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Sociology that really matters

The general article on sociology of the *Encyclopaedia Britannica* states: “It is evident that sociology has not achieved triumphs comparable to those of the several older and more heavily supported sciences. A variety of interpretations have been offered to explain the difference (...)”. In the following remarks, I would like to offer a comment of this diagnosis.

It is true that sociology gives the impression of being a science different from the others. While some of its products appear as genuinely scientific, others – many others- seem not to meet the criteria generally associated with the notion of science. Recently, some sociologists have even seriously contended that sociology would find its identity if it would accept the idea that it should not try to be a science similar to the others¹.

In spite of this identity crisis, sociology appears as more solidly institutionalised around the world than ever, though. In the third edition of the *International Encyclopaedia of the Social and Behavioural Sciences*, more than 200 articles are devoted to sociology, against 100 to economics, 150 to history, 130 to linguistics, 130 to demography, 100 to philosophy, 40 to archaeology. How can these contradictions be explained?

Sociology : science or literature ?

In order to answer this question, I will start from W. Lepeines’ considerations on sociology as a *Third Culture*².

According to Lepeines’, the self image of sociology oscillates permanently between science and literature, while the truth, according to him, is that it belongs neither to science nor to literature and can for this reason be qualified as a *Third culture*. Classical sociologists, as Durkheim or Weber, have seen sociology as a science similar to others. But their works would display many aesthetical and ideological features. They should be considered as *intellectuals* rather than scientists. The sociological community has always been split into a number of cenacles, sects or schools, evoking rather the world of art than the

¹ As an example among many, Flyvbjerg B., *Making Social Science Matter*, Cambridge, C. U. Press, 2001.

² Lepeines W., *Between Literature and Science : the Rise of Sociology*, Cambridge U. Press, transl. of *Die drei Kulturen*, Munich, Carl Hanser, 1985.

world of science. As far as what Lepenies understands under his notion of a *Third culture* is clear, he contends that sociology *is* in fact and *should be considered as* a branch of literature: the branch specialised in social essayisme.

It is true that, from the early stage to the present days, sociology seems to hesitate between science and literature. Thus, E. Goffman was occasionally described a few years ago, as “the greatest American sociologist of his generation”. The obituary devoted in the *Times Literary Supplement* by Tom Burns to Goffman is entitled, though : “Stating the obvious”. Goffman’s audience was due to the fact that he described with talent the pharisaism of social life. He sold a number of copies more typical of literary than scientific works. At the same time, as Tom Burns -who pays definitely little attention to the principle *de mortibus nihil nisi bene-* makes clear, sociologists with a scientific orientation wondered whether Goffman had taught us anything. To take two other examples supporting Lepenies’ thesis: D. Riesman sold more than one million copies of his *Lonely Crowd*: describing in a vivid fashion the isolation of individuals in mass societies, he aroused in a broad audience the feeling he had produced a diagnosis as to the causes of people’s psychic ill-being. At the turn between the 19th and the 20th century, Le Bon had captured the attention of a large audience at a time when what he called the *crowds* and what we rather call the *masses* frightened the middle class: “effrayaient le bourgeois”.

I would propose to identify the type of sociology illustrated by these writings as *expressive*. They are not equally good nor acceptable. By far not. But they are -or were for a while- visible, essentially because they *express* in an original and efficient fashion feelings many people experience in their everyday social life: the feeling notably that they are manipulated by anonymous forces, or that hypocrisy is a dominant feature of social interaction, or that they are unable to plan and predict their own future and the future of their children.

The visibility of this genre explains perhaps Lepenies’ thesis that sociology is rather an *aesthetical* than a *scientific* discipline. This genre is not, though, against Lepenies’ view, the one which the founding fathers have practised. As Lepenies himself stresses, Max Weber has deliberately decided to write in an awkward fashion in order “not to influence psychologically” his readers and to stress the value free character of his analyses. Most of his analyses are effectively scientific, in the most uncontroversial sense of the word. Tocqueville writes a wonderful French, but he is very hard in his *Souvenirs* against those -very numerous in France according to him- who, being inspired by what he calls *l’esprit littéraire*, tend to consider a theory as true as soon as it generates positive emotions. He could be hard against *l’esprit littéraire*, because he felt rightly that his own analyses were rather inspired by *l’esprit scientifique*. Durkheim has been accused of being ideological. He has been in some respects.

But he is considered as a giant, because he has produced on many subjects theories which are scientific in the most genuine sense of the word.

Lepenies not only disregards the fact that the founding fathers have produced genuinely scientific theories; his idea that sociology would be an intermediary *culture* between art and science is obscure. A more fruitful approach would be to consider that there are many mansions in the house *Sociology*. Durkheim, Le Bon and Proudhon are all considered as sociologists, but they have evidently not the same conception of sociology. Lepenies is right when he says that some sociological products are closer to works of art than to works of science. But he is wrong when he applies this category of a *Third Culture* to the greatest classical sociologists. He should have illustrated his *Third Culture* by Proudhon or Le Bon, say, not by Weber or Durkheim.

The cognitive genre

I will illustrate the *cognitive* genre by a sample of examples drawn from the three founding fathers I have just mentioned. I will present them in some detail in order to bring some clarity into the question as to *what a scientific theory is* and to show that, against Lepenies, sociology can produce theories using the same procedures as the natural sciences and is able to reach the same degree of validity³. I could have drawn examples from modern sociology. But, given the quantitative importance of modern sociology, my choice would necessarily have been arbitrary.

What a scientific theory is?

A long discussion has been going on as to what a scientific theory is. As those who claim that sociology should not try to emulate the natural sciences do not generally even care to tell what makes a theory scientific, it may be useful to try to clarify this question in a summary fashion. To the Vienna Circle, a *good* theory is a theory which in principle at least can be reduced to a set of uncontroversial statements, once it is unfolded. To Popper, a scientific theory is a theory which in principle can be shown to be *false*. To others, a good theory is a theory which can be expressed in a mathematical fashion. To others, it has to use the most sophisticated statistical techniques. To still others, there are no criteria of the scientificity of a theory and myths are as good as scientific explanations. This list is of course not complete, but sufficient to make clear that, before accepting or rejecting the idea that sociological can or cannot be scientific, we have to be clear on the point as to what a scientific theory is.

³ Boudon R., *Etudes sur les sociologues classiques*, I & II, Paris, PUF, Quadrige, 1998-2000 and "La rationalité du religieux selon Weber", *L'Année sociologique*, 2001, 51, 1, 9-50.

Falsifiability is an important dimension of scientificity, but it is neither a necessary nor a sufficient condition for a theory to be scientific, as Popper himself recognised, when he confessed that he could not decide whether Darwinism was scientific or not. If the use of mathematical language were the sign of scientificity, biology would not be a science. Possibly, this is at least my impression, the Vienna Circle came closer to the right view as to what a scientific theory is: I would submit in other words, taking the risk of being considered as premodern by many philosophers of science, that a good scientific theory is a theory that explains a given phenomenon by making it the consequence of a set of statements compatible with one another and individually acceptable, either because they are congruent with observation, *or for all kinds of other reasons variable from one case to the other*. Thus, the Toricelli-Pascal's theory of the barometer is better than Descartes', not only because it reproduces correctly the behaviour of barometers, but also because it avoids the Aristotelian notion of the *horror vacui naturae* and substitutes for it the much more acceptable notion of the weight of the atmosphere.

I would like to show now by examples borrowed from the founding fathers that, against Lepenies' view, sociology has proposed theories as valid as the natural sciences. Tocqueville's, Weber's or Durkheim's theories are built in the same fashion as Pascal's theory of the barometer. *They dissolve the puzzling character of the phenomena they aim to explain by deriving them from a set of statements, all of which appear as easily acceptable.*

Tocqueville

Tocqueville is generally presented by French political scientists as a major proponent of political liberalism, a kind of anti-Marx, by American social scientists as a major analyst of the American constitution, and by philosophers and sociologists favourable to *grand Theory* as a prophet who complained on the dangers of egalitarianism. He is actually much more: he has proposed genuinely scientific theories of a number of phenomena.

The very first sentence of Tocqueville's book on the *Old Regime and the Revolution* is: "*This is not a book of history*". Having said that his book is not a book of history, Tocqueville does not make any effort to say what it is. But we have little hesitation in this respect. The *Old Regime* is a masterpiece in comparative sociology. For it aims, not at presenting the *story* of the Revolution, but at explaining a number of differences between the French and the British societies at the end of the 18th century. Why do Frenchmen at that time believe in Reason with capital R while Englishmen do not? Why does French agriculture remains stagnant, while British agriculture modernises at a quick path? Why is the distribution of French cities as a function of size different from the distribution of British cities?

The research project conducted in the second *Democracy in America*, the volume published in 1845, follows exactly the same line: Tocqueville identifies a number of differences between the French and the American societies and tries to explain them. Why do Americans remain much more religious than Frenchmen, in spite of the fact that materialistic values impregnate their society? Why do they sometime practice their religion with an exaltation unknown in France? Tocqueville's explanation is so solid that it explains differences which can still be observed.

The stagnation of French agriculture

So, at one point in his *Old Regime*, Tocqueville wonders why, at the end of the 18th century, French agriculture remains stagnant at a time where agriculture is flourishing in England. This is particularly puzzling since the physiocrats, who develop the view that modernising agriculture is the most efficient path toward growth, are politically very influential in France at that time. Tocqueville's explanation: administrative centralisation is the cause of the fact that *civil servants* are more numerous in France than in England. Also, French centralisation makes that serving the King is in France a unique source of prestige, influence and power; consequently, other things equal, landlords are more easily incited in France than in England to leave their ground and buy a royal position. In England by contrast, being an innovative landowner can, not only produce local respect and prestige, it can also open the way to Westminster. This macroscopic difference between England and France, summarised by Tocqueville by his notion of *administrative centralisation*, explains why landlord absenteeism is much larger in France than in England. Furthermore, landlord absenteeism is the cause of a low rate of innovation: since their interests are at the Court, the landlords have little motivation to innovate; as to the farmers who run the land, they would have a *motivation* to innovate, but not the *capacity* of doing so. Finally, the low rate of innovation is responsible for the stagnation.

The macroscopic difference between France and England is explained by Tocqueville as the effect of individual decisions taken by the landlords. Their individual decisions are analysed as taken by men belonging to social contexts with different parameters. The parameters characterising the French and the British contexts are themselves the product of a long history. Finally, Tocqueville uses here what we call *Rational Choice Theory*: by leaving their land and serving the King, the landlords gain in influence, prestige, etc. In England by contrast, it is a better strategy to appear locally as a modern and efficient landlord. The macroscopic statement "*centralisation* is a cause of agricultural underdevelopment" appears as entirely acceptable, because it is analysed as the effect of the aggregation of individual decisions that appear as easily understandable, given the contexts. Though *centralisation* is a complex

factor, it is identified with precise *parameters* which affect the field of decision of the actors, here the landlords. *Centralisation* is a construct. But it is not a mere word. It can be noted incidentally that Tocqueville's path has been literally followed by Root in an illuminating book on the comparative development of the modern State in Britain and France⁴.

In another analysis from his *Old Regime*, Tocqueville wonders why the cult of Reason became immensely popular in France at the end of the 18th century, but not in England. His answer is that traditional institutions and hence Tradition with capital T were totally disqualified in France, but not in England. The British aristocracy fulfilled important social and economic roles. Consequently, its higher status was considered by people as grounded and legitimate. In France by contrast, the gentry had no visible social and economic function except sitting in Versailles. Remained on their land those members of the gentry who were not able to buy a royal position. Poor and bitter, they stuck ritualistically to their privileges. Their officially higher rank was perceived by the peasants as illegitimate. As it was the product of tradition, the peasants came to the idea that institutions deriving their strength from tradition are bad. So, when the *philosophes* proposed to substitute for institutions grounded on *Tradition* with capital T a society grounded on what they presented as the opposite term, namely *Reason* with capital R, they had an immediate success. The notion expressed widespread feelings. Tocqueville makes clear that this success cannot be analysed as the product of interpersonal influence, since it was immediate. So, the macroscopic phenomenon under examination, the success of the idea of Reason, is analysed by Tocqueville as the effect of the fact that individual French peasants, lawyers, etc. accepted easily the theory that good institutions should be the effect of social engineering (in our language), be the product of Reason (in 18th century parlance). Here again, a puzzling fact is analysed as the effect of easily acceptable notions and statements. Individual peasants tend to endorse the political theory proposed by the *philosophes* because this theory appears to them as valid. Peasants endorse the political theory of the *philosophes* because they have strong reasons of seeing it as valid. Tocqueville uses here a model where actors are supposed to be moved by cognitive rationality, i.e. the type of rationality moving the scientist who is confronted with the question as to whether a theory is valid or not.

American religiosity

The same kind of rationality, that goes beyond the notion of rationality in the sense of our *Rational Choice Theory* is also hypothesised in Tocqueville's analysis of the American religious exception. The American religious exception

⁴ Root H.L. (1994), *The Fountain of Privilege: Political Foundations of Economic Markets in Old Regime France and England*, Berkeley: University of California Press.

is puzzling, because it contradicts the macroscopic trend identified by Comte, Tocqueville or Weber, according to which modernisation would generate a disenchantment of the world. The American society is the most modern, it remains, though, the most religious of all Western societies⁵ ? The puzzle has been explored, not only by Tocqueville, but also by Smith, Weber and by many modern writers⁶. But the latter have added few new elements to the explanation of the former.

I will limit myself to Tocqueville's contribution in the second volume of his *Democracy in America*. The balkanised character of American religious institutions, a host of sects, has made impossible the competition and conflicts between the State and the Church which appears in France during the 1789 Revolution. Consequently, the American sects have not been deprived of a number of functions, having to do with notably Health, Education and Welfare, which they had traditionally fulfilled. In Europe, in France notably, as a consequence of the conflict between State and Church, these functions were more and more fulfilled by the State; while they remain in the US fulfilled to a large extent by the Churches. As a consequence, American citizens have to do with all kinds of religious institutions in their everyday life. It is then fully understandable that they can hardly develop against them negative feelings of the type the Frenchman of the 18th or 19th centuries developed.

Moreover, the number and variety of the sects has made that, in the US, a high degree of tolerance has developed as far as the dogmatic aspects of religion are concerned. Given this dogmatic tolerance, the main common denominator between the Protestant sects is *moral*, rather than *dogmatic*. This had the effect of protecting religion against the advances of science. While, in Europe, scientific truths were often established at the expense of dogmatic religious truths, this was less frequently the case in America. So, a cause of the decline of religious beliefs that was powerful in Europe was much weaker in the US.

If we summarize Tocqueville's program as it can be reconstructed from his analyses, it can be characterised by the following principles 1) the objective of sociology is to explain puzzling phenomena; 2) explaining a phenomenon means in sociology as in any other discipline finding its causes; 3) the causes of the social phenomena are to be found on the side of individuals, of their attitudes, decisions, choices, or beliefs; 4) the attitudes, choices, beliefs, representations of individuals can be understood: their meaning to the individual is the cause as to why he endorses them; 5) the meaning to the individual of his choices, etc. is

⁵ Inglehart R. *and al.*, *Human Values and Beliefs, a Cross-Cultural Sourcebook*, Ann Arbor, The University of Michigan Press, 1998.

⁶ Iannaccone L., "The Consequences of Religious Market Structure : Adam Smith and the Economics of Religion", *Rationality and Society*, 3, 2, Avril 1991, 135-55.

understandable exclusively by reference to the context in which the individual is embedded.

Max Weber

Often, Max Weber retains the attention of his commentators more through the philosophical aspects of his work (“the war between the Gods”, “the iron cage”, “the polytheism of values”, etc.) than through his scientific analyses. As many people would believe, according to a familiar joke, that Beethoven has written only one symphony, the ninth, many students believe Weber would have proposed one theory: *The Protestant Ethic*, while he has devised solid scientific explanations of a multitude of puzzling phenomena.

For Weber, as Tocqueville or Durkheim, saw sociology as following the same basic goals and procedures as any other scientific discipline. Sociology aims at *explaining*, in other words at finding the causes of the phenomena it aims to explain. To him, as far as *social* phenomena are concerned, their ultimate causes lie in individual actions. So, the sociologist should aim at finding out the microscopic causes of the macroscopic events he is interested in. Finding out the microscopic causes of macroscopic events is also the final objective of other disciplines, as biology. When a biologist has discovered, say, a relation between some eating habit and cancer, he will normally not stop here, but will try to find out the micro-mechanisms behind the correlation.

The analyses conducted by Weber in his writings on the sociology of religion and also on other topics are effectively grounded on the methodological principle that the causes of religious beliefs lie in the reasons they have to endorse them. The convergence between the theoretical considerations of the *Essays on the Theory of Science* and the analyses of the *Essays in the Sociology of Religion* is perfect⁷.

For or against monotheism

Why did for instance the monotheistic Mithra cult penetrate so easily into the Roman Empire, while the traditional Roman religion was polytheistic? (Weber, 1922) Why was it particularly appealing to the Roman civil servants and soldiers? Answer: because they had strong reasons to find it appealing. The traditional Roman religion was a religion of peasants: it did not speak to civil servants. Why would they consider the landmarks between the fields as gods? By contrast, Mithra religion gives the stature of a god to a unique figure, half real half unreal; the Mithra-believers are promoted from one rank to the next higher by being submitted to uniform, well defined, impersonal procedures.

⁷ Weber M., *Gesammelte ...op. cit.*, and *Gesammelte Aufsätze zur Religionssoziologie*, Tübingen, Mohr, 1988 [1922].

They have reasons to feel appealed by this religion: it appears to them as familiar, since its general features can easily be seen as a transposition of the rules and rituals governing the Roman civil service. Roman civil servants are promoted also after having been submitted to standardised examinations. At the top of the hierarchy sits the Emperor, both a human figure and the symbolic representation of an entity, the Roman Empire. So, the civil servants have reasons to prefer Mithraïsm to the traditional Roman religion. The reasons of the centurions are the same. These reasons are understandable. The theory explains why the Roman civil servants were a powerful vector in the diffusion of the Mithra cult. Of course, the reasons are not of the instrumental type; still, they are reasons; these reasons are the genuine causes of the individual conversions of the civil servants and, by aggregation, the causes of the macro-phenomenon “diffusion of Mithraïsm in the Roman Empire”.

Why did the Prussian civil servants feel attracted by masonry. The analysis is similar to the one I have just mentioned. At the beginning of the 19th century, the Baron vom Stein reorganized the Prussian State, giving it the backbone of a powerfully stratified body of civil servants. These civil servants were promoted from one rank to the higher one through impersonal examinations without an always clear relation with the type of competence they had to master in their functions. The civil servants were supposed to be guided in all their actions by impersonal and coherent rules and laws which were supposed to serve the interests of the impersonal State. Now, masonry could easily appear to the civil servants as reflecting the same principles on a symbolic mode. A great Architect following unchanging universal laws, a body of servants strictly stratified and promoted from one rank to the higher one through impersonal formalized procedures. Once this similarity is perceived, it is easy to understand why the civil servants felt more attracted than, say, the *Junker* or the land workers by this *Weltanschauung* and why they accepted it more easily.

By contrast with the Roman civil servants or the centurions, the Roman peasants accept with reluctance the new monotheistic religions appearing in the Roman Empire, Mithraïsm and later Christianity, and tend rather to remain faithful to the traditional polytheistic religion. Why? Because, given their type of activity, the Roman peasants find difficult to believe that the natural phenomena they are subjected to, being to a great extent unpredictable and whimsical, would result from a unique will. A unique will has to reveal some coherence in its action, while the natural phenomena appear as incoherent, sometime helpful sometime hostile to the peasant. The Roman peasants would, according to Weber, be Popperian *avant la lettre*: they would be reluctant toward a theory, monotheism, which appears to them as incompatible with the data they observe.

Attraction and influence of puritanism

Weber devotes many pages to the problem of theodicy, in *Economy and Society* and the *Essays in the Sociology of Religion*. As long as the world is conceived as governed by a number of gods in competition with one another, explaining the defects of the world, explaining the evils which can be observed, raises no special problem. Each god has his followers and servants; each has his objectives and strategies; they struggle against one another; the outcome is unpredictable and variable. By contrast, as soon as the world is conceived as submitted to a unique will, theodicy becomes a crucial theoretical question.

Historical religions have proposed three basic answers to this question. The dualistic solution typical of Manicheism, the Indian doctrine of the transmigration of souls and the doctrine of predestination. Zoroastrism, Buddhism and Puritanism are particular illustrations of these three basic solutions.

Considering the third solution, the one proposed notably by Puritanism: God's power being unlimited, his decisions cannot be considered as affected by human actions. He has taken his decisions once for ever. The reason why they appear as difficult to understand, why good men are often struck by unhappiness and bad men as following a happy life is that God's decisions are ununderstandable. The calvinist, then puritan solution to the question of theodicy, the *deus absconditus*, appears to Weber as the most noticeable of the three. It is simpler than the Indian solution, less easy than the manichean solution, and more compatible with the notion of God's all-powerfulness.

This solution appears repeatedly in the history of traditional religions, because of its intrinsic logical strength, suggests Weber. The idea of predestination is already present in Augustinus' writings, but also in the *Old Testament*, in *Job's Book* notably. Job is a good man, and is exposed though to all kinds of sufferings, because the motivations of God's decisions are not accessible to the believers. Why would Job complain? "*Animals could as well complain not to have been created as human beings as the damned could complain that their sinfulness has been determined by predestination (as Calvinism contends)*". Many other passages of the Old Testament insist that God's will is ununderstandable. The idea appears in other words very soon, because it is a corollary of the notion of the all-powerfulness of God. Among the three basic answers to the question of theodicy, it is the one which is the most compatible with the dignity of God. Moreover, it has the essential side effect of making magical practices and rituals meaningless and of promoting instead ethics against magic. In this third solution, it is meaningless to try to influence God by magical rituals: he has taken his decisions since ever, and they are final; the best thing to do for the believer is to behave in a way as ethical as possible; if he

behaves ethically, this will not influence God, but plausibly be the sign that he belongs to the number of the elected⁸. Other side-effect: the third solution contributes to the disenchantment of the world, since the believer is deprived of the hope of reaching any direct access to God, and that, although the world is the effect of God's will, the believer is unable to interpret the world as the effect of God's will. This will lead him toward a naturalistic interpretation of the world.

As these examples show, the objectives of Weber are the same as Tocqueville's: identify, as the biologist for example currently does, the microscopic causes responsible for the macroscopic phenomena he wants to explain. Here: the collective beliefs and their macroscopic (unintentional) effects are explained by showing that at the microscopic level, individuals belonging to a given context have reasons and motivations to believe what they believe.

Durkheim

Durkheim's view of science is less clear than Tocqueville's or Weber's, at least if we take seriously the doctrinal presentation he has proposed of it in his *Rules of Sociological Method*. But, as soon as we try to detect the program he effectively follows in his empirical analyses, it is not difficult to show he follows a program close to Tocqueville's or Weber's.

The Durkheimian theory of magical beliefs

I will take as an example the Durkheimian theory of magical beliefs: probably one of the most remarkable of the theories proposed in his *Elementary Forms of Religious Life*. It can be summarised as follows.

According to this theory, it should firstly be recognised that *primitive* men have not at their disposal the intellectual tools and resources Western people have developed in the course of centuries. They have no reason of knowing the principles of Western physics or biology, nor of mastering statistical inference. Over the generations, they have accumulated all kinds of know-how and empirical notions. But they cannot derive from their empirical experience a representation of the biological processes responsible for the birth, decay and death of living beings. Now, they need such a representation, in order to synthesise their empirical notions and data, and above all, to devise recipes likely to increase their economic effectiveness and productivity. So, they will draw a *biology* from the representation of the world available in their society and considered as legitimate: the religious representation of the world. Religious doctrines play the same role as science in our modern societies: they are the source from which all kinds of practical recipes are extracted, exactly as we

⁸ Boudon R., "La rationalité ...", *op. cit.*

derive recipes from science⁹. “*Religions have provided a first representation of what the relationships between things could be (...) between the logic of religious thinking and the logic of scientific thinking, there is no wide gap. Both are made of the same ingredients (...)*”. So, magical beliefs are nothing else, but the recipes which *primitive* men draw from the religious doctrines available in their society: “*we can now understand why magical beliefs are full of religious ingredients : they are born from religious beliefs*”.

The next question is: magical recipes are ineffective; they fail as frequently as they succeed. Why is then their credibility not eroded in the minds of the believers? Durkheim raises this question himself and explains this persistence of magical beliefs by a set of ingenious and solid arguments.

Anticipating on modern philosophy of science, he maintains that scientists have strong reasons not to reject a theory as soon as it appears as incompatible with some data. A scientific theory is always a set of articulated statements; among these statements, some belong to the core of the theory, other are more peripheral; when a theory appears as incompatible with some data, the scientist cannot know which statement(s) in the theory is or are responsible for the contradiction. So, he will normally assume that a theory that explains many facts is basically good, and that some minor change in the peripheral assumptions should be able to reconcile the theory with the data. This thesis is known today as the *holistic* Duhem-Quine’s thesis. The thesis is called *holistic* to stress the point that, to the scientist, a theory is a *whole* and that he cannot immediately see which part of this whole is wrong. The thesis is attributed rightly to Duhem, since in his work on the history of physics, Duhem devoted a lot of attention to the empirical fact that generations of physicists believed in theories which they knew were incompatible with some data. Quine has contributed to make explicit Duhem’s intuitive explanation of this fact. But before him, Durkheim identified very clearly the cognitive mechanism which we attribute to *his* contemporary Duhem and to *our* contemporary Quine. He saw that scientists have strong reasons not to reject a theory contradicted by data : they can always believe that a minor adjustment would solve the contradiction between theory and data: “*When a scientific law can take benefit of the authority of numerous and various experiments, it would be contradictory with a methodical stance to reject it too rapidly because a fact seems to be incompatible with it. One should first check that the fact can only be interpreted in one way and that it is impossible to*

⁹ Durkheim E., *Les Formes Élémentaires de la Vie Religieuse*, Paris, PUF, 1979[1910], p.340 : “Le grand service que les religions ont rendu à la pensée est d’avoir construit une première représentation de ce que pouvaient être ces rapports de parenté entre les choses (...) entre la logique de la pensée religieuse et la logique de la pensée scientifique, il n’y a pas un abîme. L’une et l’autre sont faites des mêmes éléments essentiels (...)”. “Nous pouvons maintenant comprendre d’où vient qu’elle [la magie] est ainsi toute pleine d’éléments religieux : c’est qu’elle est née de la religion”.

explain it without evoking the statement it seems to refute. Now, the Australian does not behave otherwise when he explains the failure of an Intichiuma to some hostile action"¹⁰. Exactly as scientists, contends Durkheim, magicians introduce auxiliary assumptions to explain why their theory has failed: the rituals have not been practised the way they should; gods were ill-tempered that day; unidentified factors have disturbed the magical operations, etc.

Moreover, as the history of science shows, a theory is rejected only from the moment when it can be replaced by a more credible one. In spite of the doubts aroused by the notion of the *horror vacui*, it was used until Toricelli and Pascal were able to show that it could be replaced by another, more credible one, the weight of the atmosphere, to explain the barometer. Now, traditional societies, by contrast to modern ones, are characterised by the fact that religious interpretations are produced in a monopolistic institutional environment, while scientific interpretations of the world appear in a competitive institutional context. In addition, social change is slow in traditional societies, so that the pressures of the other subsystems on the subsystem of religious beliefs are much less important than in modern societies. The market for new theories is on the whole much less active in traditional than in modern societies.

Moreover, empirical data can reinforce false beliefs. When do the primitive practise their rain rituals for instance ? In the periods of the year when rain is likely to fall, when it is needed by the plants, and not in the dry periods, when plants do not need water. In other words, if we would build a contingency table and classify the days of a given year along two binary variables indicating whether on a given day the rituals have been practised or not on the one hand, and whether or not rain has fallen, on the other, we would almost certainly obtain a high correlation between the variables. Now, we know that correlation is not a proof for causality; but even modern scientists rely often on correlations to ground causal statements: many diets are recommended by physicians on the basis of correlations: since the Japanese or the Greek eat (or avoid) such and such food, and since they are less likely to suffer from a given type of cancer, we should eat (or avoid) that food. The cognitive mechanism is exactly the same as the ones explaining the confidence of the *primitive* Australians considered by Durkheim in their magical beliefs: *“Moreover, the effectiveness [of magical rituals] is, apparently at least, reinforced by objective observational data. It is normal that the totemic species reproduces itself regularly; in most cases, things happen as though the ritual gestures had really produced the effects expected*

¹⁰ Durkheim E., *Les Formes...*, p.515 : “Quand une loi scientifique a pour elle l’autorité d’expériences nombreuses et variées, il est contraire à toute méthode d’y renoncer trop facilement sur la découverte d’un fait qui paraît la contredire. Encore faut-il être sûr que ce fait ne comporte qu’une seule interprétation et qu’il n’est pas possible d’en rendre compte sans abandonner la proposition qu’il semble infirmer. Or l’Australien ne procède par autrement quand il attribue l’insuccès d’un Intichiuma à quelque maléfice....”.

*from them; failures are exceptional. As rituals, especially those that are periodical, do not require from nature anything else than to follow its normal course, it is not surprising that, in most cases, it seems to follow them. Thus, if the believer appears not to pay attention to some observational data, the reason is that he pays more attention to other experiments that appear to him as more convincing. The scientist does not behave otherwise: he is only more methodical*¹¹.

Durkheim suggests in other words that the collective beliefs observed in traditional societies are not essentially different from the beliefs we observe in modern societies. They can be explained, exactly as ours, by the fact that they are meaningful to the believers, that they have strong reasons to endorse them. I will leave here aside an important point I have developed elsewhere¹².

Durkheim's theory of magical beliefs is genuinely scientific in the sense that it explains a very puzzling phenomenon (that people believe persistently in the validity of causal relationships which are objectively invalid) by a set of easily acceptable statements (as the Duhem-Quine assumption and the other assumptions introduced in the theory). But its high level of validity is also confirmed by the fact that it satisfies in a spectacular fashion the Popperian criterion of the congruence with data. It explains easily the variation over time and space of magical beliefs, including variations which have been discovered a long time after Durkheim has proposed his theory. It explains why magical beliefs are absent from classical China or Greece, why they are more frequent in hunting or fishing societies, or in agricultural societies than in gathering societies. It explains why they have a much greater importance in the 16th or 17th centuries in Europe than in the 14th century, or why in the 16th and 17th centuries they are much more important in the most modern parts of Germany or Italy than in Spain or in the backward parts of Germany or Italy. Many of these data are strongly counterintuitive. They are easily explained by Durkheim's theory.

¹¹ Durkheim E., *Les Formes*, p.516... :“De plus, l'efficacité physique elle-même [des rituels magiques] n'est pas sans trouver dans les données de l'observation objective une confirmation au moins apparente. Il est normal, en effet, que l'espèce totémique se reproduise régulièrement ; tout se passe donc, dans la très grande généralité des cas, comme si les gestes rituels avaient réellement produit les effets qu'on en attendait. Les échecs sont l'exception. Comme les rites, surtout ceux qui sont périodiques, ne demandent rien d'autre à la nature que de suivre son cours régulier, il n'est pas surprenant que, le plus souvent, elle ait l'air de leur obéir. Ainsi, s'il arrive au croyant de se montrer indocile à certaines leçons de l'expérience, c'est en se fondant sur d'autres expériences qui lui paraissent plus démonstratives. Le savant ne fait pas autrement ; il y met plus de méthode”.

¹² Boudon R., *Etudes II*, *op. cit.*

The achievements of the TWD program

In summary, it is not difficult to identify in classical sociology scientific achievements, even *triumphs*, to use the vocabulary of the *Encyclopaedia Britannica*. In all the examples I have selected phenomena at first view opaque are explained by their causes, these causes being represented by understandable individual actions or beliefs. These explanations are very convincing, exactly for the reasons why any scientific theory is convincing. They are congruent with observational data; they are made up of empirical and non empirical statements and notions that are easily acceptable.

It would be as easy to find in modern sociology numerous examples illustrating what I would call the TWD program, the program described by the kind of contributions from Tocqueville, Weber or Durkheim I have just presented. A host of studies, applying the principles of the TWD program, contribute to explain convincingly opaque phenomena: those dealing with crime, social mobility and stratification, education, social change, organisations, collective action, norms and values; social mobilisation, innovation and diffusion processes; collective beliefs, public opinion, institutions, etc. When put together, these studies not only appear as producing cumulative knowledge, but in many cases they have changed in depth the perception which we have of these phenomena¹³. Thus, studies on the diffusion of innovations have shown that we need not to see the rejection of innovations as irrational even when innovations appear as positive with regard to the interests of the actors themselves. Studies in the sociology of religion have shown that beliefs appearing as strange to observers may appear as grounded to the social actors themselves. They have contributed to a better explanation of religious beliefs, but also possibly to a greater tolerance. Studies on education, stratification and mobility have shown that the relation between the three processes is highly complex and have perhaps contributed injecting more wisdom into educational policies.

This does not mean that the sociological works that belong to the TWD program are the most widely known. On the contrary, people prefer sociological products belonging to the *expressive* or *critical* types or the grand theories built around these *collective concepts* which irritated Weber. As Pareto has written, people prefer often a *useful* to a *true* theory. Not under the effect of any perversion, but simply because it is easy to see whether a theory is useful while it can be hard to judge whether it is true or false. Thus the Nietzschean theory of the origin of Christianity is simple and *useful* in the sense that it serves ideological interests. The refutation proposed by Weber of this theory is both

¹³ Boudon R. & Cherkaoui M., *Main Currents in Social Theory*, 8 volumes, London, Sage, 1999, propose a selection of pieces following the TWD programme. The first four volumes cover the period from the origins to 1930, the four last ones the period from 1930 to 2000.

complex and *useless* in the sense that it does not serve any religious or anti religious movement. One can even go further: the criterion *useful/useless* tends to dominate the criterion *true/false*. One can check it at the fact that a false and useful theory is often perceived as true, as soon as its falsity is not too visible. If it is obscure, it will be perceived as profound.

These remarks apply to the general public but also to the mediators. They can see easily whether a theory is *useful*, less whether it is *true*. They can see whether a theory supports some ideology or social movement. Less whether it is true or new.

Where does the singularity of sociology come from: the four ideal-typical programs of sociology

I can now come back to the doubts expressed by the *Encyclopedia Britannica* on the scientific status of sociology, I have mentioned earlier. The institutionalisation of sociology can be explained notably by the success of its cognitive program as brilliantly illustrated in the past by Tocqueville, Durkheim or Weber. But, while this program is widely used and illustrated also by contemporary sociologists, it is far from being unique. And it is far from being the most visible. The label sociology covers also other types of programs. Lepenies is right when he maintains that, from the beginning, sociology follows other types of program and that it oscillates between science and essayisme. But he is wrong when he says that its ambition of being a science as expressed by Weber or Durkheim is an illusion. Moreover, one can be more precise and, instead of stating that sociology is a third culture between science and literature, try to describe the variety of sociology by a typology.

I would like to submit that it is possible to identify at least four major and permanent ideal types characterising sociological production. I propose to call them the *cognitive* (or *scientific* type), the *aesthetical* or *expressive* type, the *cameral* or *descriptive* type, the *critical* or *committed* type.

The *cameral* or *descriptive* program; the *critical* or *committed* program

As I have lengthily presented the *cognitive* or *scientific* program and evoked earlier the *expressive* or *aesthetical* programs, I will present now the two other ones.

Schumpeter has called cameral sciences, the sciences that aim essentially at producing relevant information aiming --supposedly at least-- at making political decisions more adequate.

Many sociological works belong to this genre, although their authors are not always conscious of this point. They aim for instance at making visible phenomena that are well known to the actors themselves. Thus a great part of urban sociology or of the sociology of social marginality consists in describing experiences which are familiar to the actors themselves.

This information can take a qualitative direction, as when the sociologist describes the ways of life of marginals. It can take a quantitative dimension and attempt at answering questions of the type *how many* or *how much*. Many surveys on the evolution of crime or suicide, on the variations of public opinion and on many other subjects have effectively an essentially descriptive scope and an essentially cameral function. They help enlightening people but above all informing the decision makers.

Cameral sociology meets -- with other types of sources of information, press reports, data produced by administrative offices as the Bureau of Census or polling institutes-- a crucial demand of modern societies. This demand is rapidly growing. Not only the political decision makers, but all kinds of actors have a need for social data: political parties, social movements, pressure groups, etc. These data have not only a practical use, they are often used as rhetorical arguments. Quantitative data help making political discussions serious.

This type of sociology has been practiced since ever. Thus, a Le Play in his work on *Les Ouvriers Européens* described methodologically the conditions of living of the European workers; his work was motivated by the fact that, under Napoleon III, social policy was rationalised. Now, cameral sociology has tremendously grown as a consequence of the increase in the demand for social data. The importance of this growth can be seen for instance at the fact that some traditional branches of sociology get an increasingly cameral orientation. As noted by Luckman, while classical sociology of religion raises useless but fascinating questions - as to the origin of the notion of soul, or why Christianity penetrated so quickly into the Roman Empire, modern sociologists of religion are often rather concerned with cameral questions of vital interest to the Churches, as whether, how and to which extent Protestantism is threatening the interests of the Catholic Church in Latin America.

From the moment when the cameral orientation becomes dominant, one cannot expect cumulativity. Mainly intro-determined when the cognitive dimension is dominant, sociology appears as extro-determined when the cameral dimension becomes dominant. When rates of crime increase, sociology of crime tends to develop. When demographic factors brake the increase in the number of students, the interest for the sociology of education tends to decline. This cameral interest explains why the great time for the sociology of education was the time of the explosion of the number of students in the sixties and seventies.

When the rates of unemployment increased, this generated a wave of surveys on unemployed people, etc. Today, urban violence, globalization or terrorism are going probably to become increasingly popular topics.

Of course cameral sociology is affected, not only by the fact that a social problem becomes visible or on the contrary vanishes, it is also affected by ideologies. But this influence of ideologies is in most cases perceived *ex post*. To take an example rather from demography than sociology (but sociological examples could as easily be evoked), in the thirties, demographers were essentially concerned by a problem then perceived as going without saying : the deterioration of the genetic potentialities of mankind ; nobody cared at that time about overpopulation nor differential fertility rates.

The fact that the interests of cameral sociology fluctuate with social and ideological conjunctures, is obviously not surprising, but it gives cameral sociology -and sociology shortly when cameral sociology becomes dominant- a rhapsodic character. So the observer who identifies more or less consciously sociology with cameral sociology will have normally the feeling that sociology for obscure reasons appears as less cumulative than other scientific disciplines.

As these examples show, it should also be noted that the notion of descriptive sociology is less clear than it appears at first sight. For sometimes, through the description, the sociologist wants to serve a social, political or ideological cause. The words sometimes make this clear. Thus the word *exclusion* is very much used today in France where the word *poverty* was used yesterday. The two have close meanings. The main difference is an axiological one. While *poverty* is a descriptive word, *exclusion* is a normative one: a society cannot accept the idea that some citizens are excluded from it. A number of studies in the sociology of family aim more or less at legitimating the evolution of attitudes toward the family. When the main objective of a sociologist is to influence political processes, one can talk of *critical* sociology in the sense of the Frankfurt school, or of *militant* sociology. This critical dimension is more or less visible depending on the subject and the socio-political conjuncture.

The reason of the present skepticism on sociology

We can go back now to the puzzling question raised by the *Encyclopaedia Britannica*. Where does the contradiction come from between, on the one hand, the fact that the main objective of the social sciences is cognitive, that they aim at producing solid explanations of puzzling social phenomena, that classical sociologists and many modern sociologists have insisted on this objective and have shown it is possible to fulfil it, and, on the other hand, the fact that they are perceived as sciences of a particular type?

I see in summary one main reason to this state of affairs. As I said before, all the ideal typical genres I have distinguished are represented, yesterday as today. About at the same time when Durkheim and Weber produce their *cognitive-scientific* works, Le Play or Villermé produce their *cameral-descriptive* main works, and Le Bon his *expressive* work on the crowds. But the distribution of sociological works among the various genres has been progressively distorted. The growth of the demand for social data which goes with the rationalisation of public policies in all sectors of social and political life --education, crime, housing, regulation of economic life, etc.-- has generated a proliferation of *cameral-descriptive* works. On the other hand, the growing importance of the media in modern social life has produced an increase in the diffuse demand for *expressive* sociology. The 19th century citizen found in religion, literature or philosophy an explanation of his moral and physical plagues, the modern and post-modern citizen look rather toward psychoanalysis or sociology. Sociology is also used to legitimate social movements and actions. The media are more interested by the sociological products likely to meet a demand from their audience, than sociological products with a cognitive function. They prefer *useful* to *true* theories. This is not only true of sociology. The most popular psychological theories are rather the most *useful* than the most *illuminating*. Psychoanalysis is much more popular than experimental psychology and much more commented in the press.

I would add that all the genres I have distinguished, *cognitive*, *cameral*, *critical* or *expressive* are all legitimate and interesting, though the cognitive genre is certainly the most crucial. Durkheim was right when he said that sociology should be useful, but not try do be so. In other words, its aim should be to produce new knowledge, and sociology is useful mainly because it produces new knowledge. But it should not try to legitimate such and such view of the world.

The fact that the cognitive aim is the most natural corresponds to a general feeling. This can be seen at the fact that the greatest names have all brought important contributions to the cognitive genre. Le Play's work is certainly important. But he is generally ranked lower than Durkheim or Weber, essentially because his contributions are essentially descriptive-cameral rather than explanatory. A Proudhon has had beyond doubt a much higher influence than Durkheim. But he contributed little to explaining social phenomena. I know that the genres I have distinguished are ideal typical and that the borderlines between them are in reality sometimes fuzzy.

I know also that each of these genres is hard to define. I have defined the cognitive genre as the one aiming at producing good theories of puzzling phenomena and given several examples illustrating this idea. But there are other ways of serving the cognitive function of sociology. One is for instance to create

concepts able to bring some order in phenomena. Thus, the contrast between *mechanical* and *organic* solidarity, between *Gesellschaft* and *Gemeinschaft*, between *appolinian* and *dionysian* societies or Parsons' pattern variables are useful concepts. *Class struggle*, *exploitation*, *alienation* are useful concepts even though they have been included in controversial theories. But one should not confuse *concept-building* and *theory-building*. A *concept*, a system of concepts is not a *theory* in the usual sense of the word. And, if some concepts are fruitful, others are mere words. *Social capital* is an excellent contemporary example. Much is written about social capital today. But *social capital* is just a word for well known mechanisms. As Alejandro Portes writes: "*Current enthusiasm for the concept [of social capital] (...) is not likely to abate soon (...) However, (...) the set of processes encompassed by the concept are not new and have been studied under other labels in the past. Calling them social capital is, to a large extent, just a means of presenting them in a more appealing conceptual garb*"¹⁴.

In other words, one can have a cognitive ethos but contribute little to knowledge because of a deficient notion as to what a good theory is.

Finally, these distinctions between the ideal typical genres I have submitted include side-benefits which I have not yet stressed. When they are taken into consideration, some confusions vanish. Thus, the paradigm described as *methodological individualism* (MI) has always been considered with some doubt if not hostility by many sociologists. This hostility has been explained by G. Homans: the weight of social structures is so heavy that MI hurts the normal feeling of powerlessness and lack of autonomy experienced by social subjects. This explanation is certainly valid. But the sociologists who reject MI have not only *bad* but also, this is at least my guess, *good* reasons to do so. MI is relevant exclusively as far as the cognitive genre is concerned. MI is the proper way of explaining social phenomena and all the examples I have evoked before use this paradigm, including Durkheim's example. But MI is often meaningless as far as the other programs, the *expressive*, the *descriptive* or the *critical* is concerned. *Expressive* sociology is effective when it confirms by its descriptions the weight of social structures evoked by Homans. The idea that people have no autonomy and follow their fate is the key of the effectiveness not only of Greek tragedies, but of the realistic novels of the 19th century. The success of a Le Bon or of modern sociologists inclined toward structuralism has also to be explained partly by the fact that they describe individual autonomy as an illusion. *Descriptive* or *cameral* sociology has little to do with MI either, since its aim is not explanation. *Critical* sociology insists normally on the alienation and sufferings of people and need not MI either. MI has a real meaning only to sociologists whose purpose is to *explain* social phenomena : it proposes to take seriously in

¹⁴ Alejandro Portes « Social capital : its origins and applications in modern sociology », *Annual Review of Sociology*, 24(1998), prefatory chapter, 1-24.

consideration the fact that their causes can exclusively lie on the side of individual actions, attitudes or beliefs; it assumes that the *causes* of these actions, attitudes or beliefs lie in their *meaning* to the actors. For it is difficult to imagine that ordinary actions or beliefs can exclusively be due to obscure social, cultural, psychic or biological forces. As Weber has rightly stressed, MI is the way to explain scientifically social phenomena, while metaphysical descriptions are normally anti- or a-individualistic. For this reason, Tocqueville, who has never reflected on his methodology, follows intuitively MI and why Durkheim, who is officially hostile to it, uses it actually in his analyses. But, as MI has little relevance as far as the *expressive*, the *descriptive* or the *critical* programs are concerned, and as a majority of sociologists are implicitly at least devoted to these latter programs rather than the cognitive one, one should not wonder why MI is not fashionable among sociologists. *A fortiori*, this explains why *Rational Choice Theory* is not popular either, since RCT is a restrictive version of the IM paradigm.

Finally, these distinctions are equally crucial to understand the evaluation of social scientific products. Thus, Foucault's *Supervise and Punish* has been highly praised. One can understand why. As some works by Goffman or Howard Becker, it has drawn the attention on the destructive effects of prison on individuals and on its weak collective effectiveness. *Supervise and Punish* is an important work belonging to the critical and expressive genres. Scientifically, it contains factual mistakes and rough logical flaws, though. From the fact that prison increases the rates of recidivism, Foucault concludes it increases the rates of criminality. A mistake which a first year student would not make. The positive evaluation is grounded. The book is useful. But this does not say that it is true.

On the whole it must be recognised that today the cognitive TWD genre is less represented than the expressive-militant genres and the descriptive genre in the last decades. This explains perhaps that eminent sociologists have the impression of a discipline in a process of decomposition¹⁵.

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¹⁵ Horowitz I., *The Decomposition of Sociology*, New York, Oxford University Press, 1994.
Dahrendorf R., « Whither Social Sciences ? », The 6th Economic and Social Research Council Annual Lecture, Economic and Social Research Council, Swindon, UK, 1995.