CENTRE AND PERIPHERY

SPATIAL VARIATION IN POLITICS

Edited by

Jean Gottmann

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CENTRE-PERIPHERY AND SYSTEM-BOUNDARY: CULTUROLOGICAL PERSPECTIVES

Raimondo Strassoldo

INTRODUCTION

Centre-periphery is a geometric, static concept. It can be brought to life for use in the social sciences in two ways:

(1) analysing the *symbolic meaning* of centre, periphery, and their encompassing notion, the circle; symbol-analysis can also be called semiology or, more widely, *culturology,* according L. K. Whyte's not too fortunate proposal
(2) using it as a pattern-system model of an *action-system,* in Kuhn's (1974) terms, the centre then becomes a living nucleus, a decision-making node, a control structure; in this case, it is "system," not "circle," that becomes the encompassing notion, and the whole panoply of systems analysis can be brought to bear

I have already attempted, in several places (Strassoldo, 1970, 1975, 1977, forthcoming; Strassoldo with Gubert, 1973), the second kind of analysis, placing the centre-periphery polarity in the context of a "general theory of boundaries" fashioned, after the manners of the General Theory of Systems, out of the insights and fragments of a wide array of established disciplines.[1]

Here I would like to develop the former approach, and give only synthetic summaries of the conclusions reached on the second level. For purposes of brevity, terms and arguments are employed without excessive concern for formal definition and articulation. The reader's kind insight, rather than

logic, is called to task. More formal presentations can be found elsewhere. I think it not improper for the only sociologist in a symposium of political geographers and other serious scientists to assume a dionysian, rather than apollonian, posture.

THE MEANINGS OF CIRCLES AND CENTRES

One of the most archaic ideograms is the neolithic Sun Wheel. The circle is the symbol of the sun, of life, of enlightenment, of the self, of the "totality of life," of the union of opposites, of human and universal perfection. The *mandala* is one of its more universal and sophisticated expressions. They can be found also in Europe, in the rose windows of medieval cathedrals, in the haloes of saints, and in the ground plans of temples and cities (Jaffè, 1976).

Mandala "means circle: the translations from the Tibetan sometimes render it by 'centre' and sometimes by 'that which surrounds'" (Eliade, 1969: 52). I think we have here, in a nutshell, most of issues and ambiguities that concern us in this essay. The mandala is a class of visual archetypes of the most subtle and elaborated cultural meanings; they express cosmological myths produced along thousands of years in a wide culture area. They are basically patterns of concentric circles and other figures, variously complicated in size, color, textures, and additional elements. They are circles, and therefore can be conceived as points, as (enlarged) centres; in addition, they *have* centres, but they also have a periphery, a boundary line marking them off the environment, the field.

All archaic cultures, Eliade assures us, have been fascinated by the symbolism of the centre, to which that of the circle is closely associated (the circle is generated by a centre). Art historians are most sensitive to this tradition in Western civilization, especially now that it has been destroyed in the arts. Centre and circle mean symmetry, proportion, and perspectives. Hans Sedlmayr has decried the "loss of the center" in modern Western visual arts, while Pauler (1961) has traced the "metamorphoses of the circle" in Western culture, beginning with Plato: "The notion of a circular pattern, mirroring the parallel organization of the Cosmos, structured in concentric circles, seems to be the most typical element of the Platonic tradition." It was elaborated on by the neo-Platonic school of Plotinus, Proclus, et al., who spoke of the world as a circle, and of the centre as its "cause," i.e., God. It was taken over by the early Christian philosophers, who called God the Centre, and revived in the Renaissance by Marsilio Ficino ("the Soul is the

Centre of Nature"), Pico della Mirandola ("God has placed Man in the Centre of the World"), Paracelsus ("all universe surrounds Man, as the Circle surrounds the Centre"), and Giordano Bruno ("the Soul is a sort of Circle").[2]

THE DIALECTICS OF CENTRE AND BOUNDARY

Drawing from his studies of non-Western cultural systems, Eliade (1969: 54) makes two basic points. The first concerns the dialectics of centre and boundary (periphery). On the one hand,

every human being tends, even unconsciously, toward the Centre, and towards his own Centre, where he can find integral reality-sacredness. This desire, so deeply rooted in man, to find himself at the very heart of the real— at the Centre of the World, the place of communication with heaven— explains the ubiquitous use of the "centres of the world."

It can be noted, in passing, that a similar view about the function of centres is presented by Ardrey (1966) in the most fascinating final chapter of his controversial book, *The Territorial Imperative*. Building upon a metabiological theory of animal needs and the functions of territory, he suggests that while the frontier provides opportunities for conflict, adventure, social encounters, discharge of aggressiveness, and self-realization (stimulation and identity), the centre provides security, rest, and the environment favourable to reproduction of the species (mating and rearing of the offspring). And insofar as the security of the individual and the continuation of the species are the ultimate values in nature, the centre can acquire a sort of biological sacredness.

On the other hand, *groups* build boundaries between them and the outside. Circle and centre are the sacred loci of identity and security of every human being; but human beings are social creatures, and their individual spheres coalesce into an ordered cosmos: "At the limits of this closed world begins the domain of the unknown and the formless. On this side there is ordered space; on the other, outside this familiar space, there is the unknown and dangerous region of the demons, the ghosts, the dead and the foreigners—in a word, chaos or death of night" (Eliade, 1969: 37).

According to such *Weltanschauung*, which can be found in most great civilizations such as China, Mesopotamia, and Egypt, there is then a fundamental distinction—a *boundary*—between *cosmos*, the ordered, familiar world inhabited by fellow men and *chaos*, the frightening outer world of evil forces and monsters. Sociologists such as C. Cooley have called our atten-

tion to the basic, if rather bland, parallel distinction between "ingroup" and "outgroup"; and depth-psychologists have generally interpreted such funda-mental and almost universal dychotomization of the world as projections of destructive drives into the environment, as construction of the external "enemy," and as an extraflexion of our own darker inner side. The outsider is a proper object of our contempt, hate, fury, and terror; he allows us to show our righteousness and virtue. The sharing of a common enemy becomes a powerful cement of social solidarity. G. Simmel and others have highlighted this function of social conflict and the social status of the stranger, and C. Schmitt has maintained that the category of the "enemy" lies at the founda-tion of political life. The boundary line between "us" and "they," between ingroup and outgroup, between countrymen and foreigners, between men and barbarians, between one's own world and the external environment, between inside and outside, appears then as one of the basic moral catego-ries.[3] It is a boundary encircling the individual self as well as whole so-cieties; every level of social organization is marked off from its environ-ment—more or less hostile and frightening—by such a psychocultural boundary. The strongest one is usually found at the level of cultural area or civilization; almost as deep and consequential are the sacred frontiers sep-arating the political systems in the age of nationalism.[4] As soon as bounda-ries of this sort are conceived or discovered, defensive reflexes arise; mere de facto differences become objects of intentional, organized activities of promotion and defense. "Ecological" or "informal" systems begin to dif-ferentiate into "leading" or "control" subsystems, i.e., centres. So the de-fence (and expansion) of boundaries creates the conditions for the develop-ment of centres.[5] This is a common enough historical experience; assertive cultures become military nations, besieged cultures develop strong social cohesion and a political-military organization.

The second of Eliade's basic points however is wholly culturological. Most cultures have a three and four-dimensional image of the world. The earth might be flat, but the cosmos is a sphere or a set of spheres, and the centre of the world is usually the point of intersection between heaven, earth, and hell. "The most widely distributed variant of the symbolism of the Centre is the Cosmic Tree, situated in the middle of the universe, and upholding the three worlds upon an axis" (Eliade, 1969:44). This myth can be found in ancient India, China, and Germany. Elsewhere we find cosmic mountains, towers, poles, or mounds. One of the most familiar and elabora-ted of such three-dimensional concentric cosmologies is the medieval Euro-pean one described, for instance, in Dante's works. The centre is not only three-dimensional; it is also often dynamic, so to speak. It is the growth centre of the universe, from which it was created. Rabbinical texts, matched

by Indian ones, state that God created the cosmos starting from a "navel" (Eliade, 1969: 43). Theories of the "big bang" are not that new.

IN SEARCH OF STRUCTURAL GROUNDS

What seems to differentiate Western civilization from all others is the insistence on the symbolism of the unique centre. One way to explain it is the well-known idea that Western thought is "little more than a commentary to Plato"; we have already mentioned the importance of this tradition. What remains to be analysed are its roots. They are to be found, of course, in the Pythagorean religion of numbers and forms, where the circle had a promi-nent place as the image of divine perfection, self-sufficiency, incorruptibil-ity, harmony, and the like; but is there something less cultural beyond it? Just why should the circle carry such meanings and exercise such fascination on human beings? Are there biological, psychological, or sociological bases to it?

Emile Durkheim was fond of looking into social structures for the sources of mental categories, values, and images. According to his analytical stance, it is not to be excluded that Plato's and others' sacralization of the circle has to do with the physical shape of the Greek polis, as of most other settlements, and with his own aristocratic background that of course entailed a central position in public gatherings, in the public political doctrine, and possibly also in residential location. The circle would then be the formalization of urban structure and the planar projection of the pyramidal political hierar-chy; the centre is the place where sacred institutions and powerful families are located.

This Durkheimian approach seems to stand in sharp contrast with the culturological one, according to which it is mental images such as those of centre and circle that lead to the construction of round cities with social centres in about the middle. Eliade (1949), for instance, is emphatic in his opinion that the shape of walls, ground plans, and city centres is primarily of symbolic nature and that their utilitarian and esthetic aspects are only acci-dental and derived; he is especially concerned about the magical meaning of the defences of settlements: "ditches, labyrinths, ramparts, etc. were set up to prevent the incursion of evil spirits rather than attacks by human beings" (Eliade, 1969: 39). His position is radicalized by Jaffé (1976: 272), who insists that "whether in classical or primitive foundation the mandala ground plan was never dictated by considerations of esthetics or economics. It was a transformation of the city into an ordered cosmos, a sacred place bound by

its centre to the other world." By the same token, it is controversial whether it was pyramidal social structures that gave rise to the geometrical concept of pyramid, or vice versa. The Durkheimian approach seems validated, however, by the fact that there are sound and obvious physical and behavioral reasons to account for the circular shape of settlements and public gatherings. Urban geography and human ecology have developed convincing theories about concentric growth of cities, due to competition for the most accessible locations, and theories have been developed about central places; Doxiadis' Ekistics postulates a "Central part" at every settlement level. Of course, consideration of human values cannot be excluded from these analyses; it has been repeatedly demonstrated that one of the main motives of the competition for location in the central business district is not really accessibility or other such "objective" factors, but *prestige*—the lingering symbolic lure of the sacred centre. Overall, however, it does seem that genuine ecological forces tend to produce urban patterns with centres and peripheries; just as it seems that the operation of market economic systems (the human analogue of ecological system) tend to produce hierarchies of settlements around "centre," "poles," or "capitals," and that the shape of these territorial units tends to the hexagonal pattern, which of course is the result of the compacting of circles. Thus, at the most primitive level, it might be that the idea of circle is the result of the economic-ecological forces that suggested the circular shape as the most economical one in building fences and walls, because it minimizes the ratio between perimeter length and enclosed surface; and the idea of sacred centre may be a cultural elaboration of the fact that this location was the most secure from outside harassments and at the same time the most internally accessible. Descending a further step in the level of naturalistic explanation, we can take notice that centre-periphery polarities tend also to emerge among social animals, both for defensive reasons (the ring of elephant or bison bulls around the soft core of cows and calves) and more interestingly, for communication purposes. Members of baboon troops tend to stay *around* the dominant male in order to have a better and unobstructed view of his behaviour, from which their own depends; he tends to sit in the middle, often on an elevated position, in order better to survey his domain. Baboons that for some reason are marginal tend, not unexpectedly, to stick to peripheral locations.

Jolly (1972) has detected two categories of primate social groups: the centripetal and the a-centric ones, and has rephrased the whole of status, and much of the rest of social structure, in terms of *direction of attention*.

Pursuing further this line of biopsychological arguments, one may speculate, a la Desmond Morris, whether breasts and nipples have anything to do with human delight in circles and centres; the visual arts certainly suggest it,

and Freud associated roundness with femininity. But the mind boggles at the thought of the links that extreme Freudians like Geza Roheim may have discovered between the Platonic celebration of those shapes and the Hellenic fondness of callipygian youths.

On quite another level we find hypotheses drawn from the physiology of man's senses of spatial orientation. As a visual animal, man relies very much on sight for his perception and conception of the world; and the eye happens to be equipped with a quite distinctive centre-periphery polarity. It is currently suggested that we really have two visual systems: the retino-tectal and the retino-geniculo-striated. The first is based on the rods, and gives us the global image of the field in a wide but relatively fuzzy way; the second, based on the cones, is the organ of *focus* by which we fine-scan objects placed in the centre of attention. The fovea, a central area in the retina filled with cones, is its seat. Our visual sense of space emerges from the combination of these two systems within each eye, as well as from binocular vision (Trevarthen, 1968). Our total sense of space requires, in addition to the eye, the inputs of other organs and, indeed, the whole body. Paillard (1974) and others have demonstrated the importance of the vestibular apparatus in supplying the fundamental vertical spatial axis in relation to the mouth-head-spine-anus polarity, while Piaget (1948) and others have insisted on the tactilo-cynesthetic system of spatial orientation, which supplies information on the dislocation of limbs and body parts in relation to a theoretical centre of the individual, but also on the distance between a point in space and the individual, as measured by the amplitude of the movements necessary to reach it.

THE TRIUMPH OF THE CENTRE: THE WESTERN SCIENCE OF PERSPECTIVE

Thus the full sense of space, as architects have long known, implies the time dimension and movement. But painters can work only with the two dimensions of a flat surface and have to rely on the spatial notions yielded by the eye, based on the projective geometry of retinal images and the laws of optics. And here we meet one of the greatest peculiarities of Western art, i.e., perspective. Great painting traditions have flowered for millennia, innocent of this breakthrough. The discovery of the laws of perspective is one of the glories of the Italian Renaissance; they mirror optical laws easily demonstrated a few centuries later by the darkroom and the photographic camera; they belong then to the naturalistic mood of Renaissance culture. But they also enhance its Platonic spirit, because perspective is, in effect, a

glorification of the centre. The whole picture is arranged around a generating centre, toward which all lines converge. Gestalt psychology and the psychology of vision have discovered that the eye naturally organizes images along axes, of which the vertical one, related to gravity, is the most important; centres can emerge only where two or more axes cross-cut (Howard and Templeton, 1966), and it has been shown that when drawing pictures, the tracts do tend to be organized around an invisible central area (Ceccato, 1968). The idea of perspective is perhaps grounded in psychophysiology, but there is no doubt that its development is a wholly cultural affair. Its uniqueness to Western civilization can be readily seen by comparison between Japanese and European styles of interior architecture and garden landscaping. Chang (1938) has characterized Chinese epistemology as *polyocular*, i.e., interested in cross-perspective relations and complementarities rather than in axial distinctions and oppositions.[6] There is no relevant centre in the well-known graphic symbol of yin and yang.

Eliade (1969: 39) has warned us that "we must not envisage this symbolism of the Centre with the geometrical implications that it has to a Western scientific mind. For each one of these microcosms there may be several centres. . . . All the oriental civilizations had an unlimited number of centres."

THE UNICENTRISM OF WESTERN COSMOLOGY

Galtung (1971), one of the most energetic promoters of the centre-periphery metaphor in the social sciences, has explored such elements in the opposing "Western" and "Oriental" cosmologies. In a vein similar to C. Kluckohn and F. Kluckohn's analysis of cultural values, he states that cosmologies can be analysed according to their notions of space, time reality, man-man interaction, and man-nature interaction.[7] Starting with the latter one, Galtung sees Western culture as characterized by the Cartesian matter-mind duality and the attribution of individual soul to each man, while Eastern culture is characterized by the conception of mind and soul as a common medium diffused throughout the universe. *Man-man interactions* in the West are individualistic and competitive; in the East they are more consensual and harmonic. *Reality* is approached in the West by the Scholastic drive to clear-cut distinctions and the Cartesian analytical mood: "sorting" (i.e., sharp boundary-making) characterizes the Western treatment of

reality. In the East the "holistic" stance predominates, and everything is considered interpenetrated with, complementary to, contradictory with, and inseparable from, everything else.

In the *West time* is conceived as unilinear and progressive; in most Western cosmologies it displays a characteristic "trajectory" marked by a primeval high point or golden age, a subsequent vertical fall from grace, a period of darkness and a long ascending parabola of enlightenment, progress, and final catharsis. On the other hand, the East views time as repetitive, turning into unending circles, spirals, or waves.

Galtung tends to conclude that even the most general cultural traits mentioned above can be boiled down to the ultimate one, the Western obsession with the centre. Western *space* is unicentric, i.e., polarized by one centre from which everything else radiates and is measured, and which posits a negatively defined periphery. On the contrary, Oriental space is polycentric. As a leading champion of the cause of the Third World, i.e., world peripheries, and as a sympathizer of countercultural movements, he is of course very fond of what he sees as Eastern cosmology and tends to ascribe to Eastern influences the good things in Western thought, such as dialectics. It is worth noting, at this point, that Galtung's characterization seems closely akin to what a leading scholar of cybernetics—a Japanese-American, not surprisingly—calls "traditional Mainstream Logic" and "Emerging Logic" (Maruyama, 1973).

Traditional Mainstream Logic	Emerging Logic
unidirectional	mutualistic
uniformistic	heterogeneistic
competitive	symbiotic
hierarchical	interactionist
quantitative	qualitative
classificational	relational
atomistic	contextual[8]

POLITICAL CENTRALIZATION

Be that as it may—and such sweeping generalizations are always open to challenge—there seems to be a certain consensus on the importance of the centre of perspective in Western art and culture. Mumford (1961) equates centralistic perspective in architecture and urban planning with the centralization of power in what he calls the Baroque city. Counterreformation Rome was certainly self-consciously restructured as a network of centres or nodal points pregnant with sacred and scenographic values and linked by rectilin-

ear avenues. Renaissance planners produced innumerable projects and some actual cities with circular, radiocentric, and concentric ground plans; Palmanova is perhaps the largest and best known. The epitome of the radiocentric pattern, the purest triumph of perspective, can, however, be found in Versailles and the innumerable imitations by other European rulers and aristocrats, with the *patte d'oie* innerving the whole landscape to the horizon and conveying it, so to speak, to the feet of the lord. Rome and Versailles, the centres of absolute spiritual and temporal power, set the example for cities and villas alike, their fame reaching even the Far East. New cities were designed along these patterns, and old ones—the most macroscopic case being Haussmann's Paris—were renewed by clearing great focal centres and creating perspectives toward them. Centralized power and central perspectives constitute two faces of a cultural syndrome within which it is not easy to impute priorities. Certainly the reconstruction of the land- or townscape in radiocentric patterns is a projection of the central power, a materialization of a sociopolitical structure. But there are also grounds to believe that centralization of power and the reconstruction of social reality into a monolithic pyramid culminating in the absolute authority of the sovereign is a reflection of *esprit de géométrie*, a Cartesian passion for the rationalization of social relationships according to deductive logic, standardization, and simplification. Was it their lust for power that led the French Jacobins to bring to ultimate perfection the centralizing processes initiated centuries before by the monarchy, or was it their passion for "reason," i.e., deductive logic? Again, as in the case of "spontaneous" centralization processes in the growth of settlements, there seems to be no conclusive evidence, and the temptation is great to find the easiest way out by positing a mutually reinforcing causal loop among these phenomena.

The effectiveness of such a syndrome has been indeed enormous, as witnessed by France's human geography and by the strand of corresponding-ly forceful polemics against centralism that can be found in French political thought from the Fronde liberalists, to Catholic writers of the Restoration, to the libertarian and anarchic socialism of Proudhon, down to the passionate utterings of Simone Weil's political testament, Alexandre Marc's relentless battle for federalism and, more recently, De Rougemont's (1977) plea for regionalism. Such a profusion of intellectual efforts does not seem to have noticeably affected deep-seated French outlooks. Even scholars of peripheral regions seem to share it: two recent such studies open with almost identical words: "*En sortant de Paris par la route par un clair apres midi*" (Bonnet, 1972) and "*Quittant Paris par la route par un clair apres midi*" (Kessler and Steinbach, n.d.). There is hardly any doubt on the centre of the French view of the world.

Throughout the centuries, France has set the pattern after which the modern nation-state was fashioned. All over Europe absolute monarchies gave way to democratic republics and, in some cases, were transmogrified in totalitarian tyranny with an uninterrupted crescendo of centralization. Even English thought was affected, mainly through the vast works of Jeremy Bentham, whose drive for reform had a vicious antilocalistic, centralistic orientation, and whose *pan-opticon* principle, quite fittingly, became the basic guideline in the design of jailhouses for at least a century.

According to de Tocqueville's classic analysis, centralization is the necessary consequence of such basic processes as democratization and social equalitarianism. Modern enlightened conservatives like Nisbet (1976) seem to keep their analysis within this framework. But it seems likely that centralistic trends and ideologies are rooted in deeper layers of Western culture, as we have seen. Perhaps more important, political centralization is also an aspect of structural processes pertaining to the operation of large-scale technological systems of production, transportation, and communication. It is of little use to preach for political decentralization as long as a way is not found to offset the advantages of large-scale industries, or to operate huge networks of canals, railways, and highways on a local basis, or to strip of its political relevance the design, construction, and operation of such systems (in the Marxian vein of "administration of things" replacing the "government over men"), or to make do without them, according to the "paraprimitive solution."

In sum, centralization of power is not simply the outcome of a conspiracy of power-hungry demagogues, as Nisbet implies; nor only of the fundamental cultural trait of Western civilization, as Galtung suggests; it is also, and perhaps in a more important way, the result of the working of the basic mechanisms of societal cybernetics.

At this point, however, our discourse must radically shift back from a culturological perspective to a systemic one: from a consideration of centres as static spatial concepts to their role as loci of activities; to be more precise, of *control processes* within *systems*. This will prepare the ground for a discussion of peripheries, the conspicuous missing element in our discussion so far.

THE FUNCTIONS OF CENTRES IN SYSTEMS

There is some agreement that the centre-periphery metaphor, as used in the social sciences, entails two assumptions: (1) that the centre is the locus of decision-making, i.e., of power; (2) that they both belong to an encompass-

ing system, of which they are differentiated but interdependent parts. This is most clearly seen, for example, in the politicological and organizational use of the concept (Gremion, 1976; Tarrow, 1977) An adequate discussion of these assumptions would then call for analysis of such disproportionately large subjects as (1) social power, (2) social systems, and (3) the relationships between the functional (analytical, normative, symbolic, and behavioral) dimensions of society and its spatial (concrete, matter-energy, and communicational) ones. A clarification of such issues would be in order because of the inevitable tendency to water down the spatial denotations of the centre-periphery concept, and to use it as a mere synonym of other polarities, such as bourgeois-proletarian, dominant-subordinated, developed-underdeveloped, rich-poor, urban-rural, and so on. The inclination is inevitable because of the quite real interplay between the spatial and the analytical (behavioral, and social) aspects of society, for the simple fact that society is *both* a collection of physical human organisms on territory *and* a "reality sui generis," as Durkheim stressed, located as a structure of images, norms, and values in their immaterial minds. Thus a phenomenon such as power has both material referents (e.g., transmitted commands, means of coercion, and resources) and symbolic, mental referents (e.g., consent, fear, legitimization, resistance, and persuasion). Power can be exercised by operating a complex machinery of means of coercion, corruption, and propaganda, but also by letting people embrace the values, understand the words, and anticipate the will of a charismatic leader. Power might be embodied in a specialized communication subsystem, such as the central nervous system of organisms, or may be diffused throughout the system, such as the humoral systems of enzymes.

The sociological literature on power (and related concepts such as authority, control, influence, domination, and so on) is enormous and controversial, since the issue is objectively very complex. Thus we can hardly be expected to achieve here a clear synthesis. The present view comes mainly from Deutsch (1963), Etzioni (1968), and Kuhn (1974). Suffice it to emphasize that the different forms and bases of power have quite different relationships with the spatial configurations of society. On the one hand, coercive power, based on continuous surveillance by the dominant of the subordinate's behavior and on quick deployment of threats and punishments, is clearly tied to material conditions such as efficient communication lines and distribution of coercive "resources" (or "bads" in Boulding's language) on the dominated territory. To the extent that political systems (states and governments) are, by definition, based on the monopoly of the use of force over a territory, they must take into account these hard realities of a physical and spatial nature. Thus state systems tend to look, from a bird's (or

geographer's) eye, like unicellular organisms with nuclei, (core, centre, and capital), bodies (the territorial expanse), and outer membranes (the boundary) with stomi (border passes, ports, and so on). In a diachronic perspective, states have often also displayed ameboid changes in body size, shape, and location across space. The organismic metaphor in political geography has the virtues and pitfalls of all metaphors employed by scientists in every discipline and there is no reason to be peculiarly touchy about it. Deutsch (1963) and D. Faston have shown the great potential of what is essentially an updated organismic metaphor—the cybernetic one—in the analysis of political systems. Within this framework, power is defined as control over communication flows, and such control is exercised at the nodes of the channel systems; in particular, at those nodes where *selection* is possible, i.e., where *decisions* can be made. Miller (1965a, 1965b) formally defines decision-making subsystems as nodes with fewer output than input channels.

Channel networks are physical things located in space; thus there are physical loci of power and decision-making. As complex systems usually achieve their complexity through hierarchicisation (Simon, 1969), there emerges a hierarchy of power centres branching out to a seat of ultimate decision-making power. Commands flow down from the centre to the periphery, while information travels in the reverse direction.

In opposition to this communicational-cybernetic, ultimately physicalist concept of power systems, we have the functionalist-normative view of society so majestically represented by the Durkheim-Parsons "grand tradition," where power itself almost disappears, replaced by the concept of collective moral consensus on shared norms and values. Social order is achieved not through the operation of an ultimately coercive (political) power system, but through the spontaneous coordination of individual behavior by means of impersonal mechanisms such as the market. People exercise functions and not power; status and prestige are peacefully and unanimously granted to those who fill the most strategic social roles, for example. This type of society, based on commonality of immaterial elements such as images and moral codes, is obviously much less tied to the physical laws governing channel networks and is also less bound to spatial determinants of communication systems. To speak of centre and periphery in such a society can be wholly misleading. As it has been pointed out by L. Kristof, such societies have "cores" rather than centres; as they grow, any initial difference between core and hinterland is submerged.

Such societies are held together not by a centre of physical control, but by a symbolically central structure of values and norms. Shils (1975: 3) has articulated the clearest statement of this approach to centre and periphery:

Society has a center. There is a central zone in the structure of society. The central zone is not, as such, a spatially located phenomenon. It almost always has a more or less definite location within the bounded territory in which the society lives. Its centrality, however, has nothing to do with geometry and little to do with geography. The center, or the central zone, is a phenomenon of the realm of values and beliefs. . . . The center is also a phenomenon of the realm of action. It is a structure of activities, of roles and persons, within the network of institutions.

Of course, being a reasonable man, Shils is far from blind to the institutional, organizational, political, and territorial aspects of societies. Thus the centrality of a value system is also due to its being promoted by the ruling elite:

The decisions made by elites contain as major elements certain general standards of judgement . . . the values [of] which are inherent in these standards . . . we shall call the central value system of the society. It is central because of its intimate connection with what the society holds to be sacred; it is central because it is espoused by the ruling authorities of the society [Shils, 1975: 4].

In another essay Shils (1975: 80) notices the "territorial delimitation, which, in turn, gives rise to the centre-periphery polarity"; he notes that "ecologically, as the distance from the centre increases, there is a diminution of the effectiveness of integration of all types" and that societies differ in their amounts of centralization and centre-periphery differentiation. But the focus of his approach is unmistakably culturological: From the observation that societies tend to develop spatial centres, he is lead to discover the affinity, already stressed by Eliade and others, of the central with the sacred; from the observation of the falling integration in the peripheries, he is led to study the processes of integration, the topology of consensus.

Real societies are mixtures of both models; the politicological-cybernetic one strongly tied to a spatial pattern of centre-periphery, and the sociological-culturological one, which is much more volatile in its spatial referents. No wonder then that both the "materialistic" model based on power and communication and the symbolic model based on consent and shared meaning have been subjected to analysis through spatial categories such as centre-periphery.

But the perils of adding confusion in a field such as the social sciences, already cluttered with the debris of perhaps hundreds of conceptual models, "dominant" metaphors, "normal" paradigms analytical categories, and so on, is to be considered. I think at this point it would be useful to adopt the elegant formulations of Kuhn (1974), who radically distinguishes between

controlled (formal) and noncontrolled (informal) systems. The organism and the polity are examples of the former; the ecosystem and the market of the latter. The former have subsystems that make crucial decisions purposefully affecting the whole system, i.e., systemwide decision makers, control subsystems, or, in von Bertalanffy's (1968) homely words, leading parts. In the second category of systems, such components are lacking and the behavior of the whole system is simply the unintended result of the behavior of its subsystems. The politicological-cybernetic societal model belongs to the first type of system, while the sociological-symbolic belongs to the second. I would venture that the first necessarily has one, and only one, paramount centre, a point in place where ultimately binding decisions are made;it may be a moving point, such as Charlemagne's itinerant court trailing from castle to castle or Air Force One carrying the U.S. President. But as government becomes an ever more complex affair and decision-making requires ever larger amounts of information retrieved from the archives, the point of ultimate decision-making tended, before the advent of the "communication (i.e., computer + communication) revolution," to cling to a fixed place where the "buck stops": the court, the parliament, the executive buildings, or the capital.

The second type of system—the market, the ecosystem, and society—culturologically seen as the outcome of spontaneous coordination of individual behavior through common mental programmes or "invisible hands," does not necessarily display such punctiform centres. Even the stock exchange has an areal (field), rather than a nodal, spatial structure.[9] They may have a plurality of coordinated centres, a diffuse core area where integration is more advanced than in the marginal area, or no internal differentiation at all.

Further, I would advance that the first type of system tends to strictly control and close its boundaries (Mayhew, 1971; Kaufman, 1974) and thus create peripheries, while the second tends to have more open boundaries and thus less differentiation between core and periphery. This links up with the dialectics of centres and boundaries already discussed in reference to Eliade's writings. There we recalled some insights on defended and nondefended boundaries; and the idea that centre is somehow the consequence of the maintenance and defence of boundaries. This view does not necessarily clash with von Bertalanffy's (1968: 71) principle that progressive centralization is the consequence of progressive segregation (i.e., internal differentiation) of systems, since their empirical referents are different; and both ideas emphasize that "progressive centralization means progressive individuation," i.e., differentiation of the individual system from its environment or, in other words, stabilization and hardening of its boundaries.

CENTRE-PERIPHERY DUALISM IN ECONOMIC SYSTEMS

The relevance of the centre-periphery polarity has been well demonstrated by Wallerstein's (1974) work on the emergence of the modern world system, in which he contrasts the relative advantages of political empires, i.e., centralized controlled systems bent on closing and defending their boundaries, and the capitalist economic system, unburdened by hierarchical bureaucracies and boundary-maintaining apparatus. His conceptualization of core areas, semiperipheral areas, peripheral areas, and external arena, as well as his developing theory on their dynamics in the making of the modern world system, look indeed like one of the most sophisticated and ambitious examples of the fruitfulness of a centre-periphery approach. In other hands, however, this polar couple may become a mere new, popular catchword by which old-fashioned Marxian classical economics is modernized with some robes of space economics.

As we have seen, the centre-periphery antinomy seems more illuminating in reference to political systems, where centralization processes have proceeded for centuries at ever increasing rates. But it has been first popularized by political economists, or space economists, under the name of polarized growth or "economic dualism." I have already presented elsewhere a "developmental" (i.e., ecosociological) "perspective to centre-periphery relations" and shall not repeat myself. I am fully aware of the structural processes pertaining to the production and transportation subsystems, to the economies of scale, to accumulation, to external economies, and to general principles of location of economic activities, by which the rich tend to grow richer and the poor lag behind, by which larger settlements grow at the expense of smaller ones and show "apoplexy at the centre and anomy at the peripheries." I am also aware of the discussions among economists on the contending theories of "dependencia," "imperialism," "lag," or "vicious circle of poverty." The point is that a centre-periphery approach seems less legitimate in dealing with economic systems than with any others. Puncti-form centres are a reality in the political system; in many of them, and especially until the advent of wireless communication and aerial warfare, control centers tended to have central locations with respect to communication networks. In the social normative system, centres may acquire a symbolical identification with the innermost *sancta sanctorum.* But in economies one can speak only of *core areas,* whose location in space usually has nothing to do with geographical or geometrical centres. The metaphor is simply misleading, for more developed areas, on the contrary, are usually

found off centre, at the interfaces with other economic systems, along the coasts, or where chance laid natural resources, and so on. The identification of central with developed, and peripheral with underdeveloped, when institutionalized, for instance, in the EEC, has led to some curious situations, such as fairly well-to-do regions located along the margins being officially classified as central and clamoring recognition as peripheral; or, on the contrary, less fortunate pockets of poverty in central areas being called peripheral. At the global level, the centre-periphery metaphor hides the fact that spheres have no "natural" centres, as circles and other flat figures do; what is seen as centre is completely subjective and "historical," as some of the Chapters in this volume emphasize. If centre is equated with "industrial," "modern," "capitalist," "advanced," and so on, it is quite meaningless to apply it to such a wide and scattered collection of areas.

Two explanations can be advanced for the usage: the first, recalled by L. Kristof, is its statistical origin; the second is its translated usage from the sociopolitical realm. In this latter case, we can as well forego the translation and resume the analysis of the fields in which the notion originally and more interestingly applies. To repeat, processes of "polarized growth" and "dualism" are only too real; both political centralization and sociocultural dominance of symbolic centres have much to do with them, and the study of their interrelations is highly relevant and interesting, as I have tried to discuss elsewhere. However, in itself, the economic realm does not appear a very fit subject for an analysis in terms of centre-periphery. To do so runs the risk of misplacing in economic processes principles that are proper to political and social processes (which are, of course, spatial); in more frank words, to attribute to "capitalist economy" the sins of the centralized nation-state.

The whole discussion of "imperialism" is vitiated by a lack of analytical clarity about what should be imputed to political and what to economic factors (processes, motives, and systems); sometimes the merchants are seen as well-meaning tools in the hands of cunning, aggressive political-military leaders, while other times colonial troops and missionaries are presented as naive instruments of a capitalist conspiracy to penetrate foreign markets. Similarly, economic isolationism and autarky is in turn interpreted as the result of economic interests or political motivations; this can also be said for the relationship between industrialization and militarism. Is the arms race a function of industry's need for expansion, or is industry a servant of political and military goals? Again, the easy way out is to postulate interdependence and mutual causation. But there are many, such as J. Schumpeter in reference to imperialism and De Rougement (1977) in reference to armaments races, that put the greater blame on political factors; in

the latter case, the nation-state's ruthless drive for "unity," i.e., "internal homogeneity," and sovereignty, i.e., independence from the environment. To repeat, this means hardening of boundaries, growing individuation, and increasing centralization.

SYSTEMS AND BOUNDARIES

Generally speaking, people are interested in the centre, the core of things, and neglect the margins. There are, as we have seen, sound logical, physiological, and sociocultural reasons to do so. Philosophers have recommended that we catch the essence of things and forget the marginal aspects; some logicians maintain that too precise definitions of terms and concepts, in order to discriminate marginal cases, are unnecessary and even stifling (Popper, 1969). Sociologists have usually looked at societies as self-contained systems, whose boundary interactions with other societies and the environments are relatively uninteresting (Mayhew, 1971). Modern societies tend to channel the attention of the masses to what happens at their centres. No wonder then that borders, frontiers, and boundaries are hardly mentioned in most textbooks in the social sciences.

The situation is different with some disciplines specializing in the interritorial field; and it is especially different with political geography, which has developed the most massive amount of empirical studies as well as theoretical considerations on this subject. With one limitation, however, the frontiers studied by geographers are almost exclusively those pertaining to the largest political units: nation-states, empires, and their dependencies. Much less studied are the internal boundaries between administrative units and local institutions.

But there is a new mood in boundary studies not to employ the much-abused concept of "revolution." In political geography it concerns the shift from a Holdichian to a Lydian outlook,[10] from a consideration of boundaries as a line of separation between hostile political units to the consideration of borders as regions of encounter and exchange between cooperating neighbor states; from "separatist" to "associative" policies (Kasperson and Minghi, 1969; Gottman 1973; Dorion, 1974; Guichonnet and Raffestin, 1974). In other social sciences the interest in boundaries is a fallout of the systems approach. Boundaries are an integral part of the definition of system (Miller, 1965a, 1965b). Wherever a social group, institution, or organization is conceptualized as a system, it is automatic to look for its boundaries. In fact, the issue of boundaries is one of the *pons asini* of the whole systems approach.

The new approach to boundary studies does not limit itself to geographical boundaries of societal systems. It is interested in the analysis of the spatial boundaries at all systemic levels, and it is also interested in nonspatial boundaries.

Systems are made up not only of material-energetic components, but also of relations and interactions among them and their attributes. In simple mechanical systems these are embodied in material-energetic connections, depending on physical contact and proximity; as the level of complexity grows, the spatial arrangement, which is the primordial informational structure (form = information; Monod, 1970), becomes more fluid and the communication network becomes more extended, involuted, and "ethereal" (Simon, 1969). Thus it is often better to focus on the behavior of the components themselves, leaving the causal network in a "black box," as it were; to focus on the information content and meaning of the messages, instead of the spatial structure of the communication networks. This is often advisable when dealing with sociocultural systems, where the behavior of components, often involving great changes in the material-energetic posture, depends on very thin informational flows—images, ideas, attitudes, perceptions, and expectations (Bertalanffy, 1968)—within and between the individual organisms.

Thus the boundaries of social systems are not only spatial, but also functional; a social system is said to exist as long as its components display certain behaviours, states, and attributes. At the moment its variations exceed certain critical values or norms, the system is said to be stressed, disintegrated or to have become something else (Buckley, 1968). A family, church, corporation, party, and state have a spatial boundary, i.e., a line circumscribing the localities in which their human (and material) components are placed. But they also have normative, functional, or analytical boundaries circumscribing the range of behaviours and attributes stipulated to belong to the system. When we deal with abstract (or action) systems, it is possible to overlook the spatial dimension and boundaries completely; but this is merely a heuristic, methodological device to simplify concrete reality. Some models of the social, political, and economic systems are constructed not with concrete organisms but with roles and "persons," i.e., fictional "homo oeconomicus"). This may be a necessary first approximation model, but, as science develops, the characters must be integrated, and this usually means meeting the physical, spatial constraints of human behaviour (Miller, 1965a, 1965b).

BOUNDARIES AND FRONTIERS: CONTRASTING SOCIOLOGICAL APPROACHES

Raimondo Strassoldo

The study of analytical, nonspatial boundaries is not foreign to the Parsonian systems analysis, where interesting insights on the interface between the various analytical (sub)systems can be found. But long before Parsons the interaction of spatial and analytical boundaries had been placed at the centre of a full-scale sociological treatise.

La théorie des frontières et des classes (1908), by the Belgian scholar and social reformer, Guillaume De Greef, is built around the following wide-ranging theoretical assumptions:

J'espère avoir démontré dans cette étude que la frontière d'abord homogène et indivise et, du reste, toujours en rapport avec l'état interne de chaque groupe et avec ses relations vis-à-vis des groupes extérieurs, se différencie au cours de l'évolution sociale en une multiplicité croissante de frontières spéciales qui peuvent cependant être ramenées à sept espèces de frontières en rapport avec les sept classes de phénomènes sociaux dont j'ai établi le tableau hiérarchique dans le premier volume de mon Introduction à la Sociologie. Cette différenciation croissante des frontières et des groupes respectifs est un facteur important du nivellement des conditions sociales et de l'extension de la civilisation, à condition d'être toujours accompagnée d'une coordination appropriée.

La fonction des frontières n'est donc pas simplement séparative; c'est là seulement leur caractère négatif, le plus apparent mais aussi le plus superficiel. La fonction positive des frontières est d'équilibrer les forces de tout groupe social à l'intérieur et d'équilibrer ce groupe lui-même vis-à-vis des forces sociales et des groupes extérieurs. Un autre caractère positif et non moins essentiel de la frontière est d'être un organe de la vie de relation intersociale; elle est l'organe de la sensibilité collective aux influences du dehors et en même temps un organe de pénétration du dedans vers le dehors.

La vie internationale, la vie mondiale se constituent par l'interpénétration réciproque des frontières, par l'établissement d'un niveau général et commun grâce à cette pénétration et, dans la société ainsi agrandie, par une multiplication croissante des subdivisions intérieures, multiplication qui, dans les sociétés progressives, est accompagnée également d'un nivellement de ces subdivisions.

La structure mondiale de l'humanité ne doit donc pas être conçue par nous comme dépourvue de frontières; la planète est limitée, ce serait, dès lors, la seule frontière extérieure en y comprenant la zone susceptible d'être conquise par la science. Mais les frontières intérieures, celles des groupes sociaux particuliers, ne feront que se multiplier sans limite fixe assignable actuellement. Cette différenciation croissante doit nous apparaître comme le procédé naturel de l'évolution progressive de l'humanité [De Greef, 1908: 386].

De Greef's work was left without any appreciable echo in the history of sociological thought.[11] At the same time, however, wide publicity, at least in the English-speaking world, was given to the other major approach to frontier studies, introduced by F. J. Turner. Sociological studies on *frontiers* in the peculiar American meaning were conducted in Australia, Brazil, South Africa, Indonesia, and other areas (Leyburn, 1970; Katzman, 1975). *Frontier* as the advancing front of Western civilization into "empty" or "wild" areas, for purposes of economic exploitation and cultural civilization, became a basic concept in the language of spatial economy and regional planning (in opposition to periphery, as we shall presently see; Friedmann and Alonso, 1969). Some thought to the role of frontiers as "crossroads" of civilizations was given by the great synthesizers of "sociocultural dynamics" and by world historians. Toynbee (1954) advanced a thesis on the "progressive shifting of power from the centres to the peripheries" as great civilizations degenerate at their core, while some of their elements are assimilated by the "barbarians at the periphery," the "external proletariat" that thus grows strong enough to conquer the centre or break up the old cultural area and build a different one around a new core (the old periphery). Examples of the first process come readily to mind: the Macedonians' conquering of Greece, the Manchu over China, and so on. Examples of the other are also common: the Germanic-Roman sacred empire growing along the old Rhine-Danube frontier of the ancient Roman empire.

An important discussion on these admittedly highly general issues concerns the role of frontiers as crossroads, middlemen, and eventual synthesizer between different sociocultural systems. As an extreme representative of one view we may take the Polish historian Koneczny (1962: 25–26, 318–319), according to whom such processes can only occur between different cultural subdivisions *within* a single civilization:

There is a principle of closedness, of self-containedness of civilizations.... Therefore there is only one law in history: every civilization, so long as it is viable, tries to expand; wherever there meet two civilizations which are able to live, there must be struggle against each other. Every civilization is on the offensive, so long as it is not dying.... A synthesis of civilizations does not exist and is not possible. The only thing that is possible... is only a mechanical mixture.... But its results is only chaos.... There are no syntheses, only poisonous mixtures.

The reason on which such sanguine views are grounded is that "such mixtures are a sin against the fundamental condition of every civilization, which is the law of harmony of existential categories.... One cannot be civilized in two different ways." Of different opinion are other authoritative world

historians; both Toynbee and Sorokin stress the importance of contact areas as crossroads between civilizations, and Braudel (1973: 44) remarks that not only in their core areas do civilizations develop, but also along their contact areas "small sparks can start great fires." The crux of such discussions rests, of course, in the theoretical definition of "civilization," as opposed to "international subdivisions," and on the empirical identification of such objects; it is on such matters that most world historians and comparative social theorists disagree.

Sociology proper has tended to keep clear of such sweeping generalizations, taking refuge either in purely formal theorizing or in narrow-minded empiricism. "Society," subreptitiously identified with the nation-state, was taken as the largest unit of analysis, and no thought was generally given to higher units as civilizations or international systems. The latter field was usually abandoned to political scientists, while the study of such "ideological" notions as (supranational) "capitalist society" was left to Marxist literature.

Only recently and sporadically have sociologists seriously tackled the problem of interaction between societies, and therefore focused their attention on boundary processes.[12] In one of the clearest and concise books of this new approach (Mayhew, 1971), we find concepts closely reminiscent of De Greef's: Different structural-functional components of the social system have different dynamics; processes, limits, and ranges of action. Hence they project very different boundaries around them. The boundaries of the social subsystems are noncoinciding, incongruent, and obey different dynamics. To give two extreme examples, the primary solidaristic groups must be limited in both extension and number of members by the biopsychical limitations of the individual; they tend to be small and to have narrow and closed boundaries. On the other hand, cultural systems, ideas, and ideologies have almost no physical and spatial limitations and can cover the whole globe, leaping over geographical, demographic, and political barriers. Two crucial subsystems occupy an intermediate position: The economic system, which, unlike the primary group, is not bounded to its own penetration and expansion in the environment, even if it does not have all the fluidity of the noosphere; and the political system, whose main function seems to be that of trying to make the various boundaries of the subsystems coincide toward the outside, i.e., to unify and control them in order to be able to put up more resistance to environmental variability and to attain the system's ends.

The upshot of Mayhew's (1971: preface) analysis is this: "It is the overlapping character of the boundaries of our social systems that explain much of the tension and the dynamics of social life." With these statements by an authoritative theorist, the study of boundary is placed right in the centre of

sociological concerns; but it must be admitted that no noticeable effects have ensued in day-to-day sociological activities. This discipline still lags behind most others, especially political geography and political science, in the actual study of boundaries, borders, and frontiers, as a review of the literature has shown (Strassoldo, 1977). The subfields most active in such research are human ecology, ethnic studies, and organization studies.

As the most spatially oriented of sociological subfields, human ecology has dealt with boundaries since the Chicago days, when the main problem was to *define*, i.e., to draw and study, the "natural areas" within cities. Also the special field of "community studies" has been concerned with the problem of finding the boundaries around human communities, both urban and rural. One of the most brilliant recent examples of the Chicago tradition is G. Suttles's (1968) study, in which neighbourhood boundaries are shown to have a reality sui generis, independent of other sociocultural factors such as ethnicity and class. This study is influenced both by symbolic interactionism and labeling theory (the boundary as the outcome of interaction between the community and the environment), and by Lorenzian ethology (boundary as the limit of territory).

In ethnic studies the boundary comes up in two ways. On the one side, as the symbolic, normative boundary that keeps ethnic groups apart and defines the relations between them (Barth, 1969; Hughes, 1971). On the other side, territorial boundaries or border zones between ethnic groups and cultural areas are usually a place where contacts and sometimes mixtures occur, often between the border areas of nation-states are also marginal and backward places, where ethnic differentials are better preserved or acquire dynamics of their own. For all such reasons, as well as for the case of comparative analyses, border areas are favourite places for sociologists and anthropologists interested in ethnic problems (Rose, 1935; Surace, 1969; Miroglio, 1969; Cole and Wolf, 1974; Gross, 1978).

Finally, organization studies have been led by the influence of general systems theory to focus on the processes and problems of analytical or normative boundaries of administrative or business organizations.

MARGINALITY

A body of literature not unrelated to the issues mentioned before is that of the "marginal man" (Stonequist 1937), the "member of two worlds," who in some ways belongs to one system and in some ways another. This may be conceptualized as a case of role conflict, cognitive dissonance, and incongruence between membership and reference groups of crosscutting role sets.

Such situations are usually seen as straining and challenging; if the challenge is not met, alienation and disorganization may ensue; if it is met, there is opportunity for creative syntheses. Marginality thus seems the individual, psychological parallel of the frontier situation. The marginal man may work toward a synthesis of the two systems on whose contact area he is situated. The builders of the EEC came from border regions: Adenauer from the Rhineland, Schumann from Alsace, and Degasperi from Trentino. On the contrary, he may strive to improve his position relative to the one centre he feels most attached to. This may in turn lead him to overstress his loyalty in order to overcome his frustration and minority complex. It has been noticed that many great empire builders (and empire-building has often been considered a symptom of internal disorganization) came from areas marginal to great culture cores: Alexander from Macedonia, Tamerlane from Mongol-Turk frontier region, Napoleon from Corsica, Stalin from Georgia, and Hitler from Austria (Devereux, 1973); on a more modest level, we may add Garibaldi from Nice.

More recently *marginality* has increasingly been used in sociological parlance simply as a combined synonym of weakness, poverty, and ignorance to indicate—in a meaning taken over from economics—a position of deprivation (alienation) with respect to power, wealth, and culture (Germani, 1975). No precise, consistent, and relevant spatial denotations seem implied in this usage, although marginal people are usually found in particular ecological pockets within city systems, or in certain rural and peripheral regions within societal systems. The usefulness of the aggregate term and its spatial suggestions has yet to be ascertained, as we shall see in the closely related, almost synonymical, case of "periphery."

THE PERIPHERY AS A SPECIAL BORDER SITUATION

The relevance of all this for the centre-periphery theme has already been mentioned. An emerging "general theory of boundaries" (Strassoldo, 1973, 1975, 1977) as a subfield of the general theory of systems, likewise fashioned out of a wide variety of disciplinary contributions, results, among other things, in a typology of "border (or boundary) situations."[13] The typology is built upon the contrast between frontier and periphery formalized in the literature of space economics and planning, but also widely used, perhaps less precisely, in other fields and in common parlance. According to Friedmann and Alonso (1969), frontiers are areas of growth in "virgin" territory, while peripheries are the stagnant, quasi-colonial areas beyond the centres or metropolitan regions.

The study of border areas suggests that the closure of boundaries tends to discourage investments, cause higher costs, and generally have depressing effects on economic activities, while open boundaries and energetic interaction with the environment tend to attract people and capitals (Romus, 1971; von Malchus, 1975). The peripheral situation is then associated with closed boundaries, while the frontier situation is related to open boundaries.

This, however, is not enough. Societies are characterized not only by the openness or closure of their boundaries, but also by their spatial *mobility* or *stability*. Older political geographers used to give much attention to the changes in shape and size of political units and to boundary dislocations; the frontier was even sometimes defined as an organ of penetration and attack of states upon each other. All this is now wholly *passé* with the "freeze" on territorial changes tacitly agreed upon by the international community since World War II. But the expanding frontier has been a very important reality throughout history, so the mobility-stability dimension is not illegitimate.

The old frontier was open to both the natural and sociocultural environment and to marching; it was a locus of important cultural change and synthesis, as well as of socioeconomic growth. Similar processes can now take place along boundary lines that, although open, cannot be spatially moved. This gives rise to a situation analogous to that of a harbour, a bridge, or a cross-roads (Gottmann, 1973), where interactions between different areas take place without changes in their respective locations. Indeed, it is just such diversity that creates the "difference of potential" from which the interactions flow. If the boundary could move, the area would be homogenized and the opportunities for exchange lost; lively frontier outposts would become sleepy backwaters.

To round out the typology, we can speculate what the opposite situation—a closed but dynamic boundary, i.e., a moving periphery—might be. This is the "no-man's land," or, in extreme cases, the politics of "scorched earth." In the case of *expansion*, the enlarging system is not interested in interaction with the social or natural environment; the only conceivable reason might be the pursuit of isolation and security, which could entail the creation, around the settled territory, of empty areas only surveyed by military.

TABLE 2.1   A typology of border situations

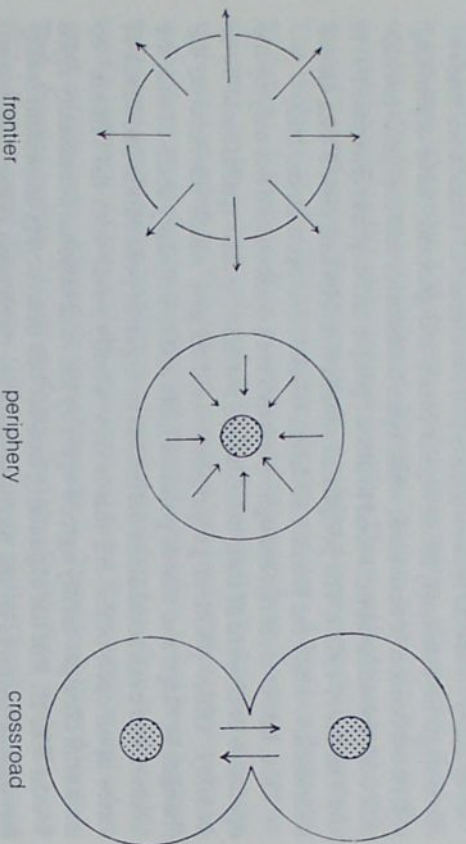|	Spatially	
Socially	Dynamic	Static
Open	Frontier	Crossroads
Closed	Scorched earth	Periphery

frontier periphery crossroad

FIGURE 2.1

tary forces. Historically this has often meant the expulsion or destruction of autochthonous populations, the prohibition of cultivation and settlement, and in some extreme cases even the burning out or cutting of vegetation (Miroglio, 1969). This is the real "no-man's land." In the case of *retreating* periphery, we have the classical "scorched earth" policy by which any basis for interaction with the advancing hostile system is destroyed.

The periphery then is an area characterized by having its "shoulders to the wall" of a closed and frozen boundary. It is poor because it is outlying and handicapped by greater costs of transportation to the centre, by which it is forsaken. It is marginal, weak, alienated, provincial, and backward. Innovations come late and investments tend to have a purely exploitative and colonial character, with no spin-off effects because of lack of locational advantages other than natural resources. Its peculiar function in the system is to play host to boundary-maintaining personnel; military bases and garrisons constitute an emerging feature of its cultural, political, economic, and urbanistic makeup. But military presence, while activating certain economic circuits in the tertiary sector, acts as a deterrent to investment in civilian public works, infrastructure, and production (Strassoldo with Gubert, 1973).

Such is the standard picture that emerges from the literature of "border regions" flowering within the EEC countries;[14] but the picture does not seem very dissimilar to that of former colonial territories—the overseas peripheries of empires. Peripheral regions within nations begin to be called "internal

colonies" (Hechter, 1975). Thus it is no wonder that the centre-periphery concept has been stretched at the global scale. What is really interesting from a culturological point of view, and that could hardly have been brought to light without subjecting the matter to an analysis in terms of "general theory of boundaries," is that the periphery concept entails the concepts of boundary closure and fixation. This is the specular opposite of the concept of frontier, which has so long dominated Western social science and the Western world view.

The earth was then conceived as an open system, inexhaustible of opportunities to be seized, boundless in resources to be exploited, and limitless in its potential for growth. Mankind seemed launched into a unilinear, infinite evolutionary trajectory; civilization would expand all over the world and pull laggard peoples to the light of progress. Advanced countries felt the responsibility of "the white man's burden" and poverty, ignorance, and barbarism seemed a passing condition. In sum, the whole earth beyond Western countries was an open frontier with no limits to development and no boundaries to the future.

How different is our present mood. We are besieged by the Cassandras of the limits to growth. We count in decades the duration of our nonrenewable stocks of basic resources. The space adventure has shown, if anything, the impracticability of colonization of outer space, at least within meaningful deadlines. No one believes any longer in unilinear theories of evolution and few in the necessity of progress. The world is full and wholly cut up. There are hardly any surprises to be expected in the still underexploited regions.[15] There are no open frontiers, only closely guarded boundaries everywhere. Worse, development does not seem to be automatic. On the contrary, vicious circles of poverty seem to have been ignited by which the expectations of poorer regions to follow the path of the more fortunate ones seem utterly frustrated. Worse still, according to a common view, the continuation of development of the advanced countries necessarily requires the plight of the poor ones. While the peripheries of the centres, i.e., the exploited classes and internal colonies of the advanced countries, could expect an improvement of their position as a consequence of overall economic growth and/or territorial expansion, such perspectives are utterly foreclosed to the world peripheries. There is no "outside" to expand into, and into which to project hate as well as hope. The world is a closed system and its "contradictions" are "exploding" inside it. Strains and conflicts cannot be exported. There is no frontier as outlet for the frustrations produced by social inequalities. The world centre—the most fortunate citizens in the community of nations—cannot quiet the demands of the peripheries with vague promises of future gains, nor can they be advised to "go west, young man." Thus the issue of

redistribution of presently available scarce resources cannot be eluded with all that this means in terms of power, prestige, and class conflicts. This is, I think, the doctrine hidden in the centre-periphery concept and the cultural mood that explains its popularity.[16]

CONCLUSION

The weakness of culturological analyses is their lack of predictive power. Their subject matter are meanings, moods, attitudes, images, and ideas, all of a very volatile nature.

It might well be that in a very short time the centre-periphery concept will be discarded as wholly irrelevant to changed conditions or changed perceptions of them. The history of social thought is a huge attic of obsolete analytical instruments and ill-conceived inventions.

The concept of periphery, as we have seen, is quite young in the social sciences; it is much younger than the opposite one of frontier, which nowadays seems so sadly outdated or objectionable, with its overtones of colonial exploitation. Certainly the idea of centre is infinitely older and more deeply rooted in the human mind; but, as human beings learn to make do without the idea of God and the sacred (and perhaps war and enemy) that seemed so indispensable to their mental operations, they might also outgrow such fixations and come to regard them as childish; they might learn to live in a world without a centre or with a large number of them arranged along sectoral, geographic, or hierarchical lines. They may learn to master their biocultural heritage and their physiological constraints, and get accustomed to looking at the world as an unfocused environment and at society as a community of equals, without kings, presidents, or capitals to symbolize their unity.

The centre—and, to a lesser extent, the periphery—may be a category of the mind of almost Kantian status, at least in Western civilization; but as we are disposing of other fundamental categories such as space, time, and cause, we may do the same with centre. Like those others, it was a mental device to simplify the chaos of impressions, a point of departure and reference of perceptions. But simplicity, like economy, parsimony, and the like, is a requirement of *human* mental operations. "Artificial intelligence" can help us handle and control complexity; a cybernetic society shall be less bound to the mythology of the centre; its integration can perhaps be achieved through diffuse networks of interconnected communication systems.

The "global village" can resemble the villages of old if it will be able to re-create such collective, segmentarian, nonhierarchical structures.

There was no meaningful centre-periphery differentiation in primitive, "mechanical" societies of small, self-sufficient units. That polarization began with the emergence of urban civilization and the network of central places and reached its apex in industrial, capitalist societies where economies of scale, external economies, economies of agglomeration, and so on are responsible for large concentrations of men, capitals, and settlements. Most of these sorts of economies depend upon the technology of transportation and communication, although they can be reinforced by social values and political-military considerations. But technologies change, and so do social values and these other factors.

The cost of communication and transportation has been dropping very steeply, so that it is common nowadays among urbanists and planners to speak about "frictionless space" and locational indifference. To be sure, space and distance will always play a role in the structuration of human activities, but less and less the determining role. So there will be increasing leeway for industrial and other activities to settle in peripheral locations. There may even be more convenience to do so, in terms of available space, freedom from congestion, and so on. The question is whether the higher economic functions of management, finance, research and development, and the like can alsodeconcentrate; but few rational economic factors militate against decentralization. The technology of communication works in this direction. Centralization of headquarters is often a matter of mere prestige and tradition, but other environmental factors, such as residential amenity, seem to be working fast in the opposite direction.

So it seems that the postindustrial, communicational, informational, "technetronic," cybernetic society toward which our civilization is moving, according to many of its most perceptive observers, has no major objections to the end of the centre-periphery duality.

Politically and militarily, there seems to be positively no value in the centre-periphery arrangement. On the contrary, concentration is a military liability. Under the pressure of the atomic missile threat, the gospel is decentralization, mobility, small scale, self-sufficiency. On the political side, the situation is more complex. The political power of big urban concentrations and developed regions is usually not commensurate to their economic strength: Wealth does not translate directly into power. As we have seen, the political systems strive for concentration of *control*, not necessarily of things and people. If better integration can be achieved by territorial equilibrium, the development of the peripheries and local autonomy, it will try to grant it.

So we come to social and cultural considerations. On one side we see inequality, whether economic, social, legal, or territorial, as universally

rejected with increasing indignation. The spread of this value translates operationally at the political-economic level in an increasing intervention of the central state through regional planning processes to develop the depressed, peripheral regions. On the other side, we see the charm of the centre being dispelled every day. The centre was a sacred notion, while society is increasingly secular; its glorification is connected with the religious-artistic-cultural apparatus of central power holders. The lavish construction of ceremonial centres and national capitals was an aspect of the attempts of central powers to fascinate and integrate the peripheries (as much as the foreigners), to lure attention and prestige, to impress with artistic achievements, and to buy political loyalty through the manipulations of minds.

All this is nowadays fairly debunked intellectually, even if still going on in practice; the emperor's clothes have been stripped to show his naked power. Monuments are attacked as a waste of resources, and most artists and intellectuals refuse to serve, at least consciously, on the staff of the central power. "National" cultures are decried as mass cultures, the abuses they have grown out of exposed, and local, provincial, and marginal minority cultural traditions revived. The quest for local autonomy and regional equalitarian planning fuels the rebirth of local cultural traditions long repressed into the vernacular limbo.

Another sociocultural trend decries large-scale, bureaucratic, mass society, with its hierarchical arrangements and its centralization, and looks to its breakdown into small, simple, participatory, natural communities; and this certainly is something that is not going to reinforce centre-periphery differentiation.

To sum up, the question is whether the equalitarian trends are powerful enough to offset the polarizing factors. On both sides we find a mixture of sociocultural-ideological forces and technical-economic ones. It is important, however, to note that political factors seem relatively neutral on the issue, that military factors are decidedly against polarization, and that within the economic system there are contradictory forces. What weighs in favor of accumulation at the centre and abandonment of the periphery are mainly traditional patterns, which are sunk investments. Capital invested in a centralized transport, communication, and settlement systems can be a strong motive for further investment in it. Such conservative attitudes, however, are often rational only in the short run and from the individual viewpoint. From a long-term, collective perspective, a radical decentralization might yield higher payoffs.

Finally we can emphasize that the political system's willingness to allow for the development of the peripheries, local autonomy, and so on can only be expected as long as this does not impair the centre's control over the

crucial integrative institutions, such as the nodes of ideological manipulation, the higher law-making bodies, and the like. Beyond that there is only the political system's suicide, which is probably a good way out, but hardly conceivable.

All this seems applicable to advanced societies. The situation in underdeveloped countries is different, because (1) the cleavage between centre and periphery, or better, between primate city and hinterland, is much wider, (2) political systems are often engaged in the initial steps of nation self-building, and (3) the resources are so much below the goals that strict economic efficiency must be adhered to. It is therefore possible that for some time the basic problem of such countries will be the development of the centre, while the periphery will be left to wait. However, it is also possible that the Western model of economic development will be abandoned in favor of another one that tries to bypass the urban-industrial accumulation-concentration phase and heads directly toward a balanced growth of the rural communitarian hinterland, while societal integration is achieved mainly at the symbolic-ideological level. The success of this model cannot be predicted, since there are as yet no clear precedents.

NOTES

1. Some paragraphs of this chapter have been borrowed from Strassoldo (1977, forthcoming).

2. The citations are from an Italian secondary source, as it was not possible to locate the original.

3. The division between "we" and "they," the internal and the external, seems a universal cultural trait; see Levi-Strauss (1966), Benedict (1934), Mead (1964), and Sopher (1972). The depth-psychological bases underlying it have been explored by Freudians such as Fromm (1955) and Fornari (1969). Max Weber commented on the division of internal and external as a basic category of the political realm, connected with its territorial dimension, which in turn is due to the physical nature of violence; but it was K. Schmitt who in 1932 linked such insights with the Freudian concepts. That the primary characteristic of political space is closure or boundedness, in opposition to "open spaces" or "fields," has also been remarked by theoretical geographers; see Cox (1972) and Claval (1973). To sum up with a quotation from a world-historian: "The point of any ethnocentric world image is to divide the world into moeties, ourselves and the others, ourselves forming the most important of the two. To be fully satisfying, such an image of the world must be at once historical and geographical" (Hodgson, 1968).

4. To Vickers (1970: 136), the importance of national frontiers in shaping human life is far from declining, even if their emotional overtones may be changing: "Next to the human skin, [the nation state] is today the most important interface between internal and external relations and I think it is bound to remain so and even to increase in importance."

5. That a basic distinction between "defended" and "nondefended" system-boundaries can be drawn, with far-reaching implications, is suggested by Boulding (1970). De Greef (1908)

emphasized the priority of the boundary over the centre in the formation of systems. Ashby (1962) seems to suggest the same view: a system first emerges as a differentiation between an inside and an outside; the control centre then develops as a response to boundary-maintenance requirements. An elaborated theory of the growth of urban-political systems based on the same principles has been developed by Di Sopra (1975).

6. Citation borrowed from Maruyama (1973).

7. Galtung's views were presented during a seminar at the Dubrovnik Inter-University Centre in November 1976. I apologize for possible misinterpretation or premature schematization of the results of his research, probably still in progress.

8. The reader is referred to Maruyama's article for a fascinating clarification of the antinomies.

9. The formation of prices in a market system, of which the stock exchange is a telescoped example, requires bargaining among a *plurality* of buyers and sellers and hence an area to accommodate them and a space to support a web, however immaterial, of interactions. On the contrary, political decisions—of which administered prices can be an example—require in principle no more space than exists between the ears of the decision maker. But one may well contend that such space, punctiform from the point of view of the social scientist, is a hugely extended, differentiated, complex, diffuse, redundant network from the point of view of the neurophysiologist. It can even be better conceived as a field than as a hierarchical network. No paramount centre has yet been localized in the brain system.

10. Peattie (1970: 55) contrasts the "realistic and strategic" school of thought on boundaries represented in the early twentieth century by British Colonel Holdich and the "abstract and theoretical" school of Professor Lyde. "The first considers the problems of the moment, the second seeks solutions for the future and is more social."

11. To my knowledge the only acknowledgement of De Greef's theory of frontiers can be found in Barnes (1942).

12. A few pages on the different boundaries of societies appear in a treatise by Janne (1968), another Belgian sociologist, but there is no hint of the author's awareness of De Greef's work.

13. As declared in the introduction, neither terminological questions nor formal definitions are considered in the present chapter, as they have been discussed elsewhere. The difference between "border," which has an areal connotation, and "boundary," which is a line, however relevant in other contexts, is of no weight here. Both terms are taken to refer to the more general concept, of which "frontier" and "periphery" are polar subcategories. Different antinomies have been explored by other authors, such as the one between frontier (area of expansion of dynamic societies) and boundaries (linear limits of political-territorial systems).

14. Besides Romus (1971) and von Malchus (1975), see the documents of the Council of Europe from the several meetings on the problems of frontier regions.

15. The closing of the world's frontier has been variously emphasized by Mumford (1944). Its social, political, and economic implications have been announced by Herz (1959), Hoffman (1960), Haas (1968), Mayhew (1971), and Taylor (1973).

16. The concern for world peripheries, so widespread especially among counter-cultural movements, has certainly been boosted by the modern phenomena mentioned above, as well as by the power of mass media, the facility of travel, and so on; but it also incorporates a very long tradition of eulogies of faraway "primitives" as more natural, innocent, and virtuous than one's own immediate fellows. This tradition can be seen in the nostalgia for rural life chanted by urban poets throughout the millennia, from Hesiodus to Virgil to nineteenth-century romantics; in the praises of the courage and hardiness of "barbarians," uttered by people who, like Tacitus, felt that their own society was corrupt; and in the Rousseauian celebration of the "noble savage," as well as in contemporary populistic doctrines. One of the more elaborated social

theories based on the systematic opposition of the civilized urban centres, prone to degeneration, and the barbarian but virtuous rural peripheries, whence reinvigorating waves of regeneration come, was proposed a few centuries ago by Ibn Kaldhoun.

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