

Different thematizations of evolution in connection with Spencer
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Summary

Herbert Spencer's theory was influential during his lifetime, but by the time of his death in 1903 it had been eclipsed by other theories that had emerged in the interim, and was almost completely ineffective for many decades after his death. When Talcott Parsons returned to the U.S. from Germany after a long study tour and summarized the major tables of social theory there and in France in 1937, he began by asking, "Who reads Spencer today?" and declaring that Spencer's work was dead. But after nearly thirty years, in the light of General Systems Theory, which had since emerged and had begun in the field of biological theories but could be applied to the analysis of the physical, biological, and social spheres of reality, he saw, beginning in 1961, that Spencer had described functional differentiation and other evolutionary processes and mechanisms central to the modernization of societies in essentially the same way that General Systems Theory does today. Today, it can be said that the emergence of general systems theory as a central theme of all social science, and the analysis of individual social institutions from a systems theory perspective, has gradually revised Spencer's sociological theory.

In addition to the above considerations, which are mainly found in historical sociology and sociological theory, philosophical ontology, which analyzes the phenomenon of the evolution of reality at a broader level, also includes lines of analysis that deal with the evolution of the phenomena of reality. In particular, the ontological foundations developed by Nicolai Hartmann in the 1930s provide a good basis for a new approach to social evolution in comparison with those mentioned above.

The following analysis was made for a conference on *Herbert Spencer*, and the various formulations of the problem of evolution are central in his theory.

1. The disappearance and revival of Spencers theory

Herbert Spencer's theory was influential during his lifetime, but by the time of his death in 1903 it had been eclipsed by other theories that had emerged in the interim, and was almost completely ineffective for many decades after his death. When *Talcott Parsons* returned to the U.S. from Germany after a long study tour and summarized the major tables of social theory there and in France in 1937, he began by asking, "Who reads Spencer today?" and declaring

that Spencer's work was dead. But after nearly thirty years, in the light of *General Systems Theory*, which had since emerged and had begun in the field of biological theories but could be applied to the analysis of the physical, biological, and social spheres of reality, he saw, beginning in 1961, that Spencer had described functional differentiation and other evolutionary processes and mechanisms central to the modernization of societies in essentially the same way that *General Systems Theory* does today. ¹ Today, it can be said that the emergence of general systems theory as a central theme of all social science, and the analysis of individual social institutions from a systems theory perspective, has gradually revised Spencer's sociological theory.

But what caused its long disappearance after its early enormous impact? *Robert L. Carneiro*, in his 1981 study, has gone through the accusations against Spencer and shows from texts that most of them were simply the result of a superficial knowledge of Spencer's work. Primarily, Spencer's theory was equated with the historicism that had flourished before him, and his theory of evolution was dismissed as a version of a linear view of history. Carneiro uses texts to show that Spencer explicitly states the opposite in his *Principles of Sociology*. ² But the charge that even in the early years of his work he long used the term progression to analyze successive historical changes and only later began to replace it with the term "evolution" is valid. In a letter written in the 1860s, he indicates that he was aware of this change because he recognized that the term "progression" contained a teleological implication, and he wanted to get rid of it because there was no predetermined direction of change behind the changes. ³

Jonathan Turner and *Charles Powers* also address in an essay the reasons for the displacement of Spencer's theory, and in their listing, it was not primarily the intrinsic problems of this theory that caused this, but rather the political entrenchment of social theory in the academic-university environment of the early 1900s, whose political premises simply displaced this theory. Thus, the fledgling sociological and social science community took the state's progressive efforts to benefit the underprivileged as an evidential starting point for its academic premises, while Spencer's moral conception of the state and the rule of the free market politically stigmatized his theory. ⁴ But social scientific thought, steeped in stubborn leftist ideological premises, was also repelled by the assertion of "survival of the fittest" as an evolutionary principle, which Darwin in fact borrowed from him. But in the political battles, proponents of *Social Darwinism* were branded as the cause of the downfall of the powers that

¹ See Talcott Parsons: An Outline of the Social System. In. Parsons et al. (eds.) *Theories of Societies*, Free Press. New York. 1961 pp. 39-90, also in *Societies. Evolutionary and Comparative Perspectives*. Englewoods Cliffs. Prentice Hall. 1966.

² "Like other kinds of progress, social progress is not linear but divergent and re-divergent. Each differentiated product leads to a new set of differentiated products." Spencer, *Principles of Sociology* 1873, cited in Carneiro 1981, 187.p.

³ Spencer's first systematic treatise on the laws of historical change was published in 1857 under the title "Progress: Its Law and Cause," and he wrote in his autobiography about the later substitution of the term "progression" for "evolution": "But as early as the 1860s he points out in a letter that there is need of a term which does not convey the necessity of progress in a certain direction because it does not correspond to the changes of history . the adoption of the word arose from the realization that "progress" has an anthropocentric meaning and that a word is needed that is free of it" (see Carneiro 1980. p. 159)

⁴ "There can be no doubt that Spencer's moral philosophy stigmatized him, especially his view that the state should not intervene too much to help the unfortunate. This view was at odds with the expansion of the welfare state in the twentieth century. The ideology taints Spencer's sociology, and it has clearly made scholars reluctant to give it a fair reading. "Turner/Powers, 2002, 85.p.

supported it after the war, and Spencer was one of them, as a figure of 20th century conservative social philosophy.⁵

But beyond these political-ideological reasons, which qualify sociology itself rather than his theory, Spencer was repeatedly criticized for using biological analogies to explain certain features and evolutionary processes of sociality. *Ferninand Tönnies* even criticized this sympathetically in a 1905 article, suggesting that such an account hindered rather than advanced understanding, but most simply assumed that Spencer viewed society as a human body. While Spencer himself acknowledged this criticism, stating that he did so only for illustration and better understanding, in retrospect it can be said that by this illustration he obscured the fact that in the physical and biological spheres "matter" and the "living organism" form the basis as the evidential basic element of these spheres, scientific research and the exploration and tabulation of relationships, it did not occur to him what this specific basic element might be in the case of the social sphere. The explanation by biological analogy covered this gap for him, and since the theories of society developed after the beginnings of *German Geisteswissenschaft* in the 1880s by *Wilhelm Dilthey* and *Henrich Richert*, and later by *Edmund Husserl*, *Max Weber*, and *Nicolai Hartmann*, proceeded from the idea that sociality is based on the institutionalization of sense, Spencer's analyses can only be considered interesting in the history of sociology without it. And the real addition, the functional differentiation and increase of complexity that accompanies social evolution, has become the established thesis of contemporary social science with the help of General Systems Theory, without using Spencer's theory for it. Had the scientific community of sociology not suppressed Spencer's theory, which outlined these connections as early as 1870, because of its ideological bias, it could have moved in this direction at the latest from the early 1900s and not only from the 1960s. Spencer's theory thus not only disappeared for a good sixty years, but was also largely excluded from the development of the social sciences during that time.

2 Development, Progression, Modernization

Spencer initially used the term "progression," which had been widely used in intellectual life in the 19th century in the wake of historicism, to describe social change, implying that the world was moving toward a better world according to its internal laws, and only when he had theoretically summarized the detailed knowledge of social history that he had accumulated did he begin to use the term "evolution," which rejected this final, purposive view of history. Beginning in the early 1960s, the mainstream of sociology replaced the term evolution with modernization, especially in the wake of some influential American authors. However, leaving the level of sociological theory and historical sociological authors and looking at theoretical reconstructions of reality, including developmental and transformational tendencies of society, from the level of ontological-philosophical thinkers, the theoretical framework is formed by the superposition of layers of being, including the gradual construction of the mental layer of society in the course of evolution. This was developed most extensively by *Nicolai Hartmann* in the 1930s, and today his theory of the evolution of the layers of being is available alongside the trends of thought on social evolution to work out the connections.

⁵ "Spencer's coining of the term "survival of the fittest" and the use of that idea in much of twentieth-century conservative philosophy and, worse, in the eugenics movement of the last century have further stigmatized his sociology." Turner/Power 86. p.

Although progression was a central idea of the 19th-century intellectual milieu, it appeared as early as the early 1700s in *Giambattista Vico's* description of the ever-ascending spiral of human development, and in the early 1790s in Frenchman *Condorcet's* description of human history as the development of man's increasingly unfolding intellectual capacities. Hegel's conception of human history as the unfolding of the absolute spirit, *August Comte's* parallel conception of history as a succession of necessary stages, and Marx's conception of the emergence of communist society at the end of the necessary succession of modes of production are all different expressions of this historicist conception of progression.⁶ As we have seen, Spencer himself began to express his ideas unconsciously embedded in this train of thought, and it was only with the accumulation of systematic historical knowledge, involving not only his own research but also his assistants whom he employed as research secretaries,⁷ that he abandoned the term "progression" and began to use the term "evolution" more and more emphatically instead, in order to free himself from the implications of a conception of history with a definite future goal.

Evolution, then, is a term for describing historical change without a predetermined goal, and Spencer used it before Darwin, but it was Darwin's empirical work on the origin of species that made it truly acceptable to the general intellectual public. In the early 1900s, the idea of evolution in sociology was discredited by Spencer because of the biological analogies, and the idea of human history as a struggle of races was discredited by the Social Darwinists (e.g., in the works of *Ludwig Gumbrowicz* and *Gustav Ratzenhofer*) because of the demise of the powers that used it as an ideological prop in World War II, and it was not until the 1960s that this line of thought began to be revived. A central role was played by the work of the American *Talcott Parsons* in the 1960s - he became the world's most influential social theorist for a number of years - in the wake of which *Niklas Luhmann* in particular reintroduced the idea of evolutionary social theory to the German intellectual world. However, he had already completely set Spencer aside and taken Darwin's theory of evolution as a starting point, from which he continued only the analytically isolated general evolutionary mechanisms, as *Donald T. Campbell* stated in the 1960s on the basis of Darwin's analyses. According to Campbell, in any change in a social institution, one must always keep in mind the pool of available alternatives, the selection mechanisms that selected one of the alternatives and discarded the others, and the mechanisms by which the selected alternative was stabilized. The application of the evolutionary perspective to the study of social institutions is thus simplified to the mechanisms of generation of *variations*, the mechanisms of *selection* from these variations, and finally the mechanisms of *stabilization* of the selected.⁸ Luhmann used this conceptual set to analyze evolutionary change in a number of social subsystems in extensive volumes. Thus, in the subsystem of modern law, the production of variation is ensured by *de lege ferenda* (academic opinions only) legal solutions published in legal journals and discussed in legal academic circles, which develop alternatives to the existing legal solution, Their effects are discussed theoretically, but they are merely alternatives in abeyance until one of them is highlighted by a government with a parliamentary majority and made law by insertion into the existing law, thereby abolishing the existing. Legislation is thus the selection mechanism that chooses from the pool of varieties and sets aside the rest as

⁶ See László Kiss. *Acta Agriensis Sectio Historiae*. 2015. XLIII. PP. 134- 139.

⁷ Spencer, who had inherited a prestigious legacy, could afford to employ as private secretary from the early 1860s the young Scottish junior scholar David Duncan, who collected material on the historical unfolding of civilizations under his guidance, followed by James Collier and later Richard Scheppig. The work he directed was then published in fifteen volumes under the title *Descriptive Sociology*, the first eight between 1873 and 1881, and after his death the remaining seven volumes by 1934, forming the basis for his voluminous work *Principles of Sociology*, which runs to over two thousand pages (see Carniero 1991, pp. 162-163).

⁸ See, for example, Niklas Luhmann: *Evolution and History*. *Sociological Enlightenment* 2. 1975. p. 150-170.

mere de lege ferenda academic opinion. This legislative selection also stabilizes for a short time, but real stabilization takes place only when what is selected is incorporated into the legal dogmatic conceptual system, because until then it is only tried out, even though it is already law. The same is true of the variety of political parties in the political subsystem, where cyclical elections select the new and new governing party, displacing the old, and thus temporarily stabilizing the selected until the next election displaces it. In the subsystem of science, the variety pool consists of the scientific assertions made in ever new scientific publications, and the constant process of dethroning or merely modifying and supplementing established scientific truths is free scientific debate, and, if not in one fell swoop, as in politics in parliamentary elections, the dethronement and establishment of new truths occurs gradually, and the more durable results are incorporated into broader scientific paradigms, just as in jurisprudence the more durable parts of new legal products are incorporated into legal dogma.

Along with progression and evolution, "modernization" became a guiding concept in sociological research from the mid-1960s. This was based on the fact that extensive material had accumulated over the preceding decades on the principles of social organization in the communities of the former African, Asian, and Latin American colonies, which were highlighted in comparison with the more successful European and broader Western patterns of civilization, why these societies stagnated, and what, in comparison, were the reasons for the rapid development of European civilization, especially in the western parts of the continent, from 1500 onward, which later enabled them to militarily subjugate and permanently dominate the entire world. In this context, they developed the general trends of modernization that Western societies underwent over many hundreds of years and contrasted them with the stagnant human communities of Africa, Asia, Australia, and South America as traditional societies that lacked it and therefore built their societies without it. The main tendency of modernization was functional differentiation, as, for example, law was gradually separated from morality and custom in European societies, beyond the separate judiciary that existed in several stagnant civilizations but was supplemented only in the western half of Europe by conscious legislation and a legal conceptual system that was adopted somewhat later in the Eastern Europe. The functional differentiation of politics emerged around 1800, when the struggles of political parties led to a constantly renewing structure of state power through cyclical elections linked to the legislative process in parliament. Similarly, secularization pushed back the all-dominant character of religion, and from 1600 onward, free scientific research became possible, which was able to exist as an independent scientific subsystem with the emergence of secularized universities. Without further enumeration, separate subsystems were created to fulfill all major social functions, and with them came the development of mechanisms for their constant internal renewal, so that in addition to differentiation, constant innovation was built into each functional subsystem, while the main problem of stagnant societies was the immobility of the structures once built, which could only somehow be solved by cataclysms (regicide, etc.) in times of tension along with great destruction. But mechanisms for internal and exchange of activities between differentiated functional subsystems were also developed as a modernization trend. This was developed by Parsons based on the role of money in the economy, and just as money fulfills this function here, its own means of exchange fulfill this function in the other subsystems. Following on from this, Niklas Luhmann has shown, on the basis of empirical research in the American sociology of science, that the mechanisms of scientific reputation work, and in his analysis the scientist's "money" is a measure of his reputation, indicated by his citation index on the surface, and when the whole scientific and university system (appointments, distribution of

research funds, etc.) is linked to this, it functions like a market economy based on the circulation of money.⁹

Thus, functional-structural differentiation, the integration that bridges it, and the incorporation of mechanisms that allow constant innovation and renewal are the main modernization tendencies, and these modern social structures have been used to confront traditional societies in order to understand the causes of their stagnation.

3. The evolution of the layers of being

In addition to the above considerations, which are mainly found in historical sociology and sociological theory, philosophical ontology, which analyzes the phenomenon of the evolution of reality at a broader level, also includes lines of analysis that deal with the evolution of the phenomena of reality. In particular, the ontological foundations developed by *Nicolai Hartmann* in the 1930s provide a good basis for a new approach to social evolution in comparison with those mentioned above. It is related to the above in that the dominance of the German intellectual school of thought in the social theories that emerged from the early 1900s onward led to the specific substance of sociality being conceived as the institutionalization of the structures of meaning, and the evolution of sociality in each of these theories was in some sense an evolution of the representations of meaning. But in these analyses, the construction of the social world on its physical and biological foundations was only present as evidence, and the evolution within the social world was no longer systematically linked to the evolution of the biological layer of being that evolves toward the physical, or to a comprehensive analysis of the unified evolution of comprehensive reality. This had traditionally been the domain of ontology in philosophy, but since the 1950s it had been relegated entirely to philosophy itself. Fortunately, Nicolai Hartmann had already crowned this direction with his research in the 1930s, and we have here his summary of this domain.

First, it should be pointed out that the necessary elevation of the understanding of social and human evolution from the narrower sociological-theoretical evolution/modernization analyses to the level of philosophical ontological analysis has become particularly important today because social evolution, which was based on human intelligence for many hundreds of thousands of years, has been increasingly supplemented by machine intelligence in recent decades. Thus intelligence itself, the central core of social evolution, is directly involved in the rapid processes of change that are already reshaping the whole of social evolutionary theory to date, and may to some extent replace the limited sociological-theoretical subject matter in the near future. So let us take a closer look at this.

In recent years, the growing power of artificial intelligence has struck fear into the hearts of both practitioners (*Elon Musk*) and theorists (*Steven Hawking*, *Nick Bostrom*) who have directly addressed its use, and is described as a new development beyond human control and beyond human control. Another description of this newness, based on a remark made by *John Neuman* in the years before his death, thematizes it as the advent of the *Age of Singularity*.¹⁰

⁹ See, e.g., Niklas Luhmann: *Self-control of Science*. *Sociological Enlightenment* 1. 1971. p. 232-252.

¹⁰ That Neumann was the first formulator of the Singularity is known only indirectly from Stam Ulam. He recalled in 1957, a year after Neumann's death, a conversation he had had with him in the early 1950s, and it was then that Neumann spoke to him briefly about the coming of the Singularity: "The accelerating progress of technology and the changes in the way of life of human beings give the appearance that we are approaching an essential Singularity in the history of the race, beyond which human affairs as we know them could not

According to the latter, ever-increasing computer capacity and ever-faster program execution are bringing self-learning artificial intelligence to a point where human intervention, which has previously slowed its acceleration, is eliminated. From that moment on, self-learning and self-evolving sub-algorithms capable of speeds millions of times faster are switched - uniquely in world history (*singularity*) - to speeds millions of times faster, and within hours become completely incomprehensible and uncontrollable even to the computer scientists involved. Robotics developing in parallel will also enable artificial intelligence to produce anything, and this will not only result in artificial intelligence becoming incomprehensible to humans, but also in humans being deprived of control over the changes in the world and giving way to artificial intelligence - and this is the age of post-singularity.

If we leave aside for a while the concepts and fears of AI theorists and focus instead on the philosophical concepts used to analyze the previous evolutionary leaps of the world, the ontological analyses of the last hundred years, already empirically grounded, will also allow us to make a more informed analysis of the rise of AI. In exploring the general evolutionary leaps in society over the last few decades, *Nicolai Hartmann's* theory of layers of being has been most helpful to me in understanding the coexistence of social existence and its underlying physical and biological layers. I have always accepted Niklas Luhmann's rich theory of social systems and subsystems as embedded in Hartmann's theory of the larger context (see my summary, Pokol, 2013.) Turning now to the exciting developments in artificial intelligence, I gain a framework for Hartmann's theory of layers of being and a hypothetical formulation of the possibility that a new layer of being is being created. Just as the biological layer of being on earth once rose above the physical layer of being, so, with its evolution, the psycho-emotional layer of being gradually rose in the upper levels of animal life, beginning with the mammals, and finally, at the primate level, the spiritual layer of being gradually emerged, by which the lower layers of being were increasingly eclipsed in human communities. And now we stand before a new evolutionary leap, and above the intellectual being layer bound to the human being (and the psycho-emotional, biological and physical layers constantly subordinated to it) a new being layer seems to develop, which begins to develop to the self-organizing intellectual being layer, the successor of the intellectual being layer bound to the human being (and the other being layers lying under it), as world-determining force. In the following I will examine this train of thought.

Nicolai Hartmann has already analyzed in detail the relationship of the new layers of being to the evolutionary older, underlying layers of being in earlier evolutionary leaps and has established common regularities between the newly emerging layers of being after each earlier evolutionary leap and their predecessors. In this way it is worthwhile to briefly recall some of his findings before analyzing what lessons can be drawn from them for the new layer of being that is now emerging as the level of artificial intelligence, when it will be perspectively autonomous and self-organizing.

3.1 Man and the Hierarchy of the Layers of Being

What is actually "human" in man is the gradual dominance of the intellectual layer of being over his physical, biological and psycho-emotional layers of being, but at every moment of his life he is influenced by the laws of all four layers. Man is a multi-layered being, and human communities can develop within the sum of the laws of these layers of being. The

continue." This is the first known use of the word "singularity" in the context of human technological history. (Quoted in Kurzwweil 2012:185.)

upper layers can develop only by taking into account the laws of the lower ones, but this does not exclude that the laws of the higher layers are independent of those of the lower ones. The building up of the higher layer took place first by reshaping and keeping the laws of the lower layer, but with the two uppermost there is no more reshaping, but only the building up on the lower layers. While the material elements of the physical world are also used as elements by the biological-organic layer - only transformed by their own life-world laws -, there are no material elements with the psychic layer and the intellectual layer building on it. Here the elements of the lower layer of being are no longer retained in transformed form, but are simply built up by the higher.¹¹ In Hartmann's formulation here is a longer quotation for all four layers of existence: "To understand multi-layeredness, it is sufficient to stick to generally known facts. Nobody doubts that organic life is essentially different from the physical-material. But it does not exist independently of the latter: it contains it in itself, is based on it, indeed the laws of the physical extend deeply into the organism. This does not prevent the organism from having its own laws beyond them, which do not merge into them. Such a self-legislativity then over-shapes the lower, general physical legality. It is similar with the relation of the spiritual being to the organic life. The soul is, as the phenomena of consciousness prove, quite dissimilar to the organic, it obviously forms its own layer of being above it. But it exists everywhere, where we meet it, in dependence on it, as carried being. (...) Thus, the mental being is indeed carried being, but in its peculiarity it is autonomous in spite of all dependence. Finally, since the overcoming of psychologism, it is a well-known fact that the realm of mental being is not absorbed in that of psychical being and its legality. Neither the logical legality nor the peculiarity of cognition and knowledge could be exploited psychologically. Much less the sphere of will and action, of valuation, of law, of ethos, of religion, of art. These areas all reach far beyond the realm of psychic phenomena, if only in terms of their phenomenal content. As spiritual life they form a layer of being of their own and higher kind, with whose richness and variety the lower ones cannot remotely measure up. But also here the same relation to the lower being prevails. The spirit does not float in the air, we know it only as carried psychical life - carried by the psychical being, not differently than this is carried by the organism and further by the material. Here, too, therefore, and here more than ever, it is a question of autonomy of the higher layer in relation to the lower, precisely in dependence upon it."¹²

Thus, man is a unity of four layers of being, and human reason functions based on the lower layers of being, that is, on the basis of man's biological body. More precisely, the mental layer of being is the realm of pure mental activity, and Hartmann describes it as a combination of three inner mental forms of being: the form of being of the individual mind, the objective mind, and the objectified mind. The first two are the forms of the living mind, while the objectified mind is the dead mind, but going back to the latter in a situation, its parts can constantly transform into the form of the living mind. The individual mind lives together with the contents of the objective mind of its time, and it is more or less the multiplicity of the individual minds that carry the forms of existence of the objective mind as the folk spirit of a time and the other collective spiritual manifestations of the time. But at the same time the individual mind also possesses to a large extent the very contents which are contained in the objective spiritual forms of its time - for it is on this basis that man was socialized in childhood, and his individual mind is formed accordingly - and their relationship can

¹¹ Let us now bracket the fact that brain research in recent decades has now found - based on the initiatives of Donald O. Hebb in 1949 - that in hundreds of millions of brain neurons each new cognition and experience brings a group of neurons into a particular arrangement, and that in this sense there is a material basis for the mental changes in the brain. For an analysis of this, see the chapter on neocortex in Kurzweil's 2012 book Kurzweil, 2012:pp. 85-95.

¹² Hartman 1962, 71. p.

therefore be described rather as interpenetration. And with the expansion of the contents of the third form, the objectified mental form of existence (the multiplication of the forms of intellectual fixation by writing, printing, etc.), the individual minds can, in addition to the objective mental contents of the age, draw upon the objectified mental contents of the past, which are fixed everywhere and in every age, and thus enrich and transform the objective mental contents of the age as a retroaction. On the level of the mental layer of being, the living collective thus comes into being, and while on the biological layer of being only the community of species carries the frame of the common existence above the ever decreasing individuals, the mental life can also only be the mental life of the individual, while on the level of spiritual existence it is precisely the individual minds, socialized by the contents of the common spirit of time, and all this in turn, interwoven with the knowledge and spiritual contents objectified many ages before, that make the individual mind and the collective objective mind coexist. In Hartmann's words, "Everyone has a spiritual life for himself. (...) One can suffer with the pain of others or rejoice with them, but this remains a second pain or joy next to the original one, and for all its familiarity, it becomes qualitatively different. On the level of thought, however, when one takes it over, it becomes the same thought, although it appears in a different thought act. It is a thought act in a different consciousness, but it remains the same thought." ¹³

Hartmann makes yet another distinction within the layer of mental being, which occurs at the boundary between objective (living) mental content and objectified (dead) mind. For mental contents anchored in the past (beliefs, behavioral patterns, moral and other cultural values, etc.) can also penetrate into today's objective mental contents and thus exist by being followed en masse on the unconscious level as self-evident facts. But it is a different kind of penetration into the present when it exists only as an objectified mental content fixed in time, but no longer appears in the mental activities of beliefs, knowledge, evaluations, etc., which are followed en masse. Only the conscious regression of the individual mind to the dead objectified mental content then brings it into the present. "The one is the being-in-force or still being-alive (of a custom, view), i.e. the power of the "thing" to hold on to the continuing spirit with a certain steadiness, even there, where it otherwise changes visibly. (...) With the perceptible carrying in, it is everywhere where the thing itself no longer lives on, the immediate tradition is torn off." ¹⁴ Let us see how the relationship between these three forms of spiritual existence has changed until today - beyond Hartmann's 1930s - and how they are infiltrated by forms of artificial intelligence.

3.2 The increasing integration of artificial intelligence into the intellectual layer of being

The rise of the intellectual layer of being to a more dominant position in human communities and the pushback against the underlying determinants of existence began with the advent of a form of writing when intellectual fixation became possible. This was, of course, only a thin framework for the life of human communities in most civilizations that reached this level, and the broad masses and their daily lives were not really affected by any fixed meaning. The advent of printing in European civilization in the mid-15th century did not change this at first, but for part of the upper class, this technical facilitation began to increase the importance of literacy, and they began to think and act with fixed meaning more often in the moments of

¹³ Hartmann, 1962:15-16.

¹⁴ Hartmann, 1962:38.

daily life. During the 19th century, this gradually spread to the whole human society in Europe and in the European cultural countries, spreading from there to other continents. From the early 1900s, based on a generalized knowledge of reading and writing, the fixed intellect was also indirectly integrated into everyday life in the form of calendars, newspapers - and in the upper classes even weekly newspapers and magazines - and then, with the advent of film and radio, to an even greater extent, and from the 1950s, with the general spread of television, every minute of daily life was permeated by the written, spoken and moving forms of recorded reason, shaping the thinking, intellectual life and activities of the individual. In the course of this process, the intellectual layer increasingly transformed the hierarchy of the four layers of being in human existence, and these lower forms could only function in a suppressed manner, which was perceived as the civilization of societies.¹⁵

But it was not until after the 1980s, when computer programming and use, which had been narrowly focused until then, brought with it the digitization of writing with the mass distribution of personal computers, that the latter received its real boost, and the written record of meaning could be left in a state of permanent correction by the digital computer record. But not only did intellectual fixation thus become fluid, but so did the transformation of individual intellectual fixation into shared intellectual fixation through word processors and their easy conversion. This potential then became a reality with the proliferation of the Internet in the 1990s. What someone writes down, thinks up, posts on video or Facebook can influence the thoughts and actions of hundreds and thousands of people within minutes.

Kevin Kelly described this process by analyzing twelve dimensions of technological development. At its core is the liquefaction of fixed meaning through digitization, fluidity, where the rigidity of earlier written fixation is replaced by the ease with which the person creating the fixed meaning can continually rethink, change, extract, and transfer the individual parts of the meaning into a framework of meaning designed for a different context. For some people in the intellectual fields, this has already brought about a slight ascent from the physical fixation of the intellect on paper to a state of permanent reflexive floating of the intellect. The scientist, the artist, the theoretical jurist, etc., could, in the course of his constant theoretical reflections, fix his results, if always only temporarily, and it was now possible, almost without hindrance, to reconsider them, to change their details slightly, to transfer certain details to other contexts. Flowing, becoming flowing, is the basis for all the other aspects of computer digitization highlighted by Kelly. All that was needed to make this possibility work as a flowing shared sense in the broadest human community was a more unified editing program, and that was created in the late 1980s by the advent of *Word* and one or two other programs among myriad versions, along with easy conversion. Then, with the advent of the Internet, the fluid and easily communicable intellect has taken a path that has fundamentally changed intellectual life today. Gradually everything is transformed into a *Becoming*, a way of being in constant flux, thus extending the transformation from traditional to modern society that has already taken place in key functional institutions (laws that can be repealed, state power that can be replaced by elections, scientific truth that lives until it is disproved, etc.), and almost all of our things and our community institutions are now in a state of constant flux. The fluid aspect of fluid meaning that extends to all forms of communication includes the aspect of *Screening*, as we move from the early centralized television screen to today's smart TV, and in parallel to the computer screen, and similarly to the cell phone screen, which is becoming a general television/computer/phone/artificial intelligence screen as smart phones take over more and more functions. In this way, instead of our mere "fixation" on the things of the physical-biological sphere of existence, the subjugation of our

¹⁵ Nobert Elias traces the course of this civilization through the changing forms of satisfaction of natural needs based on a rich empiricism from the early modern period, see Elias, 1987.

entire environment to cognitive reflection has brought about its impregnation with cognitive reflection, cognition. So that *Cognifying* is the development made possible by the preceding aspects in sequence. Through interaction, the "*backward observation*" of our things that have become smart through cognition, and by observing our reactions, they begin to complement and guide our activities by giving us feedback. All of this leads to *Accessing*, a focus on access, in that the mode provided by ownership takes a back seat (Kelly, 2016).

The newer processes highlighted by Kevin Kelly thus also reorder Hartmann's emphasis on the three modes of being (individual, objective, and objectified) of the intellectual layer of being. The individual mind is more densely and continuously connected than before to the objective intellectual content of the epoch, not only in early socialization, most of which lasts a lifetime, but also in dense daily contact, whereby it shapes itself and directly places its own intellectual contribution on the Internet, in a sense recreating the objective intellectual content of the epoch. Likewise, the objectified intellectual content is constantly and continuously available, since everything is put on the Internet and is instantly retrievable. In this way, the objective intellectual content of an epoch becomes almost indistinguishable from the intellectual content created anywhere and becomes dead, merely objectified. The strong separation of the three mental forms of existence, which Hartmann still expresses, has thus entered a state of tendential convergence, although their separation cannot be completely abolished.

3.3 The direct connection of artificial intelligence with the mechanical layer of being

If we have clarified at the outset that man is a combination of four layers of being, and that behind all his intellectual expressions there is also in some sense a psychological and biological definition of being, then we can also work out more clearly the differences between the robot with artificial intelligence and man. *Michio Kaku* writes in his book that in an interview with *Rodney Brooks*, the interviewer told him that a robot is a machine, just like a human, and that one day we will be able to build living machines just like ourselves (Kaku, 2014:263).) In contrast, it can be said that based on Hartmann, this cannot be seriously claimed. Although the increasingly sophisticated and refined programs can not only replicate mental operations and feed them into the robot's activities, but they can also provide emotions to the robot by incorporating emotions into an algorithm or simulating physiological pain sensations in the programming. In fact, the programming can digitally imitate the psychological emotions only at the intellectual level, but since there is no actual psychological-limbic emotional level and biological-physiological existence mechanism behind it, it can only be imitated. A robot with artificial intelligence can necessarily only be a "two-layered" robot, and no matter how complex its programming and how much it can program itself to perform the reactions and physiological-biological movements characteristic of mental life, it can only be a combination of two layers of being as opposed to the four layers of being of real humans. We should not be deceived by the fact that today a real sense of sight can be created by creating an artificial retina for a blind person without a retina by inserting it into the occipital lobe as a kind of built-in camera (Kaku, 2014:264). Kaku discusses this in his book, accepting as evidence Rodney Brooks' previously criticized statement about the machine-like nature of humans and robots, and writing about the assertion of human rights of robots with built-in pain sensation and the emergence of ethical questions (Kaku, 2014: 250-252).

In the robot, the digital reproduction of the intellectual layer of being takes place in its programming, and as this programming becomes richer and richer, it can penetrate to the

lower layers of human existence. They can then map not only intellectual but also psychological and physiological reactions, incorporate the reactions into an algorithm, and link this increasingly intelligent intellectual program directly to the physical-mechanical bodies. Another manifestation is that the brain waves of invalids or otherwise immobilized injured persons are directly linked to the paralyzed parts of the body and, bypassing the damaged part of the brain but mimicking its functions, a program enters that makes the previously paralyzed person mobile again. But even without this - as we have seen with the recently deceased *Stephen Hawking* - by linking the intellectual responses of the brain waves, the paralyzed person can use the wheelchair to move or move objects in the outside world, or he can speak by converting the brain waves of his thoughts into sound in an algorithm. "Telekinesis: matter controlled by mind," Kaku writes in the title of his chapter, and this accurately reflects the reduction to two layers that has taken the place of the four-layered human being in the case of Stephen Hawking, who could live only by the very existence of the brain and mind and its direct connection to the mechanical world. (Of course, with a living brain that must be nourished and cleaned by its metabolism). But the technology thus created, in conjunction with the purely physical robotic body, could in the future contribute to the creation of an existence without a psychic and biological layers of being. An analysis of this and the emergence of self-organizing artificial intelligence can be found in the volumes by *Ray Kurzweil* and *Nick Bostrom*, to which I will only refer here (Kurzweil, 2014; Bostrom, 2015).

It seems worthwhile to summarize the conclusions from our analyses so far regarding the relationship between the intellectual layer and the possible new layer that emerges above it. As long as the intellectual layer of being is enriched, and this enrichment occurs only through the amplifying effects of the artificial intellect tapping into our intellectual operations, it is probably not possible to speak of the creation of a new layer. Including all the tendencies described by *Kevin Kelly*, it is nothing else than the muscularization of the intellectual layer, which becomes more and more numerous with the human being, but which nevertheless plays a subordinate role for the time being. Only the intellectual layer, which is used more and more frequently and continuously and which has an increasingly transforming effect on the lower levels of human existence, can be spoken of, even if it is extended by artificial intelligence. If this is only the beginning of the process of artificial enhancement and "enrichment" of our environment, and if, as Kelly predicts, many times more will take place in the coming decades, then this is only the fourth, uppermost layer of being. We can only speak of the emergence of a new (fifth) layer of being if the forms of artificial intelligence that we have developed in our time, the algorithms, the algorithmic embeddings of brainwaves and their direct connections with mechanical bodies, can somehow become independent and function in the world without being intertwined with human intelligence. Another question is whether this will then be just the unfolding of another new layer of being, as has already happened three times on Earth in the last nearly five billion years - as an indispensable prerequisite for the refounding and maintenance of the previous ones as lower layers of being, or simply building on the lower ones - or whether this evolutionary leap will be of a different kind?

3.4 A new artificial layer of being or only a new beginning of evolution on the basis of the reached intellectual human layer of being?

In the light of the books of Ray Kurzweil and Nich Bostom quoted above, there are two possible ways and forms of development for the emergence of an artificial intelligence detaching itself from the human being and organizing itself: either by a qualitatively stronger

form of the weak form of artificial machine intelligence existing today or by emulating the brain carrying the human mind and transferring it to a digital medium, thus breaking the boundaries of the human layers of being. Thirdly, one need only refer to the superintelligence of man with artificially enhanced intelligence, although this can only be another form of our present artificially intelligent life, which makes no evolutionary leap away from the previous four-layered human existence and only reinforces the dominance of the uppermost one.

The existence of two forms of artificial intelligence that have escaped human control and are self-organizing must therefore be considered here in light of the preceding analyses: the strong AI and the AI that has been uploaded to a digital medium by fully emulating the mind carried by the human brain. From the foregoing, it is clear that in addition to the computerized transmission of the digitized mental layer of being parked on a server, here the linkage of changes in the world with physical bodies, possibly only for short periods of time, enables the existence of two layers of being, with the biological and psychological layers of being completely absent. Even if, in the case of a strong AI, some parts of the latter could be simulated into the program to determine decision-making possibilities, this would have no functional role but only a hindering effect, so that its elimination from programming by self-learning is almost certain. If the artificial intelligence, separated from the human being, were created by digitally uploading the entire mind, thus retaining with the entire former personality its psychological life structures - its feelings of solidarity, its value decision patterns arising from identity consciousness, etc. -, it would no longer have a functional role in the state of freedom from biological and solidarity community life. The self-consciousness of the former personality, transmitted by uploading and previously formed and functioning under the constant influence of biological instincts and existential limits, and also containing the intellectual personality structures together with the spiritual life formed from childhood by the power of dependence on family and friendships, would come upon a vacuum in relation to the lower two layers of being when entering the digitalized computer form of existence. Memories of a biological-physiological reaction would remain for a time - just as a man with an amputated leg has itchy sensations about his non-existent leg - and likewise the mental life dispositions of consciousness might have an effect, but all this would be without an actual functional role. In a world of superintelligence reduced to two layers of being, the probability of such parts of consciousness disappearing at a million-fold rate through recursive program evolution is very high in the case of emulated personalities.

The answer to the posed question is that artificial intelligence as an evolutionary leap cannot create a new layer of being in earthly evolution and human existence, as it has done several times in the past billions of years. As long as it functions as a continuation of the intellectual layer that has grown with increasing force over the past thousand years, determining and outgrowing the lower layers - accelerated by the advent of digital intelligence, which has been in operation for nearly half a century - it represents merely an increase in the dominance of the pre-existing uppermost, fourth layer. However, when the digitalized intelligence thus created breaks away from the control of human intelligence in the manner shown, there is again an evolutionary leap - the evolutionary outcome in the lower layers of being rises above the existing layers of being - but unlike before, the new evolutionary force is no longer based on the lower layers of being. Its functioning can be described in Hartmann's concepts of layers of being in such a way that the biological life, which has risen above the physical-technical being over billions of years, and then the psycho-emotional being, which has arisen in the ever higher levels of this, provide a basis for the emergence of the intellectual layer of being on the primate level, but above all at the level of man, and the coexistence of these four layers of being has finally produced a digitized artificial intellect which can now be directly connected to physical bodies by operation through an autonomous carrier separate from man. In this evolutionary leap, the new life form

would not build on the hierarchy of layers that produced it - adding a new level of hierarchy - but would be directly connected only to the original base, the physical-mechanical layer. In this case one could say that the cooperating layers of the human existence "pulled out" the artificial life form from the birth - and that it could come into being only in this way - but that now, when they become independent, they are superfluous for it. *So the artificial intellectual being cannot be a new layer of being above the previous ones, but a new beginning of evolution on the initial basis under the leadership of the self-organizing intellect.*

The source of great controversies and fears is therefore rightly, as repeatedly emphasized, for example, by Stephen Hawking or Elon Musk, the question of what will happen to human existence and the entire - superfluous - biological sphere of existence in the age of artificial intelligence, which will guide the destiny of the world. For all the justification of their fears, it is only necessary to point out that the new life form that will emerge through evolution will not need life on Earth and could develop unhindered on a number of neighboring planets, as Kurzweil has so generously explained the colonization of the cosmos by artificial intelligence (Kurzweil, 2014:433-564).

4. The dilemmas of social evolution in our time

The dilemmas of our time, then, must be examined alongside the traditional theme of social evolution, which has emerged as a new evolutionary theme in recent decades, triggering radical changes in human societies. The question is therefore: to what extent does the civilizational space of Europe, which has risen to world leadership and domination in recent centuries, pose problems in relation to the traditional sociological-theoretical and historical-sociological evolutionary themes - or evolutionary impasses - and what is the impact of the new evolutionary opportunities and threats arising from the rapid advance of the new artificial intelligence?

In terms of traditional trends in social evolution or modernization, we can see that the European civilization area took the lead throughout the world, first the more Western parts, then the Eastern European parts imitating and following them, and, especially in the North American parts, even extending this civilization to the wider West. This European pattern of civilization was then adopted or spread throughout the world in certain respects. In the shadow of this successful modernization, however, there was always the possibility of falling into a modernization cul-de-sac, which this civilization knew how to avoid and was able to dominate the rest of the world militarily and economically while maintaining and improving its internal conditions. However, after careful study, it seems to me that trends reminiscent of the impasse of evolutionary modernization have emerged in the world of European and Western civilization more broadly in recent decades.¹⁶

The most obvious is the demographic collapse resulting from the gradual abolition of the role of women as mothers, extending equality between people beyond necessary biological differences, starting in the second half of the 19th century, and if this continues, this civilization will be on the verge of extinction around the year 2150, overaged and without descendants. The other evolutionary impasse is the fatal erosion of communal identities, which, like the first, also began since the second half of the 20th century. The main reason for

¹⁶ See Béla Pokol, *Political Reform and Modernization. Modernization and Political Reform in Europe*. Béla Pokol: A critique of the theoretical abolition of public morality. Kairosz Kiadó, 2010; Béla Pokol. *Untergang von Europa*. Schenk Verlag, 2013; Béla Pokol: *Juristocracy. Trends and Versions*. Századvég Edition. Budapest, 2021.

this was that the victorious powers after World War II attributed the outbreak of World War II to an excessive sense of nationalism. In this way, it began to view societies held together by national identities as dangerous. As a consequence, one of the main efforts in Europe since the 1950s has been to undermine and stigmatize national identities. However, since the Christian identity that had been effective for centuries before had largely disappeared by that time, no overarching community identity remained in the countries of the European civilization area. At the end of the nineteenth century, Kantian moral theory took hold in intellectual circles, from which community morality was judged to be an inferior custom, and in this way the widespread and coherent conception of morality in the Western world was gradually eroded. Attempts were then made to disseminate, through the mass media, a *critical morality* that had emerged in narrow moral philosophical circles and was actually accepted in the intellectual strata of society. However, sociological studies of morality show that mass dissemination has not succeeded even after many decades.¹⁷ Thus, the erosion of public morality has largely taken place, but the creation of a new public morality has failed to materialize, which, together with the disintegration of communal identities, has resulted in the European civilizational space, with many hundreds of millions of people, sinking into an atomized chaos held together only by legal rules and administrative organization, which is insufficient without a moral and identity foundation.

However, this is not the end of the problems that can be thought through in the traditional theoretical framework of social evolution. For it is in this condition that the European civilizational space, demographically and morally fractured and lacking communal identities, has been confronted with Islamic societies since the 1980s for the second time in its history, after the victory over the Turkish-Islamic masses in 1400-1600. The Turkish and Arab masses, imported by the hundreds of thousands for menial labor in Europe in the 1960s, and the Islamic masses, also imported by the millions from the former colonies, have been living in several Western European countries for decades. But the Islamic masses, who have remained demographically fertile and unbrokenly united by the Islamic faith, have swelled to nearly 30 million in Western Europe in the last fifty years and have become a majority in some neighborhoods of some major Western cities and have withdrawn from the broader European norms of civilization and now organize their lives in parallel societies. But their numbers mean that in some areas of Paris, London, Berlin, Malmö, etc., they already make up the majority of children in schools. So European civilization, which is collapsing demographically and morally and has no common beliefs, is forced to live in this state with the ever swelling Islamic masses who number in the millions and have a firm Islamic identity and belief.

This state of affairs can thus be classified as a civilization that is in a social evolutionary impasse, with the complete Islamization of European civilization being the most likely development after two or three generations. This has been recognized in European intellectual circles for a number of years, and it would still be technically possible, on the basis of a unified European political decision, to separate the radical currents of Islam (e.g., Salafists, Wahhabis) from the other, more peaceful Islamic currents and to carry out a mass expulsion of these, e.g., by creating an enclave for them in the northern parts of Africa, and to force those who remain here to adopt European civilizational norms through harsh integration programs. However, given the observed social, moral and identity weakening, this is illusory for European civilization. The ostensible reason for rejection - if it could be seriously considered - would be the "human rights" prohibition, but the real reason is the total moral

¹⁷ See the results of Lawrence Kohlberg's empirical sociological research on morality in Ibolya Szilágyi Váriné: What You Should Know About Lawrence Kohlberg: Kohlberg's contribution to moral psychology. In *ibid.* (Eds.). Scientia Humana. Budapest 1994. pp. 11-41.

debilitation of Europe, which is almost tantamount to an acceptance of collective suicide because of this high degree of lack of self-defense reflex.

As for the question of social evolution in the context of the unfolding of the new artificial intelligence, it should be noted that European civilization was able to achieve this precisely because the intellectual struggles of the Enlightenment and the subsequent political struggles of the French Revolution ruthlessly abolished the earlier forms of communal control over individualism and declared equality, even in relation to biological differences, to be obligatory. The excessive demands for individualism and equality have thus led to the demographic collapse described above and to the rejection of communal identities and public morality to this day - in other words, to the evolutionary impasse pointed out. On the other hand, it also released free creative energies of individuals and created the possibility and then the practice of constant renewal and breaking of old forms instead of tradition. It thus created the greatest technological power in the world and, in principle, the technical basis for effectively dominating the world even today, which ultimately led to the explosive power of artificial intelligence blowing up all previous evolution. The modernization-evolutionary impasse and at the same time the evolutionary progress, which is orders of magnitude higher, are thus two sides of the same process, and in the present both are acting simultaneously and will do so especially in the coming decades.

What will this look like in the everyday life of European societies and cities when, on the one hand, the rise of Islam in the major cities of the West will trigger the civil war phenomena we know today, but, on the other hand, the penetration of artificial intelligence into everyday life - at least for large parts of the elites - could lead to a life almost completely dominated by robots and algorithms? One immediate consequence, the harbingers of which we are already feeling today, is that artificial intelligence algorithms and robots will create mass technical unemployment by taking over more and more jobs. What once brought the unskilled Muslim masses to Europe sixty years ago is now done entirely by robots and algorithm-driven machines. Only with a high level of IT education will it be possible for both the European tribal population and the immigrant Islamic masses to increasingly share in the remaining jobs. However, because they live in non-integrated parallel societies that are extremely hostile to the former, they cannot grow up with the language skills necessary to participate in high levels of education, and the total isolation of most of them from inclusive European culture keeps them in a rudimentary state. They have already left their homeland, but have not been able to integrate here. All of this drives their pre-existing civilizational hostility with Christian European societies to terrorist organizations and daily civil wars in many cases. If we are to predict the future and the conditions of everyday life in Europe that will result in some twenty to thirty years from these impasses of social evolution, it is very likely that the daily life of the masses in the major cities of our Western European cities will be marked by daily civil war-like confrontations with the followers of radical Islamic movements as a result of the rise of Islam, while those who control the jobs provided by artificial intelligence and the constant improvers of artificial intelligence will live their daily lives in enclaves of seclusion and safety, protected from mass-level civil wars.

5. Epilogue

These are the most likely, moderately bleak social development prospects for us here in Europe and in the broader Western civilizational space, as I assess them. But there is also, what is less likely, a more optimistic and a much more pessimistic evolutionary outlook with

the tumultuous developments of emerging artificial intelligence. There could be a shift in the optimistic direction with chips in the brain if today's technological problems are solved, and Elon Musk, for example, who is investing billions in this direction, has predicted breakthroughs in five or six years in interviews based on his intimate knowledge of laboratory results, and he has generally fulfilled his technological predictions so far. If these are massive, the lower classes of people who cannot be included in the information society for intelligence reasons, as well as the African, Latin American, and Asian masses, might even come closer to harmonious coexistence at a more unified intelligence level by adopting common civilizational standards. But perhaps in this way the seemingly irreconcilable coexistence of Islam and Western civilization can be secured after all.

However, there are also development scenarios that go in the negative direction, and one of them is that of *Yuval Harari*. Looking at the likelihood of mass technological unemployment becoming permanent, he concludes that, thanks to robots and algorithms, the few percent of the elite who dominate the globe will be able to get by without the labor of the masses for the first time in history. Thus, for the first time in history, the majority of society, while also able to be provided for at an elementary level by robots and algorithms, will live without work that they are simply not yet capable of doing, but also will not be able to do any useful activity in an artificial intelligence society run by a global elite. In his view, the vast majority will become useless and dependent, while a very small elite, genetically enhanced and superhumanized by brain interfaces, will become a distinct species of humans, dominating artificial intelligence and becoming the new *Homo deus* over the useless mass of *Homo sapiens*: "(...) the individual human will remain indispensable and indecipherable, but he will form a small, privileged elite of evolved humans. These superhumans will have unprecedented abilities and creativity and will continue to make most of the most important decisions in the world. (...) Most humans, however, will not be upgraded and consequently will form a lower caste dominated by both computer algorithms and new superhumans." (Harari 2017:298). In elaborating this idea, he does not shy away from suggesting that for the first time in history, the "human god" elite will deem the useless mass of mere sapiens to be completely superfluous, thus depriving them of the resources they need to provide for the superhumans: "As algorithms take the place of human soldiers and workers, at least some members of the elite may conclude that it makes no sense to provide upscale or even basic health care for the mass of useless poor, but that it would be more profitable to focus instead on developing a handful of superhumans who are above par." (Harari 2017:300). In other words, "Unlike in the 20th century, when it was in the interest of elites to solve the problems of the poor because they desperately needed them militarily and economically, in the 21st century the most effective (if rather cruel) strategy might be to unhitch the useless third-class wagons and let only the first class continue" (Harari 2017:301).

Honest reflection is good because it allows one to think about the possibilities of avoidance before the horrible possibilities that actually arise are realized. Harari's proposal is thus also a way of bringing into even more honest focus the fact that, throughout history to date, the respective ruling elites have had a fundamental interest in ensuring the existence of the masses who provide them with the resources to do so. Thus, if under conditions of total technological unemployment, two or three percent of the "superhumans" who continue to be advanced are reduced to a state of mere dependence and useless existence, the total "elimination" of these people is also a likely development. The horror of a permanent nuclear threat that could wipe out all of humanity still exists today, and setting in motion the thousand times more efficient destruction machinery of artificial intelligence (or "removing obstacles that stand in the way of that setting in motion") may become a permanent option if the narrow elite can survive it with a safe cover. The possibility raised by Harari of dividing humanity

into "human gods" on the one hand and useless masses on the other thus also makes the disappearance of all humanity beyond the super-elite a degree of probability.

In addition to Harari's horror scenario, there is also an evolutionary version that assumes the transformation of today's artificial intelligence into a superintelligence and sees an evolutionary development of the spiritual stratum created on Earth by an artificial intelligence (AI) that has become autonomous and freed from its biological body and that will dominate the entire cosmos within the next hundred years. That's Ray Kurzweil, the head of research at Google.

Brain augmentation will occur around 2030, Kurzweil believes. The most important application for nanorobots will be to augment our minds by merging our biological and non-biological intelligence. Our current brain has a relatively unchanged structure. Although we add patterns to the connections between neurons and the concentration of neurotransmitters as a natural part of the learning process, the full capacity of the human brain today is severely limited. Brain implants based on massively distributed nanorobots can greatly expand our memory and immeasurably improve all of our sensory, pattern recognition, and cognitive abilities.

As we move toward a non-biological existence, the ability to make copies of ourselves (and store the patterns that underlie our knowledge, skills, and personality) will proliferate, and we will be able to eliminate most known causes of death. The brain upload scenario, and thus direct brain transfer, will involve scanning the human brain (probably from the inside), recording all the important details, and reproducing the brain state in a different - presumably more efficient - computer form. This will be a feasible process that will most likely be implemented by the late 2030s. The moment our human hardware breaks down, the software of our lives - our personal "minds" - will also be swept away. However, when we have the means (along with the rest of our nervous system, our internal systems, and other structures in our memory files) to store and retrieve the trillions of bytes of information expressed in patterns called brain patterns, this will no longer be the case. The lifespan of our thought file will then no longer depend on the viability of individual pieces of hardware (e.g., the survival of the biological body and brain). Software-enabled humans will eventually be far beyond the limits of today's humans. Copying our thoughts to another medium raises a number of philosophical questions, such as whether I am really me or someone else who has just succeeded in usurping all my thoughts and knowledge. Since time immemorial, our mental software has been inextricably linked to our biological hardware in order to survive. Our ability to store and reformat all the details of our information processing would truly separate the two aspects of our mortality.

How quickly can we extend our intelligence beyond the solar system?" asks Kurzweil. As we've already seen, non-biological intelligence on Earth will be several billion times more advanced than biological intelligence by the end of this century, so it won't make sense to send flesh-and-blood humans on a similar mission. It's not just a matter of biological humans sending robotic probes to replace themselves. Human civilization may have become unbiological in every way by then. It would be enough if the probes were self-replicating nanobots. They could be launched in swarms of trillions of years, and then these "seeds" could take root in other planetary systems and propagate and replicate themselves by finding the right materials - carbon and other necessary elements. Once settled, the nanorobot colonies could acquire the additional information they need to optimize their intelligence by mere information transfer, which is only a transfer of energy, not matter, and can be done at the speed of light.

Kurzweil also believes that the realization of the eternalization of individual consciousness is possible. In the second half of the 2020s, we will have completed the unfolding of the human brain to create non-biological systems with emotional intelligence

that match or exceed the complexity and sophistication of humans. In another scenario, we could upload the patterns of an existing human into a suitable non-biological thinking substrate. A third, and perhaps most interesting, scenario envisions humans gradually but eventually evolving from biological beings to non-biological beings. This has already begun with the advent of neural implants that remove disabilities and diseases. Then nanorobots will be injected into the bloodstream, initially developed for medical purposes and to combat aging. Later, more sophisticated nanorobots will emerge to interact with our biological neurons and enhance our senses, creating vitulis reality in the nervous system, assisting our memory and performing other routine cognitive tasks. At this point, we will become cyborgs, and starting from this stepping stone built into our nervous system, the non-biological part of our intelligence will develop our capabilities exponentially. Moreover, these non-biological beings will be able to convince other humans (biological, non-biological or intermediate life forms) that they have consciousness. There is another issue related to consciousness: our own identity. Who am I? We know that most of our cells renew themselves within a few weeks, and even our neurons, which have been separate cells for a relatively long time, replace all their components every month. So I consist of a completely different matter than I did a month ago, and only the plan of matter arrangement is permanent. Although the pattern of the copy would be the same as mine, it would be difficult to claim that the copy was me, since I would still exist at the same time.

For my part, I stick with the moderately gloomy perspective of social evolution described above as the most likely scenario, and I continue to trust the less likely, more positive vision of brain chip-enhanced humanity. But I do not rule out Harari's gloomy prognosis, while Kurzweil's vision has not yet been adequately substantiated, but is likely.

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