

Chapter 6

Human, Biological, and Physical

Humanity is not only characterized by the three sets of processes described in the previous chapter, but humanity is also part of a larger grouping of processes we usually call “nature.”

Typically, we think we know what we mean by the word “nature.” But when we inquire into what might be the three inclusive subparts of nature, we find our minds pushed to ask, “What is nature?” and “What is nature not?”

“Nature” as I will use this word is not synonymous with material substance. “Nature” is not a huge machine of intelligible parts waiting for human reason to figure it out. Also, “nature,” as I will use this word, is not something static. Nature is dynamic. Nature continually unfolds. Nature begins with the Big Bang and flares forth in unrepeatable stages eventually issuing in biological evolution and still later issuing in that unique quality of consciousness that resides in human beings. Human beings are a part of nature, not just our physical atoms, not just our biological organisms, but also our unique quality of consciousness.

Thomas Berry has provided me with an image of nature that I have found deeply helpful: “cosmogogenesis.” “Cosmogogenesis” means that nature is a cosmos that has been and still is unfolding. It is not a whirl of cycles that had its genesis long ago. Rather, the genesis of nature is still taking place. We can speak of stages, but even the earlier stages are still unfolding.

- **Physical emergence** is my name for the first major stage of cosmogenesis. By “physical emergence” I mean quarks, atoms, molecules, galaxies, stars, planets, gravity, electromagnetic forces, and more. Physical emergence is not over; the physical aspects of the cosmos are still unfolding in unrepeatable stages.
- **Biological evolution** is my name for the second major stage of cosmogenesis. By “biological evolution” I mean the emergence of living cells and organisms on this planet and their amazing story of diverse forms. Biological life is still evolving.
- **Human history** is my name for the third major stage of cosmogenesis. By “human history” I mean the advent of the consciousness of consciousness and its consequences. Some materialistic thinkers have not been willing to see the dawn of the human type of consciousness as a development that is as massive as the origin of life. Some have not been willing to see the origin of life as a massive departure. These thinkers have claimed that nature is one “substance” and that biological life is merely a complex arrangement of that “material substance.” Human life, they say, is a very complex form of biological life and thus a very, very complex form of that one material substance.

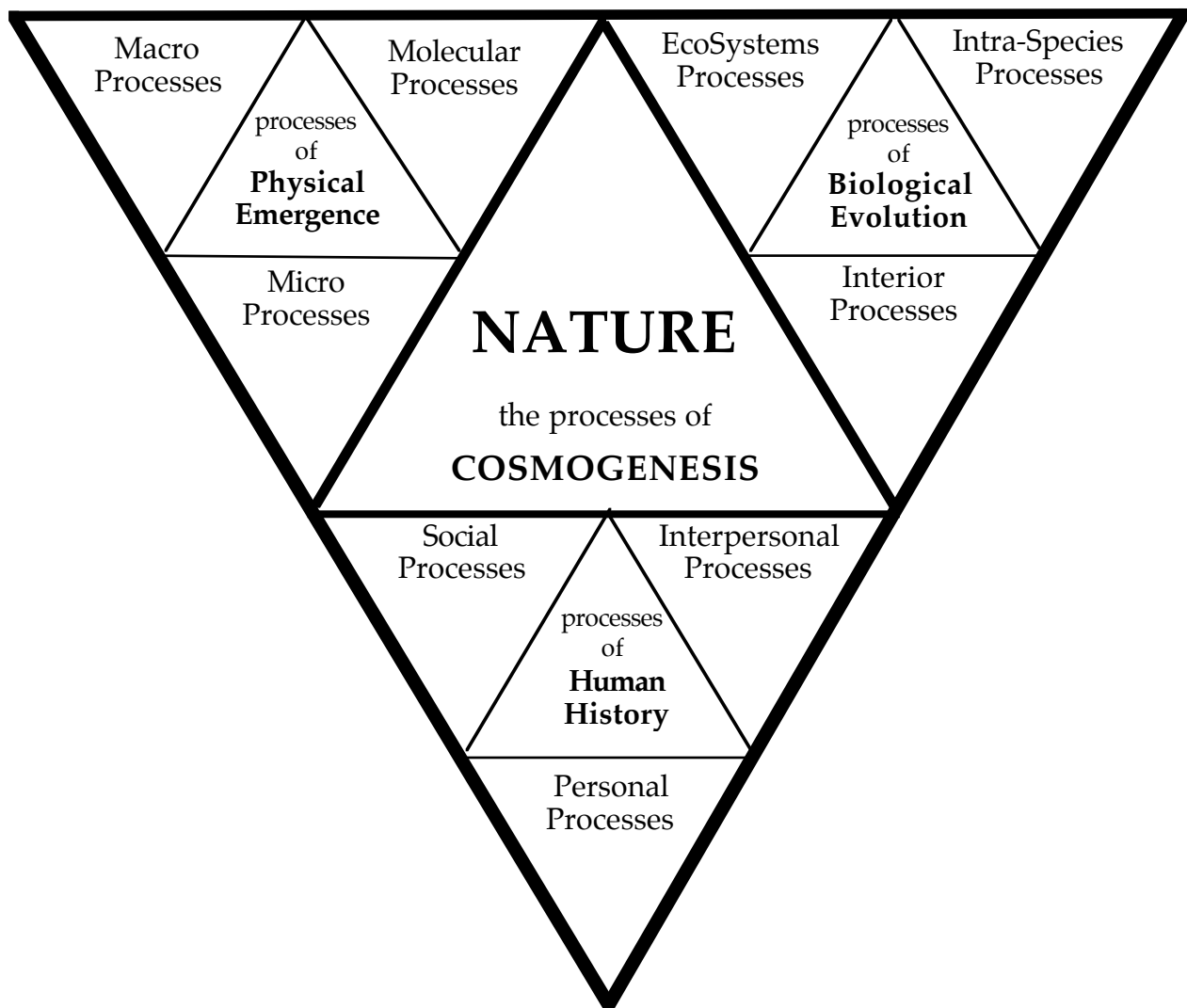
But let us inquire more deeply into this term “complex.” A living cell is so very complex in comparison with the atoms and molecules of which it is composed that a new mode of cosmogenesis can be said to have emerged. Living organisms do not behave with the predictability of billiard balls or in a fashion analogous to random coin tosses. Living organisms choose behaviors and thus directions of evolution. Even the tiniest single-celled microbes take in information from the surrounding world, process it, and come up with creative responses. Those responses are not caused by the environment nor are they caused by the DNA in that organism. Nor are these responses merely accidental. Accidents, the environment, and DNA are part of being alive, but so is this mysterious additional process I am calling “choices.” By “choices” I mean uncaused ventures. The organism simply tries something. And it learns by trial and error. Its DNA has evolved through these trials and errors and learnings. Causal and statistical factors are also important parts of the story of evolution, but the additional element, **decision**, has also entered the story. For example, similar mammalian DNA living in similar environments became horses in one instance and bison in another. One part of that evolutionary process chose to gallop and another part chose to butt. Very similar

environmental factors affirmed both the gallop and the butt. These living forms tried something, and in this case each of two quite different trials both worked for the survival of a strongly capable set of species.

Living forms are billions of times more complex than inanimate forms, and the human mode of consciousness is billions of times more complex than the consciousness found in other forms of life. To notice this does not demean the amazing consciousness and intelligence of chimpanzees, dolphins, or octopi. Nevertheless, these forms of life do not build vast cultural memories, do not store information in libraries, do not set up political and economic systems, do not tell a history of their societies, do not attempt to tell the story of the entire cosmos from its assumed beginning to its possible end. Other-than-human species do not write books such as this one in which the nature of humans and animals is discussed.

This astonishing quality of human consciousness, often described as the consciousness of consciousness, is so overwhelmingly present in our lives that we are inclined to overlook the sheer wonder of it. Other forms of life are also conscious, but as far as we can tell they are not conscious of being conscious. They do not attempt to take charge of their own consciousness and build programs for its unfoldment. They do not gather for group choices the way humans do. They do not intentionally choose to shape the course of planetary history.

Human history, biological evolution, and physical emergence are three clearly distinguishable modes of cosmogenesis. So, here is my triangular chart of nature.



We will search in vain to find a fourth mode of cosmogenesis that matches the extent of difference that exists between these three. Thus, it is reasonable to suggest that all other distinguishable aspects of nature can be viewed as subparts of these three overarching differentiations.

Perhaps some of us are bothered by the idea that the physical third of this trilogy fills a vast expanse of time and space while the biological aspect of cosmogenesis is only a thin film on the surface of one (and perhaps other) obscure planets. Furthermore, the consciousness of consciousness that is manifest in human beings is even more minute, characterizing only a tiny fraction of the life on this planet. So, one might ask why these three are the main subparts of nature.

It is helpful to note that the expanse of space and time is not the only context in which these three aspects of nature can be viewed. Space and time are physical categories. If we were to use “awareness” as our evaluative category, human consciousness of consciousness would be the most aware and in that sense the largest aspect of nature. Biological life would be the second largest. And inanimate nature would be the smallest. Size is not decisive for understanding why these three aspects of nature are the master subcategories of nature.

All of the triangular charts introduced in this book are about the human experience of REALITY. We are viewing REALITY from a human point of view. As humans we can organize all our experiences of nature into these three ongoing processes – the inanimate, the biological, and the human. These three types of processes characterize the cosmos that surrounds us, and these three types of processes also characterize the processes operating within our own bodies. All our experiences of “nature” can be understood as parts of these three master processes: the physical, the biological, and the human.

Why is This Triangular View of Nature Important?

This view of nature is important because it holds in one picture two basic truths: (1) Humanity is part of nature and (2) Nature includes humanity. Some thinkers have denied the first truth in order to put humanity on an inappropriate pedestal. And other thinkers have denied the second truth in order to affirm nature over against the human misuse of nature. But only when both truths are held, can a mutually enhancing relationship between humanity and the natural planet be envisioned.

The master vision of nature held in the above chart is also important because it shows that human social processes are only one ninth of the whole picture of natural processes. This can serve as a challenge to those who overemphasize human economic structures. The economic processes of human society are only one twenty-seventh of the whole picture of nature. If this be true, then it becomes plausible that economic processes need to be well balanced with the other twenty-six parts of nature. Economic processes must be put in their place. And the place of economics can be defined by the view that all aspects of this triangle of natural processes need to function in a mutually enhancing manner.

In addition, this master vision of nature indicates that human economic, cultural, and political processes are essentially natural processes. Every human society must build some sort of economy, culture, and polity: nature is not diminished by merely having human social processes going on. For a realistic social ethics, the key is learning how human society can be nature-enhancing rather than nature-ignoring, nature-destructive, and even nature-despising.

Human society is both a natural necessity and a humanly invented pattern. This tension is the source of our difficulties. It is natural to have social processes; nevertheless, each human society is a “world of made” set down upon the “world of born.” Though there are biological

limits and guidelines for our social life, we are not biologically constrained to have a particular sort of human society. The potential for society building experienced by human beings is virtually boundless. We do have to eat. We do have to make decisions together. We do have to communicate with one another and many other things. But beyond such basic necessities, we are free to create societies in many, many alternative directions. Some of the societies we have created are so out of sync with nature that natural environments have been devastated. Some societies have been so out of sync with human nature that they have disintegrated. Modern industrial society has attempted to harness for human use the entire biological and geological functioning of the planet. This experiment in society building is leading us into horrendous consequences. Potentially, we can construct our own ruin. We are only slowly admitting how foolish we have been, and we are beginning to bow, reluctantly, to the ancient truth that it is "best not to mess with Mother Nature."

So we must find a way to hold the following two truths in balance: (1) Having a human society is not unnatural. And (2) human societies are substitute worlds set down upon the natural world. These secondary worlds can be in tune with the natural world and thus be mutually enhancing. Or human society can be out of tune with nature. Our social creativity can go astray, and it has!

Current industrial civilization is horrifically out of tune with the natural world, and most of our economic theories and practices ignore this. Open conflict with nature was not characteristic of primitive human societies. Even five hundred years ago, our societies were not as far out of sync with nature as they are today. Industrial civilization, for all its benefits and grandeur, has this devastating downside: it is diminishing the natural planet. And it is also diminishing the natural person. Those of us who are concerned about the natural person and those of us who are concerned about the natural planet have the very same foe: industrial civilization.

E. E. Cummings use the phrases "world of born" and "world of made" in one of his colorful poems. He likens industrial progress to a disease, turning the planet and human beings into something unnatural, something sick and inhuman.

Pity this busy monster,manunkind,
not. Progress is a comfortable disease:
your victim (death and life safely beyond)

plays with the bigness of his littleness
–electrons deify one razorblade
into a mountainrange;lenses extend

unwish through curving wherewhen till unwish
returns on its unself.

A world of made
is not a world of born–pity poor flesh

and trees,poor stars and stones,but never this
fine specimen of hypermagical

ultraomnipotence. We doctors know

a hopeless case if–listen:there’s a hell
of a good universe next door;let’s go¹

But there is no good universe next door. We just have this planet – a planet upon which exists a humanity that has chosen to become "hypermagical ultraomnipotence." We have to deal right here and right now with transforming industrial society into a society that works.

¹ e.e. cummings: *e. e. cummings a selection of poems* (Harcourt, Brace & World Inc., New York: 1965) page 125

The Domestication of Wildness

“Wilderness,” “wildness,” “wild animals,” and “the wild” have become important words in contemporary ecological reflection. Nature is wild. It has wild animals, wild plants, wild weather, wild stars, wild galaxies, and wild combinations of all these wildnesses. Even we humans are wild and remain wild no matter how thoroughly we are civilized.

Wildness is experienced in our very aliveness and in our Spirit depths. Every time we make a difficult decision, we are thrust up against the wildness of our own creativity. Every time we reach out in ambiguity and uncertainty to choose the “not yet,” we experience the wild winds of history blowing down the corridors of time. Every time we experience the call to leave a comfortableness, a habitual security, or an ingrained stasis we are hearing the call of the wild, beckoning us to new creation and to new being.

A good society expresses this wildness rather than strives to get rid of it. A good society recognizes that society building is itself a wild process. Society building is wild action done by wild human beings. With our human intelligence we often attempt to tame everything, to civilize everything, to make everything conform to some humanly invented order. But the human brain is itself part of our wild biological being. Thinking is a wild process. There is no way to civilize even our thinking process much less the entire natural world.

In contemporary Western culture, we often associate the word “wild” with “chaotic,” “irresponsible,” or “given to debauchery.” But a wild wolf is an ordered being. A wolf pack is sexually disciplined, cooperative, and obedient to the limitations of its environment. Wild creatures are cooperative as well as competitive, obedient as well as creative, self-limiting as well as aggressive. Wild nature is not chaotic; it is a combination of remarkable orderliness and equally remarkable innovative power. So for human beings to be wild does not mean being undisciplined. It just means recovering our natural creativity and freedom. It means being authentic rather than socially conditioned robots of our particular society.

Industrial civilization has strongly emphasized the human-made over the wild natural world. We are addicted to artificiality – to the human made. We give our children plastic play toys and protect them from interesting fellow creatures like beetles, crawdads, and grasshoppers. We drive fancy air-conditioned cars to shopping malls on concrete highways and spend less and less time noticing the birds, the animals, the grasses, and the trees that surround and penetrate all our social inventions. We marvel over the so-called “artificial intelligence” of a fancy robot while we neglect to stand in awe of our own even more wondrous “natural intelligence.” Compared to the natural intelligence of a dog or a cat or a human being, our most advanced “artificial intelligence” is not worthy of the name “intelligence.”

We often praise our domesticated animals for all the improvements we humans have made on them. But compared to the wild animals with which we started, almost all domesticated animals are inferior. Take the domesticated sheep, for example. It may be splendid in its wool production, but in every other way the domesticated sheep is not an improvement on the wild sheep. The wild sheep was a vital part of a natural ecosystem, but the domesticated sheep can be destructive of its own grazing areas. And the domestic sheep is incapable of survival in the wild unaided by humans. Most domesticated animals are weakened versions of their wild forms.

Consider this poem about losing our wildness to the shackles of social domestication:

Domestication hurts!

A wild creature follows its inner being.
A domesticated creature follows the voice of its domesticator.

There is something wondrous about a snake;
it is never really domesticated, I think.
Alligators too, are never tame;
they seem to move with a determination all their own.
Even cats domesticate on their own terms;
a grudging and strategic adaptation seems to speak their
ever present wildness.
Dogs, best friends, O yes, but they too
reserve some rights:
they bark at their own visions, I think.

But when humans domesticate humans,
wildness hides in a dark cave.

So bring out the drum,
and beckon wildness to return, because

Domestication hurts!²

Current industrial societies, in attempting to domesticate the entire planet, are an alien order forced down upon nature and thereby oppressing its optimal operation. For the most part, the people in our culture believe that civilization is an improvement upon nature – that nature is something that needs to be tamed in order to be useful to humans – that humans themselves need to be tamed relative to their natural desires, emotions, and natural connections. We mistrust our own natural existence; we suppress our feelings; we don't express what we are really experiencing. We play it safe – that is, we accommodate to our cultural climate even when that cultural climate is killing us. We want to be civilized, rational, normal, well-adjusted, and well-accepted by other people. So we are willing to accommodate with people who see nature as basically alien to humanity. Instead of identifying with nature as our larger body or our larger self, we only use nature to serve whatever greedy purposes or whims occupy our powerful minds. Thus, we don't really care if entire ecosystems are disrupted. We don't grieve these travesties. We seem to say, "Ecosystems are not me. I am a human being. Ecosystems exist for me. If I don't value them, they have no value; for I and my species are the center of all value." This "anthropocentric" way of thinking and valuing is as much a cultural malady as sexism and racism and every other form of oppression. Whatever language we use, we need to let some fresh "biocentric" air into this stuffy "anthropocentric" house.

For both our inner life and our outward survivability, human society has to function within the limits of nature and in accord with nature's enduring processes. It is wholly possible for human societies to be so unnatural that they threaten their own survival and the survival of the entire human species. Many other species have already gone extinct through the impact of modern industrial society. In fact, we are now in the midst of an extinction spasm that has not been equaled on this planet since the passing of the dinosaurs. And this extinction spasm is being caused not by the presence of humanity or by the necessity of humanity to create social forms, but by humanity doing its modern industrial form of society. This extinction spasm will continue until humanity stops this form of society and creates an alternative society that is more harmonious with the full round of natural processes. The current extinction spasm is not as benign as those caused by asteroids or comets striking the planet. Such events have been a one time shot from which life on this planet eventually recovered. But the human-led extinction

² poem by Gene Marshall

spasm can continue on and on until humanity and most other highly-conscious species are destroyed. We may be leaving the planet to a few sturdy species like cockroaches and lichen.