HIERARCHY AND POLICENTRISM IN EUROPE

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Let me start with some preliminary concepts which will introduce the main topics we are dealing with.

First of all, and very simply, let me assume the concept of

- node, and that of
- network

and the relatinship between them.

In our perspective, the node is assigned the meaning of local system (a region, a city, in other words any individual territorial entity).

The network, on the contrary, is assigned the meaning of global (or supra-local interactions and flows.

Let me also add that talking about networks it would be possible to refer to sets of inter-connected linear infrastructures (like roads, railways, airports) which determine relations, interconnections, among nodes.

We have got however a second meaning, in which the network loses much of its phisical nature, and is asumed as the representation of social interactions between actors, or interconnections between places (nodes) whiere actors are situated.

In this case, the network takes on a metaphoric meaning, quite different from the previous one.

It is exactly in this sense that I am going to deal with the concept of network.

And it follows – as we shall se later - that urban dynamics and regional development are brought back into the broader issue of global/local relatons.

Moving on to a further conceptual issue, let's look at two different ways of representing geographical phenomena (and representation is a fundamental way for understanding, for giving sense to phenomena and processes), we have:

- areal representation
- networked representation

When a geographical phenomenon (a city, e region, a system of cities) is repressented by areas, space is imagined as a continuaous whole of places, where.

- physical distance represents a key variable for identifying the position of the objects
- whose properties depend therefore on thoses of the place they accupy, in this space.

All this implies

- a sort of spatial continuity
- impling at the same time a delimitation of the extent of the area we want to represent

Simplifying, in this way we can represent, for example, the urban phenomenon

- The city as continuous space, an agglomeration including a core, for example, surrounded by a metropolitan area, a conurbation. A series of spaces which are connected each other and delimited from the non-urban space.
- The same can be said if we take as a reference the European space. A very well known representation of Europe is that shown by the picture: the European core is represented by the large belt between Southern England and Lombardy (the well-known Blue Banana), while a second emergent belt is assumed, between Spain, France and Northern Italy, so-called "The North of the South

I am taking Europe as an example just because in my presentation I'm going to make several references to the spatial representation of the continent.

Instead, when we represent the geographical space as structured in networks, we can ignore both extent and contiguity.
We have just seen that when we talk of networks, we represent stable sets of interactions between actors, as well as networks of interconnections between places where the actors are located. In this sense, one talks of

- social networks,
- enterprise networks,
- networks of co-operation and, where we are concerned,
- city networks.

It implies, therefore, a space made made up of connections between nodes (or places, nuclei, more or less small compact areas).
So, if the concept of area means absence of voids, the discontinuity of network space means that the value of distance can change, can vary according to the context of the phenomena to which it is applied.
In other words, to use an abstract representation, intensity of interaction between places does not depend on their reciprocal physical distance, but on their constituent properties.
For instance, the industrial district of Como, in Italy, as the location of a silk filiere, is closer to Los Angeles than to Varese (only a few kilometres away), while Varese as the location of aeronautic industries, could be closer to Seattle (or to Toulouse) than to Como.

Obviously it does not mean that the tipologies of nodes can not be represented in a hierarchical schema.
In the Figure, representing a virtual global network, we have

- a global level (i.e. the level of economic, technological, political, cultural leadership)
- a level of network complexity, whose nodes a relative autonomy and play a specific role in the global scenario
- and finally, a level of hierarchical dependency, where the membership of the node of the global network is in any case of a dependent and not complementary type.

All this is obviously an extreme simplification, which reduces to a single level (local) all the other possible intermediate territorial articulations (regional, national, plurinational).

It is useful, however, at least to start with, in that the framework of relations can thus be constructed starting from the two basic concepts of network and node, as a way of representing contemporary regional and urban dinamics.
Areal representation has played a fundamental role in geography, as well as in other social sciences, for most of the XX century.
Suffice it to recall the core-periphery schema … and all the categories aimed at putting in relation development and underdevelopment, dominance and dependency, and so on.
And the representation of the European space that I have just shown you, was clearly inspired by the dualism between core and periphery. Where development of the periphery was traced back to the impulses from the core, to the progressive extension of the core itself.
However, things have changed dramatically in recent decades.
We are now usually talking about the dialectic between local and global (between node and network, as we shall see), that is rather different from the fashonable yet very simple categories that have been applied for long.

Let me therefore open a parenthesis, recalling a few points, which are sufficiently well-known, but in any case extremely useful for transferring attention to some elements that appear significant for the issue in question.

These are four key dimensions of contemporary world, which give an idea of the irreversible changes that have occurred in economic organisation, which can no longer be explained as contingent events or ones limited to individual sectors or countries.

First, there is a global extension of the company's horizon. Given the progressive contraction of space and time, the operating environment of enterprises tends to identify itself increasingly with the world economy.

In other words, the point of reference for economic behaviour is a varied range (in space) and variable range (in time) of resources, markets, technological know-how, less and less dependent on national and continantal borders.

Second, there is a growing pluralism of technologies and the strategic role played in economic competition by the development of scientific and technological potential.

What is crucial, however, is that in this trend the speed of development and the diffusion of new scientific solutions are not as important as the pluralistic and diffusive way (in many countries, in many research centres, in many companies) in which the technological frontier is rolled forward.

It follows that the multi-centred nature of innovative processes makes joint planning necessary, realised through the involvement of many different actors.

Third, there is the change in the nature and the relations between supply and demand, expressed in a growing autonomy of market demand, which thus becomes a factor less and less controllable by a single company.

While it is true that various examples suggest that standardisation of products is still present in several areas of production, it is nonetheless evident how the development of a global market leads to a rise in the quality of needs, on the variety and variability of products and services demanded, intensifying the country-specific socio-cultural and institutional factors.

Finally, in the growing complexity of the economy, the key variable is information and control of it. Information and knowledge appear in fat as essential to:
- organisational flexibility, implying the transition towards organisational forms capable of responding to challenges from a world increasingly characterised by instability, shortening of the product cycle and globalisation of economic relations, and
- technological flexibility, in other words by the introduction of computerized information systems, communication systems and programmed automation.

Well, all this for recalling an obvious observation: that the process of globalisation appears not (or not only) as extension of the great Fordist corporation and its tendency to suppress differences and develop global products for unified markets. The trend towards globalisation is not, in fact, a phenomenon that is totalising and homogenising in nature. On the contrary, it is accompanied by (and even defined by) historically specific patterns of different levels of complexity.

In other words, globalisation makes specific national and regional features the foundation of competition between different entities, where variety is the origin of competitive advantage.

In broad summary, this is expressed in concept of local identities which, precisely because of their diversity, can integrate together (can integrate in networks, let's say) and evolve in a global scenario.

Now, when we talk of local systems as nodes of network, we assume intermediate entities with specific characteristics. A node, a local system, is an aggregate of actors which can behave effectively as a collective actor, even if it is not formally recognised as such.

More in particular it is not merely a part of the overall system, but a system equipped with its own identity which distinguishes it from the "environment" and from other systems.

Obviously the term local does not have a dimensional meaning (this does not indicate, in any way, a necessarily small or "peripherical" entity).

It is therefore a system which interacts with the outside occording to its own rules, largely informal and yet sufficient to guarantee reproduction in time.

Let me add, that so it is for the global, which doesn't have a dimensional character. It must not be thought of as "extended" or "general", but in relation to entities which distribute and interact among themselves.

The global system is therefore understood in a relational sense, where its extension is not given a priori, depending on the system of the relationships that occur between local systems.

The global, in other words, is composed of characteristics of the systems it connects. On the one hand, the global network of a multi-located organisation is such, as is the natwork of cities or regions.

Circumscribed to local networks, it is the actors (individuals, institutions) which interact, and not physical structures.

Despite this, a node (a local system) is always territorialised, in that the set of relations between actors is always based on natural and socio-collective conditions and resources (the milieu conditions) whoich feed the global network.

At the same time, local actors (better to say, local networks of actors) can belong to different global networks.

Here we have to underline rwo more conceptual points.

This way of reasoning (of understanding the local, the city) implies however that we can not limit ourselves to draft a schema which mirrors a given reality of contemporary economy.

Nevertheless we have to face a fundamental epistemological question. In absence of this, in fact, concepts like node, network, cities as nodes of a network and so on, would remain empty boxes.

We have to remind in fact (and this is really an important issue from the theoretical point of view) that we can adopt two points of view to describe the behaviour of our networks.

- one external to the local system
- and the one internal to them

Let me explain in detail. In the first case (external to the system), the nodes are considered merely as sub-systems of the global network system. They can therefore be regulated through the inputs (decisions, investiment, political actions) coming from outside.

This was the point of view of traditional economic theory, which reduces local development to a process governed by exogenous variables.

Models are derived from this, such as all the interpretations based on the core-periphery, as we have seen, which deny autonomy to local systems and attribute to them passive adaptive behaviour.

If instead, we adopt a point of view within each individual node we obtain completely different representations.

And the node (the local system) can be retraceable to self-referential models, and more in particular to those of self-organisation.

In this case we are using metaforically the language of biology, but at a certain level of abstraction it can be extended to the field of social sciences.

Let me explain the issue by using a well-known metaphor:

- a system can be interpreted as a banal machine, controllable from outside and with no behaviour of its own, and thus it is interpreted as governed by exogenous variable. It does not open up to

the outside except to work as a function of a system with respect to which it loses autonomy. This implies the idea that the diffusion of development is achieved without encountering obstacles: the environment is therefore conceived as passive and incapable of organising itself. As we have seen, the areal representation *can be traced back* to this logic. As well as most of the regional development policies pursued during the early post-war decades, aimed at extending to the underdeveloped areas the economic basis and values of the developed ones.

- we can talk, on the contrary, of a non banal machine, where, in the presence of the same input, reactions neither pre-determined nor predictable are produced, dependent as they are on the internal state of the system. The autonomy of the local system will be given by the capacity to behave in its own way, dictated by a historically embedded network of formal and informal relations between actors which distinguishes it from the environment and from other systems. From this point of view, the local identity mus be interpreted in terms of its organisational fabric, i.e. the network between economic actors, individuals and institutions that constitute and reproduce its organisation.

It follows that the idea of the autonomy refers to the organisational capacity of the system (a complex system, we shall say). Being organised, a system possesses the ability to reproduce and transform itself. The source of external stimuli is our global network-system, while the closure of the local system should be understood in an organisational sense.

The essential thing in this approach is that it allows them to be considered as different systems, each with a distinct identity and thus with the capacity for autonomous behavious, governed by its own internal rules.

In other words, the identity of the system derives from its organisation, and its structuring is the outcome – both dynamic and evolutionary – of collective action.

Lets' come back to Europe now. This is another syntetic representation (again, very well-known) of the European space.

The blue banana is contrasted here with a different fruit, the European grape: it expresses the transition of the European urban system from an areal and hyerarchical structure, to a networked one, i.e. from a spatial pattern based on the core-periphery model to one based on a policentric pattern.

Where the progressive integration of peripherical urban centres follows non only the expansion, the dilatation of the European core, but first of all the valorization and development of local specific conditions and resources.

The proposal is really provocative, indeed, and aims at foresee the possible evolution of the European pattern. But: which is the nexus between dream and reality, between provocation and the meaning of things? The point is that the political problem is not avoidable.

The problem, as we can easily understand, is to overcome any kind of determinism, both that tipical of areal representation (really simplified and unable to show the real articulation of the European system), and that of the proposals looking for local identity above all.

Hierarchy is still a crucial phenomenon, which follows deep-rooted and pervasive logics. While identity and self-organisation represents, at the same time, a fundamental category, as we have seen, non only from the point of view of the organisation of European space, but also from that of the political action.

The context is, in other words, dialectic. As a matter of fact, hierarchy and policentrism do not exclude each other. The challenge – I suppose – is to include them both in a into a unique interpretative schema.

For this reason I would like to conclude by proposing a different representation of European spatial system.

Two introductory notes:

The first refers to the function of the city in the information economy. After years in which the accent has been placed strongly on the processes of diffusion, counterurbanisation, the formation of networks of centres, the urban areas have once again become leading players in economic development.

This does not deny the consolidation of network structures at the regional and sub-regional level, but this is accompanied by the re-assertion of urban and metropolitan polarities.

What can be inferred is the fact that urban dynamism no longer depends on the size of cities in the strict sense, but on the multitude of functions and their reciprocal interaction, in addition to the position that these occupy in the strategic nodes of the national and international systems.

The second fact is that "variable geometry space" is not a space which dissolves in a network of flows, in the same way in which the process of globalisation does not produce, by its very nature, models of production and territorial organisation. The fact is that we no longer have a "single possible model", but a plurality of conditions and forms of organisation. The urban network (continental in this case) does not therefore appear as without centres, but as a set of systems each endowed with its own identity.

I would like to explain these considerations by putting onto the table a proposal, partially alternative to the previous ones (to the Banana and to the Grape).

This makes reference to a systematic analysis conducted in the framework of the Study Programme on European Spatial Planning, perhaps the most substantial one of recent years, concerning the higher urban functions.

It is enough to note that almost 400 cities and 26 variables were taken into consideration.

The characterisation of urban centres is, in turn, based on the underlining of four fundamental, structuring features:

- economic and financial leadership, the expression of command and control functions of the contemporary globalised economy
- openness, with reference to the level and capacity for internationalisation, in its various aspects and components
- technological potential
- capacity of cohesion of larger regional spaces.

Here, I will obviously limit myself to a summary representation. The Figure is obvious a simplified generalisation of the elementary systems which underpin the continent's urban-functional articulation.

These include the level of cities of a global status (which I obviously cannot expand on) and that of multi-centred articulation, i.e. the set of centres that, highlighting specific potential and features, can represent the continent's real bearing structure.

This representation is purely to lay the initial foundations that introduce the two following generalisations.

Let us look at the first the Figure which represents a spatial representation of the European urban system, both descriptive and usable as an indicator of its possible transformations. To a certain degree, this is a representation aimed at expressing both the hierarchical dimension (the strong points of the system are in fact explicit) and the fundamental complementarities between the nodes.

More in particular, the Rhine axis (and in a broader sense the "golden triangle" bordered by Brussels, Amsterdam and Frankfurt) confirms its supremacy from the functional point of view.

However, it is possible to identify some significant counter-trends to consolidated images. Let us examine some of them:

- Already inside the Rhine fabric there is the breakdown of it. On the contrary, the presence is underlined of various and strongly internally cohesive sets, with intervals of significant rarefactions of the levels of "urbanity".

- The rise of "strong" East-West alignments that appear to redefine the very traits of the European core.
  The first is projected in the direction of Berlin (a well-known phenomenon). This is a fairly complex alignment of functions, connoted both technologically and in terms of modern urban dynamism.
  The second, further south, leads to the creation of a functional bond (in this case the technological components seem dominant) between the vast Frankfurt area and the Paris system.
  Another significant fact is that this second "horizontal" alignment has further extensions (certainly less pronounced than the first ones), both towards western France (the Breton system) and towards the close-knit urbanised fabric of the Brandenburg area and the southern part of the former East Germany.
- Then, the extension of the "strong" area towards the south-east (Bavaria and Austria is another macroscopic phenomenon which underlies the redefinition of the continent's overall structure, encouraged by the extension to the east of the European economic range of influence.
- Further on, to the south, the image of the Mediterranean axis asserts itself, but however with much more problematic features compared to the usual images. The Milan metropolis appears as the strategic node of an overall upgrading on the continental level and not only of its southern part.
  To the west, the urban fabric shows characteristics of significant technological dynamism, both towards the Rhône-Alpes and along the coast, where a first significant bifurcation is found towards the Iberian peninsula, and a second one towards the Atlantic.
  To the east, the Po Valley system (characterised by its consolidated production system and high urban dynamism) leads in turn to East and to the Italian peninsula's strong systems.

Finally, we come to the last representation which is in part the synthesis, as well as the re-elaboration of the phenomena outlined above.

The great areal systems are replaced by an articulation of varying complexity and functional endowment. In particular, a unitary scheme can be seen that hypothesises a strategic link of interaction between polycentrism and hierarchy.

In detail, this is based on the identification of a series of interconnected nodes, included among the regional structures (or systems) and continental structures (or hierarchies) and thus potentially capable of interpreting an organisational principle that can synthesise these two logics.

The map shows a strategic European heart which in part overlaps but which for the most part is detached from the consolidated old core.

Its corner points are five strategic connecting points (Paris, Munich, Milan, Montpellier and Bordeaux) of different sizes and functional masses, but which in any case seem to assert themselves as potential engines for the activation of forms of valorisation of emerging systems "external" to the old, consolidated hierarchies.

These are the origin of distinct fronts of valorisation that, as a whole, outline an articulation of the continent based on a plurality of scales and reasons for development.

CONCEPTS

NODE   ®   LOCAL SYSTEM/CITY

NETWORK   ®   GLOBAL/FLOWS

NETWORK   ®   PHISICAL INTERCONNECTIONS

       →   SOCIAL INTERACTION
          (METAPHORIC MEANING)

GEOGRAPHICAL REPRESENTATION

- **AREAL**   CONTINUOUS WHOLE OF PLACES
         SPATIAL CONTINUITY
         EX: CORE-PERIPHERY

- **NETWORKED DISCONTINUITY**
         EX: SOCIAL/ENTERPRISE/CO-
         OPERATION/CITY NETWORKS

1. **GLOBAL EXTENSION OF COMPANY'S HORIZON (VARIED AND VARIABLE RANGE OF RESOURCES, MARKETS, KNOW HOW)**

2. **GLOWING PLURALISM OF TECHNOLOGIES (MULTI-CENTRED NATURE OF INNOVATIVE PROCESSES)**

3. **GROWING AUTONOMY OF MARKET DEMAND (COUNTRY-SPECIFIC SOCIO-CULTURAL AND INSTITUTIONAL FACTORS)**

4. **INFORMATION AND KNOWLEDGE (ORGANISATIONAL FLEXIBILITY AND TECHNOLOGICAL FLEXIBILITY)**

GLOBALISATION PROCESS
- **NOT TOTALISING AND HOMOGENISING**
- **HISTORICALLY SPECIFIC PATTERNS**
- **VARIETY AT THE ORIGIN OF COMPETITIVE ADVANTAGE**

LOCAL IDENTITY
- **LOCAL AS INTERMEDIATE ENTITY**
- **AGGREGATE OF ACTORS/COLLECTIVE ACTOR**

POINTS OF VIEW

EXTERNAL TO THE LOCAL SYSTEM

- **NODES ARE REGULATED THROUGH INPUTS COMING FROM OUTSIDE**
- **PASSIVE ADAPTIVE BEHAVIOUR**
- **BANAL MACHINE**
- **AREAL REPRESENTATION**

INTERNAL TO THE SYSTEM

- **SELF-ORGANISATION**
- **NON BANAL MACHINE**
- **HISTORICAL EMBEDDED NETWORK OF RELATIONS BETWEEN ACTORS**
- **LOCAL ORGANISATION – LOCAL IDENTITY**
- **AUTONOMY**