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GEOGRAPHICAL LANDSCAPE.- TAXONOMY

LOPEZ, M.L.: Catedrático de Botánica. Profesor Ordinario de la Universidad de Navarra. Pamplona. España.

LOPEZ, S.: Dr. en Geografía. Miembro correspondiente del Working Group de la IGU "Landscape Synthesis". Ramón y Cajal, nº 14, 4º izq. 13001. C. Real España.

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Summary: We will show the hypothesis, which a study group will work on, of the idea of carrying out the taxonomic classification of the geographical landscapes. This hypothesis is that geographical science must necessarily count on this classification. We also mention some analogies with other authors investigations in other sciences, such as 1) The relationship between different scientific fields: "Sinergetics" (HAKEN) and Physics Chemistry (PRIOGOGINE). 2) The search for analogies which permit the use of knowledge, experience and techniques in other sciences (MARGALEF) and finally. 3) The necessity of integrating the multiple analytical studies of different geographical specialities. (GRANÓ).

Resumen: Exponemos la hipótesis sobre la que va a trabajar un Grupo de Estudio, con el fin de realizar la clasificación taxonómica de los paisajes geográficos. Esta hipótesis es la necesidad que la ciencia geográfica tiene de contar con esa clasificación. Se mencionan también algunas analogías con líneas de investigación de otras ciencias y autores, como: 1) Relación entre los diversos ámbitos científicos -Sinergetica (Haken), y Físico-Química (Priogogine)-; 2) Búsqueda de analogías, que permitan aprovechar los conocimientos, la experiencia y las técnicas experimentadas en otras Ciencias (Margalef); y, finalmente, 3) Necesidad de integrar los múltiples estudios analíticos de las diversas especialidades geográficas. (Granó).

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I.- INTRODUCTION.

In this paper we shall present the hypothesis on which we shall base the investigation we intend to carry out, as a Study Group, as a continuation and application of the conclusions published in "Taxonomía de los paisajes geográficos" (Taxonomy of the Geographical Landscapes) (LOPEZ, S., 1.985, a.).

Our Study Group is not intended to be either important on numerous, but compact and centred on the theme, although open to all kinds of relation and colaboration, both sporadic and permanent.

We would like to offer here a Manifest almost completely taken from previons publications, which can serve as a point of reunion and of information for all those interested.

We possess data of the interest which is shown in the Taxonomic Classification of Geographical Landscapes.

We know of many attempts which have been made, and of some which are being carried out. We are participating in the Work Group of the I.G.U., "Landscape Synthesis", directed by Professor Mazar. From this information we have come to the conclusion that the interests of many of these scientists are more widespread and disperse than ours.

For this reason, and without losing their valuable and stimulating contact; we think it necessary to determine our objective in ORDER TO BE able to reach it.

II.- WORKING HYPOTHESIS.

To carry out the classification, we begin with the following hypothesis:

"The taxonomic classification of Geographical Landscapes is a scientific instrument which Geography needs to fulfil the function which the present society demands of this science".

This expression of our hypothesis shows clearly the "medium function" which we have assigned to the classification: the taxonomic classification is not the objective of Geography, or even anything very important; but scientific experience has shown that to acquire a knowledge of complex realities, it is essential to have adequate techniques, methods and means. The taxonomic classification, in this sense, facilitates the knowledge, handling, comparison and transmission of information.

But what is the objective of Geography?. What part does it play in modern society?. Professor Granö answers the question thus:

"Science, which had been considered by an industrialized society as practically only a basis for technology, began to participate in the planning of the integral development of the society as an active part of social policy". (GRANÖ, O., 1.981. "Translation Geocrítica", 1.982, nº 40, page 34), (1).

As a consequence of the modern tendencies of the external objectives of Society, which is increasingly transferring its main interests from economic growth to problems of protection and regulation of our environment, both ecology and the environmental sciences have been strengthened. This supposes an integrated study of Man and his habitat; attempts have been made to resolve this problem using correlations between different sciences. However, the results achieved have not always had the expected results, as the various scientists have continued to apply their own individual methods of investigation, even when they have worked as a team.

The consequence of all this in Geography has been an orientation of their investigation programmes towards an ever increasing integration of Man and his natural environment.

Although quantitative spacialism and the general theory of systems have been applied to both physical and human phenomena, these methods have not, for the moment, produced a practical programme of investigation for a new regional Geography

based on the integration of Man and his natural surroundings. However, attempts have been made to change the processes of isolation of the objects under study, used by scientific study methods, to replace these objects in their real context, both in time and place. (GRANÓ, O., 1.981. "Translation Geocrítica", 1.982, nº 40, page 35).

We ourselves conclude that the necessity of environment management, came to a head in the nineteen sixties. All of the attempts to carry out this work, combining the knowledge of economists, town planners, geographers, sociologists, historians, etc., have not been convincing.

We can observe at present -we have a good proof of this in the international congresses- the multiplication of "methods", by which the ways of integrating these different sciences are being sought.

The rapidly increasing number of proposed solutions shows us the interest in this theme.

III.- INTEGRATION OF KNOWLEDGE.

Our intention to arrive at a real understanding of the integration between Man and the environment, and also between the different environmental factors when Man is not present, is related to: a) the definition of geographical landscape, b) The limits of the entities which form it and, c) the taxonomic classification of these entities.

These concepts must be understood within a conception of geography which places it as a science which includes both Natural and Social Sciences. In a recent work about "The rural landscape of "La Mancha" in the early Middle Ages" from which we shall take some paragraphs, we explained this point of view: a) Definition of geographical landscape "We can define Geography as the science which has as a material objective the forms of the surface of the Earth, i.e. the geographical landscape, and as a formal objective -the point of view from which the material objective is of interest- the causes which originate and explain the variety and distribution of these forms.

The causes of the various forms that we find on the surface of the Earth are the relationships between the physical/

chemical, biotic and human elements in the geosphere. Thus, Geography begins its work trying to make clear the relations between the knowledge given by these sciences, and finishes it by studying the results of these relationships both in space and time; that is to say, studying the diverse forms of the Earth's surface.

Indeed, although Geography studies the relationship between physical, chemical, biotic and human elements, and although these same relationships are also the objective of Ecology, the difference between the two sciences is that Geography studies these relationships only as a cause of the forms under study, whereas Ecology studies the relationships themselves. The same can be said of certain aspects of history, sociology, economy and culture; when Geography uses aspects of these sciences, it does so only when they are factors which produce or modify the forms.

We can express the Geographical Landscape as the forms which the Earth's surface acquires, but we must not imagine that these forms are the distribution or aspect of habitation, or the understanding of agricultural techniques, or the distribution and proportion of crops or roads... All of these are factors which affect the landscape, but it is necessary to integrate them. These factors are present in the landscape, but there is no way of defining, or therefore classifying the forms of the landscape if there is nothing to integrate all of them.

The landscape, from an analytic point of view, is composed of individuals of landscape, and from a synthetic point of view is composed of groups of individuals, that, together with their interrelations, constitute a higher level of organization.

b) Delimitation of the functional unit.

We can define the landscape individual as a functional/morphological unit, uni-or pluricellular, composed of elements, factors and phenomena, constituted essentially by a leading power, a determined space and a life span. The working is produced between the elements of the individual, which are the great, real builders of the landscape: Energy, material, life, space and time. These elements, or some of their manifestations, existing in a space and a time, and having a relationship with one another, act as factors; in their turn, these factors, with

their dynamism, originate multiple phenomena, whose consequences produce diverse forms on the Earth's surface.

In the same way that "Life" has become diversified on colonizing the different environments, and this diversification has been based on morphological variations which reflect functional adaptations to the surroundings they found, and all of this has been done by means of concrete and definite manifestations of this "Life": individual organisms; so, the landscape, a particular type of life, is diversified by means of concrete unities, which are the landscape units; each one of them is individualised, precisely by the power of organization which one of its elements acquires over the rest. We denominate this element "fuerza rectora" (leading power). The organizing power of the "fuerza rectora" is limited; if it were not, only one individual would have existed and would exist in the geosphere. It is limited as to the space in which it can exercise its organization, and limited as to the time in which it can maintain this power. These limitations mark the space/time dimensions of the landscape units, as do the different phases or forms that it could suffer: expansion, regression, hegemonic position or loss of virtualities, etc. (LOPEZ, S., 1.985, page 36).

On the other hand, the organizing power of the "fuerza rectora" does not consist in "changing" the specific working of other elements, but in "selecting" it, increasing or decreasing it through its own activity. Thus, what the "fuerza rectora" (leading power) organizes, is, precisely, the working of the individual, -unit- not of its elements.

The landscape unit, therefore, is limited in space and time, thanks to the power of the "fuerza rectora".

According to this idea, Geography investigates the forms, conceived as a result of the integration which, in every landscape unit, the "fuerza rectora" (leading power) realizes on the relations and phenomena which exist in the geosphere, from the climatological to the juridical or economic; to be able to do this it is necessary to handle data from many other sciences.

Certainly this is the problem: the landscape concept integrates -we can perceive this clearly- all the physical phenomena (geological, climatic, etc.), biological phenomena (animal and vegetable life) and human phenomena (philosophical, religions, cultural, economical, social, etc.) which occur on the Earth's surface.

Thus, we realize that if we understand the landscape of a certain area of the Earth, at a certain moment in time, we can know the synthesis or integration of what is happening there. And this would fulfil one of the most universal aspirations of Man: to know, both generally and in detail, the reality which surrounds him, or surrounded his ancestors. On the other hand, we also immediately realize that this knowledge, which we are eager to acquire, cannot be easily reached. That synthetic and explanatory vision, is the result of a long analytical process, which must be worked at, and which, in Geography, we consider must take into account the objective delimitation of the units which form the landscape.

We can explain our opinion in the following way:

A synthetic knowledge is not merely the sum of different analytic knowledge: this would be encyclopaedic knowledge; a synthetic knowledge implies the integration of the diverse aspects. The key question is: In the field of the geosphere what integrates totally?. Because vegetable life integrates climate, the nature of the soil and part of the geological history. So when we, or rather the botanists, see a certain species, they know what type of climate and soil there is there; or when a historian sees a gothic cathedral, he knows which fundamental elements existed in that civilization. These answers, the plant, the cathedral, are forms which belong to the vegetable life on the cultural background, and in themselves, combine analytical knowledge of various sciences. That is to say, it is not the investigator's desire which carries out the integration, but the concrete response of all the factors: the landscape individual unit with its working expressed into a definite form.

In this sense the landscape units are, for us, the answers which integrate all the scientific levels embraced by Geography: the physical chemical, the biotic and the human.

Continuing with the comparison -in our opinion quite clear- of the biological world, we cannot study "life" without analysing the individual units which make up this life. We would be able to say very little about the much which the botanists say these days about the vegetable world, or about the vegetation of a certain area, if the study had not begun with the analysis of each plant, or if afterwards they had not been classified into species, with which it is not necessary to rediscover already acquired knowledge.

c) Taxonomic Classification.

In Geography, the classification of landscapes has been a continual aspiration since, at the beginning of the 20th century, the German School, with Schluter and Passarge, the Russian School with Berg (all of these disciples of Humboldt) and the Finnish School with Granö, J.G., understood the landscape as the object of Geographical Science. But the reality is that we have not yet reached this goal. It is sufficient to hear some words from the International Synposium in Ottawa in 1.982. The objectives were: "To instigate an epistemological, theoretical and methodological debate on the different ways of using the landscape as an object of study". In the final summary they state what has been studied: "Various methods of using the hierarchic order have been shown. The nature of the initial units, the particular logic of the regrouping of these units at various levels, constitute the distinctive characters of these methods, but they plant very definite methodological problems, sometimes difficult to discover. It would be desirable to go deeper into the grounds of these procedures, above all to show the heuristic value of these approaches". At the end the aspects which should be the object of future investigations were enumerated: "The interchanges which have taken place should contribute to the development of coordinated investigations about topics of common interest, such as landscape dynamics, the analysis of significant structures or the comparative study of hierarchic order, for example". An even more recent piece of data shows us the interest which the subject arouses within Geography. The International Geographical Union, in its Working Group "Landscape Synthesis" had as its theme in its 1.985 meeting. "The classification of the landscape and territorial management".

In this international meeting, celebrated in Dessau (East Germany), once again there has been stated the urgent necessity -ever increasing, because of the problems of territorial arrangement- of having a landscape classification on be able to integrate the multiple and diverse knowledge we possess about the landscape, since if it is not arranged, it is very difficult to make full use of this knowledge. (LOPEZ, S., 1.985, (c) pp. 18-23).

That is to say, for us, the problem posed by Professor Granö (point II) about the practical method of carrying out an integrated study of Man and his environment, greatly affects Geographical science. We propose, as a way to a solution, to

understand the units of the geographical landscape as real answers, results of the workings (interactions) of physical/chemical, biotic and human elements. Thus, the forms of the landscape units are the integration -materialized, with real existence- of those natural and human fields which science must know to resolve the necessities of the present society. Our working hypothesis -the necessity of having a taxonomic classification of these units- is a way of carrying out the desired study.

IV .- CERTAIN ANALOGIES BETWEEN DIFFERENT SCIENCES.

Considering the landscape as a reality formed by separate units, which have a certain kind of life, which are individualized by the limited capacity in space and time of the "fuerza rectora" (leading power), and which can be differentiated, described and classified in a parallel way to that of individual vegetables or animals, brings us nearer to other scientific conceptions.

We explained this in a recent paper in the 1st. Congress of the History of Castilla-La Mancha: "El Catastro del Marqués de la Ensenada y la ordenación del territorio".

Since 1.971, Herman Haken, a German physicist, has been proposing the development of a new science, Sinergetics, or the study of the combination of actions. Sinergetics, from the Greek, in its etymological sense means: "The cooperation of diverse components to produce a combined action".

For the last 10 years, Haken has organized meetings of specialists of various sciences to study the theme. The well known publishers, "Springer", have published these studies in a special edition, directed by Haken, which now has 28 specialized volumes.

Haken starts with the study of physical/chemical phenomena and then continues with biology and even social sciences. Haken's original examples are of a physical/chemical nature, but his greatest interest is that, in his opinion, the discoveries in these fields can also be applied to the origins of living beings and even to human behavior.

From the laser to the origin of species the forming of public opinion or economic phenomena; all of these, according

to Haken, can be explained by competition, the fight for survival and the triumph of a certain structure which imposes its order, causing a general or collective conduct.

Haken (1.984) explained this in his book, "Secrets of Nature's triumphs", in this way (as comented by ARTIGAS, 1985): Nature can be seen to be a collection of enormously varied structures, from the solar system and the galaxies to living organisms and each one of their parts. We know of different cases in which an organized structure appears on reduction of the temperature.

For example, the transitions of phase, when gas molecules organize themselves into a liquid state, and at even lower temperatures into a solid state: or the hyperconductivity, in which state the resistance of a metal disappears. These are phenomena in which a certain microscopic organization results in a new, observable property. Haken is mainly concerned with open systems, where the new structures require a supply of energy to last; his basic examples are the ordered light emission in the laser, the formation of characteristic "pictures" in liquids after suitable movement or heating, and the spirals of Belowsor-Shabotinsky's chemical reaction.

Haken has developed a very ambitions mathematical theory to explain how one can pass from a state of disorder to one of order.

From these cases, Haken extracts general ideas: after a series of fluctuations, a form of combined movement, the arranger appears which controls the others, determining a general or collective behaviour that produces a new order with its own original properties. The triumph of the arranger is due to small changes in the circumstances, which produce a multiplication of its effects. (ARTIGAS, 1.985). It is surprising, hopeful and indicative that these same ideas appear repeatedly in the present scientific panorama.

Another scientist, ILVA PRIGOGINE, Nobel Prize for Chemistry in 1.977 for his contributions to thermodynamics in unbalanced situations, especially for the theory of dissipative structures, has, in the words of Federico MAYOR ZARAGOZA, the same preoccupations, and shows similar analogies between Natural and Social Sciences.

"Not only for the brilliance for his contributions but also for the philosophic and social implications of

these, Ilya Prigogine is one of greatest scientistis os all time. He has not only expounded his original and audacious physical/chemical conceptions with extraor dinary rigour, but has then come down to the level of interpretation in terms accessible to non-specialists, and has separated the repercussion of his theories into various levels. He not only does not evade, but in fact looks for a compromise with Society". (MAYOR ZARAGOZA, 1.985).

The litles of his works: "Auto-organization in unbalan ced systems. Transition from dissipative structures to ordered structures, by means of fluctuations", which he wrote in colabo ration with NICOLIS, G.; or "Dialogues with Nature"; or his recent work "Science, civilization and democracy", show us quite clearly the orientation which PRIGOGINE gives to his discoveries in the physical/chemical field. Professor Mayor Zaragoza says: "What is natural, according to PRIGOGINE, con tains elements of aleatority and irreversibility, which leads to a new appreciation of the material: it is no longer only passive, as the mechanism preconizes, but is also capable of certain spontaneous activities.

"This change is so profound", BRIGOGINE has written, "that I think we can speak of a new dialogue between Man and Nature".

The unbalanced systems become a source of order: new and more complex equilibrium factors appear which confer on the system new properties in space and time. The reactions of this kind-successive bifurcation, are especially appropriate for explaining biological events to such an extent that ecolu tion is characterized by an increasing slope of comlexity together with a lesser level of prediction. The human brain is the crowning example of intrinsic complexity and unpredicta bility. Biological evolution as a whole and that of each living being in particular -it has been calculated there are a million mutations daily in an adult man- is the reflection of a perma nent dynamic instability. In this new approach, rationality can no longer be identified with certainty, or probability with ignorance. At all levels, probability plays an essential part in the evolutionary mechanisms. The vision of the world, as we see it around us and in ourselves, converges. According to Freud, the history of science is a history of alienation; Since Copernicus we no longer live in the centre of the Universe; according to Darwin, man does not differ from animals, and

Freud himself considers that consciousness is only the emergent part of a complex reality hidden within ourselves.

Curiously, we can now contemplate all this from a completely new point of view: with the role of permanence and liberty which prevail in human life, human existence appears as the maximum realization of the basic laws of Nature, expressed in irreversibility and aleatority. And this new rationalization of science leads us to reconsider the relations between men, and between Man and Nature.

In this new vision of the "creative" world, different futures can be conjectured, which favours the adoption of an active and hopeful attitude, which tends to avoid or palliate the conditions which might favour one of the undesired alternatives. Anticipation plays a crucial part in this sense.

The fundamental difference between the planetary and biological systems is that human societies can behave according to their purposes: they can, to a certain extent, choose their course and evolutionary rhythm.

My primordial conclusion is that the future is not decided: time builds itself and this implies ethical responsibilities (MAYOR Ilya Prigogine finishes his work like this:

What can I know?. What must I do?. What can I expect?.

These questions, after the exposition of the existence of concrete, although distant, analogies between Natural and Social Sciences, help us to understand that to choose the course and evolutionary rhythm of our present society -territorial organization- we must begin with the first question: What can I know?.

But there are more analogies besides these two authors. Professor MARGALEF, in his book "The Biosphere, between thermodynamics and play" expounds this same approach, giving numerous examples in which he relates analogically the laws of Nature with the social processes. The following quotation shows his decided position with respect to this scientific approach:

The structural continuum of the universe can hardly be described in any formal language. Every descriptive level must take the next lower level as a reference point. (...).

When a certain type of knowledge wants to be considered as a respectable science, it selects a certain level in the structural continuum and identifies it as appropriate level, to describe the system and the interactions at that level (...)

Little is thought about the possible similarities between the grounds of construction at various levels, or possibly it is considered that they could never be taken seriously, as they are simple analogies which have no place in science. Personally, I believe that it would not be inopportune to take a greater interest in the common grounds of construction at different levels. (MARGALEF, 1.980, pages 3 and 4).

We, on proposing a taxonomic classification of geographical landscapes, based on the recognition of the morphological and functional unities of the landscape, contribute the idea, on the lines of Professor Margalef's last words, that the taxonomic classification of geographical landscapes might be parallel to the biological classification.

Certainly, the animal and vegetable kingdoms are parallel to, or isomorphous with, the landscape kingdom, as all of them are formed by discrete, individual unities: animals, vegetables or landscapes, all of them being morphological and functional unities.

"Elsewhere we pointed out:

"Due to the analogy which exists between biological individuals, which are essentially functional/morphological, units, and our landscape individuals, we propose a taxonomy very similar, in its structure, functioning and nomenclature, to the biological taxonomies. (LOPEZ, S. y LOPEZ, M.L., 1.985, p. 34).

On referring to geographical landscape we must not think -as we would if we did not use this integration approach- that we are referring to a study which has nothing to do with territorial organization.

We understand that:

"Geographical landscape consists of the forms which result from the interactions produced when the four ambits lithosphere, atmosphere, hydrosphere and biosphere come into contact". (LOPEZ, S., 1.985, pp. 25, 26).

"This interpretation needs to consider Geography as a science whose level contains the structural relations of the physical/chemical, biotic and human elements, as the geographical landscapes are just as much those forms produced by calorific or tectonic energy: a volcano, a fold or a fault, as those produced by Man: a Reserve or Natural Park, great cities or a yachting harbour". (LOPEZ, S., LOPEZ, M.L., 1.985, p. 26).

We can conclude that the integrated study of the medium -the first step to be able to organize the territory today- is the study of the geographical landscape in the sense that we have stated. (LOPEZ, S., 1.986).

V.- CONCLUSIONES

Our working hypothesis -the need Geography to have among it means the taxonomic classification of geographical landscapes- is based on a conception of geographical landscape which links up as we have seen, with present scientific tendencies.

What Haken deduces from his experiences in physics and considers can be extended from the solar system and the galaxies to living organisms, that is to say, that "after a series of fluctuations, a combined form of movement appears, the arranger, which controls the others, determining a general or collective behavior which produces a new order with its own original properties. The triumph of the arranger is due to small changes, in circumstances, which produce a multiplication of its effects"; this same idea is the basis of our landscape conception.

"It must be taken into account that the diversity of forms which are found in the geographical landscape is the result of the relationships and inter-relationships between the elements which form the landscape units: Energy, material, life, space and time. These inter-relationships constitute the working of the landscape units, but all dynamism takes place according to a principle of organisation which corresponds to what occurs there.

Each level has its own properties: the physical/chemical laws in the abiotic and vegetable worlds, the instincts

in the animal world, and the will, guided by reason, in the human world. Each higher lever contains also the principles of the lowers.

The landscape, a particular type of dynamism or of "life", is diversified by means of discrete units; each one of them is individualized, precisely, by the organizing power which one of its elements acquires over the rest. We call this element "fuerza rectora" (the leading power), and it can be any one of the elements which function in geographical space. The organizing power of the "fuerza rectora" (leading power) is not to interfere with the individual working of the other elements, but to "select" it, increasing or decreasing it through its own working. For this reason, what the "fuerza rectora" (leading power) organizes is the working of the individual, not that of each of its elements". (LOPEZ, S. y LOPEZ, M.L., 1.985, pp. 26, 27)

The genesis, the birth of a landscape unit is the result of a certain balance, or "situation" between the geographical elements. Which raise one of them to the position of organizer; thus, in the end, the "fuerza rectora" (leading power) corresponds to what is happening in that space, and manifests itself morphologically in the size, form and duration of the individual. (LOPEZ, S., 1.982, p. 135).

These quotations show us that not only physics/chemistry and thermodynamics begin to see interesting relations with social sciences as the words of Margalef, Prigogine and Haken indicate; but also from a geographical standpoint we can regard as fruitful the analogies which, with all necessary cautions can be established among the different scientific levels, to carry out an integrated study of the environment in which Man develops.

What is particularly significant is the coincidence between Haken's explanation of the appearance in the universe of "new orders" with their own properties based on an "arranger", and the explanation of the different landscape units based on the "fuerza rectora" (leading power), which we propose. And this coincidence stands out, moreover, because we are quite sure that it has arisen independently, without any type of communication between the authors or between the sciences.

We would also like to point out the parallelism between our working hypothesis and the exposition which Ilya Prigogine synthesizes in the triple question:

What can I know?. Our answer, stated in the investigation we wish to develop in the Study Group is: The existence, morphology and working of landscape individuals.

What must I do?. The taxonomic classification of these units to be able to compare different studies and thereby facilitate the advance of geographical knowledge.

What can I expect?. That with a more precise knowledge of the working of landscape units, and their diverse types, geographical science might help more efficiently in the task of territorial organization.

We conceive taxonomic classification only as a means for geography to be able to fulfil the demands which modern society makes on it: to offer a knowledge of the environment in which Man's life takes place -geographical landscape- such that it will enable the territory to be organized according to the necessities and aspirations of Modern Man.

It is urgent to have this knowledge, because, as Prigogine says, "In this new contemplation of a creative world, different futures can be envisaged, which favours the adoption of an active and interested attitude, tending to avoid or palliate conditions which might favour one of the undesired alternatives. Anticipation plays a crucial role in this sense".

On the other hand, starting from this epistemological basis, the purpose of the study group is to achieve the real taxonomic classification of the existing geographical landscapes, according to our previous proposition (LOPEZ, S., LOPEZ, M.L., 1.985). We realize that this work requires the collaboration of many geographers; when we elaborated the proposition, we wrote:

"It is clear to us, that to know the way, and even to discover it as one goes, is not to have reached the challenging summit, the object of our purposes. But it is realistic to encourage oneself with the discovery, because without ways, there are summits, those most to be desired, which cannot be reached. These thoughts

come to us on realizing that to differentiate, describe, classify and recognize the geographical landscape, from the point of view we have expounded, that is, as a compound of functional unities, uni-or pluricelular, formed essentially by a "fuerza rectora" (leading power), a determined space and time of life, is not an easy task, neither, of course have we finished it. Perhaps our mind is at rest because for nearly 10 years we have tried to find this way to carry out what in the beginning we thought would be the object of our PhD. thesis: the landscape study of part of the Iberian Peninsular. The work of the Geosystematics and the Geotaxonomy, as well as the Geonomenclature, are almost done, but we think that many of the studies already carried out must be integrated within this conception. This fascinating task requires the colaboration of many geographers". (LOPEZ, S., 1.985, p. 48).

Finally, we would like to point out that, possibly, geography, in performing this service to society, will manage to find its "place" among the sciences; a place that professor Granö feels it should occupy:

"The formation of the strongest and also the oldest tradition of geography as an academic discipline, which began around 1.870, was based on the identity deduced from a common corological point of view. Despite this, it was difficult for geography to make a place for itself among the rest of the disciplines, as its internal structure, dissimilar to that of other sciences, was based on the activities of the society: the study of natural resources, industry, agriculture, etc. (...). The future of the studies of landscape, as well as regional geography, is linked to the ability of scientific knowledge to overcome the fragmentation produced by specialization". (GRANÖ, O., 1.982, p. 11).

To overcome this fragmentation is precisely what we do when we study the geographical landscape, its forms, as answers which have integrated the diverse relationships that occur in the geosphere. This approach overcomes not only the fragmentation produced by specialization, but also the simple sum of knowledge.

It overcomes fragmentation, because the scientists

sorking as a team do not have to carry out the synthesis, the synthesis is already done: it is the real forms of the landscape.

It is not the scientists who, at a table, "choose" the most important elements in the configuration of a landscape: Because it is more clearly perceived... Because its influence is better known... Because its effect on the landscape is longer lasting or more spectacular... Because the geology is well studied... Because the economic phenomena are important at present..., etc.

It is not a question of human choice! It is a question stamped on the development of the geosphere working. This working, which develops in space and time, comes together in the form of individualities, or individual units, as occurs in "Life", or with material: atoms, molecules. When we know, as it occurs in vegetable life, the peculiarities of the different species, we shall be able, like the botanists, to know the conditions necessary for the formation of a vegetable species, or in our case, a landscape individual, and with that determine the appropriate place to introduce it; but always bearing in mind its functioning laws!

It overcomes, on the other hand, the simple sum of knowledge, because Geography uses those of many other sciences to study its own object, that is to say the resultant forms -on the Earth's surface- of all the interactions which take place in the geosphere. It overcomes this, therefore, by studying the forms as a result of workings. When we situate ourselves at the correct level of this science and we propose to study its true object, the sum of knowledge is overcome because the interest is centred on the forms, that is to say, it is situated at the level of looking for the explanation of the workings that have produced them.

The object of Geography is the resultant forms; for this reason, it does not study the economic and social phenomena which give rise to the formation of a "mega-polis", and then add to this the climatological data together with those of marketing, adding afterwards the urbanistical ideas and the most important cultural tendencies. All of this knowledge will enable us to explain the forms, but are not the real object of Geography. Certainly this object of Geography is often forgotten, and a lot of the blame for this is the actual difficulty in individualizing the forms.

It can be said that Geography's moment has arrived. Only now, with the degree of development reached by natural and social sciences, has Geography's moment arrived; that is to say, the possibility for this science to develop at its true level and to be able to study its proper object. Until now, the scientific status of humanity did not permit Geography to take its "place" among the sciences, although geographers of all times had foreseen it. On one hand, the basic knowledge that other sciences had to give it were lacking; on the other hand, methods and techniques now available (computer studies, teledetection, etc.) were also lacking, as was the stimulus created by the necessities and aspirations of the modern society (territorial organization).

On proposing, as a definite objective for the Study Group, the realization of the taxonomic classification of the geographical landscapes, we neither scorn, nor avoid, nor underestimate, nor, of course, consider as idle discussion or an insoluble problem, to go deeper into, to clear up and to concrete the theoretical and epistemological questions.

On the contrary, we have dedicated a great deal of time and effort to these, and, only basing our arguments on the conclusions we have thus reached, can we, in our opinion, begin to construct the classification.

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