

A NEW INTERPRETATION
OF HISTORY

History, as most people understand it, is the product of an intense effort to describe in an objective way and in rigorous chronological order events which have occurred in past time. Before the Renaissance the historian compiled traditions, chronicles, and statements, with no concern to verify the correctness of his data; thus legend was mixed with truth in confused and picturesque narration. Now, however, the investigator, established as a judge of inquiry, begins research on a chosen subject within his competence by unleashing his critical judgment, rather like a hound on the trail of suppositions. He unearths documents and confronts them, weeding out the false from the authentic, subjects the most diverse witnesses to close comparison, and then with great patience, whether gifted or inept, he presents his thesis to the assembly of the learned. These, like a jury, either accept his conclusions, admit only a part of them, or reject them completely. Thus, from the time of the humanists who cleared the way up to the present day, an extraordinary legion of specialists, as patient as the ancient Benedictines are said to have been, have made efforts to clarify

Translated by William Genemaras.

past events to establish the bases of an objective text of what has actually taken place. Hence the work of the great historian consisted in joining and fusing this labor into a homogeneous unit that would be the approximate reflection of the epoch under study.

We call these labors “anecdotal history” because their foundation consists of the documentation of certain facts on which the entire edifice rests. With regard to historical methodology, it is superior to “contemporary history,” which consists in the narration of vivid events by an eyewitness or by one who has gathered the facts from the participants, to be used, as it were, in his own cause—in defense of a policy, in exaltation of a clan, for mere literary pleasure, or perhaps (as may be the case in our time) for the aid, in good faith, of future historians. Such are *The Anabasis* of Xenophon, the memoirs of Joinville (which describe the Crusades), or the memoirs of Winston Churchill. Although those are important texts, they can hardly be called “history,” since they are no more than simple attestations. Thus, in giving them credence, the unsophisticated has often been in danger of accepting facts related in a tendentious manner, if not for the defense of one’s own or of another’s interests, in adulation of and gratitude to a crude ministry of press and propaganda. Unfortunately, there have been many such guileless historians who, influenced by those forces, have written history for the use of the vanquisher, repeating precisely what was meant to be repeated and receiving rewards of greater or lesser magnificence.

Anecdotal history, reaching its technical maturity at the end of the past century, represented an extraordinary advance. Nevertheless, it suffered a grave limitation. Once the facts had been brought to light, it was necessary to establish relations between them in order really to understand the period. It was not enough to know the strict chronology of the important events which had occurred in a determinate place, and historians soon realized that for their comprehension an understanding of the environment in which these events had developed was essential. Consequently, in addition to the political history, they studied the history of the society, of the economy and of the thought of a nation in order to present the narration in its true frame. Still, although historical description had changed character and had attained a subtlety at first inconceivable, anecdotal history was always confined to the mere anecdote, and it was logical that such should be the case from the moment that history, to become a science, based itself on the real fact, abstract, unadorned, and precise as a mathematical quantity. This being so, there could however exist no history

other than that of those periods whose well-filled archives had reached our investigators. Thanks to them, the past of European nationalities from the Renaissance to the present day was recorded. But with this method historians could not face with comfort either the periods preceding Western civilization or the great topics of universal history, for the simple reason that the available documents were useless as bases for an adequate critique. The events, with their train of testimonies, had of course occurred, but few or none had really reached us. All that we had was myths, legends, fables, and questionable chronicles, in which truth was so involved with falsehood that there was no simple way to separate the false from the true, the artful from the essential.

The problem acquired higher status when it was believed that anecdotal history had been written in an epoch in which, within the great vertices of universal history, nothing important for humanity had happened. Except for the development of the sciences and the dissemination over the earth of the white race—precisely those events least studied up to now—the history of the European nationalities, unless focused from an anthropological point of view, displays nothing except its own peculiar anecdotes. What relation to the comprehension of man's future can be seen in the internecine struggles of Francis I and Charles V or the ambitions of Louis XIV, Frederick of Prussia, and Napoleon? One needs only to compare these occurrences in terms of values and geographic scope with the events which have affected the world since the year A.D. 14 to realize that the history of the European nationalities contributed few lessons for the understanding of the great movements of humanity. Anecdotal history, like stratigraphy in geology, pointed out the slow journey of humanity, but in times of tranquillity. The latter could not explain the great orogenic movements which changed the face of the earth, nor the former the social impulses which had upset its surface, as though the mischievous gods, escaping from Pandora's box, had excited the energies of the human masses to sublime frenzy—these energies thus being set in opposition by unchained passions or hopelessly discouraged (as we shall later see) by painful upheavals having to do with the physical nature of the earth.

There existed only one exception—a European nation which, because of the peculiarity of its geographical situation and the importance of the historic movements which had occurred within its boundaries, was distinguished from the rest. This was Spain. For that reason, a better understanding of the past might clarify the great problems of universal history and perhaps permit the bases of a new methodology. Of all European na-

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tions, the history of Spain has been, until now, the most inadequately studied. For various reasons—religious wars, the Inquisition, the expulsion of the Jews—this nation's past has been written in pamphlet style rather than with scientific rigor. The Spanish, bothered by the inaccuracies and exaggerations which were reported mostly through ignorance, called these tales "the black legend." However, it has now been many years since scholars, native as well as foreign, have broken down the fables and clarified part of the myths, and, although those inaccuracies are still circulated within that great public which exists for unfounded facts, the black legend has been expunged from erudite works. But the incomprehensibility of the great movements which have occurred in Spain still stands, and, given the limitations imposed by anecdotal history, it could not be otherwise. We will indicate only two series of facts that have not been explained by it.

1. How could it happen that the most mountainous nation of the Continent, which the Roman legions had taken three hundred years to conquer, was subjugated in only ten years by invaders from the end of the world to such a degree that Spain was converted from Latin to Arabic, from Christianity to Moslemism, from monogamy to polygamy?

2. How could it be conceived that this nation, which in the eighteenth century was still one of the most powerful on earth, was left in decline and ruin in a little less than the first twenty years of the nineteenth century?

The explanation of these problems exceeded the possibilities of anecdotal history. But, if deficiencies of such magnitude existed in the history of the West, how could we possibly understand the history of non-European nations and peoples, whose historical archives had been destroyed by the negligence of time and man? And, moreover, how could we comprehend the great features of universal history, since those problems were a part of two gigantic processes well known by all historians, in which Mediterranean history was involved: (*a*) the expansion of Islam and (*b*) the causes which bring about the power and ruin of peoples?

Nevertheless, it was legitimate to formulate the problems, using the method of anecdotal history, since in Spain these events had occurred in recent times. Books existed, architectural remains were left, and the clarity of documents permitted of their study—a venture which would have been difficult for earlier epochs. But how can we hope to confirm the causes of the decadence of the Roman Empire when we know only the principal features of its past and are ignorant of the intimate details, those which might have been able to explain the mechanism of its fall? And what of the fall of civilizations far more remote—Maya, Angkor, or even the

destruction of the Achaemenians? How can constants be established in universal history by the naturalistic method—comparing cultures with each other as though they were insects on a work table, which could be measured, weighed, and analyzed to deduce analogies and differences—when precise and decisive data do not exist in sufficient quantity? Thus, in the Roman Empire, more accessible for the historian, the most opposed judgments were made. For some, the decadence began with Constantine and Christianity; for others, with Septimius Severus. Many attributed the crisis to Nero and his orgies, and there were others, overly distrustful, who diagnosed the decline to no less than the dictatorship of Sulla! According to these criteria, Rome, like the invertebrate Spain of Ortega y Gasset, had always been decadent. (This was, in truth, a play of words disguising the jugglery in the handling of the problem.)

When we began our long studies on the ruin of the Spanish structure, we were confronted with an enigma which we had to clarify in order to understand the historical evolution of this country—the invasion of the Arabs. Great was our surprise when we realized that there existed no contemporary documentation of this event and that historians, even contemporary specialists, had accepted without hesitation a legend created at the beginning of the eleventh century by the orthodox Mussulman reaction and solidifying into a movement similar to that of the Counter-Reformation. We cannot here repeat the discussion which we have debated at great length elsewhere,¹ but, discounting the total incomprehension of the historians concerning the expansion of Islam, we were convinced that the meaning of the word “invasion” had been all too obviously abused. Regarded as taboo, it was desired to conceal with this word what was unknown, and therefore “invasion” had been used with neither meaning nor reason. The result was that while, according to some authors, Spain had always been in decadence, for others invasions had occurred on the peninsula throughout its entire history.

We believe that invasions are very infrequent phenomena. The expansion and regression of ideas should not be confused with an invasion, and it should not be forgotten that ideas are forces, both in the individual and in the society, which is a sum of individuals. People have learned a foreign language without invasion but simply because of the intellectual superiority of the stranger. Greek was extended over a great part of the Mediterranean area in a period when its own political power was very weak. In the same way, a nation could have assimilated another religion to its own

1. Ignacio Olagüe, *La Decadencia española* (4 vols.; Madrid: Mayfe, 1950).

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tradition without its imposition by the fire and steel of an invader, but simply because the idea took root in a favorable environment. The Scotch did not need to be conquered by the Germans in order for them to be converted to the Reformation, and neither were the Chinese conquered in order to become Communists. Archeologists should not explain, as has frequently been done in prehistoric studies, the discovery of objects belonging to another culture by the occurrence of an invasion, when their presence could be simply the effect of imitation or of a commercial relationship. What, therefore, we ask, is an invasion?

The majority would probably agree that an invasion rests on a march toward an objective by an aggregation, warlike or peaceful, in accordance with a political organization and a spiritual leader. Then the arrival of the Alpine tribes in the West could not be conceived as invasion, since these people from the East strayed westward as a function of climatic factors, in an unorganized fashion, and during several millenniums. We should, therefore, restrict the word "invasion" to a directed action and not to displacements which show a strictly biological character. The movements of the Indo-European tribes resembled more the migrations of the zoological herds of geological times than actions conceived and directed by a man or a small group.

Thus we became aware that, in order to analyze the motor which gives the impulse to history, it is necessary to give greater importance to the process of ideas. Heretofore, the evolution of thought, whether political, scientific, or religious, had been studied apart from the facts. Keeping in mind the psychological studies of Alfredo Fouillie, we understood that if, on analysis, we could conceive of an idea as an action ascribed to the external manifestations of the individual—as a force similar in respect to its morphological characters to any other natural force—in the same way we could analyze the ideas of the society, inasmuch as it constitutes an organization of individuals. In other words, if there existed a dynamics of personal will, this implied likewise a dynamics of the collectivity. Psychology gathered the testimony from the first, and history the facts from the second.

Given that the idea is a force, we could measure its radius of action in the society—that is, in history. When an idea or an assemblage of them reached a greater expansion, it appeared more important in the eyes of the investigator. The obtained effect permitted of a hierarchical scheme of the past, as the events were in a close relation of subordination to the idea, and, given the findings of anecdotal history, the degree of its expansion could

be calculated with certainty. All that was necessary was the study of the relation between the idea and the consequent fact. We found ourselves in the same situation as the primitive naturalists, who, to establish an order in the multiplicity of living things, had undertaken an identical method. Distinguishing the principal biological characters of the animals, they had managed to schematize them according to their importance in a genealogical tree: order, family, genus, species. On this structure the future of biology had directly depended.

Thanks to the enormous inventory of documents in our possession, it is possible to attempt a similar systematization constituted of ideas-forces and arranged in an order of subordination. The success of the attempt would lie in the search for, and isolation of, the principal ideas on which the others depend. Several families, then, would compose a higher structure, a culture; and several cultures, a civilization.

We will take as an example a rudimentary society, because in mathematics, biology, and history the simple theorems permit the comprehension of the more complicated. We will consider the history of men who, since the most remote times, have dwelt close to the great polar bank, where they live in an adequate geographic territory—frozen lands, tundra, seashore, islands—and who are commonly called Eskimos. In our times the geographers and the students of prehistory have learned the higher principles to which their lives were subject. This principle constitutes for us an idea-force, despite the fact that it represents a living being, the reindeer. From our point of view, this ruminant is converted into an idea-force because the life of the society is organized about it. It satisfies all needs—food, clothing, tools, transportation—to such an extent that modern geographers have been able to establish a distinct social structure, the reindeer civilization. This creature is therefore an idea-force that limits a human association to a geographic territory determined by the range of its species. In addition, we have an abstraction which can be translated into terms of space and dated back in time, an algebraic expression. With the knowledge of one of the values of this society, then, the remaining unknown values can be automatically conceived. The simple discovery of a bone or of a rock painting immediately implies the reconstruction of the civilization as it functioned.

It is within our power to isolate any other group in a different geographic setting and thus to study the civilization of the camel, of honey, and so on, which has been done in great measure by the French geographers. The idea-force is concentrated in a concrete object and permits the

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understanding of an underdeveloped society. Nevertheless, the same principle can explain the society of the great civilizations in which the idea-force is not interrelated with a concrete object but with an idea-abstract, intimately tied to a conception of life. Nietzsche was thus able to study the Dionysian and Apollonian feeling of the Greek civilization, and Spengler the fervent desire of Western society to draw out nature's secrets, calling it Faustian, from Faust.

But let us return to our Eskimos, whose civilization is well known and whose evolution can be traced from the later paleolithic period. Students of prehistory, observing their present way of life and possessing an enormous amount of archeological material, have found it easy to reconstitute the past activity of these populations. Consequently, it was perceived that there existed in the course of this long evolution subordinate divisions belonging to the general picture, which were always delimited by the geographic area of the species—the idea-force that served as common denominator. It became evident that this species held a much more important place in primitive society than in the present. The ancients were more closely tied to the reindeer than are contemporaries, having idealized it as essentially magical. Thus profuse drawings of reindeer were found among the rock paintings of southern France and the Cantabrian coast. We would then deduce, as if in a subgenera, a group of ideas-forces of much less extent. We could isolate a paleolithic culture of the reindeer composed of minor ideas-forces; for example, magical representation of the animal, utilization of carved stones, rock paintings; later, a neolithic culture, with fittings of polished stone, and, finally, a modern culture influenced by the technical accomplishments of the white race. These three cultures possessed their individual characters, but, while on different temporal levels, they revolved about the same principle.

Consequently, in any society whatever, a certain number of fertile ideas are imposed on the mass of inferior ones. Cultures first established on less evolved conceptions are built up on a higher structure and constitute a civilization. However, the culture of the reindeer that we have just described was rudimentary. Its various cultural forms were extended peacefully in the past, the superimposition of the one over the other taking place over such a long period of time that there could not have been any confusion. On the other hand, the more recent civilizations were opposed in virtual competition. There existed a struggle which ended in a general symbiosis, in which the dominant idea-force managed to stand out and flourish in all its splendor. In the Faustian civilization its cultures were

clearly evident within very precise geographical limits. Then after a first wave, which could be linked to the Renaissance, and which had erupted with great force over the West, two opposite poles had soon been isolated: the Reformation in the north and the Counter-Reformation in the south. (These terms are to be understood in a very broad sense; thus Milton belonged to the culture of the Reformation, Velázquez to that of the Counter-Reformation.) Then, much as liquids find a single level, an equilibrium was established. A single idea spread over our continent more extensively than earlier ones and managed in the eighteenth century to again unify the West with the Enlightenment. A higher principle was erected, represented by Faust, crowning this grand and imposing architecture in singular apotheosis.

The idea, as an integral part of nature, followed the general law. It was manifested as a force and consequently was subject to evolution. It was mysteriously born, it grew, reached its maximum splendor, passed through a period of decline, and was slowly extinguished in the crucible of social agitation from which it could be reborn like a phoenix, metamorphosed into another idea, or simply received into another life-giving complex.

Now, however, we could distinguish among the ideas two large families which embraced the entire evolution of humanity. A great writer gives life to certain characters in his drama or novel, but, once born, they escape from the hands of the author. They are free—in sweet disguises they will stimulate man's imagination, enchant his dreams, soften his heart, and revive his hopes. They may appertain to the phantoms of popular novels, whose ephemeral life glitters like a flash, or perhaps, calmly but with firmness, they may occupy a place in the society as if they had really lived in a fixed epoch. Amadis of Gaul in Spain and the Princess of Cleves in France are so interrelated with a past culture that the informed person can place them immediately and without hesitation. These personages have been fused to such a degree with their native community that they have just title to be considered among its attributes.

There are, however, creative geniuses who have given life to characters so intimately linked to the essence of man that they appear able to resist the erosion of time and remain as active in the present as in the past. Thus we have Oedipus Rex, who destroys himself to learn the truth; Hamlet, corroded with doubt; Tartuffe, who, under the guise of religion, looked to increase his fortune; Don Quixote, so desirous that justice should rule over the earth that he tried to impose it with the blows of his lance,

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even at the risk of being vanquished by adversity; Don Juan, the seducer, whose passion consisted perhaps in enjoying women, perhaps in deceiving them. These characters cannot be labeled; neither do they disappear with a culture or a civilization. They have such vitality that they defy the centuries.

In the same way it is easy to distinguish among the ideas-forces two categories which enjoy such strength that they remain firm in spite of time. They are the primary and secondary ideas. A primary idea may be that of fire, which man managed to master in the early paleolithic period; secondary ideas are the representations which he has made of it or his manner of producing it in the different civilizations which have occurred since the primitive epoch. The idea of fire will remain united to the activity of man for the length of his existence on earth, but the manner of producing it will depend on each civilization—sometimes from a piece of wood, a flint, a match, a candle, or an electric spark. The ideas of God, immortality, society, and state, but also those of the wheel, weaving, agriculture, and calculation, constitute the mass of primary ideas. On each level of history they can manifest a different form, and the evolution of this form may continue throughout the centuries toward a greater spirituality, because they find themselves closely tied to the most immediate material and intellectual necessities. This is the great treasure of humanity that every newborn inherits and that is transmitted through generations by oral and written tradition.

By this method, we could conceive of man's past as a succession of ideas-forces, united in strong structures to form the frameworks of cultures and civilizations. However, imitating the orthogenic series in biological evolution, these civilizations have occurred in a discontinuous manner as a consequence of real and creative mutations. Just as the orthogenic series, in its accelerated² movement, was each time more perfected in regard to the nervous system and the brain, so the historical evolution was developed by a similar process, thanks to the transmission of life which unites generations and civilizations, but also thanks to the evolution of the ideas-forces, which became in each stage more important, more subtle, and more spiritual. In this very long operation the best is isolated and inherited; the secondary disappears or is immobilized in parallel avenues to finally stagnate, just as the fossilized series discovered by paleontologists and

2. We have studied this process in *La Ley del movimiento acelerado en la evolución* ("Boletín de la Real Sociedad de Historia Natural" [volume in honor of E. Hernández-Pacheco] [Madrid, 1954]).

anthropologists. One could therefore compare the evolution of the ideas-forces to a string of pearls, each pearl representing a civilization. The string would start with small pearls, which would increase gradually in size, to end with the most magnificent, hanging, pendulant fashion, in all its splendor. Each pearl, like each civilization, can be isolated from the string, but this string, like history, constitutes a single unit because each pearl is united to the preceding one by a thread which joins all—the inheritance of life and of the primary ideas-forces, whose power constantly increases.

The evolution of the ideas-forces followed the same rhythm as that of life, which was, after all, the simple consequence of the multiple correlations which unite the individuals. A group of species constitutes a family, several groups an orthogenic series, which is born, develops, degenerates, and dies. Then, because of a strange mutation, a new, more perfected series appears, better adapted to the geographic picture to which it belongs, more capable of satisfying the internal impulses of its nervous system and, later, the impulses of its increasingly more complicated brain. The primitive and rudimentary ideas-forces will evolve in the same way and with the same discontinuous rhythm until they reach the conceptions of *Homo sapiens*, pursuing themselves throughout the length of civilizations as in an eternal return. Moreover, in this extremely long process, idea and life are tied to the earth which nourishes them, providing at times the pedestal on which they may raise themselves and sometimes only the daily bread by which they are sustained.

In the evolution of humanity the imposition of the geographic boundaries was as important as the structure of the ideas-forces. In order to live, to create a culture, to perfect a civilization, man must enjoy possession of material goods. Without wealth and refinements the idea, its spiritual force constantly increasing, is a luxury accessible only when the primordial necessities of sustenance are assured. But wealth, like a gold coin, rotates from one point on the globe to another. It is not stable, and it also follows a process of evolution. When we studied the crisis which provoked the ruin of the Castilian plateau in the seventeenth century, we were astonished to see the rapidity with which a city of the commercial importance of Medina del Campo had vanished in misery. At the end of the sixteenth century, on festival days, drafts valued at several thousand dollars were cashed in a kind of clearing-house. One of the most important markets of Europe, both fair and market had disappeared but fifty years later. How can such a great catastrophe be explained?

Then it became clear that, apart from the minor relations which bind

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man to the soil of his birth and which, studied in these last fifty years by the geographers, are now described in the handbooks, there exists, incrustated in human evolution, another link, this one historical, which unites the idea-force with the geographical limit within which it spreads. We have called this relation "geopolitical" because the word seemed fitting and because of the innumerable criticisms addressed against our previous interpretations. Moreover, it had remained void of meaning, for the German authors who invented the word had not managed to give it a content. Then we realized that this geopolitical relation constituted a platform on which was unfolded the anecdotes of history. One could then write:

$$\frac{\text{Idea-force}}{\text{Geographic limit}} = \text{Anecdote}$$

We will take an example for greater clarification.

GEOGRAPHIC LIMIT

At the termination of the Spanish colonization, there lived in the plains of South America about fifty thousand undomesticated bovines. This wealth could not be exploited. The Gaucho, at mealtimes, having a discriminating palate, chose a pregnant cow from the flock, killed her, ate the calf which had not yet been born, and abandoned the rest to the birds of prey. At the same time, the vice-royalty of the Río de la Plata was one of the most destitute of all Spanish America. Buenos Aires was a small city of forty thousand inhabitants, in contrast with Lima, Mexico City, or Havana, which far exceeded a hundred thousand.

IDEA-FORCE

At the University of Edinburgh in 1820, following the theories much discussed throughout the seventeenth and eighteenth centuries on the basic concepts of chemistry, John Leslie (1766–1852) had the opportunity to make nature work, as was the saying then, in a most unique manner and to take advantage of it in producing artificial cold, thus transforming water to ice. His laboratory results had an impressive success, and little by little in the nineteenth century the technique was perfected, until, between 1890 and 1900, the industry of refrigeration was ready and rendered its first benefits.

GEOPOLITICAL RELATION

Now life began to fulfil its role. Soon businessmen realized the profits which could be gained if they could send the frozen meat of those gigantic herds of the pampas to Europe. Important mercantile enterprises were founded, and the landscape of those regions began to be modified. Cattle-raising, instead of being abandoned to the caprices of nature, was transformed by technique and industry. The plain was partitioned with wire fences, wells were dug, stables constructed. Trees were planted around the rural clusters, and they multiplied. Communications were perfected. A new wealth had been created. Buenos Aires, since 1890, has increased from four hundred thousand inhabitants to four million.

To establish a geopolitical relation, it is not sufficient to develop just any technical idea. The invention of paper, like that of the press, with all that it has signified for human progress, would not meet the requirements because it was subordinated to a primary idea—the written transmission of thought—serving merely as an improvement. To constitute a geopolitical relation, an idea must possess such force and novelty that it carries with it a modification of the landscape with the creation of a new wealth. For centuries since the beginning of human activity, thanks to the imposition of this relation, the natural landscape has been gradually and slowly transformed to an artificial one. But, with the evolution of the historical period, artificial landscapes have occurred one after the other in such a way that the geographer must exile himself from the confines of the earth to discover and admire a countryside free of human industry.

On the other hand, it was evident that an idea could not extend itself to such a radius of action if it did not represent the force of an entire culture. The device employed by Leslie to produce cold would not have occurred to the imagination of a man, even to a genius, had there not existed a scientific climate in which was present the principles required to carry out the experiment. This device, which today appears so simple, was the result of a constant force of two centuries during which the fundamentals of modern chemistry had been discovered and had remained firmly established. One can then affirm that this idea-force—the production of artificial ice—was representative of a society in a determinate moment of its evolution. Further, since the geopolitical relation, because of its abstract character, could be applied with success in space and time, it was legitimate to conclude that each civilization in the past had enjoyed its own geopolitical relations. However, to follow the ascending process of humanity, to understand the causes that accommodated and gave life to the anecdote, it was

necessary to interrelate the triple evolution of the three terms of the relation: (1) evolution of the ideas-forces, (2) evolution of the geographical limit, and (3) evolution of the geopolitical relation in the functioning of the two premises.

I. THE IDEAS EVOLVED

Since the historians, beginning with Renan and Taine, had initiated the study of the history of ideas (without the need to recur to Hegel's triad of thesis, antithesis, and synthesis, which at times eventuated in struggles internal to the cultures, as in the case of the Faustian civilization in the triad of Reformation, Counter-Reformation, and Enlightenment, but which did not possess a constant adequate to explain the great complex of universal history) the evolution of thought in general was deduced with always greater evidence. It was similar to the evolution of life in its enormous though diffuse ardor, its avenues, parallel but lacking in outlets, its occasional regressive movements, and its sudden and spectacular stops and starts. We could today affirm that, just as there was present in biology the evolution of the nervous system from a simple filament to the human brain (from a rudimentary and mechanical idea-force to abstract thought), there was likewise liberated in history over the ages, the long-sustained effort to reach from bestiality to greater spirituality. In the history of life and of the idea, an imposing impulse, like a tide, dragged after it a multitude of forms and ideas that gave charm and character to each orthogenic series and to each civilization. But in this medley of concepts some distinguished themselves in that they served as support for the structure of a geopolitical relation. They themselves established the nexus; they did not evolve. On the contrary, they strongly rooted the culture to the soil, so that the society might have vitality to grow, strengthen itself, reach its greatest splendor—and then disappear. The relation constituted the foundations which held a civilization in a characteristic mold. From here begins the discontinuous process of history. Yet above it, self-sustained, evolved the general ideas, free from all terrestrial determinism. And it was from within their enormous mass that, with the passing of time, future ideas to establish new relations would appear—ideas which would destroy those held previously, thus obliging human ingenuity to burst out with all magnificence in the most remote places of the globe.

In the course of the paleolithic period thousands of men must have stumbled onto the ore of cassiterite without giving it great importance.

But when certain geniuses at the beginning of the third millennium, interested in metallurgical matters, learned how to smelt it and mix it with copper, there emerged a fruitful movement, the civilization of bronze. Much later, by increasing the degrees of combustion of a more powerful furnace, other acute workers managed to smelt a more common mineral, iron. The civilization of bronze disappeared to give way to another, better adapted to the increased needs of a more numerous humanity and anxious for their satisfaction. The civilization of iron annihilated that of bronze—and the change carried peoples and nations to destruction. But there was no evolution in this case from the idea of cassiterite to that of iron. What evolved were the technical procedures necessary to achieve a combustion of more calories, a process ascribed to the idea of fire and which perseveres with still the same energy today. The idea of the geopolitical relation was thus subordinated to the evolution of general thought. The geological constitution of the globe did not change during historical times; it was technical ability which chose one object for its exploitation by man, abandoning the other. The existence of petroleum in Asia Minor was known since remote antiquity, but it could not be transformed into wealth until the evolution of human thought was sufficiently advanced for the discovery of the combustion engine.

II. EVOLUTION OF THE GEOGRAPHICAL LIMIT

The landscape can change either at the hands of man or by the evolution of nature itself. In the first case, one artificial landscape leaves its place to another. A characteristic example can be seen in England during the era of the industrial revolution. Its lands, cared for like gardens, were upset by the earthquake of a manufacturing complex in which the smoke, the shops, the railroads, and the worker's slums occupied the prairies and the villages. The landscape may also change with excessive cultivation, which leads to loss of fertility by erosion and through accelerated deforestation by the lumberman. But, in general, this change comes united with a phenomenon of much greater breadth—a rhythmical variation of the climate with the modifications of the continental landscape, a process that has existed ever since the most remote geological ages and that is attributed generally to mysterious and unknown astronomical causes. The first paleontologists had realized that the marine fossils found on the top of the mountains belonged to a different climate than the present one. Not only did the ocean occupy regions where great orographic systems are found today but the

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ancient ocean had no analogy with the present one. The sea of remote times in Europe had a tropical fauna; consequently, a change of climate had occurred. For a long time it was believed that it required geological ages for these modifications, but recently it has been certified that the climate had changed constantly during even historical times. In our studies on the Iberian peninsula we have reconstituted its climate in the direction of a greater aridity since the Christian Era. With the help of many bits of evidence, we have been able to demonstrate the eighteenth-century crisis on the Castilian plateau, calculating the loss of the pluviometric constant at around 300 mm. of water per year. At first sight the inexpert reader might deduce that this diminution was a thing of small importance in the climatic evolution of a territory, and, in truth, it would have less importance in an established geographical limit, and if it did not involve a constant. There are annual variations of temperature and rain—a phenomenon having little relation to what interests us here. The diminution of the rains—the cause of sharp crises in the history of Spain, as had been the case previously in other regions of the Mediterranean and of central Asia—was serious, from the moment it was recognized as involving a rhythm, that is, as a series of oscillations toward a lesser or greater amount of rain, and also when, in regard to particular circumstances, it was observed to modify profoundly the previously dominant geographical measure.

Characteristic botanical and zoölogical species make up a determinate landscape. The beech tree, for example, has a pluviometric optimum situated between 800 and 2,000 mm. of water per year. A decrease of 300 mm., therefore, would not modify the landscape in the least if the diminution took place within the optimum. The inhabitants of this territory who possessed no meteorological observatories, as was the case everywhere until the middle of the last century, would be unaware of the existence of the phenomenon, having no point of reference. But if we choose a place where the rainfall might oscillate to the lower limit, that is, around 800 mm., and the loss of water was constant, something might well happen. The beech tree and its associated species would resist for a certain time, but soon they would parch, to slowly disappear and leave the land free for another botanical group, which, finding itself in extremely favorable conditions, would develop with rapidity and exuberance. In the mountains of the Castilian plateau the beech tree and its relatives have succumbed to the pine family, which need much less humidity.

These considerations show that a decrease in the rainfall, in certain critical circumstances, involves, like a change of scene in the theater, a sudden

modification of landscape, with its enormous consequences in the economic, social, and political order.

But now we have a key which will help us to decipher some of the problems of antiquity. If a great part of the peoples who lived long ago in the Mediterranean area enjoyed a climate with much more rainfall than there is at present, we can easily understand how their economies attained a production which today has been lost, how they raised civilizations that fill us with wonder, and how they could suddenly have been reduced to ruin and misery. If, in the third and second millenniums, Mesopotamia enjoyed a temperate climate with abundant precipitation, the condensation of its demography is immediately explained, since great cities and their cultures are not likely to stretch themselves out in the desert sand. On the other hand, Breasted's law, according to which in times of drought the nomad invades the lands of the sedentary agriculturist, would acquire a breadth not suspected by its author, and many myths and countermyths would then be shattered. Thus the so-called Arabic invasion (which we have studied at length), which synchronized with a climatic crisis marking the change of the Sahara steppes to desert, motivated in that immense region the movements of the tribes from east to west as well as the Christian pseudo-reconquest and the anti-Arabian prejudice.³

There was present then, in certain regions of the globe, a process of drought. The temperate lands were converted into steppes and the steppes into desert—all this according to a long process of evolution, whose effects on the vegetation produced violent and sudden changes. But the consequences were not only social; they also attacked the individual as a biological being, since the modification of the landscape involved nutrition. As the human body failed to receive the inducements of the varied diet required for its complete development, there was effected, in the long run and irremediably, a change in the anthropologic structure of the individual. Faced with the need for self-specialization to arm itself against adverse

3. When the great historian Ibn-Khaldun, member of an Andalusian family which had emigrated in the fourteenth century to Tunisian lands, wrote: "A country dominated by the Arabs is a ruined country," he noted how many times the cause had produced the effect. "Consider," he continued further in his *Prolegomena*, "in all the countries conquered centuries ago by the Arabs, the civilization as well as the population has disappeared. The soil itself seems to have changed its nature. In our own day, Syria has been left destroyed, and Tunis and Morocco still suffer from the devastations committed by the Arabs." But we must distinguish two causes in his lamentations: the damages due to the modification of the landscape, which are blamed on the arrival of the nomads when they themselves, pursued by drought, were displaced, and the injuries caused by their presence, motivated by the shock of their barbarous customs compared with those of the agriculturist and the city dweller, whose culture was much more elevated.

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circumstances, and lacking the optimum conditions for maintaining even the normal equilibrium and harmony of its physiological faculties, the human body lost that elasticity and equilibrium that favors intellectual exercise. In a word, the race degenerated. The historian should not, obviously, let himself be deceived by words. The present-day Romans, Greeks, Syrians, and Arabs, considered from the point of view of the mass, must be physically different from the ancients—for better or for worse. But the change of climate brought other consequences as well that explained the ruin of certain nations of antiquity. Healthful regions abruptly became pestilent. With the drought a train of diseases suddenly broke out, among them the most virulent and insidious: malaria. This explains the fate of the imperial city of Rome, surrounded by lakes affording pleasure and beauty to its environs, where a rise in temperature was all that was needed for the *Anopheles* to lay its eggs in the stagnant waters. Thus the city was menaced by death, and Constantine had to abandon it as unhealthy.

On the other hand, while the civilizations of the Mediterranean suffered from the expansion of the drought, others succumbed to a contrary phenomenon—a sudden excess of rainfall. Situated in tropical regions, the desert became green and the jungle threatening, and, empowered by its vital juices and its innumerable armies of ravenous insects, it suddenly erupted and destroyed cities, temples, palaces, and cultures. The Maya civilization disappeared in this way, as did also that of Angkor, and several of the Vedic cultures, whose architectural remains amaze us, surviving in the midst of distant jungles. But the phenomenon was also able to benefit certain regions of inhospitable climate and convert them to temperate ones. The ice disappeared, the tundra softened and melted, rains and sea winds diminished, rivers became calm. The lands were transformed into peaceful territories, ready to receive immigrants and to be converted into areas favorable for the fostering of future civilizations. Europe, for example, in the beginning of history, attracted the alpine migrations to its plains. And it cannot be doubted that the power of the Nordic nations since the sixteenth century is owing largely to their favored climate, which has permitted the development of their agriculture.

III. EVOLUTION OF THE GEOPOLITICAL RELATION

The idea and the geographical limit having evolved, it was logical that the relation, with regard to the poles which maintained it, would also evolve.

This relation could change or disappear when one or the other pole did not fulfil its required role. The modification of the geographical limit, therefore, destroyed the existing link with all its consequences. For example, the irrigated land disappeared with the arrival of the desert. This irrigation had been constituted with regard to an established relation between the idea of geography, that of engineering, and an adequate geographic limit. But, if the rain was not sufficient to fill the channels, we saw the ruin of a canal system invented by human ingenuity along with the fall of the civilization which it sustained.

On the other hand, one idea could be displaced by another, more dynamic, which satisfied human necessities to a greater degree. A characteristic example is the failure of the Spanish metallurgic industry at the beginning of the nineteenth century, when, up to that time, the northern part of the Iberian peninsula had been one of the greatest iron-producing regions on all the Continent. This privileged situation was due to the following geopolitical relation:

Idea: art and science of the smelting of metals.

Geographic limit: sufficient proximity to iron mines with large forests that produced the charcoal for the smelting, as well as the existence of small rivers with mills which moved the required machinery.

Relation: a powerful metallurgic industry with its economic, social, and political consequences. Spain possessed one of the most efficient artilleries of modern times, which explained its wide hegemony.

Under these conditions Spain exported iron to England, especially for the needs of her navy. But in 1713 Abraham Darby discovered the procedure of transforming coal to coke, whose purity permitted competition with charcoal at a much lower price. England, which did not have a metallurgic industry, began the exploitation of blast furnaces fed with coal. Spanish and Continental metallurgy were left behind, and by the end of the century England smelted much more iron than the entire Continent. The French and Spanish might otherwise have been able to win at Trafalgar, and the same goes for Philip II after the defeat of the Invincible Armada, since the Spanish government would have had more iron at its disposal for a new navy than its adversaries and would therefore have been able to supplant its enemies.

It could be affirmed, in conclusion, that geopolitical relations are not perennial. They change. Therefore, each civilization in a given historical moment enjoys its peculiar geopolitical relations, which have many times modified their structure and the peoples who were sustained by them.

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Now, however, the great guiding standards that channel human activity are understood. While man was prisoner of the soil, he was also prisoner of his geopolitical relations. In the past, man could do nothing to master an adverse situation. The fact fatally asserted itself, like a cosmic calamity. But, with the evolution of the spirit, and as his technical and scientific means gradually increased, the play of the idea could temper or neutralize a disfavorable geographic relation. In contrast to the past the future appeared more pleasing. Then as always, in the epic of human life, there was a greater dominion of spirit over matter and, consequently, over the tyrannical imposition of the inorganic. However, these considerations permitted us to go beyond the ancient historical conceptions, since the history of ideas-forces, resting and supporting itself on anecdotal history, excelled always more and more. Thus, as in the evolution of mathematical thought letters had been substituted for numbers, now the idea and its relations were substituted for the mere anecdote. This was a new methodology in its infancy.