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BAILLY, Antoine Sylvain, RACINE, Jean-Bernard

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The Practice of Geography

Geography and geographical space: towards an epistemology of geography

Jean-Bernard Racine, Antoine S. Bailly

University of Lausanne, University of Geneva

ABSTRACT.— Beyond reviewing H. Isnard’s new book on Geographical Space, this paper questions the validity of new geographical trends. Is the New Systemic Grid proposed by Isnard of any use in reassessing traditional human geography? The need for an epistemological base is central to geography; but geographers must not forget that geographical space is first and foremost a social product. Totality, hierarchy, differentiation and finality can define a geosystem reflecting the dialectical opposition between space and society.

1. Conflicting reactions

Just over a year ago we expressed our regrets that geography only met with indifference on the part of students as, given the paucity of its heuristic reflection, it seemed unable to rouse their interest. Were the ideas expressed in textbooks indistinguishable from those to be found in any good weekly news magazine (Bailly and Racine (1978). “Les géographes ont-ils jamais trouvé le Nord?”, L’Espace géographique, 1, p. 514)? Now we have a textbook (1) which our students appear to like for its simple language and its systemic or Marxist inspiration, and because it very cleverly offers a variety of lively and concrete geographical examples. By making each example significant, the author demonstrates the relevance and interest of ideas in geography, and advocates a type of practice which may genuinely involve the individual in the service of the community.

Despite its indisputable success as a teacher’s tool, the novelty of its tone and the diversity of its sources of inspiration, the reaction of experts has been more critical and reserved. We have had this confirmed by various colleagues belonging to different generations and/or different schools of thought. We have been directly and indirectly influenced by H. Isnard’s thoughts and personality, although we are also interested in methodologies different from his. We
believe that this critical reading, which we have discussed with the author himself and which includes remarks made by our students (2), may contribute to clarifying the debate as it is obvious that this book can be interpreted in many different ways.

2. Towards an epistemology of geography

It seems wise first to summarise the contents of this short book. The first part ("Geographical space as social product", p. 14-82) rests on a dual postulate: 1) geographical space is the reflection, on the ground, of the action of human societies; 2) the dialectical principle which produced a socio-spatial system is also that which makes it work and endure.

H. Isnard discusses the nature of space as a social system, "a coordinated whole in a spatial structure", whose organisation he analyses, showing its movements, its tensions and conflicts (2nd part: "Geographical space as a geosystem", p. 85-154), which is followed by a rapid analysis of changes (3rd part: "Geographical space as a product for consumption", p. 157-211) leading to a reflection on future possibilities and on the conditions for land-use planning on a worldwide scale.

These are far-reaching statements. H. Isnard calls his introduction "Towards an epistemology of geography" as if to warn his readers that the book’s title does not convey all the ideas presented. "The book is about the whole of geography", P. George comments. H. Isnard is open to new methods of research, having supervised "quantitative" and "theoretical" theses as well as "traditional" studies; he is familiar with the Third World and Socialist countries, but also takes a keen interest in North American society, and he keeps up a permanent dialogue with his colleagues and his former students. Before him he does not hesitate to voice his pessimism about the state and evolution of this discipline, the blame for which appears to him to be shared between the "modernists" who have failed to convince him that they can free geography from its state of epistemological confusion and "traditional" geographers responsible for such lasting confusion. How could "modernists" convince him? They have not defined an overall methodology and they (among which the authors of this article) admit that they are still in search of one.

H. Isnard is dealing with ideas which today are the occasion for the most lively debates in all the social sciences, without neglecting what is at the root of our contemporary culture, like biology or ethology for instance; he is prepared to reevaluate his own research project in his discipline, thus renovating geographical perspectives — admittedly on the basis of well-known data. In so doing he hopes to give the geographer’s viewpoint a relevance both scientific and social — social in the noblest sense of the word, that of the survival of our species through management of its space.

Geographical Space is undoubtedly for many readers a genuine reassessment of traditional human geography in the light of the systemic "New Grid". When use is made of its formal characteristics only (regrettably perhaps), systemic presentation is acceptable to everybody. For many "traditional" geographers however — who are after all not completely impervious to fashion — this text will be a welcome evaluation of present trends. The book has indeed all the qualities they usually advocate: it offers a great deal of information, many examples from the author’s own experience as a geographer, nurtured by his vast knowledge of people and places and by his research in many different communities, including traditional ones, which sharpened his geographical perception thanks to the many facets of a "semantid" (3) infinitely richer than those of one-dimensional industrial societies.

"New" geographers will not find the book so much to their liking. After presenting theoretical ideas and work undertaken by systemic researchers in industrial societies, can we be content with yet another introduction to new verbal concepts for the analysis of systems? Have geographers lost their credibility by remaining for too long the uninvolved witnesses of scientific progress?

(2) Remarks made by H. Isnard on the first draft of this article are identified as "private communications".

(3) We can only guess about this as the author has failed to develop the extremely rich substance of this concept obviously pregnant with "meaning" and we are therefore referred to the analysis of space as a significant entity.
All geographers however will be seduced by the logic, the clarity and richness of the ideas illustrated by frequent examples — a didactic method which has always been appreciated by students. There are postulates, of course, but they are always qualified or corrected by examples, thus confirming, or adding to, the explanations. Each example, each relevant quotation, is a link between the geographers' observations and the general theories of the social and biological sciences, testifying to his long-standing practice of the subject.

In fact, this is a book written by a man who has mastered not only his own discipline but also a very wide range of ideas from related sciences, which aim at explaining the situation and the future of mankind and how best to achieve it. H. Isnard integrates current ideas whenever they seem relevant — all are mentioned: Attali, Chauvin, Garaudy (why not?), Guillaumelle, Godelier, Illich, de Jouvenel, Laborit, Le Roy Ladurie, Lefebvre, Levi-Strauss, Lorenz, Mesarovic (and Pestel), Monod, Morin, Moscovici, Peyrefitte (Alain), Piaget, Ruffié, Simon, Touraine, Veldrys, and many more. Like many geographers, H. Isnard is open to ideas from neighbouring fields. Novel ideas in other disciplines arouse much less suspicion than in one's own. Is this a form of naivety of is it a sign of intellectual awareness, some would say trendiness?

There are few geographers among the fashionable authors quoted; from time to time an example may be borrowed from one of them, but hardly ever an idea (4). Although H. Isnard knows many "new geographers", since he has often supervised their research, he does not go along with them; he prefers to draw their attention to the danger of their work being too much influenced by North American methods which, according to him, inevitably constitute one-dimensional oversimplifications. The author agrees very largely with Pierre George although he, too, recognises the value of results in many fields of spatial analysis, results which can only encourage one to pursue methodological research, "although one should be extremely cautious" (p. 152).

With so few references to geographical literature proper, as his only explicit acknowledgment of the old school is through warnings about methodology (p. 154: "this mostly means using old methods confirmed by so-called "qualitative" geography, i.e. the careful observation of space and of the land"), Hildebert Isnard in Geographical Space proposes methodologies which have little in common with traditional geography (5). And yet are his ideas really new? H. Isnard's work consists in presenting traditional knowledge in the light of the new paradigmatic language. Life (with a capital L) comes before everything else, an assertion which inevitably leads him to define geographical space as a social product, not in the terms of Henri Lefebvre but, more simply, on the basis of the assumption that, like any other living creature, only more efficiently, mankind has undertaken to free itself from the discipline of nature and organise its own space, one in which its history may develop: understanding this "taking over of space" is therefore the object of geography.

3. Ecological and geographical space: space as a social product

Terrestrial space has two facets. First of all objective, ecological space (which exists without man), resulting from the long evolution of life (both animal and vegetable) integrated in a physical site. This natural space is "an objective whole in which a set of relations of interdependence between its physical and living constituents create a self-managing system whose stability is maintained by regulatory rejections. It is life which makes it possible to reach this objective because of its specific ability to react to stimuli from the environment". This natural space is what H. Isnard calls an "ecosystem". He deliberately defines the expression "natural space" as applying only to such ecosystems as exist apart from any human activity, in order to be better able to define what is specific about this activity. For space has a second facet, which justifies the use of the term "geographical space";

(4) Out of the 92 titles quoted in the bibliography only 22 are books by geographers.

(5) He would probably agree with us that the majority of these in geography, i.e. presumably the best in our discipline, no longer offer explicit or valid methodological reflections. We can therefore imagine how embarrassing this can be for the author.
it is this space that “human activity has freed from evolution to integrate it into history”. This space, conceived and built from nothing by man, is “geographical” space proper; this geographical space is the subject of our research.

H. Isnard then observes the constituent elements of geographical space, housing, population, the infrastructures built for human activity and movement. “He knows” that these constituents are found in any landscape and that they are the relevant variables of geographical space. Thanks however to the theory of systems to which he explicitly resorts in his attempt to “found geography on the same paradigm that the social sciences have now adopted” (p. 11), he also knows (in our opinion even before observing this in detail, with this knowledge precisely guiding and directing his observations) that these constituents and their interdependent relationships exist as “structural elements”, they are the rules for the construction of any geographical space. Their interrelations, which vary according to circumstances (natural, historical or cultural) can be understood through the relative notion of compatibility.

Thus he shows how our observations “reveal” the organisation of geographical space, reflecting the characteristics which differentiate the societies that create it: “society commits itself entirely to the development of space, in accordance with the aims it sets itself”. This is a very probabilistic conception because society uses “all the means provided by its technology: its workforce, the ingenuity of its inventions, the support of its beliefs, its hopes and its ambitions. Geographical space thus understood is, in the fullest sense of the word, a social product, because it results from the work which society organises to reach its aims” (p. 52). As any human organisation is defined by the system of interactions which constitutes its underlying reality (p. 53), this very system of relations is reflected in its management of space. The result is that society is identified with its space, society and space inevitably evolve diachronically, although along an asymptotic line. This is the starting point of the geographer’s quest: “to study how society, through the completion of projects, transforms natural space into a geographical space with which it is identified” (p. 75). The task of the geographer must then be to conceive the geographical space which really corresponds to that society as defined by its system of values, by its ideology and more especially by planning policies adapted to the needs of its citizens. To reach this understanding however, must one first accept the premises of microgeography and give greater weight to the study of individual aspirations? This is what the most recent behaviourist research would like to show, whether from a culturalist or an environmentalist point of view.

If geographical space is a social product, it is also a product for consumption and accumulation resulting from the aims and ideologies of dominant groups. Referring to research in ethology the author shows that animals also organise their space to ensure the survival of their species. How then could man possibly escape this need to organise his space if he is to ensure his own survival and to achieve the aims of mankind? H. Isnard believes, as do sociobiologists whose conclusions are so controversial, that this is a biological necessity: the need to commune with one’s physical environment (p. 69), and also to structure space so that the location of each constituent element may contribute to improving the overall working of the system (p. 97). Planning geographical space amounts to an ecodevelopment which could combine economy and the protection of Life (p. 201); this end will be reached if, in the same way as biological processes, it can set up geosystems, which, like ecosystems, are in a state of dynamic equilibrium with their environment (p. 202). Man will then have a new “ecumene” (p. 202). This is what H. Isnard sees as the geographer’s project. The vision of a utopian, perhaps ...

4. Geosystems, a geographical concept

The author then studies this “taking over of space” taken from ecosystems and developed into geographical space, possibly even into a “geosystem”. This is the subject of the second part in which he successively questions the extent to which geographical space participates in the ecological and in the social system. Is there a dual “mapping”? In the author’s opinion, geographical space is a mapping of the social system, which can be explained by the dominant characteristics of society: its social relationships, densities of population, religious beliefs, scientific and technological development, economic system... in a word, everything which constitutes society’s culture.
In studying the organisation of geographical space one has to assume the existence of a "structured space", the ultimate target of society's creation. In a structured geographical space, each constituent element should be able to find its own place in order to contribute to the better functioning of the whole. This is a vital principle for any civilisation which intends to survive. However, from Madagascar's to the United States' East coast through Provence or Sicily, from country to town, and from a liberal to a socialist state, H. Isnard shows how and why the coherence of these structures does not have the rigidity of a self-regulated system. No-one will deny the autonomy and relative freeplay of each of the constituent variables. Nevertheless, there are limits to such freedom as it may cause crises in the working of the system, thus endangering its very structure, "that is to say destroying geographical space" (p. 104). There follows a substantial reflection on "the dynamics of geographical space", closely bound to social dynamics, its energy essentially influenced by population changes, which the author illustrates by giving a summary of a possible demo-geography. This, however, does not explain everything because the dynamics of geographical space also obeys "a sort of internal organisational logic, which governs the establishment of the various constituent elements of space" (p. 112). Processes of centrality are compared by the author to proxemic mechanisms, which govern the relationship between the nearby and the faraway, and provide an illustration. Geography rediscovers observations made by ethology (p. 112) and by the psychology of space. Macrogeographic observations are used to show that "centrality is the key which enables geographers to take into account the many ways space is organised". Inspired by Marxist theories of social-spatial relationships, governed by hierarchic and asymmetrical links, H. Isnard bases his analysis on the dynamics of systems: "the search for domination gives history its energy and governs relationships between socio-spatial organisations" (p. 113).

Different types of spatial organisations are presented in many different examples, from the simplest to the most complex; a remarkably successful presentation which is a genuine anthology of geography. However, there is nothing new about the facts. It is the point of view which is new. Centralisation, marginalisation, hierarchisation of the dependency of spaces: H. Isnard shows that all over the world "space is organised within wholes composed of interdependent and hierarchical subgroups, organised around different and even conflicting socio-economic ideologies" (p. 147). Since these groups appear to have characteristics which could belong to the definition of actual spatial systems, geography would require for their analysis such a systemic approach as has been used by other social sciences.

H. Isnard attempts to do precisely this in a chapter called "The Geosystem", which offers conclusions on his earlier reflections on, and observations of, the analysis of different geographical spaces: principles of totality, of hierarchisation, of differentiation, of finality, are fundamental in the definition of systems. Wherever possible he refers to certain elements of the general theory of systems and to those methods above dispute (statistics and mathematics, "able to show and measure interdependences which give structure and energy to the whole"), "provided that one is extremely cautious" and remembers that in the structure of the geosystem not everything is quantifiable, in particular the decisive role played by ideologies. Rather than rely on computers, the geographer must learn to observe, which is difficult, "as it requires cultural rather than technical tools". No one will deny this; let us hope however that, after acquiring the inductive material, geographers will all make the effort to go through the epistemological and quantitative stages in order to be able finally to use the theory of systems, not only in its conceptual form, but also as an operational technique.

**5. Managing geographical space**

A study of how man takes over space, and of the real nature of its organisation, must lead, in H. Isnard's opinion, to an analysis of the results. There is therefore a third part to this book, a clearly critical part, in which geographical space is seen as a consumer product. "If the consumption of space consists in transforming raw materials into a product intended to ensure that man shall continue to exist, it may be said that it is in the nature of any human society to consume space" (p. 171).

Space is created by mankind to ensure its own development. Ever since the advent of industrial society, this creation however has tended to remain limited to mere consumption, which, because of its accelerating rhythm, may endanger life on earth. "Industrial civilisation has led mankind to
bankruptcy, because it has been able to organise a geographical space capable of replacing natural space without threatening the equilibrium which ensures the continuation of Life” (p. 199). In a single sentence Isnard thus sums up both his philosophy and the whole project of his own life: it is time to act. Is this mere utopianism? He gives the answer himself: “it might be wise to remember that today’s utopia is tomorrow’s reality”. His description of geographical objectives does more than simply present the space of our lives: it is an appeal to us to involve ourselves utterly in a political project. The evidence shows that H. Isnard — as he has told us many times — believes that we need, not an epistemological theory, but a political one, and this theory will tell us that our conception of man must correspond to an adequate conception of geographical space. Is the reverse also true? It must be admitted that our conception of geographical space can only correspond, consciously or unconsciously, to our conception of mankind if the latter is founded, consciously or unconsciously, on a political theory.

So we have shown the great wealth of objectives, but also the many scientific, theoretical and epistemological ambiguities of Hildebert Isnard’s essay. How could he have avoided such ambiguities given that his efforts are directly related to his empirical conception of space?

6. Towards a discussion of methodology

Have we reached any conclusions? A more substantial analysis would run the risk of obtaining results which would only increase these ambiguities. The first would doubtless be the agreeable discovery that it might be possible for geographers to “dress up” a classical theory in new clothes, and make it more acceptable outside the narrow circles of geography. A certain relevance and community of language would contribute to the effect. But the author’s ambitions are even greater. He very explicitly claims that geography, with due epistemological caution, should tackle this notion of global space, and assimilate “a new way of thinking derived from the convergence of many new conceptual contributions” (p. 8). Is this really anything more than “new clothes” for old words? Putting this idea to the test would provide the answer: is this really a dialectical reflexion? In this respect many issues are worth examining.

a. The crisis of empirical geography: a crisis of reason

H. Isnard believes that any science (but is geography a science?) must be based on some sort of object. This is why he has often asked us, being aware of our epistemological point of view, how it was possible for us to quantify what we studied without first defining it or finding out if it was definable. We do not really know now whether his and ours are conflicting views or whether there is a misunderstanding between us. On the one hand we are told that, if research is to have meaning, the very existence of the geographical object, if any, must first be established. Obviously. Can we however accept that only careful observation of a space constructed by man (which belongs, according to H. Isnard, to “the immediate data of the senses”) may enable us to define a paradigm which is “only a way of reaching essence after observing existence” (6)? This conception appears to us to be disputed by most epistemologists who contend that any research should be based on a theory, itself derived from an axiom. We have already expressed our partial disagreement with the author (Bailly-Racine, op. cit. 1978 and H. Isnard, “Geographical space”, Annales de Géographie, March-April 1975, p. 174-187). The empiricist conception of knowledge focuses on the relation between the subject and a set of objects; in order to understand the operation described as abstraction by the subject, it is necessary first to grasp all the implications of this relation, including its subjective character. As all empirical knowledge depends on the cognitive process, the object only exists through a person. Contrary to what is stated by H. Isnard (“Towards empirical geography”, Annales de Géographie, 483, 1978, p. 513-519), man does not confront facts; he rather maintains a relation with a milieu both material and intangible which he perceives through his individual consciousness.

The vicious circle of empirical reasoning is thus introduced, with all the resulting dogmas: if our description of the world establishes certain geographical distributions, how do we assess that our knowledge does correspond to a real object? Through our perceptions and those of our

(6) H. ISNARD, private communication.
students, who have been trained according to the same methods exactly? How is it possible to maintain that knowledge can be reduced to observation, and that theory can only be tested in relation to the objects observed, when one is aware of the importance of the subjective element in the experience of the person who is thinking? What about the experience accumulated by the subject, what about his training? Empiricism seems very inconsistent in this respect and we are not alone in thinking so. A defence of empirical geography should first take into account the criticism of this pseudo-science by David and Judith Willer, or even Althusser’s criticism of the empirical conception of knowledge. The crisis of empirical geography is, first and foremost, the crisis of reason.

The very question “Does it matter whether one goes from facts to theory or whether one establishes the validity of a theory by testing it against facts?” (H. Isnard, op. cit., Annales de Géographie, 483, p. 519) shows the nature of the illusion of empiricist geography. In the first case, will the world’s hidden nature not disappear under beautiful appearances? If it is believed that any observation can lead to a theory, how can it then be said that the theory may be tested by observation? We have come full circle and the validity of the subject-object relationship can no longer be disputed. H. Isnard recognises, at least implicitly, that this vicious circle exists, when he claims that geographers are discovering at last “what might pretentiously be called a paradigm, or more simply, an axiom, a working hypothesis likely to produce widespread consensus among geographers”. Here again, however, it is empiricism which is going to direct the author’s research.

Yet when he reflects on the nature of his paradigm, he describes it as “a new way of thinking derived from the convergence of many conceptual bases”. He rejects Marxism, even though it makes it possible to take into account a great number of facts, even though Marxism, resting as it does on the observation of industrial production, is without any doubt, in Isnard’s own view, empirical in the best sense of the word. What must be done, in H. Isnard’s opinion, is an introduction to the organisation of complex living groups. And, provided that the traps of oversimplification and simplistic positivism are avoided, the systemic “New Grid” appears to him to be the paradigm by which our ideas could be structured: “today it is the best scientific approach to living entities”. We agree with him there, but we would like to ask the author how this conclusion is reached? Not by empiricism alone surely.

b. Problems of the dialectical exploration of socio-spatial dialectics

Any method not scientifically proved must first show some plausibility. Fernand Braudel outlined this: “Geography appears to me to be, in its widest sense, a spatial study of society, or, to pursue this idea to its end, a study of society through space”. Very well. He concludes however that “human society creates itself through the creation of its geographical space”, and that “space and society follow the same rationality”; as a consequence “the geographer’s method consists not in going from society to space, but from space to society, exactly as an author is discovered through his work” since, between the two, “identification is complete”. H. Isnard takes up this idea: “The purpose of managing space is to establish the necessary correspondence between society and space, so that a given society feels at home in its space, just as happiness for an individual is to feel at home within his own body” (p. 67). This last sentence is well thought out and very suggestive. But is the author not going too fast? Does a geographer really know what mankind’s aspirations are? We are paying too much attention to appearances and behaviour, and thus forgetting the underlying psychological causes. The language of observation, because it obeys certain codes, can only express a very small part of the relationship between Space and Society. Language, conceived by man, is therefore the first obstacle to the knowledge of man’s essential self.

Even if the author claims that he is working within a space-society dialectics, some readers may not be convinced that the virtually axiomatic presentation of these identities expresses the whole content of truly dialectical thinking. H. Isnard believes quite clearly that “spatial and social correspondence is the general rule in spite of the occasional violations caused by history” (p. 95)— violations or, more precisely, “distortions”. Because, in this dialectics as conceived by the author, both parties, although interacting and reworking with each other, are moved by distinct dynamics. This mutual balancing is asymptotic. Hence the need for readjustments in order to reestablish equilibrium. Colonial space is a case in point as there is a twofold
dialectical process, between colonial space and native space on the one hand, and between space and the native society which occupies it on the other. This is how he sees the specifically geographical aspects of the problem of underdevelopment: "restoring harmony between space and society, a harmony destroyed by the imposition on native socio-spatial reality of an industrial socio-spatial pattern" (6).

It is likewise interesting to note that H. Isnard believes that the proof he is searching for in order to validate his paradigm is to be found in historical experience which, he implicitly suggests, should be analysed, although he himself lacks the time and space to do so. One can easily imagine how his ideas (cf. p. 59-60) could be applied to the analysis of space as created by the socialist revolution. "The revolution of 1917 was intended to establish a socialist society. To this end the revolution attempted to create the corresponding space: kolkhoz for instance. Why did it partly fail? Because it did not in fact establish a truly socialist space. In a kolkhoz there are individual plots of land, and a kolkhoz market; in factories, management is bureaucratic and governed by the State instead of collective self-management. If it has failed, it is because neither space nor the use made of it are truly socialist" (6). The reader will judge if this is a "proof" or simply an attempt at making one's ideas particularly convincing.

Our correspondence and discussions with the author have led us to qualify our first impression — that there is proof — on reading a whole series of statements about the "object" of geography and the "identical" character of space and society. The whole book in fact shows that these ideas go much further than might at first be thought. H. Isnard's thinking is genuinely dialectical, which is why he has tried to show that geographical space and society are two facets of the same whole, in a dialectical relationship. "Which means that one cannot be conceived without the other and, conversely, that they both create each other at the same time, through the same process of organisation (like a chicken-and-egg situation). Thus when an industrial economy first appears, the construction of space and of the society which corresponds to it, takes place at the same time: a workers' society is established out of the unstable immigrant rural population together with the construction of mining towns and workers' homes (with uniform housing, tiny gardens, and road-grids). In this ordered environment the working classes are uniformly fashioned and integrated into the system. And just as labour reproduces itself in all working class areas, society creates itself by creating its space and reproduces itself by using its space". (6) Such is the explanation offered by the author of his own thought.

We, however, were rather tempted (but is this contradictory?) to try and associate this distinction between the two facets of terrestrial space with divisions of a hermeneutic sort, conceived as a philosophy of relations (communications) between the individual, society and the world. Thus the social sciences which, being Geisteswissenschaften, try to explain man from inside, may be distinguished from the natural sciences (Naturwissenschaften), which relate to the world without integrating mankind. Questioning the relationship between these two references amounts to understanding both the internal and external codifications necessary to the stabilisation of social life. If H. Isnard concentrates in one way or another on these external codifications, is he not forgetting the internal ones, those of man as a subject, as revealed by psychology?

Perhaps using "space" and "society" in the singular is the most disputable aspect of his presentation of the basis of geographical theory. All the more disputable as the extraordinary density of history is made obvious everywhere in the text as well as the extraordinary "systemic" complexity of these two subsystems which are themselves groups of groups of interacting elements. United by the dynamics of a dialectical relationship, they reproduce themselves at the same time as they transform themselves continually through the interplay of their own contradictions. Perhaps this is why the author often uses capital letters in Town, Society and Space? What is behind these capital letters? H. Isnard knows that "geosystems are articulated with each other in hierarchically levels of organisation so that geographical space can only be conceived if re-integrated at its own level in the network of its relationships with other geographical spaces" and that it would hardly be "an exaggeration to say that it exists as a function of such relations of interdependence". But he also knows that in history "various social factors which have had a determining influence on land use, have gradually lost their importance. Only one is dominant today: economy, exalted by production techniques, themselves
enriched everyday by the progress of science” (p. 213). This is why we feel, for our part, that the essential is not yet to be found in utopia, however founded pragmatically. It is in the practice of critical geography.

H. Isnard’s use of Marxism may well irritate “purists”. The author uses it whenever it helps to understand industrial civilisations better. Marxist philosophy relies on the observation of industrial modes of production. H. Isnard however believes that it is obviously restrictive insofar as it is applied without qualification to the analysis of pre-industrial societies. Indeed claiming that economics dominates all other social activities appears to contradict the works of a great number of sociologists who have studied traditional societies. It is true, as has been shown by F. Perroux, that “it was not until the nineteenth century that economic activity in western societies separated itself and became isolated from a system of values” and that this “perverse emancipation” produced an ideology of economics. Nevertheless, Marxist philosophy does not only address industrial civilisation, it also explains how the seeds of capitalisation (of land in particular) are to be found even in primitive societies. As phenomena inherent in capitalist societies also exist in third-world countries it is virtually impossible to understand the organisation of space in former colonies without starting from the level of development of productive forces and the conditions in which surplus value is generated and appropriated by some classes of society. A crucial factor in the development of any spatial structure is in the circulation, distribution, concentration and use of surplus in space. These problems, with which Marxist geography is familiar today, are not specific to western thinking.

c. The real nature of the qualitative-quantitative dilemma

H. Isnard has also worked with new methods in geography. He has supervised theses explicitly inspired by what, at the beginning of the ’70s, was still called “quantitative geography”. He nevertheless prefers theories whose proof relies essentially on a profusion of examples. And one cannot help reflecting, as one reads his book, that it is more pleasant to follow in the steps of a peasant, rather than be bored by endless lists of figures. The latter however are indispensable to the understanding of the mechanisms of contemporary society. The following remarks will no doubt confirm the suspicions of the author of L’Espace géographique that there is no limit to the effrontery of “quantifiers”. Yet once we have acknowledged that there are inadequacies or sometimes even technical or ideological aberrations to be found in some of our models or data, there is no denying the results — results which, in our opinion, have in themselves nothing to do with modes of production in any given social formation.

In his presentation of quantitative models, H. Isnard explicitly relates the ideas of quantitative geography to the analysis of spatial reality set up by the American capitalist system (p. 153). It is not the first time that this argument has been used against us. We shall certainly have to discuss this seriously one day because there is indeed some truth in it and yet it has to be seen in its proper perspective. That space as conceived by American society “includes a certain mathematical logic” is certainly true, even though this is most often the logic of chance. It is also true that concepts derived from a purely capitalistic logic have informed some of the theoretical methods for the analysis of geographical space. The truth of this has been brought home to us thanks to the development of Marxist-inspired critical geography. But this is not really the problem posed by the use of quantitative methods in geography. If there is a logic of chance, then geographical processes may be studied quantitatively through subjective and conditional probabilities. If theoretical concepts are a vehicle for an ideology which distorts reality, radical criticism of it, starting from more suitable concepts, is fully justified.

We should not forget what is essential in the new approaches: a change of attitude towards the world we study, the adoption of methods which cannot be reduced to observation alone but which imply theoretical questioning first, followed by the use of transparent and rigorous methods, formulated in mathematical terms if necessary and supported by statistical tests of hypotheses. As Bernard Marchand (“L’usage des statistiques en géographie”, L’Espace géographique, 2, 1972), has reminded us, “the very aim of the method is to enable one to use information even if it includes errors; statistics would be practically of no use if all data were completely and rigorously accurate”. To the best of our knowledge it is precisely in countries which are least well equipped with statistical data that we need deductive and statistical methods to make up for this lack of material and to
control the validity of assertions based on qualitative information (e.g. presence/absence) in order to assess the limitations and relative character of such information.

The criticism levelled by H. Isnard at “the splendours and miseries of novelty” will only hurt those who are still incapable of distinguishing the means from the end and who see this mathematical and statistical tool as anything more than a logical support for thought and one way among others of passing experimentally from the world of theory to empirical fact. That the new methods are based on their own ideology, we are the first to recognise. But what about traditional methods? “Without hypotheses derived from methodology and hinging on reality, mathematics are powerless and possibly dangerous” according to H. Isnard. Of course. Our discipline, which focusses on the analysis of relations to space, can no longer take things at face value, classifying simple regularities, and being content with the external manifestation of certain factors; it must endeavour to understand forces which are not directly observable. “The conceptual foundations of geography must be reassessed” (C. Raffestin), whether it be the nature of our hypotheses, our methodology or our ideology, both implicit and explicit because this is where ideology is most manifestly present.

Everyone will agree, for instance, that H. Isnard’s views will be either optimistic or pessimistic according to the type of society he is considering. As a Third World expert he has discovered in these countries a mode of thinking which fully legitimated his fundamental research on mankind from the point of view of individual relationships, and this has gradually relegated his previous training as well as his Marxist options to the background. His entire book, impregnated with genuine humanism, testifies to this. It must be read, although its title should perhaps be ignored, as the substance of the book has so much wider scope than the title suggests; some exaggeratedly peremptory statements about the identity between Space and Society should also be ignored, especially since his own choice of examples and his extremely subtle geographical observations constitute in themselves the necessary qualifications to such statements.

Even though we are now exploring new ground, we must insist again and again that such qualities as he displays are indispensable. But in saying this are we not perhaps admitting that we have failed to practise them for so long that we may well have lost them?

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