An Evolutionary Human Ecological Framework for Higher Education

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Abstract

The starting point of this paper is the concept of the threefold nature of a single human being, which, when humans live together, ensues naturally in a tripartite collective. This can be shown with the human ecological pyramid of Robert Ezra Park, but it needs to be revised for our concerns, so that we arrive at a subdivision into four areas, a cultural, a social, a political and an economic domain. This gives us a simple model with which to sketch the course of cultural evolution. We see that it consists in a gradual shift of authoritative power from the cultural (spiritual) to the economic (material) domain, with the result that our civilization is upside down. This model can serve as the basis for a human ecology course at college and university level, and encourage students to ask questions when dealing with more specific topics requires a further elaboration.

Key words: cultural evolution, higher education, threefold human being, threefold human society

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The threefold human

A human is a material, social, and psychic (or spiritual) being and can therefore be called "threefold." It is a basic natural fact and thus it is to be expected that it would play a role everywhere in philosophy, science, and literature: This is indeed the case. For example, the German philosopher René Weiland writes in an essay on Helmuth Plessner, a representative of philosophical anthropology:

> In his triple capacity as zoologist, sociologist, and philosopher, he had a sense for irreconcilable differences, and so he put all his discursive ambition into harmonizing those fundamentally heterogeneous areas in which human life takes place—spirituality, corporeality, and sociality" (Weiland, 1995, p. 110; translation by author).

The three aspects of human life express themselves in needs. The Norwegian writer Jostein Gaarder described this very beautifully in his "philosophy course" in the novel *Sophie's World*:

> What is the most important thing in life? If we ask someone living on the edge of starvation, the answer is food. If we ask someone dying of cold, the answer is warmth. If we put the same question to someone who feels lonely and isolated, the answer will probably be the company of other people. But when these basic needs have been satisfied—will there still be something that everybody needs? Philosophers think so. They believe that man cannot live by bread alone. Of course everyone needs food. And everyone needs love and care. But there is something else which everyone needs, and that is to figure out who we are and why we are here. (Gaarder, 1996, p. 14)

Of course, the three areas of human life are not independent of each other, but play into each other in various ways. For example, a person who does science will use their mental abilities for working, but will also exchange ideas with colleagues, which involves a social component, and will need a material set of instruments for the work. Conversely, the psyche is active not only in one's own work, but also in the aforementioned exchange and in the issue of acquiring suitable hardware.

The tripartite human association

The basic structure of human coexistence in the form of communities or societies must obviously take into account the threefold nature of humans if it is to enable

and support the life of the belonging individuals and keep the association itself alive and capable of survival. It is therefore logically tripartite: The human's material existence demands to be provided for by an economic system, its social being entails a sociopolitical system regulating and securing the cohesion of the collective, while finally its mental existence seeks a home in a spiritual and cultural sphere in which religion, philosophy, and science offer themselves as systems of interpretation of the world, art as a system of expression, and education as a system of transmission.

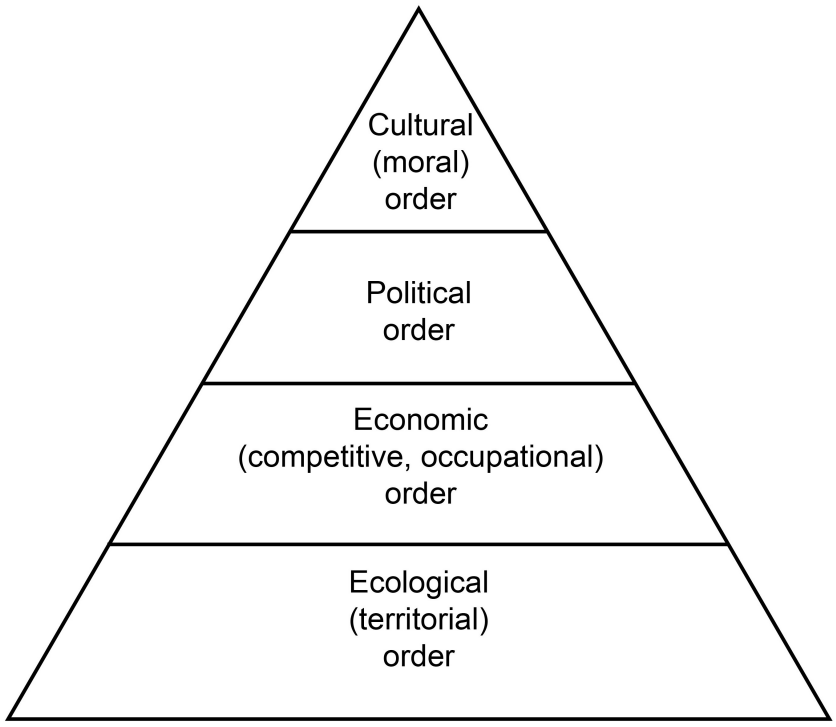
The term 'sociopolitical' used above calls for an explanation. The cohesion of a community is ensured by the fact that all are familiar with each other. I use the term 'social' for this situation in a restricted sense. As a population grows larger, it eventually reaches the point where self-government in the direct exchange of its members is no longer possible and must give way to a political organization that now explicitly regulates the functioning of society, while a social substrate (family, kin, circle of friends, work colleagues, etc.) naturally continues to exist. According to English anthropologist and evolutionary psychologist Robin Dunbar (2010, pp. 21–34), this limit is reached at about 150 individuals. He concludes this from the size of archaic kinship clans, of Neolithic and medieval villages, and of workforces in modern companies that could still function without hierarchical structures.

Given how essential the tripartite division is, it would be expected to also appear frequently in the description of human societies. We will see that this is especially the case when considering their evolutionary development. Its appearance in ethnology is also related to this. As part of my geography studies, there was a stint of ethnology, *Völkerkunde* as it was then called in German, consisting of a three-part lecture cycle on economics, sociology, and religion. The American cultural anthropologist Marvin Harris (1980, pp. 51–54) distinguishes the three levels of infrastructure, structure, and superstructure. In anthroposophy, Rudolf Steiner outlined the concept of the "threefold social organism" (discussed more fully toward the end of this article). An individual's occupation will normally be in one of the three social spheres, but they can, of course, switch from one to another. Ulrich, the hero of the story in Robert Musil's novel *The Man Without Qualities* moves through the tripartite division when he "makes three attempts in his fictional life to rise to significance: First he becomes a soldier, then a technician, finally a mathematician" (Pekar, 1990, p. 1).

The tripartite structure is also a topic in the work of the American sociologist Robert Ezra Park, which is of particular interest to us because he was a representative of the Department of Sociology at the university of Chicago, which developed a concept of human ecology in the first decades of the twentieth century. Park saw a continuity from biological to cultural evolution. Since plants and animals form a "web of life," he was interested in the question of how far the relationships operating within it still play a role in human associations and how far they do not (Park, 1936, p. 1). Park's human ecology is thus internal to society. Had the term been in common use at the time, he would likely have referred to a human society as an ecosystem. A

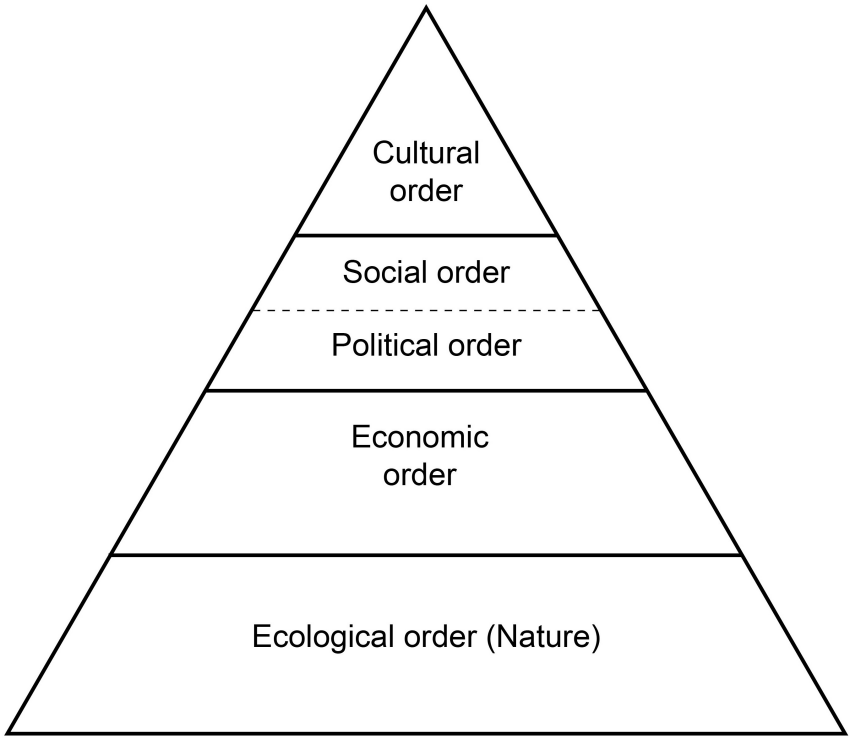
core theme for Park was competition, which he saw as a driving force in nature—relatively little was known at the time about the equally important and frequent cooperation. Competition also plays a role in human coexistence, but here it is regulated. Park illustrates this with the three-part hierarchical structure of society, which can be represented in the form of a pyramid, with an economic (or competitive or professional), a political, and a cultural (or moral) order (Park, 1925, p. 674; 1936, p. 14; 1940, p. 145, see Figure 1). In the economic realm, natural competitive behavior is still pretty prevalent. In the cultural realm, however, the moral conscience of people is formed, which imposes normative limits on competitive behavior and lends more weight to consensus-oriented communicative exchange. The political order regulates coexistence by means of formal, legally defined rights and duties. In combination with the workings of the moral order, this means: "Always there is custom and law which sets some bounds and imposes some restraints upon the wild and wilful impulses of the individual man" (Park, 1925, p. 674).

Figure 1. The human ecological pyramid as described by Park (1925, p. 674; 1936, p. 14; 1940, p. 145)



Source: Author's interpretation.

Figure 2. The pyramid of Park's divisions in modified form: The political order gets separated into a social domain and a political domain proper, and the ecological order now means 'nature'



Note. Developed interpretation of Park (1925, p. 674; 1936, p. 14; 1940, p. 145).

Source: Author.

An ecological order appears as a substructure to the pyramid with the three domains (Park, 1925, p. 674). However, this does not relate to the natural environment, but to the spatial distribution of the human population and local institutions. This explains why Park also uses the term "territorial order." Of course, it may be more or less related to natural conditions. Otherwise, however, a relation to nature is only addressed in an internal sense: The competitive instinct inherent in man represents a "biotic substructure" that must then be kept in check by the "cultural superstructure" (Park, 1936, p. 15). It must be remembered that in Park's day environmental problems were hardly a topic of discussion. He himself, however, began to worry in later years. He wrote:

> The world, which in 1870 seemed to offer a limitless space for expansion is today overcrowded. Economists

> are busy inventorying its resources and reckoning the time when they will be exhausted. (Park, 1940, p. 139)[2]

For our further use, we modify Park's pyramid by taking into account the division of the political order into a social and an actual political realm and, in addition, we now assign the ecological order to the natural environment (see Figure 2).

Cultural evolution: An overview

An evolutionary perspective can help to better understand the present situation in terms of deficiencies and their remediation. The German educator Ulrich Jüdes (1997, p. 27) thinks that a "coevolutionary human–nature concept" (translation by author) can be gained from it as a building block for an ethical imperative—that is, for normative guidelines for a common existence with a future. In the long prehistoric phase, human communities were still in equilibrium with nature. For example, *Homo neanderthalensis* lived for hundreds of thousands of years. With the beginning of the historical period, however, the problems associated with environmental degradation gradually began to accumulate and eventually became overwhelming. Modern humans, who call themselves *Homo sapiens*, have finally managed to decimate the basis of life on this planet within the last hundred years to such an extent that our own long-term continued existence is in question. Thus one can state definitively that the later phases of human cultural evolution have taken a wrong turn.

Seen in this light, it is appropriate to set out in search of the qualities of early human life in the spirit of the American anthropologist Stanley Diamond, who published a book entitled *In Search of the Primitive: A Critique of Civilization* (1974/2017). Of course, we cannot return to the ancient practices in full, but we can ask ourselves whether there is anything to be learned from them that can be applied in an adapted form to the contemporary situation. Diamond (1974/2017) sees healing potential in such an approach. He writes:

> The search for the primitive is the attempt to define a primary human potential. Without such a model ... it becomes increasingly difficult to evaluate or understand our contemporary pathology and possibilities. ... Healing ... presumes a knowledge of the primitive ... a sense of what is essential to being

2 For further information on Park in particular and the American origin of human ecology in general see Wolfgang Serbser (2004). See also the reception of Park by Parto Teherani-Krönner (1992, pp. 131–135).

> human. ... In this age of abstract horror, ... in order to determine where we are, we must learn, syllable by syllable, where we have been. (p. 119)

In the following we concentrate on the western cultural evolution, which had its origins in Europe and the near East. It starts with archaic communities, followed by social communities and continues with a sequence of political and economic societies. This succession can be interpreted as a shift in the center of power through the communal and societal spheres from top to bottom of the pyramid in Figure 1, thus from the spiritual to the material pole.

Archaic (cultural) communities

How exactly prehistoric people lived, we can only guess. Up to now, analogies have been drawn from the observation of modern-day nomadic hunting and gathering cultures, on the assumption that a life strongly dictated by natural conditions cannot assume arbitrary forms. The threefold structure outlined is, of course, present, but not yet distinguished by specific institutions and thus not very differentiated. Economically, archaic life means foraging: small groups living nomadically and making a living by hunting and gathering. The existence of egalitarian communities, with equality between the two sexes and without positions of power, characterizes the social sphere. Life takes place without the dictates of a regulating authority, and problems are solved through communal decisions. A political dimension is thus not yet present. Cultural life is nourished by worldviews formed by religious ideas that reflect and draw on the natural world. They may have a determining influence on the character of food acquisition and of living together. A community oriented in this way could be called 'cultural.'

Here is an example: In northwestern Amazonia in the border region between Brazil and Colombia lives a people of the Tukano group called Desana. Their religious worldview is based on a cosmos that contains a limited amount of life energy. It cannot grow, but can only be exchanged between plants, animals, and people in the cycle of becoming and passing away. One practical consequence of this conception is a strict practice of birth control, because a growing population would endanger the basis of life by overuse of the resources. This is regulated by sexual abstinence, which is also understood as a prerequisite for hunting success. The hunting behavior is also ritually regulated; only if the hunters observe certain rules and commands can the shaman enable and control access to the game (according to Herbig, 1985, pp. 161–165, drawing on the studies of Reichel-Dolmatoff, 1971). For all the mythology inherent in this worldview, it is an intuitive ecological truth—in a sense, one could speak of this as the first law of biodynamics. Whenever a human population grows within a certain habitat with a constant or even increasing resource consumption per capita, it logically must reduce the possibilities of existence of other life. And because this other life simultaneously supports that of humans, the question of

balance between human and nonhuman life arises. It is a notion of sustainability of the highest order, so to speak—one that involves not only the resources used by humans but the entire living world. It is quite conceivable that similar ideas played a role in prehistoric times.

Social communities

I speak of 'social communities' in the sense of the above-mentioned dichotomy within the sociopolitical dimension. With the transition to agriculture and sedentariness in the form of village settlements—restricting communities' ability to evade each other—and the emergence of property in the Neolithic, it is often believed that there were increased violent conflicts. This led to hierarchically structured male-dominated societies. It is conceivable, however, that the previously valid egalitarian gender relationship continued to exist for a longer period of time, or that, in addition, women even gained a central position. This is plausible, if one considers that in the foraging stage a sex-related division of labor prevailed, in which the hunting men had to deal with animals, the gathering women mainly with plants.[3] After settling down, the women probably devoted themselves mainly to horticulture, the men, however, to animal husbandry and also retained a hunting role. In any case, the contribution of women to the livelihood will have continued to be very significant and may well have ensured a continued strong position in the community for some time.

After years of study in southeastern Europe, Lithuanian-American archaeologist Marija Gimbutas concluded that women-centered cultures existed there from about 7000 BCE to 3500 BCE. She has documented this in several books, including *The Civilization of the Goddess: The World of Old Europe* (1991). According to her, people of the time lived relatively peacefully and worshipped goddesses. Gimbutas bases her opinion on, among other things, the fact that in the abundance of figurines found, those of female character predominate by far. Furthermore, she has advocated the so-called Kurgan thesis, according to which these cultures were gradually transformed and even destroyed from about 4000 BCE onwards by Indo-European, patriarchally oriented cattle breeders migrating from the east (Gimbutas, 1991, p. 352). A final *Creation of Patriarchy*, however, probably first took place with the emergence of cities, as the American historian Gerda Lerner (1986) describes it for Mesopotamia.

3 According to more recent research, however, this idea should be regarded as outdated. It is said that women in foraging communities also went—and still go—hunting regularly (Ocobock & Lacy, 2023). It had long been known that there were indeed exceptions to the traditional rule (see, e.g., Estioko-Griffin & Griffin, 1981). But the demand to now throw the old idea overboard completely is to be questioned. When the Canadian anthropologist Richard B. Lee documented the life of the !Kung San (now called Ju/'hoansi) in the Kalahari in the 1960s and 1970s he found that "central to the foraging economy [is] a sexual division of labor" (Lee, 1979, p. 117): "Men hunt and gather, women primarily gather and very occasionally hunt …" (p. 118).

The reconstructions of Gimbutas are controversial. It is considered unlikely that a belief in divine beings existed already at that time (Barnett, 2021, p. 42). It is more widely recognized that with respect to the status of women and men the Neolithic communities were at least egalitarian if not matricentric (Barnett, 2021, p. 44). But there are also those (not only male researchers) who consider a past with outstanding positions of women impossible. It is a fact, however, that today there are correspondingly oriented and organized communities. The most famous example is probably the Mosuo people in the southern Chinese mountains (see Göttner-Abendroth, 1997). Here, social organization is based on extended families led by matriarchs, and agriculture is under the direction of women. Men do the plowing, go hunting and fishing, are responsible for building houses, and are the external representatives of the villages in political matters.

Political societies

When political positions are to be filled, it is not far-fetched to assume that this is where men come into play. According to the German sociologist Günter Dux (2019, pp. 119–127), this expresses the "external positioning of the man" versus the "internal positioning of the woman" (translation by author). This opposition has a basis in observable nature, related to the physiology of the sexes. The childbearing capacity of women results in their increased commitment to the welfare of children and family cohesion. Men, on the other hand, had already in archaic times often been absent for long periods of time for hunting, and had sometimes taken on somewhat of a protopolitical role in settling conflicts with neighboring groups. However, this represents only an explanatory starting point and not the beginning of an evolutionary necessity of male domination. History teaches us, however, that such a transformation did indeed emerge in the wake of population growth. The advent of patriarchy connected with striving for power can be seen as a decisive wrong turn in cultural evolution.

The tripartite structure of society now took on a extremely rigid and absolutist character. Every person was now assigned to one of the three estates, usually from birth. A classic example is the European feudal ternary society, which existed from the Middle Ages until early modern times. In his book *Capital and Ideology* (2020), the French economist Thomas Piketty described this form of society in detail as a "tripartite society" representing a "trifunctional inequality." He writes:

> The clergy was the religious and intellectual class. It was responsible for the spiritual leadership of the community, its values and education. … The nobility was the military class. With its arms it provided security, protection, and stability. … The third estate,

> the common people, did the work. Peasants, artisans, and merchants provided the food and clothing that allowed the entire community to thrive. (pp. 51–52).

A description of Christian society originating from the French bishop of Laon and poet Adalberon, written around 1030 CE, distinguished people in the three estates as *oratores*, *bellatores*, and *laboratores*, those who pray, those who fight, and those who work (Le Goff, 1987/1997, p. 11).

The French linguist and historian of religion Georges Dumézil is known for his theory of "trifunctionality," developed in his extensive studies of myths, legends, and sagas.[4] He regarded it as a cultural peculiarity typical of Indo-European peoples. His notion was that the deities appearing in myths were not related to natural phenomena such as the sun and moon, as is often assumed, but always had a counterpart in the functions located in the three realms of real society (Littleton, 1966). Dumézil's work is impressive, but he is wrong in his restriction to Indo-European societies, for, as we have seen, the tripartite structure follows consequentially from human nature and is thus valid everywhere.

Economic societies

In the eighteenth and nineteenth centuries, the Enlightenment and the bourgeois revolutions did away with the three-tier society. Subsequently, industrialization and the rise of capitalism led to the emergence of economic societies—with today's globalization, one almost has to speak of *the* economic society—in which the economic sector, becoming independent, increasingly took the scepter. With the development of the consumer society after the Second World War, economization experienced a further intensification. Following in the footsteps of politics, which already in the late Middle Ages had completely freed itself from moral restraints, the economy developed the idea that it was completely sufficient to base actions exclusively on economic rationality. In doing so, it can refer to its theory according to which the greatest possible common good is achieved precisely by each individual giving in to his own egoistic inclinations. The ultimate authority is supposed to be the self-regulating free market, but this presupposes that everything becomes a tradable commodity. This then also concerns the factors of production. Austrian economic historian Karl Polanyi, in his book *The Great Transformation* (2001) writes:

> Self-regulation implies that all production is for sale on the market and that all incomes derive from such sales. Accordingly, there are markets for all elements of industry, not only for goods (always including services)

4 As a result of the enormous amount of detail contained in his texts, Dumézil is not easy to read in the original. I therefore refer here to the summary account of his work by C. Scott Littleton (1966).

> but also for labor, land, and money, their prices being called respectively commodity prices, wages, rent, and interest. (p. 72)

The result is an inversion: "Instead of economy being embedded in social relations, social relations are embedded in the economic system" (Polanyi, 2001, p. 60).

With the disappearance of the three-part structure of order, the whole society dissolved into a growing set of subsystems, which now to a certain extent lead a life of their own, but at the same time are supposed to fulfill a function for the system as a whole. Religion, philosophy, and science, for example, have separated from each other. One speaks of functional differentiation. An exaggerated theory of this condition was devised by the German sociologist Niklas Luhmann with his autopoietic system theory (Luhmann, 1995). For him, the subfunctions are no longer subsystems, because they are all operationally closed communication circles that cannot communicate with each other and cannot provide a service for society as a whole. There is undoubtedly something to be said for this, if one thinks, for example, of the fact that science issues warning cries which politics hardly notices. A solution to the ecological crisis is not possible with it either (Luhmann, 1989). The individual systems are closed entities because they all have their own specific binary code by which internal communication is governed, such as true vs. untrue for science, holding vs. not holding (of offices that confer power) for politics, and having vs. not having (of money) for economics. Elements of the systems are communication events, not human individuals. These are part of the environment of the systems. So this is an extremely radical, abstract theory, and Luhmann overreaches himself in the process. He has ignored the fact that systems nevertheless communicate with each other to a large extent. This is possible because in the meantime the code of the economic system has colonized many of the other systems.

In fact, all areas of society are becoming increasingly economized, including science, which is under growing pressure to produce something useful, and above all education, which is supposed to be an assembly line, so to speak, producing employees for the economic enterprises. At least, this is the impression one gets from the reform of higher education carried out in Europe under the name of "Bologna process." It got its name from a meeting of the education ministers of the European countries in Bologna in 1999, when they signed an agreement on the standardization of the higher education system with strictly time-limited Bachelor and Master degree programs (The Bologna Declaration of 19 June, 1999). By making the rapid "employability" of graduates a key objective, the function of universities was largely downgraded to that of service institutions for the economy. Incidentally, the Bologna meeting of 1999 was a kind of "cloak-and-dagger operation" without prior consultation with the educational institutions concerned. From an economic point of view, education is a "human resource" and its value "is measured according to its exploitability for profit maximization," as the German educator Ursula Frost

(2014, p. 270) notes and criticizes. What is needed here is a reminder of the maturity that emerges from the Enlightenment, and "maturity includes critique and revolt" (Frost, 2014, p. 279). In this sense, education should always be resistance as well, with an emphasis on this addititive function, because at the same time it must be connectable to the prevailing mainstream in order to be critically effective (Frost, 2014, p. 262). "My theses on a resistant humane education boil down to the current urgency of a course correction from the economization of education to its renewed and new democratization," says Frost (2014, p. 281; translations by author).

Education should also enable one to enter the political discourse. This is urgently necessary, because politics is also largely influenced, if not controlled, by the economy, more gently through massive lobbying, more coarsely by large corporations using the means of secret arbitration tribunals within the framework of investment protection agreements to manipulate governments outright (Infosperber, 2013). The great achievement of modern times—the emergence of democratic state structures—is thus undermined.

Our civilization makes a headstand and must gain a foothold again

> We have lived by the assumption that what was good for us would be good for the world. ... We have been wrong. We must change our lives, so that it will be possible to live by the contrary assumption that what is good for the world will be good for us. And that requires that we take the effort to know the world and to learn what is good for it. (Berry, 1969/2012, p. 210)

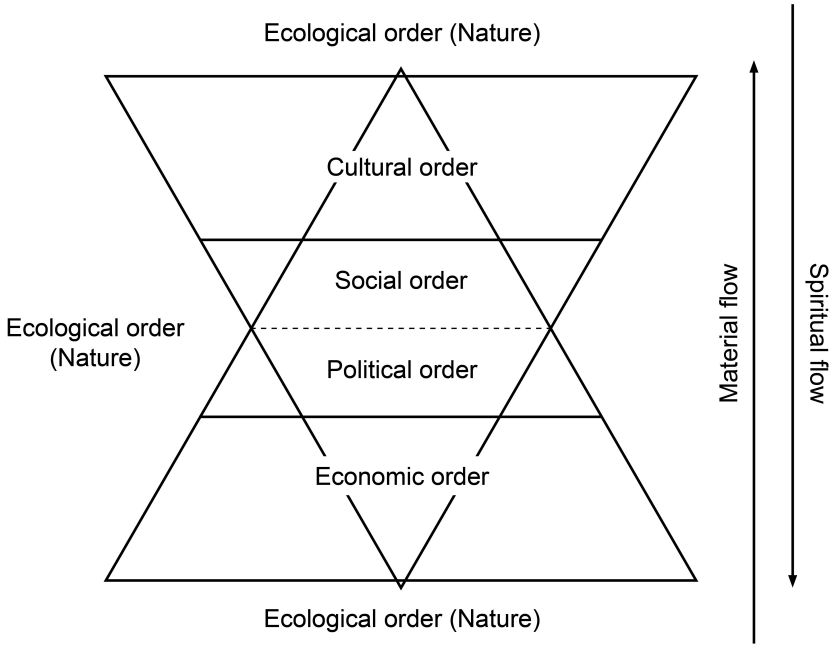
This statement by Wendell Berry, the American writer and environmental activist, expresses the fact that our civilization, at least the Western one, is upside down. As we all know, standing on one's head always involves an unstable equilibrium. With luck and skill, it can be maintained for a while, but at some point the balancing skills fail and a collapse occurs. Conversely, the headstand also means, not only in the figurative sense, that we no longer have any ground under our feet, we have become a *hors sol* society.

Park's pyramid with the material base and the cultural top (Figure 1) might suggest that a materialistic view of the functioning of human societies is at work here. Park, of course, would resist such a view, since the moral order working downward is supposed to provide consciously determined corrections to overly materialistic behavior. We are thus dealing with two opposite directions of action. In analogy to the representation of the transfer of energy or biomass across trophic levels in the form of ecological pyramids in biology (see e.g., Odum, 1971, pp. 79–84), we

can for the mode of operation of a human collective first draw a material analog of a food pyramid (we use the revised pyramid of Figure 2) and then postulate the existence of an opposing mental or spiritual food pyramid (see Figure 3). The former has a constitutive function, the latter a regulative. From the bottom up, there is a supply of material goods that has long since ceased to be limited mainly to food, but increasingly includes extrasomatic materials (concrete, sand, gravel, bricks, asphalt, metals, wood, glass, and plastic). An Israeli team has found that the amount of this technomass now exceeds that of global biomass (dry weight), not even including waste (Elhacham et al., 2020). Conversely, the cultural domain generates bodies of knowledge, beliefs, ideas, ethical considerations, intuitions, and so forth, which flow downward as mental elements and may there, by determination or negotiation, solidify into rules, regulations, or laws, but may also influence the emotional state of individuals.

The pyramidal form indicates that in each case a higher level (seen from the base of the pyramid) is dependent on the lower levels. To complete the picture we must surround the pyramids by the natural environment, which is ultimately the source of all nourishment, material and mental. For the material pyramid the connection

Figure 3: The dual structure of a human association with material and spiritual supply from nature



Source: Author.

is clear: Without input from nature there can be no economy. We can assert a corresponding situation for the contact between the base of the mental pyramid and the natural environment: Without orientation to its essence, there can be no culture, at least none that can keep a human society alive into the future. So then what about the middle level of society regarding the question of relations with the natural environment? Swiss human geographer Wolfgang Zierhofer (1997) says:

> If we take into account not only the evolutionary argument [concerning the continuity of the development of living beings and their abilities] but also the ecological argument, that the animate and inanimate environment of man flows in manifold ways into the structuring of human relations, then the concept of society would actually have to be extended in a differentiated way to all living beings and to the inanimate conditions of the habitat! (p. 95; translation by author)

Now we are in a situation in which the material pyramid suffers from oversaturation and the mental pyramid from malnutrition. This is accompanied by the claim of the former to have the right understanding of the world in the form of economic thinking, with the consequence that it also takes over the function of the mental pyramid. The dual hierarchy has thus become a one-sided, materially tinted hierarchy—a condition that the American cultural anthropologist Roy A. Rappaport (1979) diagnoses as one in which the sacred position once reserved for religion is now usurped by economics. The situation is aggravated by the fact that the economy at the material base does not follow ecological guidelines, but on the contrary considers nature as a subsystem of itself, and thus as an infinitely exploitable warehouse of goods. This is the result of neoliberal ideology. Ironically, Karl Marx and Friedrich Engels are right, who postulated that the consciousness of man is shaped by the kind of material production and not vice versa. They said:

> In direct contrast to German philosophy which descends from heaven to earth, here we ascend from earth to heaven. That is to say, we do not set out from what men say, imagine, conceive. … We set out from real, active men. ... Life is not determined by consciousness, but consciousness by life. (Marx & Engels, 1932/1974, p. 47)[5]

If our civilization is to get back on its feet, we must counteract the spiritual decay produced by economism, leading to a lack of culture. Of course, our mind must have information concerning the nature of material events, but these should not

5 By "German philosophy" Marx and Engels mean German Idealism.

appear as unchangeable, but provoke corrections inspired by the orientation on nature. In reversal of the way of speaking of Marx and Engels we should therefore descend from heaven to earth.

In the question of whether the search for the primitive could give us ideas, we have come across the existence of nature-religious world views, which have a determining force on the way of life. If we still want to learn something from them, possibly transferable to the present time, we have to hurry up, because their disappearance is in progress. For the Gibraltarian palaeoanthropologist Clive Finlayson (2014, p. 145), this has drastic consequences: "With the forced conversion of some of the last surviving populations of hunter-gatherers into civilization, humanity lost its soul." Either way, we need to reanimate the mental—some would say the spiritual—food pyramid so that it gets the upper hand over the material one. Swiss social ethicist Hans Ruh (1998) sees this as the task of the century:

> The twenty-first century is a spiritual one or none at all. André Malraux, the French politician and writer, once said that. The variation of the dictum—the future of Switzerland is an ethical one or none at all—is a provocative exaggeration, but with an accurate core. (p. 7)

And:

> The vision of a future Switzerland ... must ... be consistent with the goal of a socially just and a competitive Switzerland. (p. 8)

But:

> It must remain clear that the ecological requirement always has first priority, because in the concept of sustainability the idea of permanence logically ranks before the idea of social justice and competitiveness. (p. 8; translations by author)

We also get support from Rudolf Steiner, the founder of anthroposophy. In view of the pathological phenomena that were already apparent in societal development a hundred years ago as a consequence of the rise of capitalism after the industrial revolution, he drew up his concept of the "threefold social order." It was an attempt to develop a humane, future-oriented counter-model to the prevailing situation. It is another version of the natural tripartition of a human society. Steiner calls the parts the economic life, the life of rights, and the spiritual life, and describes them as follows:

> The first system, the economic one, has to do with everything that must exist in order that man may

> regulate his material relationships to the world around him. The second, with whatever must exist in the body social because of the relationship of man to man. The third relates to all that springs from the personal individuality of each human being and that must be incorporated, from out of the personal individuality, in the body social. (Steiner, 1919/1972, p. 19)

What is decisive now, however, is Steiner's idea that the metabolism of a society does not take place at the material end, as one might expect in reference to the human organism, but is brought about by the spiritual pole. Leber (1978) reflects on this idea:

> Spiritual life in society fulfills a metabolic task; it puts aside what has been used up or deposited, i.e., the dross, and it builds up, changes, and keeps in motion. (pp. 55–56; translation by author)

Conclusion

The simple human ecological model concept just presented can be seen as a possible foundation for a study program. It does not attempt to do justice to the complexities of today. As an educational tool, its ideal simplicity has the advantage of stimulating students to ask many questions and search for answers. After all, a study of human ecology should never simply consist of imparting knowledge, but should help to promote the formation of character with a good measure of self-thinking and self-learning.

Let us conclude with a quote from David W. Orr (2017), American political and environmental scientist:

> Without exaggeration it will come down to whether students come through their formal schooling as more clever vandals of the Earth and of each other or as loving, caring, compassionate, and competent healers, restorers, builders, and midwives to a decent, durable, and beautiful future.(pp. ix–x)

For Orr's second way to become a reality, we need a human ecology-based education system that uses head, hand, and heart to gain its ultimate orientation from manifest nature.

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