BOUNDARIES IN SOCIOLOGICAL THEORY:
A REASSESSMENT

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1. Introduction

"It is amazing how little of their intellectual power and clarity has been deployed by the classics on the study and elaboration of the concept of boundary", remarked N.Luhmann in 1971; (1) and a similar complaint had been uttered two generation earlier by the belgian sociologist G.De Greef (2) with special reference to his classics, Comte and Spencer.

We have been scanning the literature in the social sciences for more than a decade and must admit that while the boundary and related concepts (frontier, periphery, etc.) have attracted a certain attention from geographers, historians, planners, anthropologists, etc., they have still failed to become a focus for sociological discussion. The boundary has not yet been adequately "problematized" and "thematized" in this discipline. The word appears seldom, if at all, in standard textbooks, treatises and reference works; often, as in the "Encyclopedia of the social sciences", only the most "banal" (in Perroux's meaning) of boundaries, those between political systems (nation-states) are discussed; the meager sociological research literature also

refers usually to national-geographical borders, with a special predilection for "minority" and ethnic problems (3).

We are persuaded that this is not enough. We contend that the boundary and related concepts are fundamental terms in the social sciences, and that confusion on these issues is one of the main causes of the unsatisfactory state of sociology. We submit that it is some cavalier assumption about the relative closure of societal boundaries that accounts for the weaknesses of "social-system" theory of the structural-functional persuasion, as expressed by the Durkheim-Malinowsky-Parsons tradition, and combining the archetypal image of the isolate nation-state (of the Plato-Fichte tradition) with that of the isolate, primitive tribe so dear to anthropologists. That paradigm has been criticised from a great many quarters and for different reasons. If we are not mistaken, there is now a growing impatience with its boundary-assumptions, and a clearer awareness that a more adequate image of society "requires us to abondon the idea that boundaries, at any time, delimit well-defined, self contained units" as M. Granovetter puts it (4).

2. Epistemological Significance of the Boundary

Man needs to find and impose order in the world: to tell differences; to see patterns; to discriminate figures and objects; to make clear distinctions. Man seems to possess a genetic disposition to think in binary oppositions (5). This character has been imputed by G. Bateson and others to the abrupt change in communication structures inside man's organism and outside it, which is a change from analog or continuous to digital or step-wise communications (6). Infant man meets, to begin with, the fundamental difference between self and non-self, the inside and the outside (7); he must spend his first years in learning the "he ends at his skin", that there is a reality out there which is independent of him; but then he must spend many years to learn that he does not, in fact, end at his skin (8); that he depends from the outside world, with which he is connected be infinite symbiotic relationships, as stressed by transactional psychology and ecology alike.

So emerges rational man, able to recognize differences in reality, and to discriminate ever more finely between objects; but also willing to impose his own patterns on reality, to create new distinctions, new differences, new boundaries. Man has been defined as a creature that "grasps, parts, devours" (9) and old King Solomon sublimated this basic attitude aptly when he wrote that "the boundary is the beginning of every order and every thing".

On the one hand, then, we have man the ruler of nature, the rationalist, the dominator, the system-builder and boundary-maker; ever busy in discriminating among phenomena and exploiting the differences for his own ends; man the sorter, man - Maxwell's-demon, man the builder of islands and archipelagos of negentropy; man the builder of dams and banks to set the water off the land, the builder of walls to mark the civilized settlement from wilderness, of national borders to distinguish "our people" from the "aliens", of corporate boundaries to pursue "our interests" against "them". This process goes on endlessy; man is forever busy in setting up institutions, organizations, systems and machinery to reach his goals and impose his order on the environment; and in so doing he must create and control boundaries. Social differentiation, institutional specialization, division of labour, all this means multiplication of differences and hence of boundaries between groups; it means formalization,

codification, organization of the criteria of membership, of crossing and of imputation. Written law is largely dedicated to this task; it is an extended exercise in definition and distinction of social phenomena. Public administration is the art and science of defining the limits of territorial and functional areas of competence of the several centres of power. Logic is built on binary distinctions and clear definitions (10).

Boundary-making, the passage from a hazy frontier area to a sharp boundary line, is then one of the hallmarks of progress and civilization, at least in the western sense. But not every man is civilized in this sense; and we all harbour the opposite drive, to find in nature harmony, unity and continuity instead of contrast, division and quantum leaps; to stress similarity instead of diversity, to grasp the wholes instead of breaking them down into parts. Such, it seems, is the way our right cerebral hemisphere functions, in contrast to the more analytical left hemisphere; and the former is allegedly also the dominant emisphere in artists, primitives, sensitive rather than intellectual people (11). But also a deeper understanding of nature supports these tendencies; underlying the superficial discontinuities there is, purportedly, a deeper unity (Nicolaus of Cusa's "coincidentia oppositorum", Leibnitz's "natura non facit saltus"); and it was Blaise Pascal who remarked, "law might well trace its boundaries on reality, but the mind shall not be fooled". The yearning for a universal commonality, for the discovery of a unitary set of world-principles, has obvious roots in the psychology and biology of man; it is expressed in great many cultural systems, and not only in "primitive" ones; and has often immediate relevance in social and political life. Again and again in the history of civilized man there emerges the longing for the

abolition of differences, that is boundaries, between groups; the advocates of a classless society concentrate their hatred on the discriminations between socio-economic groups; cosmopolitans decry boundaries between "national" groups; the ideologists of grass-roots participation denounce the boundaries between organizations and spheres of competence; ecologists criticize the arbitrary discrimination between man and nature, system and environment and stress that the only real, living unit in nature is the ecosystem (12).

All this casts a clear and present danger to our way of living and thinking. It can easily lapse in confused, soft-headed, un-communicable mysticism; and in practical impotence. This has been a common fate of similar holistic doctrines in the past; the debunking of boundaries as man-made artifacts abolishes those handles and cracks by which man can manipulate reality. Instrumental rationality is always bounded rationality, as Nobel prize H.A. Simon emphasized. The assumption of universal interconnectedness undermines experimental and empirical science (13). "Epistemology is about where you draw the line" insists A. Wilden (14). And in fact we see that a vein of mysticism is emerging in those writers that follow more radically the implications of the open-systems approach, as, e.g. E. Morin, G. Pask, G. Bateson. But certainly the right hemisphere is no less respectable than the left one, and the psychological needs expressed by the champions of monism, of unity, of harmony, of commonality, of synthesis, of holism, are no less real and important than the opposite needs for the breaking down of reality into manageable parts, the sorting of differences, the analysis of confused wholes into simpler units, the identification of clear ideas and distinctions, the emergence of unambiguous distinctions, the emergence of clear ideas and the drive for univer-

sal communion and identity is no less worthy, at least in human terms, than the piecemeal, incremental construction of ever-expanding but necessarily bounded institutions, organizations and systems. Boundary-making is a necessary correlate of thought and communication no less than of technical control of reality; the very distinction, posited above, between the two attitudes, and the act of elaborating on it and writing this paper is evidence that without sorting and parting no rational argument is possible.

Just as logic is based on distinctions, science is based on imposing artificial boundaries upon segments of reality. In the experimental mode, every care is made in isolating the phenomenon under study from "disturbing influences" of the "outside"; the basic tool of Western science has been the model of the isolated, closed system; and the search for the fundamental, simple, irreducible unit of reality – the atom, the individuum – is essentially a search for the ultimately isolated and closed system, for the absolute boundaries. The growth of science owes much to specialization, i.e. the cutting up of the "seamless web" of reality into fields and sectors, the multiplication of artificially closed analytical systems.

Social science, strongly attracted by the classical, "natural" sciences (essentially physics, mechanics and chemistry), borrowed the analytical mode, the "caeteris paribus" clause, the closed system. But social science is historically also intimately related to mysticism and philosophy, and therefore shows a strong streak of holistic thinking, and recurrent attempts to grasp the continuous under the discrete, the analog under the digital, the flow of waves under the flash of quanta, the total patterns behind the scattered signs, the structure behind the elements, the mysterious determining totality beyond the single links of the causality network.

Such tendencies manifest themselves in a large variety of sociological approaches: dialectical historicism, "interpretative sociology", structuralism, general systems theory and various brands of enlarged cybernetic, communicational, informational and ecological approaches. They underlie gestalt and field theories in psychology as well as the more ambitious synthetic theories of universal evolution; finally, they show out most clearly in the "new epistemologies" and the "fourth logic" (15).

3. Platonic Politics and Newtonian Mechanics: the Closed-System Model of T.Parsons

The physical sciences performed a revolutionary advance when they freed themselves from the illusions of immediate reality, and dissolved the observable objects – the proverbial philosopher's desk – in a nebula of minute particles, held together by dynamic equilibria of forces of the highest complexity. The social sciences do the same with social "objects", decomposing them into roles, behaviors, communications, symbols, values, images; and reconstructing reality with the help of analytical models. But the social sciences find it difficult to discard some naive conceptions of reality – be it because of their supposedly younger age or because of the peculiar psychological involvement of the sociologist with some social objects. This is the case with one of the basic concepts of sociology, "society" or "the societal system" as used particularly in structural-functional theory. One source of this concept is, as we have seen, the small primitive isolated tribe; the second is the Platonic doctrine of the autonomous, isolated polis, as reinterpreted by the theorists of the modern nation-state (16). The success of the nation-state up to very recent times

has been such as to lend it an aura of inevitability, naturality and finality. The structural-functional idea of society, or of societal system, has been fashioned, implicitly or overtly, after the idea of the state. Textbooks of this school usually acknowledge the existence of wider systems, like "western civilization", but end up reiterating that, "for all practical purposes" the closest incarnation of a "society" is the middle-to-large-sized nation-state. This was certainly not the position of the founding fathers of sociology, who usually spoke of human society and envisioned a steady process of world integration; but can be interpreted as a legacy of the first world war, which "nationalized" not only the socialist masses, but also the sociological elites; Max Weber surrendered completely to what his wife Marianne called his "Leidenschaft für nationale Machstaat", his passion for the power of the nation-state, and Durkheim became an active propagandist for France's cause. But it was T.Parsons who weaved the various threads into a closed-system pattern borrowed from Newtonian mechanics even more than from Cannonian biology.

Parsons has struggled long and convincingly against criticisms of the alledged "closure" of his model of social system, mounted by such authors as Dahrendorf, Gouldner and Buckley. He insisted that his model was only analytical, that his research interests were not the identification of precise counterparts in reality but the illumination of the basic "cybernetic" mechanisms, that "boundary inter-changes" between systems as well as between subsystems were a basic feature of the model, etc. (17). But the damage had been done; the closed-system model was perfectly serviceable to a culture impregnated with the idea of the nation state, the seemingly hardest of social facts; and sociology became the science of national societies.

The assumption of closure numbed the interest for the system-environment relations, which is just as objectionable when the environment is the rest of mankind as when it is nature (Parsons' classic model was wrongly interpreted as closed to both) (18).

Furthermore the great container-society - ceased to be an object of interest; it was the domestic "social problems" it contained to get the attention of sociologists (19), not its genesis, structure and evolution - or other conceivable ways of keeping things together.

In sum, while in Parsons and in the Parsonian school we can find some lucid discussions of boundary processes (relationships between normative-functional and territorial boundaries, boundary-maintaining mechanisms, etc.) (20), the net effect of this approach was to draw attention away from the relationships of social systems with other social structures, to underplay the importance of larger units of which national societies are only subsystems, to underrate the problems of formation and (possible) dissolution of national societies, and to exaggerate the assumptions on internal integration and external autonomy.

The criticism of these feature has stimulated inquiries into the processes by which the modern nation state has really come into being (21).

4. Boundaries in Simple Social Systems, Structures and Networks: from Simmel to Goffman and Blau

The Parsonian grand theory never represented, however, more than one of the sociological approaches. Of special interest to us here are the microsociological approaches of G. Simmel, the interactions, small-group analysts, exchange-theorists, and the contemporary "phenomenological" sociologists. G. Sim-

mel described the genesis, evolution, and dissolution of social groups and "forms" in terms of drawing, maintaining, crossing, extending and reinforcing boundaries. He thought of society not as an architectonic whole – indeed he warned against the pitfalls of such "social esthetics" (22) – but as a network of "social circles" running through a population and through individuals. He emphasized that man has a special drive to "part and connect" things, that he is attracted by differences and contacts; this is the root of human fascination for "bridges and doors" (23). Long before modern geographers, he noticed that social spaces can be open or closed, bounded or unbounded (24); and whether he analysed conflict, secrecy, the stranger, the marginal man or other basic social "forms" he was wont to speak in terms of boundaries. So one of the main functions of conflict is the strengthening of group boundaries (25); likewise, secrecy implies a closing of boundaries (26); the marginal man, as the term indicates, is located at the periphery of the group (27).

Simmel stated quite clearly that social boundaries are a social fact, but with spatial implication (28); his "sociological imagination" had, perhaps more than in any other of the founding fathers, a strong spatial and geometrical dimension. This was consciously suppressed in some of the English translation of his work, as unbecoming in a sociological culture dominated by the abstract "action" approach (29); but is was precisely this quality that makes Simmel's work so fruitful for the student of social boundaries.

Simmel is often named today as one of the forerunners of some of more popular trends in sociology, like modern interactionism, the "dramaturgical" approach of Goffman, phenomenological sociology, ethnomethodology and the like. What unites these schools is the refusal to acknowledge "a priori" the existence of wider social structures; and the focus on has been called "simple social systems", the brief encounters between strangers, the act, the scene, the conversation the short-lived episode. Therefore they are very sensitive to the spatial and temporal "markers", the "horizons", the "parentheses", the "punctuation", the "indexes" that keep these systems together as units of social behavior (30).

But Simmel's conception of "cross-cutting social circles" lies at the basis of at least two other approaches to social theory. One is P. Blau's "structural (primitive) theory" founded on the distinction between bounded or unbounded groups, identified respectively by nominal or gradual parameters (31). The second is "network theory". Networks are open-ended structures, without boundary – maintaining mechanisms; they grow or recede segmentally, merely adding or losing elements, and are defined by function and communication more than by territory; they can therefore extend over different topological spaces, overlap, criss-cross and interpenetrate each other. They characterize very important social phenomena: groups defined by kinship, spatial propinquity, or friendship ties, ramify endlessly, weaving continuous cobwebs all over the planet, making every formal boundary-making a painful process, an arbitrium, and even a violence. The importance of the network concept is obvious in the social sciences of the territory; but lately it has been widely accepted as a "developing paradigm" in the social sciences as well (32). The open-ended network may well become a salutary counterbalance to the closed platonic circle (with its attending center-and-periphery antinomy) as the "dominant metaphor" in the social sciences (33).

5. The Frontiers and Peripheries of Civilizations: from Turner to Wallerstein

The contrast between the closed circle of the "grand sociological tradition", from Plato to Parsons, and the open-ended network concepts can be reformulated also in terms of the "open" frontier of expanding social systems and the tendentially closed boundaries of stagnating or declining societal, i.e. political systems (34). Many historians have emphasized the role of the frontier in shaping cultures. So the "Spirit of the Frontier" has nurtured the "rugged individualism", a domineering attitude toward nature, self reliance and local agovernment, and such diverse cultural traits as love for the firearms and disdain for socialism, in the American case (35); while in the inner Asian frontier it has shaped the pastoral Mongol culture in confrontation with the agricultural civilizations of China (36). The availability of a frontier of expansion has been considered of great importance in socio-economic and political dynamics, and many of the characters of the present world situation are inputed to the "closing of the world's frontiers" (37). The frontier problem draws continuing interest from social historians and sociologists; in particular the Turner thesis has often been tested, with mixed results, in great many other cases (38). But there is another facet of the frontier problem, which has been expressed by Toynbee as the "second law of history", the "shift of power from the center to the periphery" or, as others have put it, the "conquest from the fringes" (39); it is a pattern noted five centuries ago also by the Arab sage, Ibn Khaldoun.

Toynbee has also discussed other problems connected with social boundaries, beginning with the basic one of drawing the spatio-temporal boundaries around his units of analysis, the "civilization" or

"societies" in the wider sense. He notes that as long as they are growing such social system do not acknowledge and therefore do not defend territorial, linear boundaries they have only frontiers into which they radiate their splendor and fascination (40). The formation of boundaries, the transformation of an open limen (lat. for threshold) into a defended, tendentially closed limes (lat. for limit, barrier) (41) is a mark of stagnation and hence of decadence because civilizations, like organism, begin to decay as soon as they stop growing.

The contrast between boundary-defending, "circular" systems and open ended, "reticular" structures is basic also to 1. Wallerstein model of the "modern world system" (42).

He focuses on the development of commerce routes and market networks which radiated out from Western Europe and penetrated the whole world since the sixteenth century. Looking at the world as a single system he - as many others, from Frank to Galtung - detects a core (metropolis, center)-periphery pattern on the world scale, defined essentially by economic relationships. One of the most interesting features of his model, for the student of boundaries, is the dialectical opposition between world-empires and world-economies, i.e. between political organizations, which must face the problem of maintaining boundaries, and economic networks, which do not have to carry this burden. He observes that the empires of old (in particular Rome and China) though ideologically bent on universal domination, failed to achieve it not only for lack of adequate technologies, but also for the organizational and economic problems connected with internal integration and external boundary-maintenance. Only European capitalism managed to unify the world, just because it discarded the dream of a world empire and contented itself with the prose of a world market. To be sure

the process was not accomplished without military violence and attempts at cultural integration; but the essence of the system was the structure of economic relationships, so that it could continue to operate also after colonial empires were dismantled. The European core had structured around itself a complex system of semiperipheral and peripheral areas, which became states (the frontiers turned to boundaries) but could not alter their role in the system.

6. From Frontiers to Boundaries: Modernization and the Emergence of New States

The economic determinism underlying Wallerstein's theory can hardly be accepted; but his work is certainly an important contribution to one of the most central of all sociological problems – the rise of modern, i.e. capitalist, society. Other scholars have approached the issue from a more politological point of view, and explored the interaction between modernization, nationalism, and the hardening of societal boundaries (43).

The birth of national societies is often a consequence or a correlate of the modernization processes; that is, national movements, the rise of political organization, the hardening of boundaries around previously "disorganized", "open" and "primitive" areas follow the penetration of "modern", i.e. western socio-cultural traits. These relationships between socio-cultural penetration and nation-building do not fit at all in the closed-system approach, where "external" influences are considered as mere disturbances, which is the task of the system to obviate. In the case of the "new" states – and all states are new, to begin with – the system is the product of environmental pressures and inputs. What was formerly a frontier area of expansion of European civilization, becomes a state, and therefore tends to harden, close and control its boundaries.

Students of nation-building are especailly sensitive to the question of boundaries (44). Most new states have been shaped on the tables of diplomatic conferences in Europe and their boundaries have little relation to what are commonly assumed to be "natural boundaries", e.g. geographical and cultural discontinuities. What is commonly forgotten is that all boundaries, even in Europe, are artificial, and have emerged out of the same sort of historical accidents – wars, compensations, marriages agreements, population transfers, suppression of regional ethnic groups (45).

The difference is that in some cases the state existed before it became modern, and in others a state was claimed because people in an area were becoming or wanted to become modern. Nationalism is an indicator of modernization; the nation will be built within whatever boundaries it inherited from the colonial past, and will begin to question them only to the extent this may serve to its internal integration (46). However the present international system has learnt from the bloody European history that territorial and border questions have no natural, rational or "objectively" just solutions. The only good boundaries are those "subjectively" agreed upon, as stated already by P.J.Proudhon; and the international community has therefore cast a radical taboo on changes in the boundaries emerged after world war II (47).

7. Boundary Tensions and Social Change: G. De Greef and L.Mayhew

It is commonly assumed that social change derives from two main order of contingencies: the endogenous

and the exogenous ones. Inputs from the environment are an obvious, almost trivial source of social change; most sociological theories concentrate on the change processes that occur well inside the system (cultural dynamics, social differentiation, role of elites and leaders, etc.). Only in a few cases the attention has been focused on boundary processes as a source of social change. The idea here is that the several societal subsystems usually have non-coincident domains, non-congruent territorial and functional boundaries, different ways to relate to their respective environments; and that such differences create tensions to be overcome by change; in particular, by growth and expansion of the system. This principle has been formulated, with primary reference to biological system, and to the "law of allometric growth", by K.E. Boulding: "growth is often the result of an attempt to correct disproportionalities" (48).

At a time when human societies were seen as progressive systems, expanding not only in population and consumption but also in the realm of morals and community, G. De Greef stated that the growth of internal differentiation and specialisation inevitably devalues and deletes the political boundaries among societies, because the boundaries of the "social forces" developed within the system do not coincide with those of the political organization: "cet inéquilibre de fait entre les frontieres politiques et les autres frontieres des forces sociales...a eté un phénomène constant de l'histoire; il est meme un facteur indispensable du transformisme social et du progrès. Une non-correspondence actuelle est indispensable à une correspondance superieur future" (49). This theory is echoed almost verbatim by L. Mayhew: "it is the overlapping character of the boundaries of our social systems that explains much of the tensions and the dynamics of social life" (50).

Mayhew approach combines a "grand-theoretical" interest for the whole societal system with a "naturalistic" approach; but in this opening statement he seems to hark back also to Simmelian suggestions on the "criss-crossing of social circles" at the microsociological level.

An interesting consequence of the primacy granted to boundary processes in social and, more generally, in systems dynamics, is the derivative, secondary status of societal (systems) centres. The basic phenomenon is "a difference which makes a difference", i.e. a simple differentiation in some attribute space; in the biological realm, the development of membranes is seen as one crucial passage in the evolution of living matter, a key in the interpretation of phenomena of life (51). The appearance of regulative centres is seen as a later event, connected with the advantages of an active defense of systems boundaries. This seems particularly obvious in societal systems, where the basic source of legitimization of the ruling elite has been, historically, their defense functions (52); the political system is basically a boundary-maintaining mechanism; it emerges as a consequence of an already existing boundary. Once born, however, the political (sub)system takes on a very active role in the management of boundary processes.

Most notably, it tends to closure and isolation, because this heightens its control over the whole system, its internal integration, its autonomy from the environment (53), etc.; while the socio-cultural subsystems and the (market)economy usually reach out and strive for opening. But the situation is much less simple than this; for instance, the military, that in its pursuit for security often demands expansion of the whole system; while some sub-sections of the cultural subsystem, like the literati, often develop isolating

devices, like national languages and, in general, nationalistic ideologies.

8. A Boundary-Based Typology of Social Systems and the Theory of Worldsociety: N. Luhmann

N. Luhmann, whose indictment of the neglect of the boundary concept we have quoted at the opening of this paper, works on the integration of a wide range of threads in social theory; most notably, in our context, on the integration of Parsonian system theory (based on an essentially closed system model, the concept of "core values", and equilibrium) and the cybernetic-ecological, or general systems theory, based on the open system model, system-environment interaction, and evolution. In this context Luhmann treats boundary formation as a complexity-reducing mechanism, and gives logical priority to the emergence of differences, i.e. boundaries, between system and environment, over the formation of a controlling centre (54). He also has developed a typology of social systems embracing the full range of the sociological field; and one of the main variables taken into account is precisely the type of boundaries (55). Thus, the simple social systems of the Simmelian-interactionist-exchange-phenomenological tradition are marked by the actual co-presence (Anwesenheit) of the actors in a spatio-temporal setting clearly marked by symbolic boundaries, without which it would be impossible to treat them as systems (56). The organizations, or organized systems, are characterized by functional boundaries. As they are also defined by continuity over time, and potential immortality, the temporal boundaries play a much less important role. They are also characterized by very active, sometimes paranoid, boundary-maintaining mechanisms and elaborate ad-

mission and expulsion processes (rites de passage, membership requirements, etc.) (57). The importance of spatial boundaries varies with the type of organization, some being more interested in personal qualities and activities of their members, other with their location in space. But the two classes of boundaries are never mutually exclusive (58). The third class of social systems, societies, are construed essentially by networks of economic exchanges and symbolic communications; they have no defended boundaries but mere separations and limits. In our own times all barriers to transport and communication have been broken down be technology, and there is only one society all over the world, the world-society (59).

This typology is very important because it departs radically from the Parsonian identification of society with the political organization of the nation-state, throws the latter in the same category as any other organization, and reserves the concept of society for the whole of mankind, thereby emphasizing its real as well as desired unity. Moreover, stressing the communicational and economic bases of world-society, as of every other society, Luhmann points out also that world unity will not progress through the traditional means of politics, like law, force and institution-making, but by the simple growth of exchanges of things and informations, the automatic formation of nodes, etc. This is, basically, a reformulation of the doctrine of "international functionalism" which, in turn, is to be traced back to the XIX centuries theories of progress, and of the overcoming of national division through the growth of the rational-materialistic civilization of Western Europe (60).

9. Systems and Boundaries in Society

We started out by emphasizing both the necessity and the dangers of holistic thinking, the longing for unity and for overcoming of boundaries. Global sociology can easily fall back to old "globaloney", to visionary misticism.

So much more important therefore it becomes to develop rigorous conceptual frameworks to deal with complex, open, interpenetrated systems; which is tantamount as saying a theory of boundaries. The concept of boundary is certainly central to the general theory of systems (61). The basic issue here is between a "nominalist", and a "realist" approach. The first assumes that the system is in the eye of the beholder, rather in the reality out there; that the definition of a particular system depends entirely from the subjective research interests of the observer; that, at bottom, systems "theory" in nothing else than a method, a calculus.

This means also that the boundaries we assign to a system are wholly conventional and arbitrary; there are no objective criteria to tell a system from its environment. The realist approach maintains, on the contrary, that systems do exist and function in reality, that they develop and maintain boundaries, which can be objectively observed as sharp discontinuities in communication intensity and as absence of feedback loops (62).

Perhaps both positions are true. Some living systems, both natural and artificial, do seem to be real, while others seem rather intellectual constructs. For instance, the organism responds rather well to the model of a system (also because the latter was really fashioned after the former), while the ecosystem looks more like heuristic device; beyond the classic case of the pond it is always difficult to

So much more problematic the issue is in the social sciences, where a great deal of what goes on has to do not with crass matter-energy systems but with fleeting and abstract systems made of symbola, feelings, norms, roles, thoughts, fragments of behaviors. Only few human systems display concrete, observable, spatial boundaries; in most cases the boundaries of human systems are only normative and symbolic.

The interplay between territorial and symbolic delimitations, the various mechanisms by which human systems maintain their boundaries, search for optimal balance between the advantages of opening and those of closing the boundaries, the drive for ever-finer selecting and filtering power, the symbolization of spatial borders and the spatialization of symbolic boundaries, the criteria for optimal boundary-making between settlements and regions, the relationships between boundary and conflict, all these are just a few of the possible fields of inquiry of a systems-oriented sociology of boundaries.

10. Conclusion

At the Institute of International Sociology of Gorizia we have managed only to begin the exploration of some of these issues. We developed a very simple model relating openness and closure on the one side, spatial mobility or fixity on the other, producing a hopefully meaningful systematization of three of the most current boundary-related concepts: periphery, frontier and crossroads (or bridge) (64). We have also explored some of the problems of people living close to national borders (65), and the potential roles of border regions in providing impetus to cross-border cooperation and international integration (66).

Of course to us the boundary is a basic

feature of reality, in a way that is not to be expected from people living closer to the centers of a national society. We are perhaps overly sensitive to the non-congruence between nation-state and society, since we interact daily with people belonging to another nation-state. So we look with great expectation to sociological theories that open new vistas on the demise of the nation state and the rise of world society. But we are also painfully aware of the inevitability of boundaries, because they mean the persistence of valuable differences between systems, cultures, organizations. No one wants world-society to be an indifferentiated, homogeneized mass; this would be the most terrible dystopia. We want to preserve as much diversity and variety as possible, in the unity of mankind; and this entails the preservation and, indeed multiplication of boundaries. This is not all to the bad, because it is one of the basic principles of sociology, repeated again and again from Simmel to Merton, from Coser to Blau, that the multiplication of lines of cleavage may increase the frequency of conflicts, but decreases their intensity. The problem, then, is to reconcile a maximum of diversity with a maximum of openness. This is not an altogether new problem (67), but certainly the worldsociety poses it on an unprecedented scale. Tolerance for the "other", is one general psychological attitude needed in the new situation; but the conciliation of openness and diversity, of cooperation without loss of identity poses many technical problems; which are basically problems of the engineering of boundary-processes.

1. N. Luhmann, Soziologische Aufklärung 1, Opladen, Westdeutscher, 1971, p. 142.

2. G. De Greef, Théorie générale des frontières et des classes, Brussels, Larcier, 1908, p. 11, 14, 106-241.

3. Some bibliographic references can be found in: R. Strassoldo, 'The Study of Boundaries, a Systems Oriented, Multidisciplinary, Bibliographical Essay', Jerusalem Journal of International Relations, 2, 3, 1977; and R. Strassoldo, 'La teoria dei confini', in: Temi di Sociologia delle relazioni internazionali, Gorizia, ISIG, 1979. To the literature cited there some major works should be added: E. Leach, Culture and Communication, Cambridge, Cambridge University Press, 1976, on the meaning of symbolic boundaries; T. Malmberg, Human Territoriality, The Hague-Paris-New York, Mouton, 1980, where great a wealth of facts and ideas on all sorts of territorial boundaries are assembled; C. Raffestin, Pour une géographie du pouvoir, Paris, Librairies Techniques, 1980, where conceptual synthesis of the author's previous work on boundaries and a plea for a systematic study of the subject can be found. Interesting remarks on the subject can also be found in F. Barth (ed.), Scale and Social Organization, Oslo, Universitetsvorlaget, 1979; and especially in the contribution of T. Schwartz, The Size and Shape of a Culture.

4. M. Granovetter, 'Advancement', in: Theories of Social Evolution and Development', American Journal of Sociology, 85, 3, 1979.

5. This has been recognized one of the main assumptions of anthropological structuralism: M. Lane (ed.), Structuralism, London, Sage, 1970 and has one of its classical expressions in: C. Levi-Strauss, The Raw and the Cooked. On the genetic bases of the inclination, see P. L. van der Berghe, in: L. Gallino (ed.), Sociobiologia e natura umana, Torino, Einaudi, 1980, p. 100. On its universality, see E.A. Leach, Anthropological Aspects of Language, in: E.H. Lenneberg (ed.), New Directions in the Study of Language, Cambridge, Mass, MIT, 1964.

6. G. Bateson, Steps to an Ecology of the Mind, New York, Ballentine, 1972; A. Wilden, System and structure, London, Tavistock, 1972. E. Leach, op. cit.

7. Two of the best-known authors associated with this idea are J. Payet and J. Lacan.

8. G. Vickers, Freedom in a Rocking Boat, Harmondsworth, Penguin, 1970, p. 136.

9. K. Schmitt, Der Nomos der Erde, Köln, Greven, 1950.

10. On this themes see the often fascinating but sometimes murky essays by A. Wilden in the work cited above. The main sources of Wilden in this area are Bateson and Leach.

11. Writings on the right-left cerebral asymmetry have become more popular since one of the eminent researchers in this field, R.W.

Sperry, got the Nobel prize.

12. G. Bateson, op. cit.

13. A. Van Den Berghe, 'Critical Theory: is there still Hope?', American Journal of Sociology, 86, 3, 1980, p. 468.

14. Op. cit., p. 219.

15. "Fourth logic" is the label proposed by M. Maruyama, The Epistemological Revolution', Futures, 10, 3, 1978. There are innumerable other presentations of this general cognitive attitude; some of the main names have already been cited, such as G. Bateson. See also E. Morin, La methode - 1, la nature de la nature, Paris, Seuil, 1977; J. de Rosnay, Le macroscope, Paris, Seuil, 1974; E. Jantsch and C. Waddington (eds.), Evolution and Consciousness, London, Jonatahan Cape, 1977.

16. R. Bendix, 'Tradition and Modernity Reconsidered', Comparative studies in society and history, 9, April 1967. See also R. Dahrendorf's criticism of the utopian element in the Parsonian approach 'Out of Utopia', American Journal of Sociology, 1958.

17. Parsons reflections on the theme of boundaries are widely scattered in the large corpus of his writings, and it is hardly possible to present here a balanced analysis. One of his more systematic earlier treatments is his contribution in: R. Grinker (ed.), Toward an Unified Theory of Human Behavior, New York, Basic books, 1956; see also his later: Societies. Evolutionary and Comparative Perspectives, Englewood Cliffs, Prentice Hall, 1971.

18. On the alledged "closure" of the Parsonian model see R. Dahrendorf's and A. Gouldner's contributions in: N.J. Demerath, R.A. Peterson (eds.), System, Change and Conflict, New York, McMillan, 1967.

19. L. Mayhew, Society. Institutions and Activities, Glenview, Scott Foresman, 1971.

20. Another eminent functionalist who concerned himself with boundary problems is E. Shils, e.g. in: Center and Periphery, Chicago, University of Chicago Press, 1975.

21. R. Bendix, Kings or People, Power and the Mandate to Rule, University of California Press, 1978, and previous works of the same author; C. Tilly, The Formation of National States in Western Europe, Princeton, Princeton University Press, 1975; W. McNeill, The Rise of the West, Chicago, University of Chicago Press, 1967.

22. G. Simmel, Soziologische Asthetik, in: Brucke un Tur, Stuttgart, Koehler, 1957.

23. Ibidem

24. G. Simmel, Der Baum und die raumlichen Ordungen der Gesellschaft, in: Soziologie, Leipzig, Duncker & Humbolt, 1908, pp. 617ff.

25. G. Simmel, Conflict and the Web of Group Affiliation, New York, The Free Press, 1966, pp. 17-18.

26. The sociology of G. Simmel, K.H. Wolff, (transl. and ed.), New

27. G. Simmel, Soziologie, cit.

28. Ibidem, p. 617.

29. See the translator's (R. Bendix) note in G. Simmel, Conflict and the Web of Group Affiliations, cit., p. 125.

30. Also in Goffman's case, as in Parson's, observations on boundaries are scattered throught his voluminous output. See e.g. Relations in Public. Microstudies of the Public Order, Harmonsworth, Penguin, 1971; and Encounters, Indianapolis, Bobbs-Merrill, 1961. On ethnomethodology, interactionism and other "microsociologies", see e.g.: H. Mehan, H. Wood, The Reality of Ethnomethodology, New York, Wiley, 1975.

31. P. Blau, Inequality and Heterogeneity: a Primitive Theory of Social Structure, New York, The Free Press, 1977.

32. S. Leinhardt, Social Networks: a Developing Paradigm, New York, Academic Press, 1977.

33. J. Gottman (ed.), Center and Periphery: Spatial Variations in Politics, London, Sage, 1980.

34. A simple model relating the concepts of periphery, frontier, and other types of "boundary situations", resulting from the interplay between two modalities, open/closed and static/dynamic, has been proposed by the present author in several papers; e.g.: R. Strassoldo, Center and Periphery: Socio-Ecological Perspectives, in: A. Kuklinski (ed.), Polarized Development and Regional Policies, The Hague-Paris-New York, Mouton, 1981, p. 75.

35. F.J. Turner, The Significance of the Frontier in American History, 1894; the thesis has been reformulated and reprinted innumerable times since that year.

36. O. Lattimore, Studies in Frontier History, Paris-The Hague, Mouton, 1962.

37. The closing of the world frontiers and the beginning of the "limited world" has been announced already by M. Proust (1'ere du monde fini commence) and restated innumerable times ever since by such diverse writers as Mackinder, Mumford, and many contemporary scholars of international relations and political geography. The 1976 congress of the International Political Science Association even devoted a session to the subject; its proceedings have been published by M. Merle.

38. J.G. Leyburn, Frontier Folkways, Boston, Anchor, 1970 (1935). G.R. Taylor, The Turner Thesis, Boston D.C., Heath, 1956; D. Gerhard, 'The Frontier in Comparative View', Comparative studies in Society and History, 1, 1959; M. Mikesell, 'Comparative studies in Frontier History', Annals of the Association of American Geographers, 50, 1960; R. Katzman, The Brazilian Frontier in a Comparative Perspective', Comparative studies in society and history, 17, 3, 1975; D.H. Miller, J.O. Steffen (eds.), The Frontier: Comparative Studies, University of Oklahoma Press, 1977.

39. A. Toynbee, A Study of History, vol. 8, Oxford, Oxford

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University Press, 1954; R. Wesson, The Imperial Order, University of California Press, 1967.

40. We cite here from an Italian translation of Somerwell's edition: A. Toynbee, Storia delle civiltà, Roma, Newton Compton, 1973, p. 48.

41. Op. cit., p. 51.

42. I. Wallerstein, The Modern World System, New York, Academic Press, 1974.

43. J.P. Nettl, R. Robertson, International Systems and the Modernization of Societies, New York, Basic book, 1968; L. Mayhew, op. cit.

44. Eminent among them is certainly K.W. Deutsch, to whom we owe a large number of lucid contribution to the problems of societal boundaries; beginning with, Authonomy and Boundaries According to Communication Theory, in: R.R. Grinker (ed.), Toward a Unified Theory of Human Behavior, cit.

45. The situation is apparently changing. Even American authors are apparently awakening to the hapazard nature of state formation; cfr. M. Granovetter, op. cit., p. 510.

46. Toynbee maintains that all states grow out of the ruins of the proceeding empires, and reflect in their boundaries the political-administrative subdivisions of empires. On the boundaries of states grown out of modern colonial empires, especially in Africa, there is a large literature. See e.g. S. Touval, The Boundary Politics of Independent Africa, Cambridge, Harvard University Press, 1972.

47. G. Gorilly, in: P. Romus (ed.), Les regions frontalières a l'heure du Marché Commun, Bruxelles, Université Libre de Bruxelles, 1971.

48. K.E. Boulding, The Organizational Revolution, Chicago, Quadrangle, 1968 (1953), p. 30.

49. G. De Greef, Theorie generale des frontieres et des classes, Brusselles, Larcier, 1908, p. 239.

50. L. Mayhew, Society: Institutions and Activities, cit., p. 1.

51. See for instance the works of E.E. Dickerson and of J. Willima Schopf on the early evolution of macromolecules and of cells; in: Scientific American, Italian Edition, September 1978; Prigogine in La Nouvelle alliance has pointed out the importance of the "surface effects" and boundary phenomena in the formation and behaviour of dissipative phisico-chemical structures.

52. N. Elias, Uber den Prozess der Zivilisation, Berne, Francke, 1969, pp. 11–30.

53. G. Kaufman, Il sistema globale – immagini e modelli, Udine, Del Bianco, 1974; N. Luhmann, Soziologische Aufklarung II, cit. p. 57.

54. N. Luhmann, Soziologische Aufklarung II, cit., p. 13.

55. Ibidem, pp. 10, 13.

56. Ibidem, pp. 23, 28ff.

57. Ibidem, p. 10.

58. N. Luhmann has often speculated on the role of space and

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spatial boundaries in social systems; see e.g., Soziologische Aufklarung 1, Opladen, Westdeutscher, 1971, p. 145; Soziologische Aufklarung II, cit., p. 60ff.

59. See several essays in: Soziologische Aufklarung II, and in particular 'Die Weltgesellschaft'.

60. E.B. Haas, Beyond the Nation State, Stanford University Press, 1964.

61. See the various contributions (especially of T. Parsons, A. Rapoport, K.W. Deutsch, and D. Campbell in: R.R. Grinker (ed.), Toward a Unified Theory of Human Behaviour, cit.; J.G. Miller, Living Systems, New York, McGraw Hill, 1977. Some other works are cited in this context by R. Strassoldo, 'La teoria del confine', in: Temi di sociologia delle relazioni internazionali, Gorizia, ISIG, 1979.

62. Among the former, A. Kuhn, The Logic of Social Systems, S. Francisco, Jossey Bass, 1974; the leading exponent of the latter is J.G. Miller. On the problem see the criticisms of Rapoport, Parsons, Kuhn and others in: Behavioral science, 25, 1, 1980.

63. Typically, a matter-energy approach to ecosystems, like that of H.T. Odum, Environment, Power and Society, New York, Wiley, 1971, takes the boundaries for granted, with only minor problems in definition (p. 59); while a more psychological, informational approach like that of Ittelson et al., An Introduction to Environmental Psychology, New York, Holt, Rinehart & Winston, 1974, enshrines the lack of real boundaries as the main characteristic of environments; boundaries are imposed by the observer on the environment (p. 105). In this light, G. Bateson's reiterations that "the real evolutionary unit is neither the organism nor the species, but the eco-system", is morally very valuable and philosophically fascinating, but not very helpful to scientific inquiry.

64. See note 34.

65. R. Gubert, La situazione confinaria, Trieste, Lint, 1972; R. Strassoldo, Sviluppo regionale e difesa nazionale, Trieste, Lint, 1972; R. Gubert, L'identificazione etnica. Un'indagine sociologica in un'area plurilingue del Trentino-Alto-Adige, Udine, Del Bianco, 1976; A.M. Boileau, E. Sussi, Dominanza e minoranze, immagini e rapporti interetnici al confine nordorientale, Udine, Grillo, 1980. See also F. Grass, Ethnics in the Borderland, Westport, Greenwood, 1978.

66. R. Strassoldo, 'Friuli-Venezia Giulia, a border region', in: Plures, Regionalismus in Europa, München, Intereg, 1981; also, Sociologia delle relazioni internazionali, cit.

67. H. Teune and Z. Mlinar, Development and the Openness of Systems, in: R. Strassoldo (ed.), Boundaries and Regions, Trieste, Lint, 1973; O. Klapp, Opening and Closing, Cambridge, Cambridge University Press, 1978.