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## THE ESTABLISHMENT OF SOCIOLOGY

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I do not propose on this occasion to enter into any defense of the claims of sociology to be called a science. I wish simply to show that its history, and the steps in its establishment, do not essentially differ from those of other sciences.

On a former somewhat similar occasion I took the same position, and as the words then spoken in a foreign tongue have never been reproduced in our own, they seem to form a fitting introduction to this address. This is what I said:

Certainly no member of the International Institute of Sociology doubts that there is a sociological science, but certain persons suppose that there is a difference between this and other sciences. The fact that the foundations of the science are still being discussed, and that sociologists differ with regard to them, while the foundations of other sciences seem to be recognized by all, causes it to be imagined that sociology is a science different from the rest. But one needs only to study the history of other sciences to see that such is not the case. Without entering deeply into this study, it is sufficient to consider the most completely established sciences at a special epoch in their history. Everyone knows that astronomy is the most exact and the most perfectly established science that we have. Let us consider it, for example, in the seventeenth century. Descartes was acquainted with the theories of the ancients. He knew the Ptolemaic theory. That of Copernicus was familiar to him, as well as the modification of that theory proposed by Tycho Brahe. Modern astronomy is chiefly based on the theory of Copernicus, and its exactness depends entirely upon the law formulated by him of the revolutions of the planets. But was astronomial science established at that period? Certainly not. In the possession of all this knowledge the greatest genius of the seventeenth century rejected the true principle and elaborated a new hypothesis very different from all that had preceded it-a massive and complicated hypothesis which the modern world has almost entirely forgotten. Astronomy in the seventeenth century was, then, in a condition somewhat similar to that of sociology today.

It would be easy to show that the same was true of physics before the

<sup>&</sup>lt;sup>1</sup> Address of the president of the American Sociological Society at its first annual meeting in Providence, R. I., December 27, 1906.

discovery of the law of gravitation, and also that it was true of chemistry before the discovery of the true nature of combustion. As regards chemistry, it is appropriate to mention it in this amphitheater devoted to its study, and it is the glory of France and of the immortal Lavoisier to have made that great discovery which lifted chemistry out of the state of vague theories and false hypotheses, and placed it on the firm and secure basis on which it stands today.

But there is a difference between the modern theories of sociology and the theories which prevailed in the other sciences before their final establishment. The theories of Ptolemy and Descartes in astronomy were false, or they contained only a minute germ of truth. The theory of phlogiston in chemistry was almost entirely false. This is not the case with modern theories in sociology. The organicist theory is not false, nor is that of imitation, nor that of the struggle of races, nor that of social control, nor yet that of the consciousness of kind (these last two come from America, and I do not speak of principles laid down by myself). These hypotheses, and almost all others in sociology are true, or contain a considerable part of the grand sociological truth which is the final synthesis of them all.<sup>8</sup>

More recently a South American, Ernesto Quesada, professor of sociology in the University of Buenos Ayres, has uttered very similar words, going, however, much more fully into the subject.<sup>4</sup> He was practically driven to this course by a remark of the retiring dean, Miguel Cané, of the university, in a public address, reflecting severely upon the study of sociology. He said, among other things, that "sociology, far from being a science, was little more than empty verbiage," and added that he would see with great satisfaction the abandonment of a word more pretentious than expressive of anything real, and more capricious than scientific. To study the various human groups, the causes that actuate them, and all the other determining elements of their respective activities, is to set forth principles of a general character, which, though accepted only provisionally,

serve as a basis for further investigations. But from this to the erecting into a science, with fixed, immutable boundaries, of a mixture of hypotheses and empirical assertions, and calling it a science in the same sense as algebra or mechanics, seems to me an enormous stride. A science ought to be that

<sup>&</sup>lt;sup>2</sup> The congress held its session in Hall of Chemistry of the Sorbonne.

<sup>&</sup>lt;sup>8</sup> Annales de l'Institut international de sociologie, Vol. X (Paris, 1904), pp. 50-52.

<sup>&</sup>lt;sup>4</sup> Ernesto Quesada, "La sociología: Carácter científico de su enseñanza," Revista de la Universidad de Buenos Aires, 1905, Vol. III. (Reprint, Buenos Aires, 1905, 43 pp., 8vo.)

impregnable region where alone reign truths and proved laws. If twenty professors, all working along the lines of the modern sociologists, were charged with the preparation of a program of the subject, I am certain that they would present twenty different programs, each conforming to the quality of mind, personal education, and peculiar method of the author; whereas, of twenty professors of geometry there would not be one who would dare to attack the hypothenuse and attribute to it properties that it does not possess.

Professor Quesada replied to all this very fully and with great ability, but he failed to point out the complete irrelevancy of Dean Cané's attack, comparing sociology to mathematics, which is not a science of concrete things at all, but simply the norm by which all science is tested, and even referring to algebra, which is only an instrument, or tool, to be used in the solution of problems of quantity.

But Professor Quesada shows very clearly that no science is absolutely fixed. All are compelled to start with certain postulates—i. e., unproved propositions, or assumptions—and build upon these; and he enumerates the chief of them as defined by the masters in each science. He shows, moreover, that these postulates are often doubtful, and that several of them—as, for example, that of the atom of chemistry—are undergoing profound modification with the advance of our knowledge. may be said to have made out a clear case that there is no "impregnable region where alone reign truths and proved laws," and that all the sciences are perpetually in fieri, in the same sense as is sociology. He does much more; for he proceeds to show, not only that sociology is already a science of great importance, but that it may be applied directly to practical affairs; and he promises in his lectures to show the legislators and statesmen of Argentina how they may utilize it in advancing the interests of their own country and people.

All the attacks upon our science might easily be met in a similar way, and I have taken some pains to collect all the objections I could find and to ascertain the fallacy that underlies each one. I had thought of presenting the result of this study; but not only would it require more time than can be devoted to it in this address, but, upon mature consideration, I conclude that

it is not worth the while, as sociology is marching over all these stumbling-blocks, and nothing that its enemies can do will greatly check its sure and steady advance. What I propose to do, therefore, is simply to draw your attention to a few of the steps that sociology has taken, and endeavor to point out what has actually been done in the direction of its establishment as one of the great sciences.

Probably the most important result that sociology has accomplished is that of showing what society is; that, if it is not an "organism"—and few now would go that far—it is at least a great organization, bound together by organic ties in all its parts. To be more specific, sociology shows us that human institutions constitute the structures, organs, and organic parts of society, and that they are not independent, but are connected into one great system, which is society. It has not only done this as the result of a study of society in its finished form, but it has confirmed this truth by a study of the origin of human institutions. It has shown how they have arisen. It has traced them back to their primordial, undifferentiated forms, and studied their development from this state of homogeneity to their present state of heterogeneity. It has watched first their differentiation and then their integration.

The general result is that we have come to know what society really is. Sociology has enabled us to orient ourselves in this great maze of human life, to see what the human race is, how it came into existence, approximately when and where it began, in what ways it has developed and advanced, and how it has come to be what we find it. "Know thyself," said the old Greek philosophers; but man never did really know himself until these studies of origins had been undertaken and successfully carried out.

Involved in this we have the true genesis of all the most important human institutions—religion, language, marriage, custom, war, cannibalism, slavery, caste, law, jurisprudence, government, the state, property, industry, art, and science. Instead of a great bewildering maze, a vast meaningless chaos, society reveals itself as a true genetic product of uniform laws

and forces, a product of social causation, and stands out in clear relief against the background of history.

But sociology has done more than this. It has not only discovered the laws of society; it has discovered the principles according to which social operations take place. It has gone farther even than physics, which has thus far only discovered the law of gravitation, but has not yet discovered its cause or principle. Sociology has not only established the law of social evolution, but it has found the principle underlying and explaining that law. Just as in biology the world was never satisfied with the law of organic evolution worked out by Goethe and Lamarck until the principle of natural selection was discovered which explained the workings of that law, so in sociology it was not enough to formulate the law of social evolution, however clear it may have been, and the next step has been taken in bringing to light the sociological homologue of natural selection which explains the process of social evolution. That principle is not the same as natural selection, but it serves the same purpose. It also resembles the latter in growing out of the life-struggle and in being a consequence of it; but, instead of consisting in the hereditary selection of the successful elements of that struggle, it consists in the ultimate union of the opposing elements and their combination and assimilation. Successively higher and higher social structures are thus created by a process of natural synthesis, and society evolves from stage to stage. The struggling groups infuse into each other the most vigorous qualities of each, cross all the hereditary strains, double their social efficiency at each cross, and place each new product on a higher plane of existence. It is the cross-fertilization of cultures.

The place of sociology among the sciences has been definitely fixed. It stands at the summit of the scale of great sciences arranged in the ascending order of speciality and complexity according to the law of evolutionary progress. It rests directly upon psychology, in which it has its roots, although it presents a great number of striking parallels with biology, chemistry, physics, and even astronomy, showing that there are universal laws operating in every domain of nature. The motor principle

of sociology is psychic, and the study of this principle has shown that social phenomena are produced by the action of true natural forces, which, when abstraction is made of all perturbing elements, are found to be as regular and reliable as are the forces of gravitation, chemical affinity, or organic growth.

As a result of this it has been possible to establish the subscience of social mechanics and to work it out with something like the completeness that has been attained in the mechanics of physical nature. At least it has been possible to distinguish clearly between static and dynamic phenomena in society. distinction, dimly seen by Comte, and still more dimly by Spencer, when fully and clearly apprehended, throws a flood of light over the whole field of social phenomena. Social statics is found to constitute the domain of social construction, and to explain the origin of all social structures and human institutions. It underlies the social order. Social dynamics, on the other hand, is the domain of social transformation, and explains all change in social structures and human institutions. It is the science of social progress. The laws of both these sciences have been to a large extent dicovered and formulated, and their workings described.

All this has been accomplished by a careful study of the social energy alone. But sociology has not stopped here. It has plunged boldly into the far more difficult and recondite field of social control. The social energy is so powerful as to exceed its proper bounds and threaten the overthrow of the social order, and would do so but for some effective curb to its action. The motor power of society has to be guided into channels through which it can flow in harmony with the safety of society. This guidance has been furnished by the higher mind or intellect of man. guiding or directing agent is a far more subtle element than the motor force itself, and one much more difficult to understand. But sociology has not shrunk from the task of studying it and unfolding its laws and operations, and these have been sufficiently mastered to be in large part formulated and described. fairly complete mastery of the dynamic and directive agents of society has placed sociology in position to deal in a thoroughly

scientific way with all the facts and phenomena of society—with its origin, its history, and its present condition.

Finally, with the light shed by social dynamics on the spontaneous modification of social structures and the consequent progress of society in the past, and further guided by the established law of social uniformitarianism, which enables us to judge the future by the past, sociology has now begun, not only in some degree to forecast the future of society, but to venture suggestions at least as to how the established principles of the science may be applied to the future advantageous modification of existing social structures. In other words, sociology, established as a pure science, is now entering upon its applied stage, which is the great practical object for which it exists.