestsellers rather than by books offering knowledge.

Communication that utilizes computer networks universalizes information and knowledge instantly among several hundred million users. It is impossible to say at this point what result and influence this massive spread of information and knowledge will have on human development (electronic civilization?). We can surmise that man will be more aware of his limitations and possibilities.

Table 4-1. The evolution of the INFOCO system

INFOCO	Sense Organ	Humankind	Brain Size	Structure of Consciousness	Paradigm
Stimuli-Response	Nose	Hominid 10 M–6 M	500 cc	Archaic	Instinct Communication
Sound	Ear	Australopithecine 6 M.-2.5 M.	500 cc	Archaic	Sound Communication
Variety of Sounds	Ear	Homo habilis 2.5m.-1.8m.	750 cc	Archaic	Hand Communication
Intelligence (fire)	Brain	Homo erectus 1.8m.-200K	800 cc-1100 cc	Archaic Spaceless Timeless	Survival Communication
Wisdom	Brain	Homo sapiens 200K-60K	1750 cc-1350 cc	Magical 1D Timeless	Migration Communication
Language	Mouth	Homo verbalis 100K-4K BC	1350 cc	Mythical 2D Natural Tempos	Symbol Communication INFOCO-1
Civilized Language	Mouth "Feather"	Homo tribalis & Homo scirba 4K BC-1454 AD	1350 cc	Mythical 2D Organized Tempos	Social Communication Writing INFOCO-2
Print, Records	Eye	Homo libris 1452-2000	1350 cc	Mental 3D Spatial Abstract Time	Information Communication INFOCO-3
Computer Networks	Cyberspace	Homo electronicus	1350 cc-1500 cc	Integral 4D Space Free Time Free	Networked Communication INFOCO-4 INFOCO-5

THE ARCHITECTURE OF THE A.D. 2000 PARADIGM SHIFT

In the second millennium, human existence depended on man's functioning alone in the framework of large-scale laws of historical development, which, "consciously using an actually very appropriate cliché," we will call the big picture. We will refer to this way of life as the "disconnected-flat existence." After Hegel, Popper and Kuhn, we have found ourselves in a position where historical development has its own internal "spiral" dynamics and is racing toward some ultimate goals. Each spiral development is enriched with new achievements, which are the effect of the work of civilization.

As a result of the continuous development of ideas and values, man develops knowledge and awareness about him/herself, nature and civilization. Hence one can formulate after Bronowski and Mazlish (1962) the *first civilization law of man's self-fulfillment*:

People have seen themselves as entering the world with the potential of many gifts, and they hope to fulfill these gifts in the development of their own lives.

This law has absorbed the minds and work of Locke, Voltaire, Rousseau, Kant, Schopenhauer, Jefferson, Jasper, Habermas, Havel, and others. This law may be called the self-realization law.

It inspired the development of science and technology to liberate a person from his own manual effort, replacing it by mechanization, automation, and informatization. From Leonardo da Vinci through Edison, Ford, and Cray, inventors have tried to provide more free time for us that we can use for rest, entertainment, and education. This idle time provides the chance for the development of talents and dreams. In the 21st century, in some countries, it is apparent how the value of possessions is being transformed into the value of the quality of life. Intuitively, this law was applied in the movement for civil rights in the 1960s and for human rights in the 1970s and also in science and art. It would be interesting to trace this law through the historic roots of civilization.

An example of a big-picture law is the *second civilization law of man's quest for freedom* that formulates the right of man to freedom and knowledge (reason). We formulate it as follows:

People constantly aim for freedom; the range of this freedom depends on the level of the nation's knowledge and communication ability and the knowledge of the international community.

In the last 6,000 years of civilization, mankind has constantly been increasing its freedom as a result of its development of knowledge about socialization. This freedom has been enlarging ever since the Renaissance (15th century), when print was applied to disseminate information and, later, knowledge. In practice, man has been liberated from political, economic, and social discrimination only at the end of the 20th century and only in democratic states. This process is not yet finished and historians could show how this Grand Law has been emerging through civilization's history in order eventually to guide contemporary activists.

The *third civilization law of its evolution* is the law of conscious historical evolution, which we formulate in the following way:

Mankind consciously steers the development of civilization through the formulation and implementation of main ideas and values of a given epoch.

The Renaissance, Enlightenment, and Modernism impacted their times in very recognized ways. This law emphasizes the meaning of cultural consciousness, which among educated people guides economic development and not vice versa. The Enlightenment epoch created the American and French Revolutions that opened the door for the Industrial Revolution, and so on. People observe that their chosen values decide more about their fate than economic conditions. It would be an interesting task for historians to trace the historic trends in business and find out why pure competition is being replaced by a mix of cooperation and competition. Is this emerging trend based upon this law, or on a stronger emotion of greed, or the art of survival?

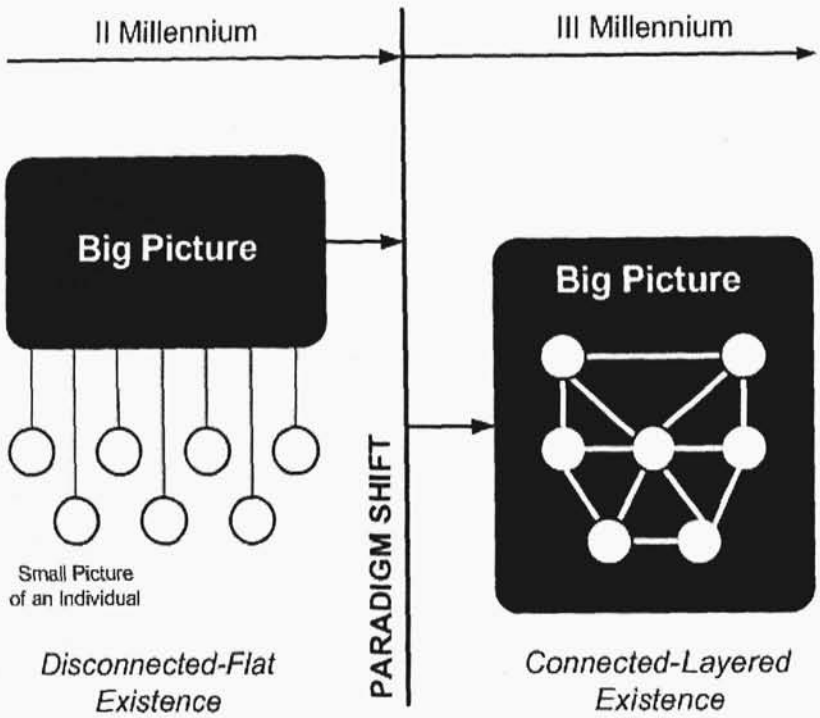
The *fourth civilization law of country's status* reflects the historical process which decides about country's success or failure, which develops in the following way:

The degree of a country's historical success is proportional to the level of harmony among political, social and economic domains.

In the 21st century, the world is in transition to a "New World Order." Many countries, particularly those transforming from Communism towards democracy, experience a lack of the harmony mentioned in this law. The cases of Poland (in the last 350 years), Russia (1905-1917 and 1991-2000), Yugoslavia (1988-2000), Somalia, Rwanda, Burundi, Belarus, and even Canada and Belgium demonstrate this law. Historians could again trace the application of this law through civilization's history, providing a very meaningful contribution to political science.

Mankind is entering the third millennium in communication with almost the entire world,

Figure 4-3. The paradigm shift of existence



thanks to computer networks and to increasingly accessible realms of information and knowledge. Thus, man becomes better informed and realizes that he is not alone. In itself, the act of communicating with other people from another part of the globe forces people to act locally and think globally. In other words, the big picture works its way into the way of thinking of an individual who no longer considers himself alone against dominant ideas of the age. The individual becomes a part *of* rather than apart *from* the big picture. We can call this way of life a connected-layered existence.

Changes in the architecture of existence in the second and third millennia are shown in Figure 4-3.

THE CONNECTED-LAYERED EXISTENCE

Mankind is entering the third millennium forming an awareness of a four-dimensional space. This space can be described thus:

1. A space of life principles formulated in layers of big picture and small picture
2. A cultural space defined in layers of integrated native, national culture, adapted, national culture (e.g., after immigration), and an emerging global culture
3. A communication space defined in layers of integrated local, national, and global information infrastructures
4. Cyberspace, which makes it possible to do business by electronic means, for example,