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INTRODUCTION

Anthropogenesis as an Evolution of Contrasts in Need of Harmonization¹

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LIFE TAKES MANY FORMS. Human beings can be viewed as just one of these lifeforms among others. Although it is certainly true that humans are one biological species among many others, it is also the case that humans are different from all the others in quite remarkable ways. We have produced works of exquisite beauty, sophistication, and enduring value. And yet at the same time we are threatening to drive ourselves as well as untold numbers of other species on Earth into extinction. To make sense of this anthropogenic paradox we first need to understand how we diverged from the rest of our animal cousins in the course of our evolution. We need to understand this evolutionary development, both in terms of how we are continuous with other species and how we differ. There is not only diversity in the *nature* of animal and human evolution, but likewise in the *stories* we tell about it: a diversity of scientific explanations and speculative understandings of continuities and discontinuities between animal and human life.

The aim of this book is to provide a dynamic hub where the different angles, modes, and contents of these stories can contact one another and be discussed. The chapters emerged out of the anthropological section that we, the editors, organized for the international conference “Seizing

an Alternative: Toward an Ecological Civilization” that took place in Claremont, CA (June 2015). The authors included in this volume examine core dimensions of *conditio humana* in light of *process philosophy*. They apply process metaphysics to core anthropological issues, including the survival of both the human species and the biosphere as a whole. With a general focus on the unique capacity for symbolization as marking an important and influential factor in human evolution, the following specific questions frame the different chapters of this book:

- How did symbolic thought shape the evolution of the human species?
- How did symbolic systems shape human experience of and reasoning about space, time, matter, life, and natural processes?
- How do our unique forms of power relations distinguish humans from other species?
- How do our spiritual and metaphysical belief systems influence human rationality and morality?
- How can we balance our spiritual needs with our rational abilities, and how could this influence our future evolution?
- How should we respond to the trends towards transhumanism and bio-technocracy?

Without neglecting the evolutionary continuity between the human species and the animal kingdom, the authors reflect on human particularities compared to animals in respect to the past as well as the future of our species. Considering the clear and present danger caused by human actions on Earth, all of the authors agree that retrospective as well as prospective thoughts and intuitions regarding human particularities must be guided by an overriding sense of responsibility, not only for our actions, but to understand our past and shape the future of human evolution. Two important facts about human nature moved us to edit this book. The first one is that anthropogenesis gave rise to a highly antagonistic contrast between a *need* and a *faculty*, both of which are uniquely characteristic of human consciousness. This contrast amounts to the most essential difference between humans and animals.

Humans need to make *sense* of their activities. The more our activities find their place within a social environment, the more they mean something to us. We live by values which we, whether consciously or

unconsciously, permanently reinforce or undermine through our activities, thoughts, emotions, and desires. This is true especially of ethical values. The evolutionary transition from animal to human being is inseparably connected to the emergence of a new form of creativity: *freedom*. Even though freedom is often attributed to animals, animal creativity does not reach the level of freedom. The latter should not be reduced to the ability to choose between different alternatives of action that, of course, must be assigned even to animals with simple nervous systems. Freedom can only be ascribed to beings that feel the need to justify their actions within the framework of ethical values and that have the ability to do so. Freedom is creativity that is indissolubly bound to sociality, that is to say, creativity that is guided by principles, directed towards the creation of meaning and sense, and guided by values and ethical considerations. Therefore, instead of attributing freedom to animal actions, it would be more appropriate to talk of animal creativity.

Besides the need to realize ethical sociality, our species stands out due to our highly developed faculty to think abstractly. Although many animal species manifest the ability of abstract thinking, in human beings the evolution of conceptual reasoning has reached an unprecedented peak. This has enabled us to build universally usable tools. The most powerful of them are our abstract concepts and the symbolic systems (e.g., scientific theories and social utopias) into which they are integrated. Both allow us not only to build increasingly complex material tools but also to invent narrative structures, such as myths in a broad sense of that term. Myths, for example, reaffirmations of “faith” in endless scientific and technological progress as well as economic growth, rationalize the desire to manipulate nature by employing material tools and, even more importantly, justify our right to do so. One of the most powerful instruments that emerged in the evolution of the human mind is modal thought: the ability to combine abstract concepts in order to imagine highly complex potential future situations, which in contemporary philosophy are referred to as “possible worlds.”

Due to operating with abstract concepts that can be combined in unlimited ways one with the other, human thinking is able to create an endless number of propositions that outline the image of future possible actions. This mental faculty corresponds with the evolution of both episodic (experiential) and semantic (propositional) memory. At some time in the Pleistocene, however, due to their capacity to anticipate the future and remember the past, our distant ancestors became aware of the limitedness of their existence. If beings with highly developed mental faculties and a

strong feeling of individuality become aware of their mortality, it is only a matter of time before different forms of desire for immortality and a thirst for eternity arise. Our faculty of conceptual thinking opened to us ways of canalizing different forms of mental and physical work that enabled us to create highly complex works that have outlived their creators by centuries and millennia. Philosophical, scientific, political, and economical works, such as the Vedas, the works of Plato, Hegel, Newton, Adam Smith, and Karl Marx, as well as material creations, such as the pyramids, ancient Greek temples and sculptures, and the Moai statues of the Easter Island, witness a conscious or unconscious desire of their creators to reach eternity. There is no question that most of these enormous achievements continue to perform a great service for humankind. Highly complex abstract or material creations harbor, however, a significant risk: they can become ends in themselves. This applies especially to our theoretical systems, because abstract structures tend to seduce their creators and their users into removing them from the social and ethical contexts within which they were developed. As a result, political visions; economic growth (money is also an abstract medium); work; highly abstract systems of knowledge; technological achievements; faith; the exercise of different forms of power; and fine arts have the virtually irresistible tendency to become ends in themselves. However, activities that have become self-referential ends in themselves increasingly lose contact with reality, i.e., to the wider socio-ethical context. Sooner or later this detachment from reality ends in disasters of different dimensions because self-purposes cannot limit their own expansion before they cause the collapse of their carrier and thus of themselves. In the last thirty years we have witnessed two events of historical proportions that can be traced back to stubborn insistence of political and financial elites on their beloved convictions: the collapse of real existing socialism and the enormous financial crisis of 2008 that is the worst economic disaster since the Great Depression of 1929.

We think that there is a severe antagonism between the need for meaningful social embeddedness, on the one hand, and on the other, the strong tendency of our intellectual ability to give birth to different sorts of abstract and material systems that become ends in themselves, threatening social togetherness. This antagonism is the most fundamental struggle that impels human evolution. The increasing frequency and severity of all kinds of crises have made obvious that this antithesis must become balanced if the human species is to survive. Thus, the second central thought motivating this book is the urgent necessity of raising the aforementioned antagonism

characterizing human nature to a new quality of harmonization before it is too late.

Over the last seventy years humankind has presided over the most severe ecological crisis in 65 million years. It is obvious that this crisis is rooted in the central myth of Western civilization that consists of three interconnected dimensions: the belief in endless economic growth, technological manipulation of the environment, and scientific reduction of living and inorganic nature. (The latter reductionistic perspective is the basis upon which biotechnological manipulations of vast agricultural areas are undertaken, manipulations that will likely have severe ecological consequences in the future). This tripartite myth is the most solidified end in itself that dominates the destiny of the entire human species at the present. What nevertheless makes our century so outstanding is that we must establish a new balance not only within the framework of our globalized human world but rather inside the whole living environment. We must expand our sense of ethical sociality throughout the whole living environment: Earth's biosphere. It is self-evident that this must occur not only in a spatial but also in a temporal sense. We must learn to justify our actions within an ethical framework that is seriously concerned about the present and *future* biosphere of Earth.

Following this imperative a central topic of this book is the future of human evolution. In which directions could human activities canalize our physical and mental evolution? Will we be able to integrate our intellectual abstractions with our intuitive insights so as to bring forth a new synthetic consciousness that will raise humanity to a beneficial evolutionary factor in the biosphere? Several chapters in this volume offer new approaches to ecology, science, spirituality, and technology as a counter project to the vision of the future provided by *scientistic-technocratic transhumanism*. Although most contemporary transhumanistic visions, such as the achievement of personal immortality or the creation of a new human species adapted to space travel and life on other planets, are being discussed only within limited circles, they must be taken seriously by all who are concerned about the future of Earth and our species. For just as our visions and hopes provide information about our unconscious, transhumanistic visions reveal the implicit beliefs of experts, many of whom work for big biotechnological and other high-tech corporations, about the human body and corporeality in general. Transhumanistic visions are much more than they seem to be. They display the unconscious fundamental attitudes of proponents of scientistic technocracy in its totality. Thus, even if those

visions sound bizarre, we think that they must be considered as a grave “radiograph” of the mind and soul of a powerful elite that extends far beyond the transhumanist community and might dominate a near-future society by enforcing scientism and technocracy. Hence, rather than being dismissed as the grotesque thoughts of “nerds,” transhumanistic visions should be taken seriously as warning signals about just how alienated our technologically shaped species has become from the fragile natural world we depend upon.

To show how process philosophies inspired by Henri Bergson and Alfred North Whitehead can provide a diversity of fertile responses to these issues, we have collected the views of nine thinkers from different countries and discourses.

For us, there is no better way to start this volume than with a chapter called “Humanness.” What if our biological nature cannot be separated from our symbolic nature? And if we are the “symbolic species,” then how does the human capacity for symbol use provide us with a clue to understanding our own evolution? *Terrence W. Deacon* presents his idea of an inextricable connectivity between two modes of social transmission in human evolution. He argues that a “non-genetic-non-physiological” interaction of semiotic processes is largely responsible for the way our organism, and especially our brains, evolved. A symbolic component of social inheritance is interwoven with a nonsymbolic social-cognitive inheritance. Deacon talks about three crucial points of his research: How does the importance of symbols for our evolution challenge us to find a new and more adequate theory of symbolic reference? What does it mean that humanness is primarily based on an unprecedented semiotic dynamic that influences our nervous system and its functions? After all, which mental predispositions make us specifically human?

Proceeding from Deacon’s discussion of the extraordinary importance of symbols for marking human continuities and discontinuities with animal life, the chapter “Religion in Human and Cosmic Evolution” focuses on those processes where symbolization may find its most powerful manifestation: in humanity’s diverse expressions of spirituality, mythmaking, and religion. *Matthew T. Segall* investigates the evolutionary origins of human religion according to the thoughts of Robert Bellah and Alfred North Whitehead. What does it mean that, far beyond any static definition, human religion and spirituality are interrelated dimensions of an ongoing, cosmologically-emergent activity? How does this cosmological view of the

relationship between scientific theorization and religious mythopoeia reveal the important role of our capacity for spontaneous playfulness? What was the role of play in humanity's evolutionary past, and how might a recovery of this playfulness influence the future of human evolution? Segall argues that religion and spirituality are far more than just accidental products of blind biological forces; they are expressions of the unfolding creativity of the universe in its human mode.

Indeed, a better understanding of the human relation to the universe requires a continual integration of biological and social perspectives. In this process, the human condition itself does not remain static. *René Pikarski* reflects on how the dynamic interplay of biology and sociology depends upon our view of life and power. On this account, "Are We Human or Are We Dancer?" attempts to bring together the thoughts of Henri Bergson and Michel Foucault. What does it mean that our intelligent and intuitive performances tend towards a high degree of flexibility, openness, and universality within the configuration of our relations with and references towards the world, our environment, others, and ourselves? And what does it mean that these capabilities and performances intrinsic to our condition usually take place in social frameworks and therefore in the context of power relations? Pikarski argues that a dynamic understanding of the human condition refers, at its core, to the human process of becoming a subject by developing a self that critically reflects on and transforms the dependencies that surround and penetrate it. Thus, the "care of the self" is a further expression of human creativity that, unfortunately, is often inhibited by the power mechanics of our own life-denying form of intellect.

Alex Gomez-Marin begins his chapter, "Evolution and What the Intellect Makes of It," with an elegant provocation: The human being is caught in a paradox, since we think of ourselves not only as a *result* of evolution, but also as the *developer* of various theories of evolution. In other words, the evolutionary process, in an unprecedented attempt, has been thought by one of its products: the explanandum has nominated itself as the explanans. Nevertheless, symbolizing, conceptualizing, thinking, and speaking about evolution is one thing, while evolution itself is another. Given this gap, we should be worried about the way our intellectual discourses and capacities have lost contact with the real and essential virtue of evolutionary processes. How may the intuitive thoughts of Henri Bergson on heterogeneous continuity and his notion of multiplicity be able to help us recover this essence of evolution which is veiled by our habitual ways of thinking about it?

The search for an adequate understanding of evolutionary processes further leads to the problem of how we should interpret the interactions between living beings and their environment. In his chapter, “Human vs. Animal Relation to the Environment,” *Spyridon A. Koutroufinis* introduces Jakob von Uexküll’s concept of *Umwelt* (environment) as a notion that subsumes several aspects of an animal’s surroundings that are meaningful to it. Uexküll created a biology of subjects. With respect to human subjectivity, Ernst Cassirer expanded Uexküll’s *Umwelt* by adding the component of symbolic forms and defining the human as an *animal symbolicum*. According to Cassirer, whereas animals use signs, humans communicate with symbols, which are signs that have objective meaning. It is this distinction that characterizes the specific difference between human and animal intelligence. Humans, compared to animals, not only experience the spatiotemporal aspects of their *Umwelt* in a radically different way—they live in a multidimensional symbolic *Umwelt*. Obviously, the abstract symbolic systems of contemporary physics, life science, technology, and economy enable us to act on other living beings and on the whole planet with an emotional distance, which can be destructive. Koutroufinis claims that ecologic disaster forces us to reinterpret the term *Umwelt* in order to enhance it with an ethical dimension. Such a move, he argues, requires a view of nature based on Whitehead’s understanding of natural beings as embodiments of intrinsic values. Building on Bergson’s concept of intuition and his advocacy for the rising of the age of intuition, Koutroufinis introduces the concept of *sacred environment*.

Now we are at a point where intuition more than intellect has guided us to the past and present aspects of human continuities and discontinuities with animal life. Thus, the chapter on *Umwelt* opens our view and discussion to the question of how we shape our environment and how it is going to shape us in the future. *Linda Groff* outlines various “Views of Future Human Evolution and the Future Human.” Different technological and transhumanist perspectives that separate humanity from the animal kingdom often express the heavy impact that cultural and technological factors can have on biological evolution. Furthermore, the values of these perspectives should be critically investigated in order to determine the extent to which they are prepared to meet the challenge of creating a sustainable and living society on planet Earth—or, perhaps, on Mars. What infotech or biotech perspectives and models of transformation are on the table and with the help of which normative criteria are we able to

counterbalance dangerous tendencies towards a future anthropogenesis? We desperately need an evolution of human consciousness to a dynamic, interdependent, complex, and whole-systems thinking.

Expanding on this point, the next chapter, written by *Sean MacCracken*, is concerned with the future of humanity and, to this end, critically investigates transhumanism. “Regarding Humanism: Some Observations Concerning the Tibetan Buddhist and Transhumanist Dialogue” takes the nascent dialogue between both as the occasion to reexamine normative interpretations of Derek Parfit made by Max More—philosophical assumptions that have guided the development of transhumanism in its formative stages. It seeks to demonstrate that More’s outlook represents a specific interpretation of Parfit, while Parfit himself shares a substantial philosophical vocabulary in common with Buddhist epistemology. Based on a recent body of literature examining the relationship between Parfit and Buddhism, how is it possible to furnish a response to the lack of gender and ethnic diversity evident amongst many transhumanist enthusiasts? Here, the guiding assumption is that an unyielding functionalist-materialist stance may be one of the key factors in “hard transhumanism,” alienating large sections of the population. As an alternative, it is suggested that Parfit’s category of the “empty question” is not incompatible with a Buddhist interpretation of personhood, via *Nāgārjuna*, wherein persons are held to be processes in unproblematic states of indeterminacy that are variously interpreted, not finally determined.

Many chapters in this volume assume that the contemporary ecological crisis on Earth possibly refers to what our next author terms a “disproportionation between technological success and ethical failure.” From this angle, *Jason James Kelly* examines the ecological significance of cosmic consciousness in relation to Alfred North Whitehead’s philosophy of organism. “Shared Vulnerabilities: Cosmic Consciousness and the Philosophy of Organism” deals with the question of how the concepts of cosmic consciousness and organism privilege a nondualistic or holistic idea of the subject-object relationship that affirms an ecological relationship with nature. By drawing on the work of the English author and activist Edward Carpenter, and the Canadian psychiatrist Richard Maurice Bucke, it can be shown that the ethical significance of cosmic consciousness coheres with the ecological teachings of spiritual ecology. Furthermore, the ethical and ecological significance of cosmic consciousness can be enhanced by cultivating a deeper engagement with Whitehead’s philosophy of organism. Finally, Kelly points out an intuition that is at the basis of this entire

volume: Whitehead's philosophy provides a metaphysical foundation to ground the ethical teachings of cosmic consciousness.

The last contribution of our volume is dedicated to what such a cosmic consciousness must be aware of: Humanity is losing its enlightened self-certainty about the future existence of humans due to our powerful artifacts and recent ecological and political crises. Thinking about a new human mode of being is therefore one of our most urgent tasks. "Technosophia: a Cosmohumanist Manifesto" explores ideas for a new way of being in the world relying on a specific cosmo-phenomenological worldview. *Theo Badashi* explores the fundamental principles and patterns of this cosmohumanism: What role can technology play in this new technoeological view, if we see it as both subjective ecological *and* objective material? How does a holistic cosmohumanism differ from the technocratic, naturalistic, and anthropocentric visions of transhumanism? Criticizing transhumanism need not mean we underestimate its role as one of the most important narratives about future humans. Instead, we should integrate transhumanist ideas into what Badashi calls the core components of a cosmohumanist paradigm: a universe-oriented cosmology in the form of a living universe story; the validation of all beings and modes of being; the emergence of participatory teleology; and a cosmological view of technology, called technosophia.

We assume that all the ideas, concepts and theses in this volume are a valuable contribution to questions regarding the processes of anthropogenesis. For us, it is an evolution of diversity and contrasts that must be harmonized. This harmonious balance is not achieved by simply unification, but by complex integration! This volume assembles a collection of reflections and intuitions on the specific ways we differ from other species, like our capacity to symbolize and create a helpful or dangerous distance from life, and our playfulness and proclivity for mythmaking. Our intellect is troubled by a consciousness of its own evolution, by the ecological and ethical challenges of a severely degraded environment, and it wields great symbolic and mythic fictions with the power to influence the bio-social evolution of future humans. Despite all our unique qualities, we cannot set ourselves apart from the natural heritage we share with every living being on planet Earth. Somewhere between transhumanism and cosmohumanism, we must find an ethical guide, an organismic and cosmic consciousness, and a speculative framework to manage our knowledge and our spontaneous actions towards the future.