

## EVOLUTION AND CONSERVATISM

### DARWIN, OR THE FEAR OF GOD

The first principle of evolution is immutability; the primary objective of a species is to perpetuate itself. A transition from one species to another has never been observed and never will be; even in paleontology the study of fossils will never bring to light a continuity in the history of life: the passage from one form to another is always abrupt, and the “missing links” are only a creation of our imagination, an answer to satisfy our expectation.

At its birth more than 100 years ago, the theory of evolution opened completely new horizons for the life sciences. From the philosophical point of view, it was a reaction against catastrophism and creationism, that proceeded from two postulates: the discontinuity of the history of life and the impossibility for species to change. Now, if we take seriously the thesis presented in our first paragraph, must we conclude that after more than a century of development the theory of evolution is back where it started, renouncing the dogmas that were so dear to it? Can it be that catastrophism, banished from evolution, is today making a triumphal comeback? This may seem difficult to believe, and yet the statements given above could well represent the

Translated by Jeanne Ferguson.

credo of a current included in contemporary evolutionist thought. They are a challenge to all the tradition of European thought in the last 100 years. This challenge is that of two young American paleontologists, Stephen Jay Gould and Niles Eldredge, who presented their ideas in two articles appearing successively in 1971 and 1977,<sup>1</sup> integrating their theory into the solid framework of modern scientific hypotheses. In the light of their reasoning, it appears evident that the contemporary naturalist should have been led, not only by the quasi-totality of the arsenal of paleontological and biological facts but also through his own professional formation, to subscribe to the initial statement that “the first principle of evolution is immutability.”

But if that is the case how can we explain that since the time of Darwin<sup>2</sup> and up until today the conviction has prevailed that changes relating to evolution are always of a gradual nature, that they are the result of the continuous accumulation of slight variations and that species are slowly transformed into other species? Now, the ideas of natural selection and struggle for life have thoroughly penetrated the collective conscience: the Darwinian, or neo-Darwinian, model of evolution has achieved the status of consummate proposition of a science that has successfully withstood the test of time. The thesis of the continuity of evolutive changes is presented in its most succinct form by G. G. Simpson, one of the founders of the “synthetic theory of evolution” and the best known, undoubtedly, of the traditional evolutionists, who wrote that if we knew all the

<sup>1</sup> N. Eldredge and S. J. Gould, “Punctuated Equilibria: An Alternative to Phyletic Gradualism,” in Schopf, T.J.M., ed., *Models in Paleobiology*, San Francisco, Freeman, Cooper & Co., 1972, pp. 82-115.

<sup>2</sup> Darwin is considered as the father of modern evolutionism, and “natural selection” or the “struggle for life” are never brought up without his name being mentioned. Much less often do we find the name of the other “father” of evolutionism, Alfred Russel Wallace, who, independently of Darwin and at the same time, came to conclusions that were identical to his. At the insistence of his friends, he renounced the publication of his master work, which would have appeared in the same year as the *Origin of Species*. His doctrine differed from that of Darwin on only one point: the question of the origin of man. Wallace, who was closely involved with the spiritualist current, did not admit that selection alone could explain the human phenomenon. This stand, that was associated with idealism and that Darwin feared because he had no solid arguments to oppose to it, has caused the discretion that up until today has surrounded the contribution of this great scholar.

intermediary stages in the history of life we could, by going backward in time, pass from man to the amoeba without leaving the framework of *Homo sapiens* (given that we would never know at what moment the limits of this framework had been crossed). The great majority, if not the totality, of evolutionists has continued to consider that if we lack the transitional forms between various groups of organisms, these lacunae can only be attributed to the incomplete nature of the fossil material at our disposal, which in one sense makes the absence of formal proof one more argument in support of the theory itself.

This “phyletic gradualism,” an expression designating adherence to the hypothesis of evolutive changes of feeble amplitude followed over long periods, has been the unshaken and unquestioned canon of evolutionist scientific thought ever since the appearance of the theory of evolution. Such gradualism has held sway not only over the life sciences: beginning with the work of Charles Lyell geology has also accepted the dogma of the accumulation of slight and slow changes, an illustration of which is the well-known Chinese proverb relative to the drop of water that hollows out a rock.

The adherence to gradualism cannot be considered as having been imposed by facts that were known at the time of Darwin; rather, it is explained by the social and cultural context that influenced the father of evolutionism. Marx, while admiring Darwin’s thought, wrote in a letter to Engels that he saw in enterprise and its acceptance of the principle of the struggle for Darwinism a reflection of English society, of its cult of free existence, a principle whose theoretic bases had been drawn by Darwin from the work of Malthus.

One of the two contemporary authors we have cited, Stephen J. Gould, turning to account a point of view that is close to that of Marx, sees in the phyletic gradualism of Darwin the product of a grafting of British liberalism on the natural sciences; let us mention, at the risk of forcing his thought a little, the bourgeois superstition that supposes a constant struggle of the human individual against other individuals in facing the challenge of the environment that is society, which can never guarantee to all an equal access to material goods.

Was Darwin really only the spokesman for his social class?

## *Evolution and Conservatism*

Is this what influenced his thought in a decisive way? We will return to these questions later. What is certain is that Darwinian thought found a highly favorable terrain for its implantation, as is proved by its prompt adoption as the one and only truth.

The history of life on earth or, more exactly, the history of species consists, according to Darwin, of an infinite series of generations throughout which the only individuals that survive and reproduce are those who have won in the struggle for existence, having revealed themselves as superior to others, if only to a minimum degree. Each generation is thus slightly different from the one that preceded it: it is enriched by the characteristics that assured the victory of the individuals that survived, depleted of those that proved to be not efficacious or detrimental. When these differences, accumulated over the course of successive generations, reach a certain value, we may conclude that a new species is born; however, the frontier between the mother-species and the daughter-species is purely arbitrary.

Such a hypothesis leaves no room for great and violent occurrences, for the abrupt changes that would affect a large part of the biosphere. It leaves no room for revolutions, those revolutions that were so dreaded by the English middle class, as we may recall, drawing a conclusion that Gould did not want to formulate himself.

### CUVIER, OR WHEN A CONSERVATIVE BECOMES A REVOLUTIONARY

However, things become considerably complicated if we undertake to submit to the same type of examination the work and thought of another great classic of the natural sciences: Baron Georges Cuvier, the French zoologist and paleontologist of the beginning of the 19th century. We cannot suspect of having revolutionary sympathies this man of confirmed conservative and royalist convictions, this member of the very elite Academy of Sciences, this scholar covered with scientific distinction and official decorations. Yet, his doctrine—quite justly called catastrophism—postulated the intervention, during the course of the history of life on earth, of a number of dramatic events that each time having overthrown the preceding conditions, cut out a

large part of the living organisms of the world and brought the establishment of a new equilibrium that was completely different from the preceding one. A paleontologist of the first order, a peerless connoisseur of fossils, Cuvier drew the logical conclusion from the fact made clear to him from his observation and one that was well known to scholars: the discontinuous nature of historical sequences offered by the living world. Analyzing numerous stratigraphic profiles, which the Paris region offered him in great variety, he simply verified that the long periods of stability of the fauna appearing in the profiles were interrupted by sudden occurrences, after which the situation did not return to the preceding prevailing order. He did not know what the origin of these catastrophes was nor from whence came the organisms that developed on the ruins of the worlds that were destroyed each time. However, he suspected that the catastrophes did not affect the entire earth and that, in each case, the pioneers of the new life were species that had taken refuge in regions that were spared the catastrophe. For a number of contemporary paleontologists such a hypothesis has a particularly modern ring: the American evolutionist David Raup recently calculated that at the time of the Great Extinction, between the Permian period and the Triassic period, that is, around 220 million years ago, more than 95% of marine species became extinct. It follows from this that all later species descend from the handful of survivors of the catastrophe.<sup>3</sup> Do we not see here a revival of Cuvier's thought, even though no one explicitly refers to it?

Cuvier did not think that each catastrophe was followed by a new act of creation, although he did not exclude the possibility. In any case, he observed a significant silence on this question and, on the other hand, sometimes suggested, as we said above, that the reconstitution of life after each catastrophe was due to the survivors. It is only to his student and continuator, Alcide d'Orbigny, that we owe the construction of a system carrying the catastrophism of Cuvier to the extreme: according to him,

<sup>3</sup> The other great extinction, that of the cretaceous superior, 65 million years ago brought about a global catastrophe on the continents, on the seas and in the air. The disappearance of the dinosaurs is only the best-known episode of this immense drama. As in the case of the Permian extinction, we know practically nothing about the cause of this event.

## *Evolution and Conservatism*

the earth has known 27 global catastrophes during its history, all life on the planet being destroyed each time and each catastrophe being followed by new creations, through which, proceeding from new experiments, the Creator reestablished life on earth but in different forms. Thus the catastrophism of Cuvier made room for creationism, a scientific thought was transformed into a metaphysical system and rigid dogmatism. Now, it is in this deformed version that the ideas of Cuvier have entered the collective consciousness and survived up until today.

Darwin, whose fervent youthful religiosity had been supplanted by a strongly accentuated materialism in his old age, no doubt feared above all the propensity of idealism. To recognize some brutal change within paleontological material, to claim to identify some catastrophe in the history of the earth, was, for him, to evoke the creationism he wanted no part of (and which was always associated, with no basis, with catastrophism). From this came his need to be constantly searching for gradual transformations, transformations that, in most cases, it was impossible for him to establish but of whose existence he was firmly convinced. In my opinion, it is in his non-religiosity and not in the influence of "British liberalism" that we must look for the explanation for Darwin's attachment to gradualism and his reservations with regard to any hypothesis bringing in brutal changes and with them, in his eyes, the attempt to draw him into a direction he had strongly resolved not to follow. This was an attitude that later influenced the development of all 19th and 20th century European thought but one that had nothing that was necessary nor even typical for a representative of Victorian society, as is proved by the warning sent to Darwin by Thomas Huxley, who was, however, the most enthusiastic partisan and most efficacious propagandist of evolutionism: "You have taken on a useless and troublesome load in accepting without reserve the formula *Natura non facit saltus*." This reflection by Huxley dates from 1859, the very year of the publication of *The Origin of Species*, a work that opened the way for the modern theory of evolution.

## GOULD AND ELDREDGE, OR THE CONSERVATIVE REVOLUTION.

The rapidity with which new ideas can be accepted in the scientific community, the suddenness and radical nature of these events that have been qualified as “revolutions” by the well known philosopher of science Thomas Kuhn deserve to be noticed. Gradualism, to which evolutionists have unanimously adhered as to a true dogma, and which permitted the elaboration of an entire system explaining a large number of phenomena relevant to the history of life, has received a rude shock and has rapidly disintegrated under the influence of an article by two young researchers who probably did not suspect the reverberations their work was going to have. If it is true that the new faith is not yet accepted by all (we recall what Max Planck said, that it is the disappearance of old ideas that allows new ideas to spread...) it is a fact that the professions of attachment to gradualism are becoming rather rare today and are stamped with a certain reserve.

Gould and Eldredge are aware of the fact that their non-orthodox views (unless they already represent the new orthodoxy) are not derived deductively from observable facts any more than the gradualism to which they are opposed. However, they are also aware that they represent the *Zeitgeist*, that they propose concepts that are deeply anchored in the current of contemporary science. Without cybernetics, with its idea of stable and homeostatic systems; without the catastrophe theory of René Thom and his postulate of abrupt changes after long periods of stability; without the Kuhnian theory of revolutions and scientific paradigms, perhaps “punctuated equilibria” would not have been born. This does not mean, however, that Gould and Eldredge drew their concepts from these scientific domains that are distant from paleontology nor that they took these branches of science for models. They are simply convinced that their hypothesis was already in the air. In other words, that it just had to be formulated.<sup>4</sup>

<sup>4</sup> Since the appearance of the first article by Gould and Eldredge (and in some cases, before its publication) a number of researchers have come to conclusions that are analogous to theirs, either in support of the “punctuated equilibria” or in expanding and modifying the theory. Thus we have seen the

## *Evolution and Conservatism*

There are at present on the earth around 2 million species that are distinct or discrete units of organization and that do not cross in nature. We know that the present situation is the result of an evolution over more than 3 billion years. We also know that all existing species had common ancestors in the distant past, that they perhaps come from a single mother-species or even from a single living cell. In these conditions, how can we explain that such a constant evolution and one having such a creative nature could have occurred, if we assume that species do not change? How can we conceive the possibility of the passage, through innumerable transitions, of the amoeba to superior mammals and man if we admit that each of these intermediary stages had for its sole aim to endure and perpetuate itself eternally? Present-day evolutionists of non-gradualist tendency give an answer to this question that is as clear as it is unexpected: if evolution has been possible it is precisely because species were not transformed into other species or, more exactly, because the individuals making up one species could not all be transformed in the same direction to give a new species. A system that proposes at the same time the reality of present species (which is contested by few) and their gradual transformation in time is marred by a logical contradiction and even invites the suspicion that its authors have a touch of schizophrenia.

Species are not simple aggregates of individuals but cybernetic systems whose integration is assured by the operation of a subtle network of interconnections, by the action of schema of individual or ontogenetic development and by inertia, which is all the more efficacious when the population of individuals concerned is numerous. Today we are beginning to have an idea of the complexity and solidity of the bonds that unite the individuals—the

birth, or rather rebirth, of the notion of megaevolution. We think today that megaevolution is alone responsible for the creation of new species and we oppose it to microevolution, limited to slight modifications in existing forms. The elaboration of this new theory is especially due to the geneticists, who see the regulatory genes as the principal agent of evolutive changes belonging to megaevolution. According to them, on the other hand, mutations of the structural genes would bring about only unimportant modifications, ascribable to microevolution. Whatever the case may be, the theory of Gould and Eldredge is helped by it.



“population”—belonging to the same species and the precision of the mechanism on which this stability reposes. When we read works on social insects, we cannot help being astonished at the iron discipline their organization implies and the clockwork precision that characterizes it. Everything that the specialists tell us about ants and bees—castes and classes, workers and soldiers, queens and slaves, sacrifices and courage, labor and idleness, language and communication, and many other things—makes us ask if we are not in the presence of a model, perhaps caricatural, of a society governed efficaciously and aware of its objectives. The anthill and the hive may be described in terms suitable to cybernetical automatons, which do not leave the slightest margin of liberty to the units of which they are composed. An insubordinate ant, an individualist bee would soon perish within the machinery of such an automaton. Is the evolution of an anthill imaginable?

Social insects are without a doubt an exception in the world of living organisms: their astonishing organization is due to a genetic anomaly affecting the species and animating each individual with an innate altruism toward the other members of the group. However, all these species and all these populations are characterized by a mode of organization that presents a certain rigidity: everywhere are found complicated systems of laws and prohibitions, everywhere behavior is codified into rites, everywhere the individual is assigned a clearly determined place within the group. Everything that during the course of evolution has been shown to be favorable to the collective well-being is petrified and fixed for eternity. Everything that has been found to be detrimental to this well-being has been eliminated. Each individual, each group that would rebel against this system would be destroyed, each mutant would be made to disappear. Conservatism has been elevated to supreme law, change being considered as the greatest danger. Such are the factors that make evolution possible.<sup>5</sup>

<sup>5</sup> Let us remember, for example, that the first fish to leave their aquatic milieu 350 million years ago, whose descendants became amphibians, left in order to look for other sources of water in regions that had become desert. In one sense, if the fish became amphibian it was because of his determination to remain a fish at whatever cost. Here, as in other cases, the creative force of evolution was the “desire” not to change.

## *Evolution and Conservatism*

The group does not have the monopoly on conservatism; the individual is no less the enemy of change. This is not surprising: the individual exists in an infinitely complex cybernetic system governed by such a large number of stabilizing mechanisms that any unconsidered modification would risk the destruction of this fragile equilibrium. The development of a being, from the egg to the adult stage, rests on a delicate procedure of regulations that cannot be modified without bringing about a mortal risk for the individual. In the final analysis, the individual is only the product of the genes hidden in the nuclei of his cells, which, protected from all contact with the exterior, teleguide his slow and precise construction. Sociologists tell us—and we see no valid reason for not following them on this point—that we are nothing more than “cases” whose function is to assure the protection of the genes against the dangers that the exterior world threatens and to allow them to perpetuate themselves and to engender to infinity replicas of themselves. Now, the genome is, certainly, the most conservative machine for identical reproduction and the most highly perfected that nature has invented.

We have brought out that genes, individuals, populations and species (as well as other “*intégrons*” dependent on the organization proper to life) “fear” changes and “consider” evolution as the greatest danger. However, evolution is a fact that no longer, practically, has to be proved and which must be explained one way or another. If the thesis held by Gould and Eldredge came to deny the reality of evolution, these two young scholars would be well advised to quickly change their professional occupation: to devote one’s energies to research on non-existent phenomena would be fruitless.

### THE MORE IT IS THE SAME, THE MORE IT CHANGES.

However, Gould and Eldredge in no way deny the reality of evolution. They confine themselves to affirming that species do not transform or, more exactly, that numerous populations that are well integrated have no possibility to evolve. If there are beings among which pioneers of progress are found, they can only be restricted and isolated populations that have escaped the all-powerful domination of the stabilizing mechanisms or, at least,

for which the efficacy of these mechanisms is lessened. Let us imagine for a moment a large and powerful State whose system and structure are directed to the maintenance of the *status quo*: this is not difficult, given the number of examples of such States that history presents us. Now, it is again history that shows that the farther one goes from the administrative center the more feeble are the stabilizing restraints, the more free are the local administrations and the more independent are customs. It is at the frontiers of such a State that wars originate; it is from these peripheral regions that danger comes; it is toward them that an eye is kept to reveal the beginnings of a change, one of those changes that some desire with all their hearts and others execrate.

Now, if we wish to consider things by using this purely metaphorical comparison, we see in it an approximation of the model proposed by Gould and Eldredge to explain the origin of new species in the world. This model, called *allopatric*,\* suggests that it is where stabilizing and homeostatic mechanisms are weakened, that is, within suppressed, marginal and poorly-integrated populations, that certain original and unsteretyped solutions come into being. In other words, certain innovations forbidden by the "center" may escape from the power that paleontology calls the "stabilizing selection" and take on a concrete and definite form, thus becoming new norms that will from then on have an "obligatory" value in this local population. What happens then? This modified group may return to the territory occupied by its ancestral group which, let us remember, is incapable of change. Now, in the case in which this new line proves to be superior, no matter in what way, to the earlier species or even would have more chances (such a purely accidental superiority seems to have been a current phenomenon in the history of life) it would then be able to chase its predecessor from its territory, or more precisely, from its ecological niche; to contribute to its extinction; and to install its own norm, which from then on would be strictly observed and protected against menacing innovators.

\* The model of determination of species is called "*allopatric*" when geographic isolation exists, and "*sympatric*" when the opposite is the case. The *allopatric* notion is primary in evolutionism and constitutes the key word to the present study.

## *Evolution and Conservatism*

As we see, in this model the adversaries in competition are not so much individuals (as was the case in Darwin's schema of natural selection) but species, hence the name "specific selection" given to this process.

If an event of this kind has left traces in fossil material, we will observe a rapid transition, with no identifiable intermediary form, from an established order to the one that succeeded it. Evolution will take on indeed a "punctuated" aspect, each time establishing a new equilibrium, whose only destiny will be to endure or to give way in its turn to another equilibrium. We understand why Gould and Eldredge adopted the name "punctuated equilibria" for their theory of evolution.

### CULTURAL EVOLUTION, THE CONCERN OF MINORITIES

We have already indicated that this primary formula of evolution, "Avoid change at any price," is valid not only for species but for all integrated systems. There is no doubt that human society is one of those systems and, in fact, there is no reason why this general law should not be applied to it. However, is it not true that societies continue to evolve, change structures, economic level and customs? Is not the history of man the opposite of the static image (or to be more exact, "punctuated") that we have just brought up? In an attempt to answer this question, let us undertake a mental experiment. Let us imagine that for one reason or another the European civilization, the most exuberant and most changeable of all civilizations, had in the past adopted a different strategy for its development and, contenting itself with its European domain, had not set out on the conquest of the world. In this hypothesis, would there have been the chance for our world to have, just the same, entered into an era of highly-advanced technology? Would there have been the chance, independently and on different continents, for electricity to have been discovered, airplanes built and calculators made to function? There is no absolute answer to such questions. However, it is permissible to confirm, and with good reason, that nothing of that would have happened. When the first European navigators arrived on the American continent, they found societies that had reached different stages of advancement: soci-

eties having diverse cultures that were at times of a great richness but that somehow appeared to be arrested in their development, as though they had led a life unchanged over the centuries or, like the Andean and Mexican civilizations, they were no longer more than a shadow of their past greatness. When in the 19th century the English became preponderant in China, they could enjoy a culture that was certainly fascinating but that had existed for two thousand years in a state of strange stagnation, closed as it was within a strict rigorism and a ritualism that had become hardened while, in earlier millennia, it had no doubt had a quality of renewal.<sup>6</sup> The specialists of the great vanished civilizations of Mesopotamia have frequently discovered, not without surprise, in the way of life of the peasants of these countries that are today desert, petrified and ritualized traces of customs they had adopted as innovations from thousands of years earlier. When English colonizers disembarked in Australia they found an indigenous culture that had not undergone the slightest change in 10,000 years and evoked the time when the ancestors of these same colonizers lived on the fringes of the glaciers that then covered the northern part of the European continent. When, during the Indo-Chinese War, the advance troops swept the country, chasing before them new waves of peoples who had been wrenched from their homes, a refugee camp received one day a tribe literally springing into view from prehistory, to the supefaction of the anthropologists who were witnesses. These "naked men" of Laos knew neither fire nor clothing; they did not build houses nor cultivate the earth; and their language was rudimentary. Living for centuries in the shadow of the great civilizations of Southeast Asia, this tribe had never conceived the slightest innovation that would have served to change its existence. We only have to open a book on anthropology to add to this list and confirm the surprising fact that our 20th-century world is literally peopled with

<sup>6</sup> This consideration has no effect whatever on the fact that this is one of the richest and most refined cultures in the world. However, it is evident that its evolution has been slow, and even null. This can be seen in Chinese art, rigorously conservative. Let us also remember the Chinese cult for old age and the aged, in contrast with the absence of any role played by youth in public life and artistic creation.

## *Evolution and Conservatism*

small tribes that for thousands of years have made no progress along the road of technical development and innovation that appears so natural and rational to us.

However, let us change tenor: let us leave our Earth and look farther into the Galaxy. Let us pose the question, "What is the probability of the existence of a highly-developed civilization on another planet in the Milky Way (or elsewhere in the Universe, which does not change the terms of the problem)?" In his article entitled "Wrong Numbers,"<sup>7</sup> Robert G. Wesson suggests that this probability is minute, even when evolution might have somewhere resulted in the creation of an intelligent species. His conclusion, rather surprising, it is true, rests on the argument that almost any civilization created by this intelligent species would show an innate tendency to preserve its structures and to fight non-orthodox ideas. In support of his thesis, he mentions the fact that of the twelve great earthly civilizations<sup>8</sup> that have left vestiges of their grandeur, who constructed grandiose edifices, created works of art, knew philosophy and literature, eleven were arrested in their development or even regressed before having reached the level of advanced technology. This twelfth civilization is Western civilization. Is it surprising that the science it has diffused during its development has considered progress the rule rather than the exception?

We do not doubt that even those civilizations that were arrested in their development must have begun to evolve in order to have reached the point they did. Their evolution, like that of the animal world, must have come about due to the relaxation of the stabilizing mechanisms, through the action of marginal groups or individuals. May we, because of that, consider the allopatric model as valid for human societies? It is at the level of ideas, not at that of morphology, that evolution has occurred during the course of human history. The species *Homo sapiens*, in existence on our planet for at least 100,000 years, in all that time has not changed from the point of view of morphol-

<sup>7</sup> R. G. Wesson, "Wrong Numbers," *Natural History*, Vol. 88, No. 3, 1979.

<sup>8</sup> It goes without saying that this figure of 12 civilizations has no absolute value and that it is subject to variations according to the theory of history we adopt. We may, with Toynbee, advance the figure of 25 civilizations or, with Spengler, count 7 or 8. However, the examination of this question would take us away from our subject without changing the tenor of our conclusions.

ogy: for at least 35,000 years it has remained unchanged.<sup>9</sup> If there has been evolution, it lies in the exploration of the potentialities of this species, potentialities that are indelibly inscribed in it and have nothing to do with new biological adaptations. Therefore, if the mode of evolution is no longer the same, even more because in one sense it has remained allopatric, we must also look elsewhere for the pioneers of change. Marginal populations, to repeat the same expression, are no longer those inhabiting distant regions but those that explore the confines of established thought, that transgress the norm, that avoid mediocrity and stay apart from the mean. They are populations made up of the young and rebellious, the intellectual and artistic elite, national minorities, in a word, all the “marginals” of thought—all those who are different from the majority that surrounds them. In human history, allopatry is no longer an idea of a geographical order but one of ethical and intellectual order, remaining, however, a possible factor of progress. If it is true that change is not always synonymous with progress (it is rather the inverse that is true) it is nonetheless true that in the absence of change stability will inevitably bring about stagnation and even regression.

To explain the phenomenon of European civilization, Wesson has drawn our attention to the curious fact that has marked its history since its origins. This fact is the division, indeed, the fragmentation of the continent. The spiritual capital, that for a long time was Rome, was never identified with the local centers of administration in which political power resided. This is why Europe has not known great centralized empires but has remained broken up and diversified (where spiritual power and political power coincide, as in Byzantium, culture is inflexible and schematized, which does not make it any the less fascinating). It was at the time of the city-states that ancient Greece showed itself capable of the most startling prowess; it was under the Re-

<sup>9</sup> The brain of dolphins, a species whose intelligence is by now widely recognized, has not changed in 20 million years. Did the intelligence of dolphins arise all at once, with the appearance of the species, or was it perfected by means of a certain “cultural” evolution? It is a difficult question to answer. In any case, if there was evolution it was not rapid, and dolphins may be given as an example of an unfinished evolutive chance.

## *Evolution and Conservatism*

public that Rome knew its most creative period; and it was during the era of the “Fighting Kingdoms” that China had its golden age. It is always when rigidity is relaxed, when schematism is weakened, when the straitjacket is loosened that civilizations have bloomed. However, these phases were never of long duration. In addition, Europe was threatened by the appetites of the most avid leaders. Charlemagne, Napoleon, Hitler and Stalin wanted to submit it to their power and impose on it their order. It is because of a caprice of history that none of the nine or ten attempts at hegemony totally reached its objectives, and that Europe and the West were deprived of benefits that other parts of the world have enjoyed. Today, the right to difference and “marginality” being recognized by most developed countries, cultural and spiritual allopatry no longer being contested, the world is evolving rapidly. However, we must constantly keep in mind that development is the exception rather than the rule and that nothing guarantees its perpetuity. A civilization that wants to progress must always appear conservative, unless it wants to lose what it has gained in the past. However, it must also try liberalism, without which it cannot profit from the support of its marginal groups. Even the most just thought becomes the tomb of progress at the moment it is considered as the only truth.

We do not know if another highly-developed civilization exists in our Galaxy, but we have no assurance that ours can maintain itself at this level for long.

Marcin Ryszkiewicz  
(*Warsaw*)