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Session III: Life sciences and democracy

Beyond utopias: evolutionary rationalism and noocracy

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Abstract

The rationalism of Continental Europe has been based on the belief in the unlimited potential of individual human reason. In its conception, the essence of human consciousness consists in thinking and reasoning. It has promoted the design of social utopias. Its two principal tenets are not substantiated by biology. Human conscious deliberation appears to be just a ‘monomolecular layer’ on an immense ‘ocean’ of the adaptive unconscious. Science may favour an alternative doctrine, evolutionary rationalism: rationality in nature and in society is a phenomenon *a posteriori*, a product of selection from countless trials and failures. Democracy is one such evolutionary product. Yet, the spontaneous flexibility and adaptability of democracy may no longer keep pace with the high speed of growth of science and technology. Noocracy may become an evolutionary outgrowth of democracy, having the capacity to match the quickly changing states of knowledge. It would comprise conscious, systematic and institutionalised experimentation taking place in many decentralised autonomous subsystems. The European Union, which has reached a critical stage in its successive institutionalisation, has a unique opportunity to introduce this application of evolutionary rationalism.

Introduction

Ground Zero. That is the name that has been given to the empty spot in the centre of New York City, where the twin towers of the World Trade Centre collapsed under the terrorist attack on 11 September 2001. The present state of humankind has got in the spot its symbol and in its name a most concise characteristic[3]. Grand, grandiose is the knowledge of natural laws and on their basis the technological feats of humankind. Zero, or close to zero is the human knowledge of forces that direct human individual behaviour and social dynamics. Such forces motivated the actors

behind the events in 11 September. Unknown and uncontrolled, they continue to determine the behaviour of the main actors in our times.

This is not to say that there has been a lack of effort to explain these forces. History abounds with countless speculations regarding the nature of both humans and society. Ground Zero may be conceived as an appeal to throw a fundamental doubt on these explanations: Have we been asking the right questions? Is it not high time to zero all our commonly accepted would-be explanations and to start anew? Has not the event of 11 September warned us that we have to revise the very foundations of contemporary thought? Is there not a most urgent task for natural sciences, primarily biology, to exploit all the attained knowledge in their field of enquiry so as to apply it to those problems that, until now have been the exclusive domain of cultural (human and social) sciences? The present study has resulted from such questions being posed.

1. The fallacy of European continental thought: belief in the unrestricted potential of individual human reason

European culture has one of its origins in Ancient Greece, 2 500 years ago. It started with abandoning an animistic interpretation of the world and attempting to explain it using naturalistic arguments – with the transition from Mythos to Logos. With this transition, science was “born” on Earth. At the same time, this was the beginning of one of the main currents of European culture, of rationalism of Continental Europe, of a belief that the reason of human beings can, by means of logical inference, achieve an extensive and reliable knowledge of the world. Belief in unlimited power of individual reason may have reached its peak in the Enlightenment of Continental Europe in the 18th century (the English, Scottish and American Enlightenment had, with its empiricism, a different character), but it continues to persist not only in philosophy, but in science as well. Equating human consciousness with thinking and reasoning is still one of the dominant paradigms in cognitive sciences. Some prominent evolutionary biologists oppose the clumsy tinkering of biological evolution which, according to them, is ‘immensely stupid’, with individual human’s outstanding creative potential of conscious intelligence.

The situation is undergoing a substantial change. In cognitive sciences, the ‘affective revolution’ is under way. No longer may thinking and reasoning, but the existential experience of perceptions and emotions, sensory and emotional qualia, be conceived of as the substance of consciousness. Human conscious deliberation appears to be just a “monomolecular layer” on the surface of an immense “ocean” of the adaptive unconscious [5]. The latter represents knowledge which, progressively acquired by a ratchet-like mechanism of trials and errors, has been incorporated by biological evolution into the structure and chemistry of cells and organs and into unconscious evaluative and executive devices of the brain, and by cultural evolution into material artefacts and into social institutions. ‘Reason’, conscious reasoning, rationalisation seem to function mainly *a posteriori*, in order to explain and justify the actions that preceded the awareness of what was being done.

European faith in the power of individual reason has led unavoidably to contriving social utopias. Some designers of utopias based their projects on the conviction that individual human reason has its parallel in the Reason of History, and hence on the

belief in the existence of rational historical “laws” which should be revealed and exploited. Others maintained that cultural evolution, and within it the evolution of society, is blind, and even, like the biological evolution conceived by some evolutionary biologists, “immensely stupid”, so that its products should be replaced and surpassed by much better work designed by exceptionally intelligent individuals. Generating utopian projects has been a most cherished pastime among the brightest of European thinkers for centuries. The projects could not be materialised and, hence, neither approved nor falsified. Only the 20th century – “the century of science”, as the saying sometimes goes – reached the capacity to provide technological means for trying out one such social utopia – Communism. Even though more than a decade has elapsed since the collapse of European Communism, this most important experience of humankind in the 20th century has not yet been properly evaluated. The principal conclusion from this lesson has not become commonplace: the failure of Communism dealt traditional European rationalism a decisive blow. In turn, it is promoting an alternative doctrine – evolutionary rationalism.

2. The failure of Communism: a cogent case for evolutionary rationalism

The theoretical basis of Communism, Marxism, was a logical, and probably unavoidable, culmination of rationalism of Continental Europe (another source of Marxism – romanticism – is not included in this analysis) [2]. According to his own words, Karl Marx aimed “to lay bare the economic law of motion of society”. For Marx, market economy was disordered and irrational and should have been replaced by the ‘scientific planning’ of production and consumption. The existing capitalist institutions should have been smashed up and replaced by new ones, rationally designed on the basis of scientific knowledge.

Instead of rational institutions, the spontaneous dynamics of the Communist system gave rise to institutions that, in their irrationality, had no precedence in history. Instead of a social system ensuring justice and happiness for all, a criminal political system arose – it caused immense human suffering and 100 million people perished. And yet, Communism was not useless providing that we consider it *a posteriori* as a huge social experiment and that we analyse its results and draw appropriate conclusions from them.

It does not seem that this has been undertaken so far. Four features, each of which is rather disquieting, characterise global reactions to Communism:

(1) As a backlash reaction on the failure of planned economy, an extreme view asserting omnipotence of the market is being preached and/or enforced. Faith in the moralising capacity of the market has become almost the new credo for economic reformers in post-Communist countries. Any attempts to control the market and to minimise its imperfections are being harshly criticised. A comeback of Hegel: no longer in Marxist disguise, but in a new form of market deification. As if the market were an expression of Hegel’s Absolute Reason, Spirit of History. In addition, as a reaction to the Communist misuse of power, a new naïve idea is spreading according to which a State should be just a self-service facility sustained by taxes paid by a sovereign individual for guaranteeing his/her safety and creating conditions for

his/her full “self-realisation”. This exaggerated, and often dilettante would-be liberalism has been called paraliberalism. George Soros has named it “market fundamentalism”. By its ignorance of what has already been scientifically established, paraliberalism represents a cultural regress [2].

(2) The collapse of the Marxist “scientific world-view” and refutation of belief in the unlimited capacities of individual reason is sometimes erroneously conceived as a total failure of rationalism and as the end of the era of reason in general. Marxism should be replaced by postmodernism. The objectivity of scientific knowledge, however restricted, is being questioned: science is conceived as one of several “meganarrations” equivalent to myth, religion, and art. All cultures of the world are being considered as equally valuable, disregarding the number of evolutionary trials they have accomplished, the amount of evolutionary knowledge they have built into their structure, and their tolerance of other cultures.

(3) In the Communism era, Marxism, in its primitive Leninist, Stalinist and Maoist version, became the world-view and ideology of quite a sizeable portion of the population in many countries of the world. It had the capacity effectively to suppress, or even replace, other views, such as chiliastic Christianity or Islam. After the disappointment of bankrupting Communism, Marxism has induced a return to original views, and also prepared the ground for the easy rooting and running wild of their fanatic, fundamentalist versions.

(4) Marxist utopia is surviving in academic enclaves in the West, backed by the conviction that Communism failed because it had been implemented in backward countries, therefore the failure cannot be taken as a proof that, in principle, social utopia cannot be accomplished. Even more blatant is tolerance of the political ambitions of Communist parties in post-Communist countries.

In order to make adequate reactions on Communism and to prevent repetition of similar horrific social experiments – perhaps in the form of authoritative regimes deriving their legitimacy not from a “scientific” reason but from a “revealed” reason – superficial, belittling or ignorant views on Communism should be globally supplanted by the competent knowledge of its theoretical basis and its deeds. This knowledge provides a weighty corroboration of what contemporary biology says: humans are fearful, hypersocial (and group-confined), hyperemotional and mythophilic animals [2].

3. Principle of minimal prejudice: reasonableness and limits of democracy

Human mythophilia is firmly rooted in one of the strongest human needs: the need to understand the world in which one lives. This is apparently as strong as the need eat and for sexual gratification. The term “understanding” is not equal to the term “knowing”. Understanding must be simple, consistent and all encompassing. With restricted knowledge available to an individual, what else can his/her total understanding be if not a myth?

Human capacity of perception, affection and reasoning is a product of biological evolution and is species-specific. All the evolutionary constraints of the human mind

confine humans to the world of medium dimension and low complexity. The world outside is counter-intuitive and separated by barriers which have been called “Kant’s barriers” [2]. The stretch of cultural evolution, an evolutionary “twinkle” between contemporary humans and their primate ancestors, has been too short to have changed the structure of the ancestral human mind to any substantial extent. As Susumo Ohno judiciously remarked, the inner intelligence of human individuals might be quite meagre, just a little higher than that of a chimpanzee [4]. Cultural evolution has not been improving human reason, but, thanks to emergence of spoken language, it has been quickly generating new and new pieces of knowledge. Progress of humankind is not progress of individual human reason, but progress of knowledge and growth of collective intelligence. New pieces of knowledge, temporarily stored in various memory devices, have been built into material artefacts, tools and machines, but also into “social artefacts” – institutions. The first article of European cultural creed – the sacred belief in supremacy of the sovereign, rational, knowledgeable, free and responsible human individual – may hardly rely on getting a backing from biology.

In the course of growth of human knowledge, a principle emerged which human reason should strictly observe: we should not claim that we know more than we know. It is the principle of minimal prejudice. It has been anticipated by many philosophers and scientists in such ideas as Occam’s razor, economy of thought, parsimony, and so on. It may be called Jaynes’s principle, according to the physicist who first gave it a precise mathematical formulation [1]. According to E. T. Jaynes, if one has an incomplete knowledge of the subject, the minimally prejudiced assignment of probabilities is that which maximises Shannon’s entropy, subject to the given information. The corollary of his argument has been the demonstration that the laws of thermodynamics can be derived as consequences of the principle. It may not be too exaggerated to expect that foundations of some other disciplines of science may also be derived from Jaynes’s principle. It seems that its application may provide an innovative view on the nature of democracy.

Genesis of democracy, like genesis of many other social phenomena, has a hybrid character: democracy is partly a product of historical trials and failures, and partly a product of reflections and conscious intentions aimed at improving forms of social life. Spontaneity of the origins and evolution of democracy may well be inferred from the fact that British democracy lacks a written constitution. On the other hand, the Founding Fathers of the USA deliberately formulated the principles on which the American Constitution should have been grounded. The ingenuity of the American Constitution and, in turn, of the political formation built on it, is due to the fact that the Founding Fathers observed – obviously, unknowingly – the principle of minimal prejudice: they did not claim anything more about human nature and society than what had been known in their time [2]. This virtue gave American democracy its stability and robustness, as well as its capacity of continual improvement and perfection. By this, it also created preconditions for institutional support for the permanent growth of knowledge and thus for the unique success of American science.

Yet, in the present state of American democracy, and of democracy in the world in general, some disquieting questions may no longer be ignored. The event of 11 September 2001, and even more so its aftermath, make these questions most urgent:

(1) Can spontaneous improvement of the system still keep pace with the enormous speed of accumulation of new knowledge, with the dizzy progress of science, technoscience and technology? Have not some founding principles been surmounted and are no longer adequate? Are not some tenets of the American Constitution, correctly reflecting the achieved state of knowledge at the end of the 18th century, outdated nowadays, retarding elements, and impeding due institutional and ideological adjustments?

(2) Notwithstanding the assumption that democracy, at least American democracy, was constituted on the principle of minimal prejudice, are not its very foundations built in powerful ancient myths and had not the very myths given democracy its genuine stability? Has not the Judeo-Christian moral, with its awe of transcendent authority and its fear of God's punishment and eternal damnation, been the essential glue holding together all the components of the edifice of democracy? Is not the erosion of traditional values under the aggressive impacts of science and technology concomitantly the erosion of the very foundation of democratic order [3]?

And, ultimately: (3) Should progression of science and technology be slowed down so that social institutions are able, by the rate of their spontaneous changes, to adapt and adjust? It has already been pointed out that humanity has attained a most precarious evolutionary stage: we can do too much in a situation when we understand too little [3]. Yet, the third question may be quite illusory: Any means of how to slow down or stop progression of science and technology – apparently still accelerating and undergoing exponential growth – are unimaginable. Nevertheless, the question should be asked as the future of humankind will be conditioned by the answer.

4. From fumbling democracy to experimenting noocracy

Marxist “scientific management of society” should have been executed by the proletariat, uneducated but endowed with some mystic class instinct enabling it to see and act in the right way. The attempt to install the utopia ended in disaster. Implementation of other utopias would hardly end any better. The scientific dictatorship, devised by August Comte, with a ruling group of bankers and the best scientist in the leading role of the Grand Priest, would probably have been no less irrational and cruel than Lenin's dictatorship of the proletariat. The same may apply to a political and social system designed and ruled by the monopoly of Sigmund Freud's doctrine.

If sustainable social systems, constructed by design from conscious human reason, are not feasible, the method of trial and error seems to be the only workable system. It has been proved to work in biological evolution with such remarkable results that, until Darwin unravelled the principle of natural selection, divine creation had been the only plausible explanation of such feats. It has proved competent in cultural evolution, giving birth to democracy. By trial and error, democracy has been able to improve and adapt to the environment in which it had to sustain itself. What should be undertaken now when the changes to the environment, caused by science and technology, are happening too quickly?

There may be one single possibility of mastering the situation: to speed up the frequency of trials and failures in democracy in the same way as science did in the cultural evolution – by conscious, premeditated, systematic and institutionalised experimentation. Had Communism been deliberately intended to be an experiment, it would have been tried on much smaller scales, in distinct variants, and it would have not been paid for by hecatombs of human lives. From deliberated, scientifically founded experimentation (i.e. randomised, double-blind, placebo-controlled trials) a new method and form of politics can be devised. If Plato called his idea of government sophocracy, the political system with institutionalised science-based social experimentation may be called noocracy. Noocracy would not be the Platonian rule of kings-philosophers. It would not be a reign of science, nor a reign of scientists. Power would continue to be in the hands of political élites, gained and maintained by competition, but of élites professionally trained, exploiting analyses, prognoses and proposals of countless advisory groups of experts from all branches of science, and organising field experiments. The traditional division of roles between politicians and intellectuals would be maintained [2], but the importance of intellectuals as generators of testable ideas would increase appreciably. Experimentation should obviously be applied to the search for new forms of voting systems (*e. g.* giving weight to a vote according to the education of the voter), participatory democracy (*e. g.* the obligation of deputies to meet criteria of economic and juristic literacy), fiscal policies, wealth redistribution, and education and art supports (with a clear-cut distinction between commodities and public goods). Experimental economy may also be instituted in noocracy. (Experimental economy should not be confused with experimental economics which already thrives as a branch of economics and which comprises experimentation at the laboratory scale.)

The case in point may be the recent controversy concerning the use of genetically modified organisms (GMOs). In full-fledged noocracy, GMOs would be tried in one or several regions or countries and scientifically monitored by all, under the auspices of a central governing body. Costs and benefits would eventually be shared equally by all, and administered and imposed by the central, democratically constituted authority. The widely disputed precautionary principle would be in operation without, at the same time, slowing down or hindering the application of scientific inventions.

Conclusion: A “star” opportunity for the European union

There are exceptional instances in history, which – by paraphrasing Stefan Zweig – may be called the “star opportunities”: they are short-lived, yet the future long-term evolutionary trajectory of a society may be decided in just such an instant. The European Union now finds itself in such a star situation. It can turn into a considerably centralised, rigid, bureaucratic superstate, but it can also become a political system consistently built on the idea of evolutionary rationalism. In this way, it would serve as an unprecedented research institution of political and social experimentation – a pioneer of noocracy. This presupposes preservation of the existing plurality of institutional structures as represented by particular states and nations, and even its expansion by strengthening autonomy and authority of intrastate and interstate regions. Every such relatively autonomous political unit would represent a single political laboratory. In each of these, hypotheses, corresponding to available scientific knowledge, would be subjected to testing. The lesson, drawn from falsification of a hypothesis tested in one laboratory, would serve

as a warning to all: there is no need of trying that way any further. The results of successful experiments would be disseminated all over the world.

The result of Communism, which had not been intended as an experiment but could be analysed as such, falsified some fundamental hypotheses on human nature and social dynamics. If properly evaluated and exploited it may turn into a unique asset of the new European Union Member States. Instead of being considered as poor relatives of the core members, their experience with the failed attempt of a “scientifically managed society” may become their substantial contribution to the joint cultural treasury.

Renunciation of traditional European rationalism does not mean its repudiation and condemnation. After its birth in Ancient Greece, rationalism has become the major evolutionary impetus, not only for Europe but for the whole world. As regards the achievements of science, it needs rectification and transformation. Abandoning the illusion of the boundless potency of human reason and promoting new, evolutionary rationalism, Europe – polymorphous and experimenting – may resume its leading role in promoting the advancement of global civilisation.

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