

**David Suzuki**

## **A New Paradigm**

Science reveals that ever since life arose on the planet some 3.9 billion years ago, there have been enormous changes: the Sun is 30% warmer, tectonic plates have moved, magnetic poles shifted, ice ages were punctuated by warm periods. All the while, life has survived and flourished. A key to life's resilience is diversity at the genetic, species and ecosystem levels, conferring resilience and adaptability. We have learned through painful and expensive experience that monoculture, the spread of a single genetic strain or species in agriculture, forestry and fisheries, increases vulnerability to the threat of parasites or disease.

Modern science indicates *Homo sapiens* is an infant species in evolutionary terms, arising perhaps 150,000 years ago in Africa. A massive and complex brain with an impressive capacity for memory, curiosity and creativity, more than compensated for our species' lack of physical and sensory abilities. The human brain has an inbuilt need for order, organizing worldviews that make sense from the turbulent chaos around. Cultural differences were like biological diversity in enabling us to adapt to ecosystems from deserts to Arctic tundra, mountain valleys to rainforests, grasslands to coral islands.

For 95% of human history we were nomadic hunter/gatherers following plants and animals through the seasons. Hunter/gatherers understand that we are deeply embedded in and utterly dependent on nature for their survival and wellbeing. In the last 5% (10,000 years) of our existence, the Agricultural Revolution transformed humanities' lives. Like hunter/gatherers, farmers understand that rain, pollination, nitrogen fixation and pests, determine survival and wellbeing.

As we have spread across every continent, the conjunction of explosive population growth, technological innovation, consumptive demand and a global economy has suddenly transformed our species into a new kind of force that is altering the physical, chemical and biological properties of the planet on a geological scale. In the process, we are undermining the life support systems of the planet, the air, water, soil, photosynthetic activity and biodiversity on which our lives depend.

Over the past two centuries, humanity underwent a remarkable transformation, from agrarian communities to big cities where urbanites' highest priority is jobs. And so the economy becomes our priority with steady economic growth seen as the primary goal of government, corporations and society. We forget or become blind to the reality that our domain is the biosphere which is finite and cannot grow. We are one species out of between 10 and 30 million other species, yet we have co-opted more than 40% of the net primary productivity (the energy captured by photosynthesis in plants that supports all life on Earth) and thus drive other species to extinction. The economy is a social construct within society. Thus, the "three legged stool" used to depict society, the economy and the environment is a grotesque caricature of reality in which we share the biosphere with millions of other species, our share is far too great for others to flourish and the economy is a subset of society which has become far too large to be sustained.

Imagine the invention of time travel and we go back four billion years before any life existed on Earth. We would quickly discover that human life could not exist on a sterile planet – air was toxic (rich in carbon dioxide and devoid of oxygen); water unpotable (lacking filtration by plant roots, soil fungi and microorganisms); there was no food (all of our food was once alive) or soil (created from macromolecules of dead plants and animals mixed with clay, sand and gravel). There was no energy for our bodies (sunlight transformed into chemical energy through photosynthesis) or fuel (life created fossil fuels, wood, dung and peat) or fire (needs oxygen). It is the web of living organisms or what is generally called Nature, that creates, cleanses and replenishes our most critical needs.

The way we interact with our environment is shaped by the perceptual lenses through which we see it. Ask a Palestinian and Israeli about Gaza, a man and a woman about love, family and sex, an American Democrat and Republican about the economy, and we see that beliefs and values shape our behaviour and actions. A forest can be a sacred grove or timber and pulp. A river is land's circulatory system or an opportunity for irrigation and power. Soil can be a community of organisms or just dirt while another species is our biological kin or a resource. Our house can be a home or simply property or real estate. The way we see the world determines we behave and act.

In the twentieth century, humanity has been monocultured with a single notion of development and progress defined and measured by economic growth. Nature defines the limits and opportunities for our existence yet we demand that she conform to the limits of human constructs – political borders, capitalism, economies, corporations, markets. We fail to resolve the crisis of human-induced climate change because we try to constrain the atmosphere within the political and economic agendas of each nation.

To find a truly sustainable future, we must begin with agreement on our most fundamental needs. Politicians and corporate executives inform us that we must be “realistic” and recognize that “the economy is the bottomline”. However, the reality is that we are animals whose biological nature determines a radically different bottomline. Deprived of air for more than a few minutes, we die! Forced to breathe polluted air, we sicken. So surely air must be our greatest need and keeping it clean our highest aspiration. Similarly, clean water, clean soil and food, photosynthesis and biodiversity, provide us with our most urgent needs and therefore must be our highest priority for protection.

Assured of our primary biological needs, a new set of requirements emerges like a series of nested Russian dolls as Maslow indicated. We are social animals and the greatest social need to realize our fullest potential is love from infancy through childhood. Love makes us fully human as we learn to reciprocate, to empathize, to belong to the human family. Factors that disrupt the full giving of love – poverty, chronic unemployment, injustice, gross inequity, terrorism, genocide, war – must be recognized and opposed.

And when social priorities are met, perhaps the most urgent necessity for the industrialized nations emerges - spirit. We are a part of and dependent on nature for our well-being and happiness; there are forces impinging on us that we will never understand or control; there are sacred places throughout the world that we go to with respect rather than seeking opportunity; we emerged from nature and return to it when we die.

Once we all understand and agree what our highest needs and priorities are, then we can proceed to design economies and ways of living that protect and enhance them.