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"SPACE RENAISSANCE ACADEMY - THE SPACE RENAISSANCE AMBASSADORS PROGRAMME"

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Abstract

Space philosophy is a valuable product of ethical and utopian thought in the history of Civilization so far. Fueled by the aims of many romantic space enthusiasts and activists during the last 200 years, this culture grew up in a spontaneous movement, more than an academic discipline. It is increasingly clear that philosophical knowledge and the capability to discuss philosophical concepts, are very much needed, by the space industry – whatever their jobs and specialization. Science and technology in and of themselves cannot space expansion: without philosophy we don't know why we are doing things, where we should go, or with which priorities. Without philosophy our moves are chaotic and uncoordinated. Admittedly, mankind sometimes stumble in the right direction just incidentally: yet, in many cases, we will simply miss the opportunity. Will we allow ourselves to miss the opportunity of this time: to save civilization, evolving into a solar system civilization? The Space Renaissance Academy feels the need – while space settlement is finally moving its first steps – to make a first tentative systematization of a vast cosmic literature, both historical and contemporary. There will certainly be other works of this kind, while the academic world finally becomes invested by the greatest anthropological change in history: challenged by natural limits, our species moves to exceed such limits, expanding into the Solar System. This paper illustrates a very ambitious plan: to build up a set of essential lectures, to train the Space Renaissance Ambassadors, which will spread the verb of Space Humanism into the real society. The key concepts, roots and development threads, will be analyzed through the history, from Plato, through the historic Renaissance to nowadays, in order to prepare our scholars for the highest task of our time: to conceive a modern feasible utopia, the renaissance of our civilization into outer space. The basic education programme to be developed includes at least the following tracks:

1. Ethics and morals of the space age: the camel shall pass now -- during the first half of the 21st Century -- through the eye of the needle.
2. Humanist philosophers and their journey to the stars – history from ancient to current age, towards future history.[3]
3. Edge of human culture: the new space industrial segment.
4. The space policy to be announced and boosted everywhere: priority to enabling technologies for civilian space development.
5. Humanist philosophy compared to other schemes of values, antithetic, synergistic, partially/potentially synergistic 6. History of biological evolution, human science and technology, economics, current science and techs towards civilization expansion into outer space.

TIMING AND METHODOLOGY OF THE PROJECT

The Space Renaissance Ambassadors Training Course[1] is a long term project. Many lectures will be developed and given to the students, over the coming years. The logical timeframe for the development is 5 years, within which the SRI 4th World Congress will be held in 2026. During such a time period at least 4 lectures per year will be produced.

The Space Renaissance Academy is employing some interns, in support of the development works, upon signed conventions with their Universities. The students will also be called, as part of their learning curricula, to develop some investigations in the world-wide literature, on the subjects of the lectures.

The above methodology reflects the setup of the SR Academy research: a laboratory, where all the participants will learn and teach, and all together will contribute to develop shared knowledge and, possibly, to mine non previously correlated concepts, as well as generate new original philosophic concepts[2].

THE OBJECTIVES OF THE COURSE

Long term goals

These are the main objectives of the course:

- To train the Space Renaissance Ambassadors

- To help new Space Renaissance Leaders to emerge, achieving the basic theoretical and rhetorical tools
- To consolidate the space philosophy key concepts in the Space Renaissance community and on the space community at large
- To earn useful comments, remarks, improvements to be applied to our narration and outreach methodology

Outcomes

After the course the students should have learned:

- the real alternatives at stake, between remaining into the closed world, vs. to expand outside: the two alternative futures, a space age or a new stone age
- the key milestones of the history of the space philosophy, from ancient Greece, to1500 Renaissance to nowadays
- some key concepts from precursor space and not space philosophers
- some not obvious gifts of space: what's easier and cheaper in space than on Earth surface
- how philosophy sustains science and technique: some philosophic (humanist) requirements for scientific and technical developments
- studying human variety, diversity and consequent needs for more freedom (*space freedom*): Abraham Maslow, Howard Gardner, Steven Wolfe, Robert Pirsig, Julian Simon, …
- the value of human life, and the full inclusive humanist compassion concept: if we are not humanist we don't need space
- Earth is not sick: she's pregnant! Our destiny: to expand life (the terrestrial biome) outside Earth
- why Space Tourism is not just a toy for super-rich, yet the key industry to start the space economy revolution, working on the issue of transporting and accommodate civilian passengers in space
- why none of the 17 SDG will be achievable without an 18th SDG: kick-off civilian space development
- why every single human life and their descendants are precious and necessary, to the next evolutionary step: salvation will be for everybody, or it will not be
- why democracy and freedom need growth, and why the only sustainable development is now in outer space
- why the real wealth is not money, but resources, know-how and human workforce
- Julian Simon vs. Thomas Malthus: sociology, people are humanity's real wealth, not the problem! human intelligence in the loop
- evolutionary space and non-space philosophers surprisingly sharing some concepts: Jackson, Pirsig, Ehricke, Wolfe, Kardashev
- the expansion of civilization beyond the limits of our home planet is the moral issue of our time (A greater world is possible)
- knowledge of space humanist philosophy authors: precursors, contemporary, science fiction

Achieved capabilities

These capabilities should be achieved by the students after the course:

- to communicate the rationale of civilization expansion into space in a systematic and coherent way
- to discuss the main concepts of humanist philosophy, and to explain why humans can reach a full human status only evolving into a solar system civilization
- to have solid arguments and rhetoric strength to reply to the most common objections to human expansion into space
- to master the evolutionary criteria, behind the civilization expansion into space
- to master the social motivations: a civilization 100% inclusive
- to master the environmental motivations: relieving our mother planet from the burden of our industrial development
- to master the economic motivations: assuring a future of growth for millennia to come
- to be a real help, thinking out of the box, in space project teams
- cultural tools for eventually to continue the study and become a Space Renaissance Leader / Ambassador
- for political and law profiles - a holistic, non-bureaucratic, 21st century view of the state of civilization and mature capability to generate strong strategic indications to help ignite an unprecedented cultural and economic renaissance
- for management, entrepreneurial, science - corporate mission definition, in a context where ethical motivations are now at least as important as purely economic-financial ones.

THE PROPOSED TRACKS

The course will develop on several conceptual tracks, aimed to cover the whole space culture, on the side of philosophy.

Each track will include several lectures, series of lectures and projects.

Track 01 - Space humanism: concepts, roots and development.

Space Philosophy has its ancient roots in Plato before the school of thought was then developed by Giordano Bruno during the Renaissance[3][4][5]. The modern age has borne out space philosophy from thinkers like Konstantin Tsiolkowsky[6], Krafft Ehricke, and other contemporary space visionaries[7], Natural Philosophy[8][9], Astronautic Humanism[10], Cosmism[6], Cosmic Humanism[11], Space Option[12], and Space Renaissance[13], are similar threads which concur to the global vision of the Space Humanist Philosophy[14]. The aim of the Space Renaissance Ambassadors high level training course project is to explore and classify the many concepts, to create a solid knowledge base

for the Space Renaissance Ambassadors, to go and spread the good news in the real society. The study will also include some authors which never wrote about space, because their understanding and theories are propaedeutic to space philosophy, e.g. Robert Pirsig, Howard Gardner, Abraham Maslow, Alfred Korzibski.

Track 02 - Ethics and morals of the space age

The camel shall pass *now* – during the first half of the 21st Century -- through the eye of the needle. The aim of this track is to illustrate the true moral issue of the current age[15]: to kick-off expanding civilization beyond the boundaries of Planet Earth before 2030, before the growth of humankind in a closed world will close the "launch window". The greatest adventure of all times, that will benefit all of the stakeholders: our civilization[16], humankind as a species[17], Earth's natural environment[18]. The value of human life[19],[20] and patrimony – the true core concept of space humanism -- is discussed and developed according to an organic and coherent methodology, with the goal of assembling together and motivating the rationales to defend and cultivate the human patrimony. Humanist philosophers and their relationshio (if any) will be investigated, from ancient to current age, towards future history. The history of the life of thinkers which dedicated their life to the progress of humankind, from ancient to current age, towards future history.

From Ancient to Middle Age

The formative objectives of the course consist in the knowledge of the history of humanist philosophical thought in the late antique, patristic and medieval age, in its connections with other knowledges (theology, sciences, mysticism, hermeticism). The course aims to provide the hermeneutic skills necessary for the autonomous reading and understanding of the major works of late antique and medieval authors who discussed the relationship between man and nature, between man and the cosmos (Plato, ...) and the interpretative tools for a critical analysis of the historiographic tradition.

From Renaissance to Enlightment

On the basis of a general knowledge of the history of thought from Humanism, Renaissance and modernity to the Enlightenment, the course aims to provide the ability, first, to understand and place in their historical context the different philosophical issues and authors; second, to read and interpret philosophical texts and critically discuss the issues addressed in them. One or more of the following authors will be addressed in the course: Cusano, Marsilio Ficino, Pico della Mirandola, Johannes Kepler, Giordano Bruno, Kopernicus, Campanella, Cartesio, Spinoza, Leibniz, Gianbattista Vico, Hume, Immanuel Kant, Giacomo Leopardi.

From Idealism to Contemporary Age

Based on the general knowledge of the history of thought of the period from idealism to contemporaneity, the course aims to provide the ability, first of all, to understand and place the different authors in relation to the advancement of scientific knowledge and human ability to transcend their limits, exploring new spaces and dimensions in which to build culture. Among the authors, at least the following ones will be discussed: Friedrich Wilhelm Joseph von Schelling, Karl Marx, Friedrich Nietzsche, Konstantin Tsiolkovsky, Robert Goddard, Werner von Braun, Krafft A. Ehricke, Gerard K. O'Neill, Abraham Maslow, Howard Gardner, Robert Pirsig, Steven Wolfe.

Track 03 - Edge of human culture: the new space industrial segment.

The ultimate outcome of the industrial society, the new generation of space entrepreneurs, are now working hard to downsize the cost of Earth to orbit transportation, and kick-off civilian space development. The new space generation is an entrepreneurial class that not only pursues personal profit, but also shares the ideal to transform humanity in a spacefaring civilization. This track will explore the different yet synergistic plans of Space X, Blue Origin, Virgin Galactic, and many other companies worldwide. The differences among the traditional aerospace segment and the new space one will be studied as well, from the points of view of anthropology, business and market approach.

Track 04 - Space policy

This track will cover the history of space policy, from the first rocket flight up to modern days. We will study and explain advances and delays, what has been done and what could had been done but it wasn't. the current space policy and the insufficient support so far tribute to the space vanguard. The space policy to be announced and boosted everywhere: priority to enabling technologies for civilian space development, including life protection from cosmic radiations, artificial gravity, green environments in space habitats, orbital debris recovery and commercial reuse, to start orbital industrial activities, asteroids and lunar mining.

Track 05 - Humanist philosophy compared to other schemes of values

Humanist philosophy will be compared to other schemes of values, antithetic, synergistic, partially/potentially synergistic. Some samples: religions, classist ideologies, ecologism and radical ecologism, environmentalism, animalism.

Track 06 - Natural philosophy

History of biological evolution, human science and technology, economics, current science and technology towards civilization expansion into outer space. Some evolutionary philosophers will be studied and compared, to understand possible common humanist concepts, e.g. Robert Pirsig, Steven Wolfe, Krafft Ehricke.

Track 07 - Space culture

Space in the arts, literature, science-fiction, music, visual arts, other arts. Particular attention will be given to science-

fiction literature and cinematography, discussing the work of many authors who gave us creative ways of building concepts and philosophy around space, through their beautiful novels, e.g., Paul Anderson, Isaac Asimov, David Brin, John Brunner, Octavia E. Butler, Arthur C. Clarke, James Corey, Robert A. Heinlein, George Orwell, Daniel Suarez, Alfred E. van Vogt.

LECTURES (YEAR 2022-2023)

L0001.T2 - Evolution of utopian thought along the history

Track: T2 - Ethics and morals of the space age

Contents:

- review of the philosophers who wrote about utopias
- identification of the limits of all utopias: development in a closed world
- comparison with the modern utopias
- conceptualization of the new space renaissance feasible utopia, in a new open world weltanschauung
- Plato "Atlantis" "Republica", Bacon "New Atlantis", Campanella "Città del sole", Moro, Saint-Simon, Fourier, Owen, Proudhon, Blanqui, Marx, … Ecological "Harmony with Nature", Transhumanism, the Space Renaissance Utopia

L0002.T2 – Ethics and morals evolution along the history

Track: T2 - Ethics and morals of the space age

Contents:

- review of the philosophers who wrote about ethics and morals
- essential concepts
- a modern humanist ethics: which of the old concepts are still valid?
- different humanist and anti-humanist schemes of values
- Socrates, Plato, Aristotle, Epicuro, Agostino, Tommaso d'Aquino, Erasmus of Rotterdam, Machiavelli, Moro, Hobbes, Kant, Leibniz, Spinosa, Cartesio, Hume, Smith, Schopenauer, Mill, Hegel, Kirkegaard, Nietzche, Ehricke, Sen, Bioethics, Ethics of the Expansion into Space

L0003.T3 – Reflecting on the actuality of Krafft A. Ehricke "The Extraterrestrial Imperative" and "Anthropology of Astronautics"

Track: T3 - Humanist philosophers and their journey to the stars

Contents:

- "The Extraterrestrial Imperative" - essential concepts
- "Anthropology of Astronautics" - essential concepts
- What KAE really said, his main focus, philosophical teachings for nowadays and for the future, refuting misinterpretations
- KAE's philosophical references

L0004.T3 – Gerard K. O'Neill's vision, a key heritage while humanity is kicking off Civilian Space Development

Track: T3 - Humanist philosophers and their journey to the stars

Contents:

- "Islands in Space" – a conceptual review
- "2081 a Hopeful View of the Human Future" – a conceptual review
- O'Neill, a scientist who left great philosophical teachings
- O'Neill's philosophical references

L0005.T7 – Science Fiction and futuristic literature

Track: T7 - Space culture: space in arts, literature, science-fiction, music, visual arts, other arts

Contents:

- cultural evolution and vision of the future
- the beginnings: scientists and lone heroes
- sociologic-fiction
- utopian-fiction
- dystopian-fiction: the age of de-science-fiction
- the good alien: deus ex machina
- social criticism (post '68)
- modern science fiction

A FIRST LECTURE UNDER DEVELOPMENT: UTOPIAN THINKING AND SPACE PHILOSOPHY

In popular understanding the term "utopia" is intended as an ideal social model, impossible to be realized. That's false. The word 'utopia' from the Greek ou-topos meaning is 'no place' or 'nowhere'. By the way, the almost identical Greek word eu-topos means 'a good place'. The term – coined by Thomas More in 1516 -- typically describes an imaginary community or society that possesses highly desirable or nearly perfect qualities for its members. Thus, utopia doesn't mean an unfeasible society, yet a desirable social model that was never experimented so far, but nothing is precluded from experimentation.

During the history, utopias generated ideologies, or more often have been taken as flag and pretext by various ideologies, leading to violent confrontations, social conflicts, wars and oppression by humans on humans. However, at the same time, ideologies were key to the progress of civilization, and utopias were shared goals to which to work and fight for. A society void of ideologies is a dead society. Without utopias, civilization has no direction to go .

Utopia is about how human culture deals with scarcity and abundance of resources along the millennia; the attempts of human culture to imagine, and sometimes to design, an ideal world. Utopias were often closely linked to forms of social thinking and criticism of social injustices. Claimed ideal societies designed by utopian thinkers – during the last two millennia – often referred to the basic socialist principles of the first Christian communities, and their proposed concepts fostered collectivist social models.

As a general assumption, we observe that all of the utopias so far failed – and/or demonstrated themselves to be unfeasible – for several reasons, all of them traceable to the fact that they were conceived within the limits of our mother planet. All utopias required 100% consensus and support, yet ended to be not 100% inclusive. All utopias were at some extent coercive and involved restrictions on personal freedoms (to reach/force 100% consensus and support). Many of them were unrealistic, and didn't consider the availability of resources. Many of them were realistic – sometimes hyper-realistic – about availability of resources and were based upon a claimed "fair management of scarce resources", ending into greedy bureaucratic despotic tyrannies.

In general terms, the history of the utopian thought can be summarized in a series of cases, moving between Prometheus's aim to progress and regressive dystopias, aimed to encourage humans to lye in the arms of, in turn, God(s), Nature or other claimed superhuman Entities.

Our lecture will not follow a chronological setup, through thousands of utopian thinkers in history. Rather we will follow a conceptual setup, focusing on some meaningful case studies, meaningful for a well pondered reflection, to understand who's on the side of Prometheus and who's on the side of a narcotic surrender to the forces of regression.

Just as an example, the Homer's Odyssey can be read as an evolutionary travel by its main character Odysseus, moving from his military life (as we saw him in the Iliad) to sea exploration, for that time, comparable to nowadays space exploration. Through catharsis and palingenesis, a new archetypal model of western man. From the ashes of the iliadic glory, here is a new aristeia (excellence) built by the sea, no more on the battlefield.

In his travel, driven by Gods, Odysseus meets several small communities, the main of them the utopian society of the Phaeacians, living on an island, Scheria. The Phaeacians have the cult of the guest, the exile, the refugee, the foreigner; their city is surrounded by walls, inside flourish houses and temples, each has land assigned to cultivate. The nomos is the law that distributes to each-one his/her pasture. The Phaeacians obey an unwritten code that requires them to respect and help guests and supplicants, they worship the gods. They are peaceful, non-violent, love art, work the fields, have ports beyond the walls. Theirs is also an urbanistically ordered city. It is a small cosmos. A small community, in which we could see an O'Neill colony placed at Moon-Earth Lagrange point, or anywhere else, after a future diaspora in the Solar System.

The Odysseus 's travel is driven by Gods, but the taken decisions belong to him. He has the opportunity to visit beautiful utopian communities, yet he is firmly in command of himself and his crew, renouncing the Sirens, Calypso, the lotus flower, that is, resisting the temptation to abandon oneself to blissful indifference in the lap of nature. The Odyssey, therefore, is a thalassocentric and anthropocentric work, quite interesting for its analogy with space travel, the ship as a starship. The Odysseus's journey represents an evolutionary growth in consciousness, of the ability to progress along the road of knowledge (Prometheus), vs. the regressive nihilism of naturist dystopian small societies, "in harmony with nature", resigned to a quasi-animal status.

Immense is the value of Homer, and Plato, for our research in the realm of cosmic humanism.

The holy scriptures, too, talk about a renounce to the Garden of Eden for the sake of knowledge, another case of Promethean impulse towards knowledge, vs. the hypnotic harmony of the Eden. And several utopian thinkers expressed nostalgia for a mythical golden age, when everything was easy and free of charge.

On a more ideological layer, many of the theoretical models – including Plato's "Repubblica" and "Atlantis" -- where elaborated in times of crisis and social tension. As a common model: representation of an ideal world, an indefinite space, random and fortuitous landing. An ideal journey of the reason to distant lands, where the distance is real and ideal at the same time. The term "utopia" denominates a place which does not exist in real experience, but which exists in the expectations and hopes of those who do not identify themselves with the society of their time.

Some basic assumption, to be validated by research includes, the following ones:

- all of the utopias so far failed – and/or demonstrated to be unfeasible – due to the fact that they were conceived within the limits of our mother planet, in a context of limited scarce resources
- any utopia, trying to develop in a closed system, leads to authoritarian social regimes and ultimately to tyranny
- both socialist and libertarian utopias cannot be realized in a closed system, with scarce resources;
- on the other hand, expanding into the solar system, humanity can give birth to many experimental societies, based on different social models
- totalitarianism can only grow up in closed systems[21]
- democracy and freedom need open world and abundance of resources
- though several science fiction authors wrote about galactic empires, totalitarianism cannot grow up in an open world, and space is by definition an open world, impossible to be closed, fenced, garrisoned

We will explore the realms of utopias, dystopias and anti-utopias, at least: Plato Republic, Religious early Christian socialism, Giordano Bruno and the Renaissance, Thomas More, Campanella, Machiavelli (prince of anti-utopians). Main concepts: leaving Eden Gardens for the sake of knowledge; Prometheus and the kick-off of culture; Totalitarianism and its structural causes; Utopias in closed systems; the "Fair management of scarce resources".

Fast forward to our days: Utopian Socialism (Marx); European Anarchism and American Libertarianism (Proudon, Bakunin, Rand); Classic science fiction (Heinlein, Bradbury, Asimov, Le Guin, Delany, Yefremov, Huxley, Banks,

Simak, and many others); Evolutionary (Ehricke, Pirsig, Kardashev, Wolfe, Zubrin, Sagan); Value of human patrimony (Wolfe, Gardner, Maslow); Hippy, peace and love; Ecologist naturism, animalism; Ecologist dystopia; Transhumanism; Artificial Intelligence

The New Space, or Space Renaissance Utopia: Gerard O'Neill, Island 1, space communities; Krafft Ehricke, Selenopolis; The space movement; Space Renaissance, a solar-system-wide humanist utopia, the open world philosophy; Variety of social models allowed by the space diaspora; Development of an economy of the abundance – ecotrophy; Fading out of starvation, underdevelopment and wars; Evolution to a full human status.

Our goal, designing this lecture, as a kicking-off starter of the associated research projects, is to demonstrate some assumptions and to draft the requirements for a finally feasible utopia, only realizable in the non-place for excellence: outer space, our solar system, with its enormous abundance of resources, is the baseline for an economy of abundance. Not an economy at all, an *ecotrophy*, rather.

Some basic requirements for a modern utopia should include, at least:

- to be based on virtually unlimited resources (the solar system's resources)
- to be 100% social inclusive
- to allow each and every individual to reach the highest goals of the Maslow hierarchical pyramid of the human needs
- to fully respect freedom and different aims of all human types and attitudes (Wolfe+Gardner classifications)
- to not require 100% consensus and support
- just to require freedom, allowing (not to prevent) the supporters to realize the experiment
- avoid any coercive methodology
- 100% inclusive and free means: fully open entry door, fully open exit door.

The above requirements perfectly apply to the Space Renaissance utopia.

SOME CONTINGENT GOALS: SPACE POLICY

Commercial space

Though being designed as a long term project, the Space Renaissance Ambassadors Training Course owns some political objectives, of paramount importance in the current historic period, the 2020-2030 decade. We are witnessing the explosion of the new space sector, having many characteristics very much different from the previous realm of traditional aerospace. Morgan Stanley lists 10 main drivers of the new space sector: Satellite Launch, Satellite Internet, Deep Space Exploration, Lunar Landing, Earth Observation, Asteroid Mining, Space Debris, Space Tourism, Space Research, Manufacturing[22].

Such a process progressively gained momentum since 2004, when ScaledComposites and it's SpaceShipOne won the X-Prize[23], reaching 100 km altitude twice in a week, having just a refuelling and ordinary maintenance and spending only 30 Millions, given by Paul Allen (the partner of Bill Gates). Space X, one of the companies grown up in that enthusiastic race, kicked-off the age of reusable launch systems in 2015. Something long sought by space advocacy organizations, that caused a first meaningful downsizing of the transport to orbit cost. Commercial space took-off at unprecedented pace, during the last 7 years. The global new space economy is now near 0.5 trillion[24]. This process is taking place not only thanks to private industry. What happened, simply, was the end of the NASA captive market, that in the old-space age was restricted to few institutional big suppliers. The lower cost offered by Space X, Blue Origin and other new space companies, was the main factor to determine the change of paradigm. Giving contracts to new space companies, NASA is de facto supporting the development of the new space sector, and the expansion of commercial activities in Earth orbit and beyond.

Is space settlement really taking off?

Observing this process from the space philosophy perspective, everything fine then? Is space settlement really taking off, on the wings of commercial space?

Some doubts are legitimate. The pre-copernican conception of the Earth being a closed world, and fully different from the rest of the universe, is still well rooted, not only in the society at large, but inside the space community too. According to such a backward view, humans will never adapt to live outside their mother planet. Not to mention the fact that the supporters of this view seem not be aware that humans migrated from equatorial regions up to near the North Pole, changing their physiology, and adapting to very different climatic conditions. Such a vision sees humanity bounded to Planet Earth, and any further expansion impossible, or feasible only in distant future, on planets many light-years far away. The anti-expansionist current seems to be also completely unaware of the Gerard O'Neill's space settlement model[25], based on large artificial orbital infrastructures, simulating gravity by rotation.

Earth is a celestial body like billions others

Of course they are wrong: as Giordano Bruno[26], and other philosophers have argued since many centuries, Earth is just one of the celestial bodies in the universe, made of the same substance, materials, chemical components. Expanding to our solar system, as a first step, is perfectly feasible, just a little more difficult than previous migrations, made on Earth's surface. Yet, the degree of difficulty of each migration corresponds to the degree of technology and the maturity of the civilization that is undertaking it. For the oceanic navigators of five centuries ago the challenge was not less hard (maybe more) than for us to expand to the Moon and Mars.

Humanity needs to keep on growing

Humanity needs to keep on growing[15], maintaining a reasonable demographic increasing pace, and cannot do that anymore on Earth surface only.

It is only thanks to our growing numbers that our technology culture took such a quick and spectacular development. It is only thanks to mass education systems in the industrial countries that a new social subject take place: young visionary entrepreneurs, engaged to provide solutions for a growing humanity and growing markets, aiming to that incredible growing business opportunities. Thanks to our growing numbers the nursery of good ideas has grown accordingly, until when Mother Earth has begun to protest us: "Wait a minute boys, you're 8 billions now! I cannot sustain you anymore! If you don't understand it I will take my counter-measures…". And we had Covid, and then a more dangerous virus: a patologic large support to crazy leaders, which are taking us to a global conflict. Yes, desperation and fear of the future is another natural counter-measure. Any animal, when imprisoned in high number inside a closed cage, will react in two ways: 1) going crazy, and killing each-other (the majority) 2) looking for solutions (the minority).

The larger such minority, the better the probability to go over the crisis. The size of the minority is a consequence of the numeric growth combined with mass education (the gift of industrial society).

Now, our growing process can go ahead only outside Earth, in the geo-lunar space and beyond. Good, we have the technology, or almost have. So, where is the problem?

The eye of the needle

Don't we get so excited: we know perfectly that private business initiatives move ahead only when investors see opportunity to get profit. And this is the challenge, the *eye of the needle*, which the famous camel is supposed to cross.

Now, the commercial space enterprises seem to be more attracted by the possibility to grab space resources (from the Moon and Near Earth Asteroids) by means of robotic means, driven by artificial intelligence, to mine rare earths, helium 3 and other precious minerals, scarce on Earth's surface. Such orientation, to bring space resources on Earth to push further industrial development only inside the boundaries of our planet, would be a pre-copernican strategy that would increase the pressure inside our closed environment, forcing the already compromised balance between earth environment and human development.[27]

Such an orientation by many investors – apparently logic as far as a rather quick return is concerned – is resonating with the philosophy opposed to expansion.

Of course the development of civilian astronautics will still mainly take place on Earth surface, and obviously it will challenge the earthly environmental balance as well. Yet, the risk would be worth, if we will be working to move and expand outside, while it would be useless and suicide if not.

Evolution vs. back to *post*-history

In our understanding of the current status of civilization, we know that kicking-off the expansion into outer space, giving birth to a transterrestrial[3] world, is an obligation, from many points of view: civilization survival vs. the multiple crises of the closed world environment, first of all. An evolutionary step coming quickly to a break-point, in which we will see if human species is mature enough to step to stars, or it will be thrown back to pre-history or, worse, to *post*-history.

Progressively moving industrial development to the geo-lunar space is the real solution to all of the current terrestrial crises. Just to mention one, the earthly global energy demand will be halved, being restricted to the demand of private citizens.

We know that, should our civilization have more time, the commercial space age would likely establish the logistic infrastructural foundations for space industrialization and settlement. Yet, we don't have so much time: civilization is at high risk of collapse, under the strokes of the multiple crises Armageddon.

That's why we need a strong patrol of Space Renaissance Ambassadors, having the primary task to explain the humanist evolutionary needs to the society at large, with the goal to get popular understanding and support to the giant effort of space settlement. And to convince politicians that this effort needs any possible support.

In the general scenario of critical conditions determined by the multiple crises, we can see at least one aspect that works with us, in the same direction: the entrepreneurs which are most engaged in this race are of course working according to the laws of free market, i.e. profit. Yet they are also motivated by a philosophical vision and high humanist ideals, and seem to understand the extreme urgency of their task. Elon Musk declared several times that he aims to contribute making humanity a multiplanetary species[28]. Jeff Bezos is working for laying the groundwork for millions of people to permanently live and work in space[29].

Another factor, in the same evolutionary direction is the Space Tourism industry, that finally moved its first steps by Virgin Galactic and Blue Origin. ST is the only sector having in its mission the transportation of civilian untrained passengers in space: one of our goals is to demonstrate, by solid scientific and philosophical arguments, that this is a high humanist enterprise, worth to be sustained.

And, however, as demonstrated by the facts, Musk and Bezos are now among the richest men of the world: aiming high brings huge profits! To accelerate such process, e.g. to start as soon as possible producing fuel in space from moon and asteroids resources[30], will bring even more profit, and greatly contribute to open the space frontier to all the people of Earth!

Concluding, among the goals of the Space Renaissance Ambassadors Training programme, we also have the one to put together, in a coherent space policy vision, all the best arguments to support *human expansion*, to be kicked off quickly, before 2030, vs. any concept of using space for Earth only.

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