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Development and Sustainability

by Fritjof Capra



In its original meaning, "development" identifies a fundamental characteristic of all life. Over the past twenty years, a scientific understanding of life has emerged at the forefront of science, clarifying the roots and basic dynamics of the process of development.

One of the basic characteristics of life is that living systems are open systems. They need a continual flow of energy and matter (air, food, water, etc.) to stay alive. The detailed dynamics of this flow of energy and matter have been studied in great detail over the past two decades, leading to a very important discovery.

Living systems generally remain in a stable state, but every now and then an open system will encounter a point of instability, in which there is either a breakdown or, more frequently, a spontaneous emergence of new forms of order. This spontaneous emergence of order at critical points of instability (often referred to simply as "emergence") is one of the hallmarks of life. It has been recognized as the dynamic origin of development, learning, and evolution. In other words, creativity—the generation of new forms—is a key property of all living systems.

This new understanding shows us that development is a fundamental property of life. All living systems develop; life continually reaches out to create novelty. What is created depends on the systems' internal structures. And since these internal structures change in the process of development, the path of development when new order emerges is a path of ongoing structural changes.

Development and Growth

The life sciences teach us that the development of living systems includes periods of rapid physical growth—e.g., the period of a young organism, or the early ("pioneer") phase of an ecosystem that is characterized by rapid expansion and colonization of the territory. This rapid growth is always followed in organisms by slower growth, maturation, and ultimately decline and decay, and in ecosystems by so-called succession.

When we study nature, we can see quite clearly that, although growth is a central characteristic of life, indefinite and unrestricted growth is not sustainable. For example, cancer cells grow rapidly, but the growth is not sustainable because the cancer cells die when the host organism dies. It is important, however, to realize that there can still be development without physical growth, because there can be learning and maturing.

Economic Development

Contrast the concept of development as it is used by corporate economists and by politicians. The first thing we notice is the different grammatical use of the verb "develop." In the life sciences, "develop" is used as an intransitive verb: All living systems develop; living organisms develop; people develop. There is a sense of unfolding, of realizing potential.

Economists, by contrast, use the verb "develop" as a transitive verb: "People develop things." There is a whole category of business people who call themselves developers, and they go around developing things—real estate, land, office blocks, etc.

The concept of Southern or "Third World" development rests very uneasily between those two meanings. First of all, it is a very recent concept. Before the Second World War no one would have thought of development as an economic category at all. But after World War II, it was almost always used in a transitive sense. People would go out and develop the Third World, without any perception of the power relations involved in that concept, which shows the most extraordinary lack of respect.

I'm sure that if anyone came up to you and said, "I'm going to develop you," you would be suspicious of their motives, apart from wondering what they had in mind. Yet that is precisely what Third World development entails: people with power going out and developing other people.

The other extraordinary phenomenon is the categorization of the entire world into a single dimension. Countries and people are "developed," or they are "developing," or they are "underdeveloped." It's like a soccer league table, with the rich countries (first and foremost the United States) at the top, and the poor countries at the bottom. Never mind that 25 percent of children in the U.S. now live below the poverty level, that we spend more on prisons than on higher education, and that we are the only industrial country that has the death penalty.

The huge diversity of human existence is concentrated into a single dimension called "development," which is very often measured simply in terms of income per capita. It is absolutely staggering that we, as intelligent people, living in this extraordinarily diverse world, have allowed such an intellectual construct to become so powerful.

When we look at the concept of economic development in more detail, we can identify three basic characteristics:

(1) Development is a Northern concept. The league table—"developed/developing/underdeveloped"—is arranged according to Northern criteria. Those countries that are "developed" are those that have adopted the Northern industrial way of life. It is a profoundly monocultural concept. To be a developing country means to be succeeding in the aspiration of becoming more like the North.

(2) Development means economic development. No other social aspirations or cultural values are allowed to get in the way. If they can coexist with that development, okay; if they can't coexist with it, they are overridden.

(3) Economic development is a top-down process. Decisions and control rest firmly in the hands of experts, managers of international capital, bureaucrats of state governments, the World Bank, the IMF, etc.

The Rules of Development

This narrow notion of economic development is enforced by stringent rules, set up by the WTO and the other global financial institutions. These "free trade" rules assure that trade is not free, but is a one-way street, where the Southern countries are forced to open their markets to the North, but are often prevented by steep trade barriers from successfully exporting their goods.

The global economy is a network of computers programmed according to these rules. Underlying all the rules is a single fundamental principle, the principle that money should take precedence over anything else—human rights, democracy, environmental protection, or any other value. But the same electronic networks of financial and informational flows could have other values built into them. The critical issue is not technology, but politics.

The Global Civil Society and an Alternative View of Development

At the turn of this century, an impressive global coalition of NGOs formed around the core values of human dignity and ecological sustainability. This coalition is known as the global justice movement, or the global civil society. At several worldwide gatherings, known as the World Social Forums, civil society leaders have proposed a set of alternative trade policies, including concrete and radical proposals for restructuring the global financial institutions, which would profoundly change the nature of globalization. Their proposals embody a notion of development that includes the values of human dignity and ecological sustainability.

The alternative view of development proposed by the global civil society sees development as a creative process, characteristic of all life, a process of increasing capability, in which the most important thing one needs is control over local resources.

In this view, the development process is not purely an economic process. It is also a social, ecological, and ethical process—a multidimensional and systemic process. The primary actors in development are the institutions of civil society—NGOs and other associations based on kin, on neighborhood, or on common interests.

Because people are different and the places in which they live are different, we can expect development to produce cultural diversity of all kinds. The process whereby it will happen will be very different from the current global trading system. It will be based on the mobilization of local resources to satisfy local needs, and it will be informed by the values of human dignity and ecological sustainability. Living sustainably means recognizing that we are an inseparable part of the web of life, of human and nonhuman communities, and that enhancing the dignity and sustainability of any one of them will enhance all the others.

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