
The Hybridization of Social Science Knowledge

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ABSTRACT

A TWOFOLD PROCESS CAN BE SEEN in the growth of science: the fragmentation of formal disciplines and a recombination of the specialties resulting from this fragmentation. The division of disciplines into specialized subfields has led to the development of hybrid specialties. The process of hybridization consists, first of all, of borrowing and lending concepts, methods, theories, and praxes. The fruitful point of contact is established between sectors and not along disciplinary boundaries. The hybrid specialties do not necessarily stand midway between two sovereign disciplines. They may be enclaves of a section of a discipline into a sector of another discipline. They combine two limited domains. For this reason, the concept of hybridization seems more appropriate than the concept of interdisciplinarity.

INTRODUCTION

To the title "Navigating among the Disciplines" proposed by Carole Palmer, the protagonist of this issue of *Library Trends*, I would like to add "and traversing the bridges between specialties," since, in the archipelago of social sciences, there are relatively few formal disciplines but dozens of fields, subfields, and specialties. If we crossed each of the twelve principal social sciences with all the others, the result would be a grid with 144 squares. Some squares would remain empty, but most of these would be filled by hybridized specialties each having some autonomy (Dogan & Pahre, 1990).

These hybrid specialties then subdivide, giving rise, at the second generation, to an even larger number of hybrids. A full inventory of all the existing combinations cannot be obtained by crossing the disciplines two by two, even at the level of the second generation, since some of the most dynamic of hybrid fields are of multiple origin.

In addition, hybrid fields like prehistory, which are partly rooted in the natural sciences, would not appear in the 144-square grid, which is confined to recombinations of segments of the social sciences. The configuration of hybrid social sciences fields is changing constantly. Social psychology, political sociology, human ecology, and political economy have long been recognized, whereas political psychiatry is still fighting for acceptance. Some specialists in cognitive science announce that traditional psychology will soon vanish as an independent discipline and would ultimately be dissolved in a full-blown neuropsychology, which would show, somewhat as chemistry supplanted alchemy, the illusory and prescientific character of the old psychology.

Which branch of linguistics is on the right path, structural linguistics or generative grammar? The structuralists criticize the historicism of comparative grammars and the generativists reject the presuppositions of the structuralists.

In the history of science, a twofold process can be seen: a fragmentation of formal disciplines and a recombination of the specialties resulting from this fragmentation. The new hybrid field may become completely independent, like social psychology, or continue to claim a dual allegiance, like political geography. In the latter case, one may not be sure whether to place a work in the category of geography or political science. The criterion could be based on the predominance of one or the other components or on the formal affiliation of the author. Political anthropology is a branch of anthropology but is also a subfield of political science. Where does historical sociology end and social history begin? One may feel even more unsure when faced with a case of threefold recombination. As the relative proportions are not always obvious, it remains somewhat arbitrary where the essential affiliation may be said to lie, especially since the degree of kinship among disciplines varies greatly: sociology and social psychology are consanguineous, but geology and social geography are far less so, despite appearances.

FROM SPECIALIZATION THROUGH FRAGMENTATION INTO HYBRIDIZATION

Some scholars praise "interdisciplinarity." Such has often come from the most creative scientists, because they are the first to see the problems caused by gaps between disciplines. But this is not realistic. Presently, it is no longer possible for anyone to have a thorough knowledge of more than one discipline. It is utopian thinking to master two or more whole

disciplines. Given that this implies the ability to be familiar with, and combine, entire disciplines, the idea of interdisciplinary research is illusory.

Because it is so difficult for a single scholar to be truly multidisciplinary, some methodologists are led to advocate teamwork. This is what is proposed by Pierre de Bie in the monumental work published by Unesco (1970). Teamwork is productive in large science laboratories but, where the social sciences are concerned, it is difficult to achieve in practice. The only examples of successful teamwork concern data production or collection and very seldom interpretation or synthesis—with the exception of archaeology.

The multidisciplinary approach is illusory because it advocates dividing up reality. Some researchers proceed piecemeal with philological, anthropological, historical, ethnological, psychological, and sociological approaches. This alternation of approaches, that almost never allows disciplines to meet, results at best in a useful parallelism but not in a synthesis. In fact, research enlisting several disciplines involves a combination of segments of disciplines, of specialties, and not whole disciplines. The fruitful point of contact is established between sectors and not along disciplinary boundaries. Considering the current trends in the social sciences, the word “interdisciplinarity” appears inadequate. It carries a hint of dilettantism and consequently should be avoided and replaced by the phrase “hybridization of fragments of sciences.”

All sciences, from astronomy to zoology, have made progress, from the sixteenth century on, by internal differentiation and cross-stimulation among emergent specialties. Each specialty developed a patrimony of knowledge as its understanding of the world developed. With the growth of these patrimonies, specialization became less a choice and more a necessity. Increasingly, focused specialization has led to the creation of sub-disciplines, many of which have gone on to become autonomous.

There are, in the literature, dozens of lamentations and jeremiads about the fragmentation of disciplines. In reality, fragmentation is the result of specialization. The division of the discipline into subfields tends to be institutionalized as can be seen in the organization of large departments of natural and social sciences.

A good indication of the fragmentation of the social sciences is the increasing number of specialized journals. In the last twelve years, dozens of specialized journals in English have been launched. Most of these journals overlap two or three disciplines, and many of them are located in Europe. Other new hybrid journals have appeared in French and in German. European unification also has had an impact on the development of cross-national journals focusing on special social science fields.

It is necessary to stress both parts of the social science division process: fragmentation into special fields and specialization by hybridization.

It is the interaction of these two processes, and not each one in isolation, that has led to the remarkable advance of the natural, as well as the social, sciences. The continuous restructuring of all disciplines has been the result of these two contending processes. However, both fragmentation and its correlate hybridization have developed much more recently in the social sciences than in the natural sciences. In the distant past, hybrid fields were the result of gaps between full disciplines. Today the gaps appear between specialized subfields among neighboring subdisciplines. As a result, in the last few decades, the fragmentation of disciplines into specialized subfields has led to the development of hybrid specialties. The hybrid specialties do not necessarily stand midway between two sovereign disciplines. They may be enclaves of a section of a discipline into a sector of another discipline. These combine two delimited domains, not entire disciplines, and do not need to be adjacent.

Sociometric studies show that many specialists are more in touch with colleagues who belong officially to other disciplines than with colleagues in their own discipline. The "invisible college" described by Robert Merton, Diana Crane, and other sociologists of science is an eminently interdisciplinary institution because it ensures communication not only from one university to another and across all national borders, but also, and above all, between specialists attached administratively to different disciplines. The networks of cross-disciplinary influence are such that they are obliterating the old classification of the social sciences.

SCIENTIFIC PROGRESS BY HYBRIDIZATION AND THE POSTULATE OF PARADIGMATIC UPHEAVALS

Paradigm is a word often abused. Thomas Kuhn (1979) has explicitly acknowledged that, in the social sciences, use of the word paradigm is not justified. He explains in his preface to *The Structure of Scientific Revolutions* that it was during a stay at Palo Alto Center for Advanced Studies, in the company of social scientists, that he was led to formulate the concept of paradigm with the primary purpose of making clear the essential difference between natural sciences and the social sciences (p. 8). The reason given by Kuhn was the absence of a theoretical consensus in any discipline of the social sciences.

Are there, in the social sciences, instances of paradigmatic upheavals comparable to those generated by Copernicus, Newton, Darwin, or Einstein? Can the theories of Keynes, Chomsky, or Parsons be described as paradigmatic? In the social sciences, does progress occur through paradigmatic revolutions or through cumulative processes? Are there really paradigms in the social sciences?

Several major theories may coexist within a formal discipline, but there is a paradigm only when one testable theory alone dominates all other theories and is accepted by the entire scientific community. When

Pasteur discovered the microbe, the theory of spontaneous generation collapsed, and contagion became the new paradigm. In the social sciences, however, we see at best a confrontation between several nontestable theories. Most of the time there is not even a confrontation but careful mutual avoidance, superb disregard, on all sides; this is a relatively common occurrence owing to the size of scientific communities and its division into schools. This is true for all countries no matter the size.

This mutual disregard is an old practice in the social sciences. At the turn of the century, the great scholars did not communicate at all or very little. In the writings of Weber, there is no reference to his contemporary, Durkheim. Yet Weber was acquainted with Durkheim's journal *l'Année Sociologique*. For his part, Durkheim, who could read German, makes only one fleeting reference to Weber. Yet they worked on a number of the same subjects such as religion. Durkheim does no more than mention Simmel and Tonnies in passing. Harshly criticized by Pareto, Durkheim never alluded to Pareto's work. Pareto's judgment of Durkheim's book on suicide was unfavorable. "Unfortunately" he wrote, "its arguments lack rigour" (Valade, 1990). Weber seems to have been unaware of Pareto's theory on the circulation of elites, and Pareto, in his turn, says nothing about the Weberian theory of political leadership. Weber and Croce met only once and then just briefly. There was no exchange between Weber and Freud. Ernst Bloch and George Lukács met regularly with Weber in Heidelberg, but their work shows no sign of Weber's influence nor was there any communication between Weber and Spengler. Of Weber's contemporaries, the only one who referred to him was Karl Jaspers, but he was a philosopher (Mommsen & Osterhammel, 1987). As was noted by Raymond Aron, each of the three great sociologists—Weber, Durkheim, Pareto—followed a "solitary path."

Many examples could be cited of scholars co-existing in the same discipline without influencing one another, such as Angus Campbell and Paul Lazarsfeld, who nevertheless devoted a large part of their lives to studying the same political behavior. The same remark can be made with reference to other topical fields. It is not a bad thing to pit theories one against the other, but there must be debate. There are no paradigms in the social sciences because each discipline is fragmented.

The more ambitious a theory is, the less it can be directly tested by the data available. In the social sciences, there are no "fundamental discoveries" as there sometimes are in the natural sciences. Instead, unverifiable theories are constructed. Consider Malthusianism for instance. Is it a theory or a paradigm? Malthusianism is one of the major theories in the history of the social sciences. Malthus influenced many scientists, primarily Charles Darwin, who acknowledged Malthus as one of his main sources of inspiration. A host of sociologists, political scientists, demographers, and economists took their cue from Malthus either to agree or

to disagree with him. But when demographic conditions changed in the West, Malthus's projections were invalidated, and he was condemned as a false prophet. However, if we consider today the gap between economic development and population growth in Africa, Asia, or Latin America, he could be hailed as a great visionary. We need only agree to an asynchronous comparison between the England of his time and the Third World to admit the asynchronous validity of his theory. Should we go further and talk of a Malthusian paradigm?

Today no paradigm seeks to order any discipline of the social sciences. In fact, the word *paradigm* should be excluded from the literature unless it is placed between quotation marks. The process of hybridization of specialties does not encounter disciplinary paradigms.

THE SPREAD OF CONCEPTS, METHODS, AND THEORIES ACROSS SOCIAL SCIENCES

The process of hybridization consists first of all in borrowing and lending concepts, methods, and theories.

The Diffusion of Concepts

Numerous scholars have denounced the conceptual confusion and the polysemy of terms in various disciplines. This semantic problem comes from the spread of concepts from one discipline to another. Borrowed concepts need some adaptation to the context of the new discipline, because a concept is not only a term, but it is also a notion or an idea. A recent study of more than 400 concepts used in the social sciences has found few neologisms, and this can be explained by the fact that more concepts are borrowed than created.

We can neglect the etymology of concepts in order to stress how borrowing fertilizes imagination. The word *role* comes from the theater, but Max Weber gave it a sociological meaning. From sociology this concept spread everywhere. The word *revolution* was proposed by Copernicus, but it was first applied to politics by Louis XIV. Historians adopted it, sociologists articulated it before offering it to political science. The patrimony of each social science is full of borrowed concepts, which are hybrids in the sense that they were concocted in other disciplines and replanted skillfully into another. Using the *International Encyclopaedia of Social Sciences* (Sills, 1968) and the analytical indexes of some important books, this author has compiled an inventory of more than 200 concepts "imported" into political science. In the process of adoption and adaptation, many of these concepts have changed their semantic meaning.

Many concepts have multiple origins. Authoritarianism has two roots, one psychological and one ideological. It is often inadvertently interchangeable with despotism, autocracy, absolutism, dictatorship, etc. Authority has been analyzed from different disciplinary perspectives by Malinowski, Weber,

Parsons, Lasswell, Kaplan, B. de Jouvenel, and C. J. Friedrich, among others. The concept of culture (civic, political, national) has many variants—e.g., cultural convergence, cultural configuration, cultural evolution, cultural integration, cultural lag, cultural parallelism, cultural pluralism, cultural relativity, cultural system, and post-materialist culture.

Max Weber and Karl Marx, both hybrid scholars, were the most prolific generators of concepts. Only Aristotle is comparable to them. Almond and Parsons are also the fathers of an impressive number of concepts. Concepts are often germinal grains of theories: structure generates structuralism, system becomes systemism, capital engenders capitalism, and so on.

Borrowing Methods

Distinctions should be made between scientific reasoning (in the tradition of J. S. Mill, Emile Durkheim, or Hubert Blalock), strategy of investigation, method of research, and technological ability. All four are cross-disciplinary. Sociology and political science rarely import directly from logic, mathematics, or statistics. Usually they find an intermediary in certain sectors of psychology or economics, which have played a crucial role in their methodological enrichment. Tabular demonstration, graphic presentation, summation, measures of variability, ratios, rates, sampling distribution, statistical inference, binomial distribution, multiple regression, linear correlation, contingency, factor analysis, and so on, have not been imagined by sociologists or political scientists. All have been imported, and some, after improvement, have been exported in refined forms.

A substantial number of sociologists and political scientists are familiar with the scaling method elaborated by psychologists, the path analysis imported from biology via economics, the multivariate measuring used by economists, and the linear structural relation forged by the statistician Joreskog. To the rich methodology of the *American Soldier*, edited by Samuel Stouffer (1949), have collaborated representatives of various disciplines.

Up to a certain point, the introduction of mathematics and statistics into social sciences has been valuable not only for their own contributions but also as an entree for additional borrowing. Adoption of these mathematical methods and models has paid several dividends: the rigor necessary for modeling, for example, has also been invaluable in developing logical arguments, even for work which forgoes mathematical presentation.

Because it is unnecessary to obtain a license in order to adopt a method or a research technique, the import has been sometimes indiscriminate. What is needed is good sense in applying the method to a new field. Too many social scientists are confusing scientific reasoning, research strategy, and technological tools. Today the main source of disputes

among sociologists and among political scientists is not, as many people believe, ideology, but imported methodology.

The borrowing of statistical methods and techniques is not always beneficial. Many social scientists who use quantitative methods extend the borders of knowledge. However, others are motivated mainly by an interest in technique rather than substance. They routinely build unverifiable models, over-quantify, and over-model. They often choose to discuss minor issues, spending much talent and energy to improve a correlation coefficient, or to split a hair into four by factor analysis. They are productive scholars—any input into the computer will result in a mechanical output. Few of their papers see the light of day in respected journals because most are characterized by a painful contrast between highly sophisticated analytical techniques and poor imagination in research design, or data that are too weak to support the powerful techniques utilized (Dogan, 1994).

Theories Across Disciplines

Examples of theoretical cross-fertilization abound. Interest group theory's most cited work, David B. Truman's (1951) *The Governmental Process*, draws heavily on sociological theories of groups. Mancur Olson's (1965) attack on traditional interest group theory, *The Logic of Collective Action*, was based on economics. Meanwhile, sociologists and economists have borrowed from interest group theories developed by political scientists. The theories of sister disciplines have often confronted one another on the grounds of political science. "Rational choice analysis" is a case in point. A theory is discredited only by replacing it, usually with the aid of theories from outside the discipline.

Theorists of social systems have often used extensive analogies with biological systems; biology first developed the concept of "system" as a way to organize life and of organic systems as phenomena not reducible to their constituent chemistry. Some structural functionalists have argued that social systems are like biological systems in that they are self-regulating and homeostatic. These theorists also noted that certain functions have to be performed in any biological system and used the analogy to ask what functions were vital to social systems. Systems theory drew primarily from some sectors of sociology. The theory of dependence, which seduced so many Latin American specialists, originates in the work of a group of economists, sociologists, and demographers in cooperation with statisticians from the United Nations. Theories decay, old theories are superseded by new ones. One could read today with great interest dozens of political philosophers and grand theorists of the past and cite them with pleasure. But only a handful of theories formulated before World War II are still alive. Theories survive more easily in linguistics

and economics. Specialized domains need theoretical orientations, but a discipline as a whole cannot have a universal and monopolistic theory.

SOCIOLOGY IN THE CONSTELLATION OF SOCIAL SCIENCES

In the space of four decades, sociology has experienced first a marked monodisciplinary expansion then a marked dispersal beyond its boundaries. In the period just after World War II, sociology was adopted as an official academic discipline in only a few countries, in particular the United States and Canada. In Europe it had to start practically from scratch, especially in Germany and Italy. In recent times, its growth was spectacular in many countries from Scandinavia to Japan.

In France, in 1950, the number of academics who could claim in their professional capacity to be sociologists was no doubt under two dozen. Other academics, without being primarily sociologists (e.g., historians, psychologists, geographers, philosophers), contributed to the revival of sociology. Four decades later, the *Who's Who in Sociologie Française et Francophone* contained some 1,500 names, including about 1,300 French, with 1,100 genuine sociologists and 200 related branches, among whom 500 lived in Paris—the biggest concentration of sociologists in the world. In the United States, the number of sociologists registered in the American Sociological Association doubled in the 1950s and doubled again in the 1960s.

Paradoxically, it was at the time when it was still modest in stature that sociology showed imperialist leanings. It would be easy to put forward a whole number of quotations in support of this assertion, but one will suffice. In 1962, at a time when sociology was not yet an independent discipline in Oxford and Cambridge and scarcely so in London, W.G. Runciman (1963) was claiming that if sociology was defined as the systematic study of collective human behavior, the disciplines of economics, demography, criminology, or politics should be considered branches of sociology (p. 1).

From 1970 on, growth started to go hand in hand with a process of fragmentation, with the result that today, in the developed democracies, sociology is a heterogeneous centrifugal discipline. Depending on how it is defined, there can be said to be between thirty-five and forty sectoral sociologies going in every direction: toward history, economics, politics, law, rural life, industry, and religion. There is no social activity that does not have its official sociologist. There are sociologies of education, of the family, of communications, of leisure, of old age, of medicine, of organizations—the list goes on and on.

As is pointed out by Neil Smelser (1988) in the introduction to his *Handbook of Sociology*, the likelihood that sociology will be denotative of an identifiable field will be diminished; it is likely that commitment to the discipline in general will diminish, and that smaller groups will seek

their interaction and identification in suborganizations that are inside or outside the American Sociological Association (p. 13).

This is true, for instance, of urban sociology. There are now more experts and researchers in the field of town planning than in the whole of traditional sociology. It is true that these experts include representatives of town planners from a wide array of disciplines—i.e., geography, economics, architecture, etc.—who have cut the umbilical cord attaching them to the mother discipline. But the most heavily populated subdiscipline in the United States at the present time is the sociology of medicine, where most of the research work is becoming bogged down in fields devoid of theoretical horizon.

As soon as the problem being addressed concerns society as a whole, cross-specialization becomes inevitable, so much so that it is often necessary to bring together a variety of specialists. What follows is a description of the content of a book which, in its day, enjoyed some success:

Each contributor has been an articulator of diverse disciplines: Boulding spans economics, mathematics and sociology; Coleman relates mathematics and sociology; Etzioni, organizational sociology and international relations; Kardiner, psychiatry and anthropology; Klausner, sociology and psychology; Levy, social theory and sinology; Pool, sociology and political science; Rapoport, biology, mathematics, philosophy, psychology and sociology; and Tiryakian, sociology and philosophy. They were chosen as men familiar with the problem of bridging disciplines, to build an image of a total society. (Klausner, 1967, p. 15)

Replace the word “discipline” with “polyspecialty” and add a generous dose of history, and you will have a better idea of the real content of this book.

As it has matured and spread out in every direction, sociology has become aware of its excessive fragmentation and of its dispersal and has felt the need to come back to its center without yet succeeding. This process is described by Ralph Turner (1991): “Sociology has gone through a cycle from emphasizing theory with little testable empirical basis to an atheoretical empiricism and back to the evaluation of research primarily for its relevance to grand theory” (p. 63). But at no time has sociology been willing to retreat behind its official borders.

POLITICAL SCIENCE: BORROWING FROM NEIGHBORS

All major issues are crossing the formal borders of political science: the breakdown of democracy, anarchy, war and peace, generational change, the nexus of freedom-equality, individualism in advanced societies, fundamentalism in traditional societies, ruling class, public opinion. There is no communication between two political scientists analyzing the crisis of the social security system, one by abstract modeling and the other by vernacular language. The first is in contact with modelers in economics, and the second cites scholars from other disciplines.

There are many hybrid branches of political science: political sociology, political psychology, political philosophy, political geography, public administration, area studies, and so on. Other hybrid fields or subfields can be mentioned: mass behavior (related to social psychology), elite recruitment (related to sociology and history), urban politics (related to social geography), welfare states (related to social economy and social history), values (related to philosophy, ethics, and social psychology), governmental capabilities (related to law and economics), poverty in tropical countries (related to agronomy, climatology, and economic geography), and development (related to all social sciences and to several natural sciences).

Between psychology and political science, there is a hybrid domain flying its own flag: political psychology. This is a hybrid at the third generation, because psychology itself was born as a hybrid discipline, rooted partly in the natural sciences and partly in the social sciences. Political psychology has two sisters: an older one, social psychology, formally recognized in all major universities of the world; and a younger one, cognitive science, today the best endowed of the young sciences on both sides of the Atlantic. Political psychology rarely meets cognitive science, but it is in permanent contact with social psychology.

In a recent survey, D.O. Sears and C.L. Funk (1991) write that political psychology, being "an interdisciplinary endeavor runs the danger of falling between the cracks in academic institutions [because of pressures for] disciplinary orthodoxy induced by bureaucratic inertia" (p. 346). But the inventory they make, by showing how political psychology penetrated political science departments, does not justify this fear. The journal *Political Psychology* is a good window on this hybrid field.

In the field of political psychology, we find the provinces of political socialization, role theory, alienation, psycho-biography, personality analysis, political attitudes and beliefs, small groups, topological analysis of political leaders, national character, mass participation, generations, political dissatisfaction, and a rich methodological area—i.e., attitude measurement, sociometric measurement, content analysis, clinical method, quasi-experimental approach and, particularly, survey research.

Just as there are intersections between political science and psychology, there are multiple connections between political science and geography: geopolitics, electoral geography, urban politics, territorial bases of federalism, spatial organization of society (core-periphery, city-hinterland), environmental problems, urban-rural differences, territorial aspects of social mobilization, etc. Demography is an intervening dimension in political geography.

In the collection *The Structure of Political Geography* by Kasperson and Minghi (1969), many chapters are of interest even for political scientists who are not oriented toward geography (Ratzel's laws of the spatial growth

of states, geopolitical regions, transaction flow analysis, heartland and rimland, the impact of black migration, and so on). The concept of center-periphery has obviously a geographical dimension.

Political science and geography meet also in the domain of electoral geography, particularly for the analysis of aggregate data in countries characterized by a great territorial diversity, and for which information is available at the level of small administrative units. The privileged countries from this point of view are, or were until recently, France, Italy, Spain, Portugal, Belgium, Norway, Finland, Austria, and Canada.

The hybrid field of geography has a series of specialized journals which are interdisciplinary bridges —e.g., *Economic Geography*, *Urban Geography*, *International Journal of Urban and Regional Research*, *Political Geography*.

Political scientists and sociologists are still adopting, as a unit of analysis, the nation-state at a moment when there are in the world more giant cities with over 1 million inhabitants than independent states which reach this level. The world is increasingly dominated by giant cities (Dogan & Kasarda, 1987). Geographers and urbanists are in the forefront of this domain, proposing theoretical frameworks, concepts, and methods of measurement. Urban studies are expanding and may soon become an independent discipline. Today in almost all countries, advanced and developing, the number of specialists in “urbanology” is higher than the number of political scientists. “Urban politics” is a growing field.

HISTORY AS AN OPEN DISCIPLINE

History is no doubt the most heterogeneous discipline, dispersed in time and space. It is also, by reason of circumstances, the most open discipline. Sooner or later everything falls into the historian’s net.

The dispute over the role and borders of history, which in France goes back to Durkheim, Simiand, and Seignobos, does not seem to be over. Three generations later, history has been excluded from the social sciences under the authority of an international institution, Unesco. History is not numbered among the so-called nomothetic sciences covered by the first volume published by Unesco (1970) on “Main Trends of Research in the Social and Human Sciences.” The historians do not appear to have reacted vigorously to this affront. Indeed, some historians have come to terms with it. Thus, for Pierre Chaunu (1979), “the progress of history in the last 50 years is the result of a series of marriages: with economics, then with demography, even with geography...with ethnology, sociology and psychoanalysis. When all is said and done, the new history sees itself as something like an auxiliary science” (p. 5). And here we have the word *auxiliary* which was previously such a sore point. Such is not the opinion of the *Annales* School (*Annales*, 1989, p. 1323), which is

resolutely committed to interdisciplinarity. "History will progress only in the context of interdisciplinarity, and one of its tasks is to renew the bases of interdisciplinarity" (Le Goff, 1991, p. 4).

Provided that the focus is on the long time span and the comparative approach, there is agreement between Durkheim and Braudel. At a distance of sixty years, using different words, they say much the same thing: history can be a science only insofar as it compares, and there can be no explanation without comparison.

Once it starts comparing, history becomes indistinct from sociology (Durkheim in the first issue of *l'Année Sociologique*). Braudel (1960), for his part, is just as accommodating: "Where the long time span is concerned, the point is not simply that history and sociology tie in with each other and support each other but rather that they merge into one" (p. 93). But here we are talking about only a part of history, that part which compares while considering the long time span, for other fields of history have nothing, or very little, to do with sociology. Similarly, there are not many sociologists who need to have recourse to history for the resolution of a problem with which they are concerned. Durkheim and Braudel would have been more explicit if, instead of considering their discipline as a whole, they had referred clearly to their condominium, which is now called comparative social history or historical sociology. Once it is accepted that history and sociology overlap, only in certain important but delimited areas, the long territorial dispute between history and sociology becomes a thing of the past.

Like all the formal social sciences, "history must attend to its own provinces" (*Annales*, 1988, p. 293). But this means that each sector of history is brought face to face with a sector of another discipline. Exchanges with economics have thus generated economic history, which is of interest only to some historians and some economists. However, this interest has been in sufficiently large numbers to provide material for several major journals. Each human activity has its historian, who, in order to perform his task, has to hunt in other people's lands. In the history of urbanization, for example, where the historian meets geographers, demographers, economists, and sociologists, he or she can hoist his own flag. However, urban history is not an independent field, whereas economic history is well established.

FROM SOCIAL ANTHROPOLOGY TO HYBRID "AREA STUDIES"

In a few years, toward the end of the 1950s and the beginning of the 1960s, about fifty colonies achieved national independence. At that time, some 3,000 American social scientists were sent, with the financial help of American foundations, to Asia, Africa, and Latin America in order to

study the new independent nation states. They covered the planet with hundreds of books and articles and have become "area specialists." They have replaced the European scholars who returned home after the withdrawal of Britain, France, Belgium, the Netherlands, and Portugal from their colonies.

This spontaneous generation of area specialists was born hybrid. The topics of their research blurred the disciplinary boundaries. They and their successors were confined to non-Western underdeveloped countries, to stateless societies, to what Joel S. Migdal (1983) calls "weak states and strong societies," that is to say to the privileged territory of an old discipline, anthropology, which had flourished in Western Europe around the turn of the century. The European anthropologists had discovered these "primitive" societies long before the American area specialists had done so.

There is a basic difference between the two. The European anthropologists were monodisciplinary scholars with a clear identity, vocabulary, and theoretical framework. They were exporters of knowledge to the entire spectrum of social sciences. Some of them had imperialistic ambitions, proclaiming that anthropology was the master science. All other disciplines, including political science and sociology, were considered by these academic imperialists to be provinces of anthropology.

But when the European empires, which covered half of the planet, started to disintegrate, these anthropologists lost their research fields. Anthropology shrank. The abandoned territories were delivered to specialists in area studies. In contrast to their predecessors, the new invaders did not fall within a specific discipline. Few of them were trained in anthropology, and most of them were neither theoreticians nor methodologists.

As a result of these developments, David Easton (1959) was eager to establish a new subfield—political anthropology. He published, in 1959, an essay under this title. Retrospectively, it can be said that this was a sickly child, born at a moment when the new hegemonic power needed nondisciplinary specialists of these new countries and not experts in anthropology, a discipline which began to be overtaken by other disciplines. It is significant that, at the same moment, Margaret Mead, Alfred Kroeber, and Clyde Kluckholm were concerned by seeing their discipline "swallowed [and] isolated from the community of scientists and scholars" (Mead, 1961, p. 475). The established field of anthropology fell from imperialism to being an "unsuitable scientific repository" (p. 476).

Meanwhile, a French demographer-economist-sociologist, Alfred Sauvy (1956), suggested calling these underprivileged new countries "The Third World" by analogy with the Third Estate before the French Revolution. This label survived even though the "second world" had already imploded. It is probable that sooner or later this label will be abandoned

because it includes an enormous variety of countries: old civilizations like China and artificial states in Africa, rich countries like Saudi Arabia, and extremely poor countries. Which discipline will propose the new labels?

Area studies in the Third World give priority to topics which seem important to understanding a particular country. "They do not respect disciplinary boundaries" (Lambert, 1991, p. 190). In area studies, humanities are well represented. "Area specialists who are in the social sciences are likely to have a great deal more contact and shared intellectual activity with human sciences than do most of their non area-oriented disciplinary colleagues" (Lambert, 1991, p. 192). It is at the junction of anthropology, history, literature, and political science that "much of the genuinely interdisciplinary work in area studies occurs" (p. 192).

Describing the struggle between the conventional disciplines and area studies, which has affected the self-identity of scholars, Lucian W. Pye (1975) writes: "The emergence of area specialization has changed perspectives and raised questions which go to the foundations of the social sciences" (p. 3). These foundations have been altered much more by the hybrid fields at the interstices of disciplines.

THE IVORY TOWER OF ECONOMICS: THE CONSEQUENCES OF MONODISCIPLINARY SELF-CONFINEMENT

Some economists advocate an "imperialistic expansion of economics into the traditional domains of sociology, political science, anthropology, law and social biology" (Hirschleifer, 1985, p. 53). Several of these imperialists are famous scholars, including a few Nobel laureates. A kind of manifesto has been published in *The American Economic Review*.

It is ultimately impossible to carve off a distinct territory for economics, bordering upon but separated from other social disciplines. Economics interpenetrates them all, and is reciprocally penetrated by them. There is only one social science. What gives economics its imperialist invasive power is that our analytical categories are truly universal in applicability....Thus economics really does constitute the universal grammar of social science. (Hirschleifer, 1985, p. 53)

This view is anachronistic and contrasts with the perception of economics as a shrinking discipline: "Economics as a formal discipline is suffering because its main achievements—conceptualization, theory, modeling and mathematization—have been accompanied by an excessive isolation from the other social sciences" (Beaud, 1991, p. 157). In reality, the recent history of the social sciences shows that vast areas of scientific knowledge have been abandoned by the science of economics. These areas have been taken over by neighboring disciplines.

At one particular point, economics reached a fork in the path: it could have chosen intellectual expansion, the penetration of other

disciplines at the cost of diversification and at the risk of dispersal; it chose instead to remain unflinchingly pure, true to itself, thereby forfeiting vast territories. Yet many economists consider that the choices of purity, methodological rigor, and hermetic terminology were the right ones.

Self-sufficiency, to use a word familiar to economists, leads sooner or later to a shrinking of borders. But this does not imply general impoverishment since the areas abandoned by the economists were soon cultivated by others. Those abandoned areas now have their own realms: management, political economy, development science, the comparative study of Third World countries, and economic and social history. The position of economics in the constellation of the social sciences might have been more enviable today had it not withdrawn into itself. This situation is particularly surprising in that few classical scholars have failed to assign a central place in their theories to the relationship between economy, society, and politics, from Marx and Weber to Schumpeter, Polanyi, Parsons, and Smelser (Martinelli & Smelser, 1990), not forgetting Pareto.

A whole army of famous American economists has given priority to the study of political phenomena, even if they have kept one foot in economics. Some eclectic economists denounce the reductionism advocated by other economists, particularly with reference to research on development: development is reduced to economic development; this is reduced to growth; which in turn is reduced to investment—in other words, to accumulation. It has taken several decades to dethrone per capita gross national product as a composite indicator of development. Gunnar Myrdal, the great economist, railed against economists who were in favor of unidisciplinary models.

In many countries, large numbers of economists have locked themselves up in an ivory tower and, as a result, whole areas have escaped their scrutiny. Their contribution to the problem of the development of the Third World, for instance, is rather modest when compared with the work of political scientists and sociologists. This is particularly true in the United States, Latin America, and India.

If a discipline has a tendency to turn in upon itself, if it does not open up enough, if its specialties do not hybridize, the neighboring territories do not remain barren. Many economists have had a somewhat condescending attitude toward political science. This has resulted in the development, side by side and in competition with economics, of a new corporate body, with an extremely active and large membership in the United States, the United Kingdom, and Scandinavia: political economy, protected by only one of its parents and renamed through the revival of an old name from the French nomenclature of the sciences. Political economy is currently one of the main provinces of American political science with a prolific output and renowned journals. It is one of the most popular sectors among doctoral students in political science. Political science is the greatest beneficiary of the monodisciplinary self-confinement of economics.

Thirty years ago, F.A. Hayek (1956) wrote that “nobody can be a great economist who is only an economist—and I am even tempted to add that the economist who is only an economist is likely to become a nuisance if not a positive danger” (p. 463). It may now be too late for economics to recoup the territories conquered by political science, sociology, economic history, and particularly by political economy. Some economists are still hoping: “It is necessary to reduce the use of the clause *ceteris paribus*, to adopt an interdisciplinary approach, that is to say to open economics to multidimensionality” (Bartoli, 1991, p. 490). Abandonment of reasoning by assumptions and by theorems would not be enough because the reality has changed: “Economic issues become politicized and political systems become increasingly preoccupied with economic affairs” (Frieden & Lake, 1991, p. 5).

CONCLUSION

In the beginning, there were seven academic disciplines: logic, mathematics, geometry, grammar, rhetoric, music, and astrology. These disciplines remained separately sacred until the seventeenth century when a few heretics challenged them. Some time later, the philosopher Auguste Comte, the founder of positivism, had built a hierarchy of sciences, with mathematics at the summit and biology at the bottom, followed by a second classification with sociology as the youngest and the most complex discipline. But soon this naïve scaffolding was demolished. Since the middle of the nineteenth century, the history of science is, first of all, a description of the multiplication of subdisciplines and of new branches of knowledge.

At a certain point in time, the map of scientific knowledge became so unmanageable and confusing that librarians, particularly at the Library of Congress in Washington, DC and at the Bibliothèque Nationale in Paris, and also in London and Berlin, started to make inventories and open avenues, alleys, and passages through the “scientific jungle” but by doing so they have in fact cemented the old borders of disciplines. Today, librarians know better than scientists that libraries are in part cemeteries of books and repositories of out-of-date knowledge. They know that the living part of libraries does no longer recognize the older borders between disciplines. The problems generated by the hybridization of social science knowledge and the emergence of new special fields are today also the problems of the librarians.

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