

# **THE PRODUCTION OF KNOWLEDGE IN APPLIED SOCIOLOGY**

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# THE PRODUCTION OF KNOWLEDGE IN APPLIED SOCIOLOGY <sup>1</sup>

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## **Abstract:**

This paper examines knowledge resulting from applied sociology, namely from sociological research oriented towards resolving practical problems rather than providing new contributions to our understanding of social phenomena.

Departing from James Coleman's analytical distinction between 'the world of discipline' and 'the world of action', I draw a conceptual framework which depicts the main dimensions of typical organizational arrangements for doing basic and applied sociological work.

Secondly, I analyze applied sociology as a set of social and political conditions where research is produced. These conditions usually give rise to descriptions and, on occasions, to empirical generalizations, whereas results contrasting important theoretical hypotheses from a disciplinary point of view are produced less frequently.

Thirdly, the article examines some specific mechanisms such as methodological decisions, the availability of resources and time constraints to explain why applied sociology most often produces this kind of cognitive results.

Finally, effects related to cognitive and organizational divisions are addressed taking into account two processes in current research systems: the large amount of resources devoted to applied sociological research that result in non-theoretical and non-accumulative knowledge and the decoupling of disciplinary sociology from the practical world of policy making.

**Key words:** applied research, basic research, sociology of knowledge, methodology.

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<sup>1</sup> A preliminary version of this paper has been presented at the *European Conference on Social Theory 'Knowledge and Society'*, organized by the Social Theory Research Network of the European Sociological Association. Madrid, 21-22 September, 2006.

## **Introduction**

One of the most long-standing divisions in the world of science concerns the distinction between applied and basic research. While the former is traditionally viewed as research with a practical end, the latter has as its primary aim the advancement of our understanding of phenomena. This distinction has been criticized due to the inconsistencies that arise when attempting to define scientific work and the knowledge it generates. For this reason, both concepts are only considered appropriate today if they refer to questions such as the organization of scientific tasks or professional orientations in the sciences. It is not considered so appropriate to use them when referring to researchers' intentions or cognitive differences in the research process. Nonetheless, the division continues to be useful when it is employed as a conceptual framework to reflect typical forms in the social organization of science and the conditions in which research is carried out<sup>1</sup>.

This distinction has been present in the sphere of sociology since its beginnings as a discipline<sup>2</sup>. Applied sociology is usually understood as the sociological task which is oriented towards solving practical problems. The term is likewise used to refer to applied social research when distinguishing research aimed at making novel contributions to the knowledge of social reality. But in the case of sociology, this issue has been especially problematic and continues to be a matter of some controversy even today<sup>3</sup>. On the one hand, the term "applied sociology" is used in a very ambiguous way, giving rise to what Robert Merton

called “the problem of establishing the phenomena” (Merton, 1987). At times the term is not explicit, while at others it is difficult to ascertain which aspect of sociology we are referring to when we speak about applied sociology. Are we talking about research aimed at social problems in general? Are we talking about research which attempts to be useful in the public or private sphere through the application of certain research methods? Or are we talking about empirical research commissioned by a client? The absence of a fixed criterion has practical consequences that lead to a certain amount of ambivalence when evaluating research results. For example, what is the nature of the knowledge produced by applied research? If research is applied should the results be assessed following a similar criterion to that used in basic research?

In this paper I will attempt to address some of these issues through a systematic approach. The main objective is to establish an analytical framework that will serve to understand the organizational characteristics of applied sociology and the knowledge that it produces. Basically I use a situational approach for explaining action in the world of the social sciences. The main factors that operate in a situational explanation are: intentional action, the system of beliefs supporting the action, and the structure of opportunities. In this case, it is assumed that the methodological decisions taken by researchers in a given project are an important part of the action. Methodological perspectives function like systems of beliefs. They serve as point of departure for research work as researchers try to bring their intentions up to date through methodological decisions. The conditions of the project are the components of

the social context. They are the structure of opportunities that limits the kind of decisions that can be taken<sup>4</sup>.

Three steps are followed in developing the argument. In step one I draw the main types of cognitive results (in a metaphorical sense, this is the variable to be explained). In step two I attempt to establish the social bases of knowledge production (these are pools of independent variables). In step three I try to explain the results in terms of the social conditions in which they are produced, using methodological decisions as the specific mechanic of the relationship. In the first section some preliminary remarks are made about kinds of sociological products. Departing from Coleman's ideas, section two provides an outline of the analytical framework and examines the typical organizational arrangements for producing knowledge, while section three examines methodological decisions which give rise to the knowledge that most frequently results from applied sociology. In the last section the theory gap in applied sociology is discussed.

### **Preliminary considerations**

We walk upon slippery terrain when discussing applied sociology. One of the principal problems comes from distinguishing two interrelated things: the objectives set for a specific sociological investigation and the criteria used to validate the results. It is thus convenient to make an analytical but explicit distinction between these two lines of discussion. On the one hand, one of the

questions concerns the objectives that are established for a given type of knowledge, namely what is the intended use of sociological knowledge? And ultimately, what is the knowledge good for? Yet another question has to do with the cognitive status of the products of sociological knowledge. The question here is: is the knowledge produced by sociology valid and reliable? And finally, is that knowledge acceptable? I will now deal with the second question in an attempt to identify terms that can provide aid in addressing the type of knowledge that can be expected from applied sociology. This will then serve to relate social contexts with cognitive results.

Given that almost all concepts form part of conceptual networks, the meaning of a concept depends on how it is related to other concepts in the network. For this reason, when we speak about scientific knowledge the meaning of this term depends on what is understood by other science-related concepts such as empirical observation, validity, generalization or scientific theory. For the purpose of this analysis, a coherent approach is to opt for the tradition framed in modern philosophy of science.<sup>5</sup> .

Sociological products can be classified into various types according to the statements they make on social reality. A useful analytical division would be to classify these statements according to whether they combine theoretical bases and empirical support as shown in Table 1. Quadrant 1 refers to the sets of propositions with both a theoretical base and empirical support. These are theories and explanations on a part of the social reality that can be verified

empirically (classic examples include Weber's *Protestant Ethic* and *The Spirit of Capitalism* or Durkheim's *Suicide*). Quadrant 2 includes theoretical elaborations that provide conceptual frameworks for understanding society, but from which it is difficult to derive empirically verifiable propositions (a classic example is *The Social System* by Parsons). Also included here are the hypotheses on reality that have yet to be tested. Quadrant 3 refers to observations and descriptions of social reality, which can become empirical generalizations through the verification of regularities and the accumulation of evidence (for example, early studies on electoral behavior were based on repeated observations that allowed regularities to be verified). Finally, quadrant 4 refers to statements that do not involve theoretical postulates or empirical data, but are suppositions that, in principle, are not grounded in evidence.

This table corresponds to the static version that is used to distinguish between types of knowledge. But perhaps it is more interesting to highlight the dynamic version, that is, the ways in which knowledge is produced and transformed from presuppositions. In order to do so, two routes or typical movements in sociological research can be established<sup>6</sup>. In the empirically-oriented route, empirical generalizations are grounded in theoretical hypotheses that give rise to contrasted theories that can be falsified. On the other hand, in the theoretically-oriented route, theoretical hypotheses make use of empirical data that can be generalized and verify the precepts of the theory. Whether or not the presuppositions are progressively transformed into valid knowledge depends on the procedures to formulate and empirically contrast the

hypotheses used throughout the research process.

**Table 1: Types of statements on social reality**

		THEORETICAL BASE	
		YES	NO
EMPIRICAL SUPPORT	YES	1. Contrasted theories	3. Empirical generalizations
	NO	2. Theoretical hypotheses	4. Presuppositions

One of the key terms of this argument is scientific theory, understood as a combination of theoretical suppositions and empirical foundations. Here we use the traditional notion of theory as an explanatory model that attempts to give an account of some aspect of social reality, assuming that the rules of a viable theory are of an ideal type that serve as a point of reference for the daily and imperfect activity of researchers. A theory is a linguistic formulation that consists of related phrases (propositions) that are connected to one another in a logical manner. Among these phrases are those which have an empirical referent and can be contrasted (or falsified in Popper's terms). Furthermore, a theory attempts to be explanatory, that is, to give an account of certain social phenomena bearing in mind their causes. To do so, two basic requisites must be fulfilled. First, there should be a causal connection, that is, something must exist that can be explained and something must exist that serves to explain it. Secondly, the



mechanisms by which the causal ties operate must be intelligible. In short, the reasons for explaining the generalizations must also be contrastable and congruent with the facts<sup>7</sup>.

The question of applied sociology with respect to its cognitive status is framed within this line, in other words it can be any of the first three types. When we talk about applied sociology we are not referring to theoretical approaches, epistemological questions or the methods used, nor does it have to do with the theoretical or empirical nature of the work. While the most frequent products of applied research may be of a specific type, as we will see below, this is another area of discussion that is best dealt with separately in order to explain what applied sociology is and what comes out of it. With this aim, the discussion will now turn to the question of the organizational framework in applied sociology.

### **Forms of sociological knowledge production**

When we talk about the applied side of research, we are referring to typical organizational arrangements in knowledge production. The differences between basic and applied are thus related to the ways that research is conceived of and conducted. They are ways of defining objectives, determining how to achieve those objectives, how to use the results and how to evaluate those results from different points of view. To systematically observe these differences, we normally resort to a series of traits associated to organizational modes. A common way to do this is to use ideal types that identify dimensions or sets of

facts that initially appear to be coherent.

One of the most useful analytical distinctions in contemporary sociology concerning this topic is that proposed by James Coleman between “the world of the discipline” and “the world of action”. Coleman identifies two types of referents: the world of the discipline is the structure of knowledge and ideas that constitute sociology as a science. The world of action is the sphere in which the knowledge and ideas of the discipline are used. This is an especially useful distinction to differentiate the two possible organizational models in which research is conducted, which are, in turn, the two spheres which sociologists attempt to contribute to<sup>8</sup>. By translating the terms to the most familiar notions of basic and applied research, the two spheres of research can be defined in the following manner. Basic or disciplinary research has as its chief aim to contribute to the structure of knowledge and ideas that form part of the discipline. The accumulation and dissemination of knowledge can ultimately be used for practical purposes, albeit this would be but a by-product of the main objective. What distinguishes basic from applied research is that basic research is specifically designed to advance our knowledge of any social realm. In this context, sociological analysis is always carried out in the world of the discipline. Problems have their origin in this world and the results have a bearing on the discipline. In contrast, the aim of applied research is to provide knowledge that serves to guide action. Applied research is the production of knowledge that attempts to shed light on certain social phenomena that can be affected by informed decision-making. While this type of research can also

contribute to the structure of knowledge and ideas of the discipline, this contribution is but a by-product of its central objective. What makes applied sociology different is that it is specifically designed to guide practical decision-making processes.

One of the characteristics that defines applied research is that the audience is comprised of a broad set of social actors, from an individual client to a government. A second important characteristic refers to time. In the world of action, available information is good if you get it when you need it. In the world of the discipline, the pace is marked by what is considered satisfactory knowledge by those who evaluate it. Yet a third feature has to do with the stakeholders and how resources are controlled in the research process. Applied research always involves stakeholders who have specific aims for the research in question; stakes that can differ from those operating in basic research. Researchers form part of this world of stakeholders in so far as the results of their work can provide larger resources to one of the groups (more information, higher status, etc.). Finally, a fourth characteristic which merits attention is the place that the researcher occupies in this system of stakes and stakeholders. A researcher can act: a) as an “agent of an actor”. An actor can be any individual or organization that intends to use the research results to gain information on the action to be taken; b) as an “agent of a third actor”. This is not a direct user, but someone who to some extent represents the interests of certain people who are affected by the research outcome; and c) as an “independent researcher””. Here it is the values of the researchers themselves that dictate what the

research problem is and what issues need to be examined<sup>9</sup>.

This last case is more difficult to grasp from Coleman's analytical distinction given that it sheds more doubt on the differences with disciplinary research. The reason for this is that the researcher's motives must be taken into account to determine if considerations regarding use come into play. In this case we must account for researchers' belief systems, namely their professional ideology and value systems regarding ways to do research. In short, the problem that arises when discussing applied sociology is that it is difficult to maintain a strictly instrumental position and, in one way or another, the discussion ultimately ends up turning into a normative question (DeMartíni, 1992).

The above ideas permit us to determine, in a more operative manner, the characteristics of the world of action and the world of the discipline in terms of typical organizational models or forms of knowledge production corresponding to basic and applied research. Given that the basic/applied dimension is, in principle, a question of objectives; it therefore has to do with the context in which these objectives emerge and are established and the context in which they are achieved. According to this standpoint, applied sociology is a model that represents a typical way of organizing research work. This type of scheme commonly corresponds to the way in which science organization is observed. It is the image associated to the two large spheres of the scientific world: the traditional academic world and the professional and industrial world. Indeed,

most of the authors who deal with the social organization of contemporary science employ the dual model or the “metaphor of two worlds” (Cortgrove and Box, 1975; Ziman, 1995; Gibbons et al. 1994). Using a similar strategy, the features associated with the types of social organization for knowledge production are defined in terms of dimensions with observable aspects as shown in Table 2.

Looking at the first six dimensions of the table we can highlight the characteristics of applied research as opposed to those of basic research as follows: i) the researcher forms part of a specific organizational context in which practical applications are the primary aim of research. From the organization's point of view, the work conducted by the researcher will serve to contribute to these aims, while the researcher must adapt to the context. For this reason, the division between basic and applied research can also be conceived of as sets of beliefs associated to the research and, on occasion, as professional ideologies in the world of science. ii) Which problem is selected depends on the context, and to a certain extent, is external to the researcher. iii) Researchers' rewards depend on the results of their work in that context; results that in turn depend more on specific users than on professional peers. iv) The criteria of scientific rigor followed in applied research are governed by standards that do not correspond to the “state of the art” of the discipline, but to what is possible or most convenient to do in a given situation. The criterion of finalization is also different. Work is concluded when it is necessary to conclude it and not when the knowledge that can be gained using the available methodological resources

is finally obtained. v) The justification for initiating and supporting research has more to do with the practical results that can be obtained than contributing to the knowledge of phenomena. vi) The dissemination of results is adapted to specialized audiences that can vary according to the use to which the results will be put; results which do not necessarily have to be made public.

**Table 2: Basic and applied social research models**

	<b><u>Basic research</u></b>	<b><u>Applied research</u></b>
<b>Researcher's role</b>	Individual activity with cosmopolitan orientation	Activity in the context of an organization
<b>Selection of problems</b>	Academic freedom	External demands
<b>Distribution of rewards</b>	Contribution to knowledge. "Scientific peers"	Problem solving. "Users"
<b>Methodological norms</b>	Absolute standards of scientific rigor	Standards adapted to the situation
<b>Justification</b>	Theoretical significance	Practical results
<b>Dissemination of results</b>	Adapted to the audience of the discipline	Adapted to special audiences
<b>Types of statements on reality</b>	Theoretical hypotheses (+) Contrasted theories (-)	Empirical generalizations (+) Contrasted theories (-)

## **On applied sociological knowledge**

Thus far I have mainly discussed the institutional side of applied sociology, but have not yet examined the results produced by this type of sociology. In what follows I will discuss the last of the dimensions shown in Table 2 referring to the knowledge gained from applied sociology, that is, the types of statements that are produced regarding reality. The principal question that arises here is the following: In addition to the organizational characteristics, can we say something more about the type of sociological product that is produced in each typical form? In other words, is it possible to determine what types of statements on reality prevail in each case? A reasonable hypothesis is that applied sociology largely produces specific types of sociological knowledge. Applied sociology first produces empirical descriptions and generalizations, and less frequently theoretical hypothesis and contrasted theories. Let us recall the preliminary considerations we made above regarding the statements on reality shown in Table 1. In applied sociology, these statements are more frequently found in the setting of quadrant 3, that is, empirical generalizations followed at quite some distance by the contrasted theories of quadrant 1. In basic sociology, however, there is a prevalence of theoretical hypotheses such as those found in quadrant 2, followed by the statements found in quadrant 1, that is, contrasted theories.

What is the explanation for this? The principal reason lies in the social and

organizational setting in which research is conducted. The type of knowledge produced by research depends on researchers' intentions and the specific circumstances surrounding the distribution of economic resources, power and authority. Or to put it another way, it depends on the conditions in which researchers develop their creativity when conducting research. Now, to determine how certain causal mechanisms operate in knowledge production we must adopt a strategy that permits us to determine how research is done, which methods are used and relate these methods to the context in which research is conducted.

Applied research methodology is characterized by two specific features: the manner in which variables are chosen and treated and the manner in which errors are assumed<sup>10</sup>. Although statistical language is employed, it can be adapted to any research design regardless of whether qualitative or quantitative methods are used or not.

*The distinction between variables.* When research is conducted, it is customary to make a distinction between dependent, independent or intervening variables according to whether they are factors that serve to explain an event or factors that must themselves be explained. However, a further distinction is made in applied research when establishing observations. On the one hand, there are "situational variables". These are variables which play an important role in shaping the events in question and which must be controlled in the design and analysis. They are variables, however, that cannot be manipulated. In other



words, it is not possible to intervene in these aspects of reality when taking action in a given social context. On the other hand, there exist “intervention variables” (also known as “policy variables”). These refer to spheres of observed reality which can either be manipulated or which must be taken into account when making decisions in a specific context. In both cases, these variables concern aspects of reality that must be accounted for when formulating and subsequently designing a research problem.

To further clarify this distinction, let us take an example from the field of criminology. Imagine a sociological study aimed at supporting a program for lowering the crime rate in a given city. The possibilities for taking action by a city government are unlikely to affect the structural dimensions of the crimes (social inequalities, cultural cohesion or a mixture of both). In most studies on criminology these particular situational variables serve to explain much of the phenomenon and therefore are the variables that should be taken into account. If we are able to act upon them, they will also be intervention variables. However, it is possible that the intervention variables correspond to aspects of reality that are related to the ability to act in a concrete situation, for example, in the case of a municipal government. Here the intervention variables could include visible police presence, stepped-up surveillance, effects of local media campaigns or other variables that would possibly not be examined in the context of basic research but are important for the context of use.

In applied sociology, observations focus more on those aspects of social reality in

which it is possible to intervene. When research is oriented towards decision making, certain aspects of the social reality are especially relevant to the research in a given context, regardless of whether those aspects are important to the state of the knowledge of a discipline. What is considered relevant for understanding some aspect of the social reality does not have to coincide with what is relevant in the diverse contexts in which applied research is conducted. This is because the variables subject to intervention often play a less important role in explaining social phenomena.

*Research design criteria.* A second factor related to applied sociological methodology has to do with the accuracy or rigor of a research design. In order to demonstrate this more graphically, I will refer to the well-known distinction between Type I and Type II errors; a common criterion that is used to accept or reject the validity of study results. The results of a research study will vary according to whether the initial hypotheses upon which the study is based are true or false. Problems arise when the initial ideas are erroneous but are ultimately accepted as true, or, when the initial ideas are true but are mistakenly ruled out because they are deemed erroneous. To put it another way, the Type I error, or “false positive”, occurs when a hypothesis is accepted as true when, in fact, it is false. The Type II error, also known as a “false negative”, occurs when a hypothesis which is in fact true, is rejected.

False positives are more commonplace than false negatives in basic sociological research. Ideas accepted as true, but which are subsequently

shown to be false, are not too dangerous in many problem areas of sociology. Furthermore, when researchers present good ideas they are usually admitted in the specialized literature. For example, it is not unusual to find articles in scientific journals that give little evidence or use unreliable research designs, but which are based on interesting ideas. In contrast, Type I errors are much less tolerated in applied sociology. This is because false positives can have very adverse affects if they are admitted in a context in which important decisions must be made. If you have to make far-reaching decisions, you better be sure about what you are doing. For this reason, it is preferable to reject an idea that might be true rather than to accept an idea that is false. Not surprisingly, applied studies tend to use representative methods. For example, official statistics designed to ground policies, such as those on employment and social welfare, are usually based on large samples so as to guarantee small margins of error.

### **Discussion: Applied sociology, sociological theory and empirical research.**

An issue that merits special attention is the relationship between theory and empirical observations, what at times has been called the “theory gap”. The term is usually used to refer to the vast amount of both qualitative and quantitative reports of a descriptive nature; reports which lack theoretical premises or whose results are irrelevant to a theoretical discussion. The question is, therefore, why is there such a large quantity of non-theoretical

empirical results in applied sociology that applied sociology has at times come to be confused with descriptive reports?

The origins of the theoretical gap must once again be sought in the context in which applied sociology is conducted. Empirical observation is increasingly oriented towards quantitative methods, although qualitative methods are also on the rise and many applied researchers show a marked preference for them. In fact, in the initial stages of a study either type of method can be employed. If the studies are conducted in the short term, the resulting statement usually remains at the descriptive level, providing a few explanations at most. These descriptions allow generalizations to be established when there is continuity or replication in a study problem.

This does not mean that a short-term research project must necessarily be descriptive or that descriptions are of secondary importance. On the contrary, one of the principal aims of sociological research is to provide accurate descriptions of the enormous variety of situations and changes occurring in any society. However, applied studies tend to be more commonplace given the conditions in which they are formulated and conducted, that is, due to time constraints or a lack of the material and intellectual resources needed to produce other types of results. On the one hand, researchers must weigh the degree of complexity of the problem against the level of sophistication of the demand. On the other hand, when the audience does not form part of the scientific community, the accumulation and integration of empirical findings is a

secondary concern. If the priority is to find a solution to a problem, little effort will be made to situate the study in a relevant explanatory framework and it will not be grounded in codified theories. Therefore when a research approach of this kind is used, it has more to do with social technologies, namely the standardized use of surveys, discussion groups, in-depth interviews or any other method commonly used in sociology.

From the viewpoint of disciplinary knowledge it makes full sense to address the issue of the theory gap. When a study is not set in the appropriate theoretical framework, the cognitive status of the results is affected. From the standpoint of the accumulation of contrasted knowledge this can be considered as a problem. However, the opposite can also be said from the other side of sociology. If a theory gap exists in applied sociology, then an empirical gap may also exist in basic sociology given that most of the work conducted to provide the discipline with knowledge is not based on systematic observations of reality, but theoretical elaborations or essays. But is this theoretical gap a problem from a practical standpoint? Or yet another question related to the previous one: is the issue of theory relevant to applied sociology? The answer depends, in part, on our concept of research. If we acknowledge that extremes rarely function in the world of social research the answer is yes. That is, if we don't take one of the two extreme positions: on the one hand, the deductive-logical formalism that ignores aspects of reality not included in a model and on the other, the crude empiricism that overlooks the fact that research work is always conducted within a theoretical framework, however poor that framework may be.

Moreover, the so-called theory gap is also a problem from the viewpoint of knowledge application, not only because of the type of knowledge gained, but also for a merely instrumental reason: because it detracts from the potential for use and profitability of an applied study<sup>11</sup>.

We are often too quick to assume that research techniques are what best define applied sociology and that the chief aim of an applied research study is to gather, order and analyze data. We forget that data are much more informative and useful for taking action or making decisions when they are framed within a concept of how things work. That is to say, in a theory. But what is more, if data are examined within a relevant theoretical framework, the investment made to obtain that data is usually much more profitable. It has often been said that merely descriptive data set in a given time and place are like the newscasts of yesteryear. While they provide useful information in a given context, it is likely that they will become irrelevant with time. In contrast, data used to provide knowledge about how things work have a more permanent intellectual function. Data that confirm or modify ideas remain useful even when they are no longer up-to-date. In short, the use of relevant theoretical frameworks generally enhances the status of applied research knowledge and provides better decision-making criteria.

## **Conclusion**

The applied side of sociology, which is understood as research aimed at

orienting decision-making processes, has been examined as one form of knowledge production. I have provided an analytical framework to explain the main characteristics of this type of knowledge production. I have also attempted to shed some light on what types of knowledge are generated in applied sociology. Finally conclusions are drawn as to the uses of applied sociological research in particular settings, namely research conducted in the academic world and public research centers.

Three roles can be assigned to applied sociology in public science from a normative point of view. While two are similar to the majority of disciplines, the third role is more specific to sociology and other social sciences. The first role consists of providing knowledge as a public service, such as studies carried out for a range of administrations that need information. The second role has to do with the legitimization of the discipline. Orienting research towards practical problem solving tasks lends the discipline a certain legitimacy, thereby justifying public investment in social science infrastructures and personnel. This is very important given the enormous difficulties encountered when competing with other disciplines where research is predominantly instrumental in nature. These are the two roles that, in part, characterize the situation facing public science institutions today; a situation in which the direct implication in problems is viewed merely as a complement to the traditional production of certified knowledge.

In our discipline, however, applied research plays an important third role. This

role is the result of the particular situation facing sociology within the scientific institution, especially when comparing sociology to other disciplines such as the scientific-natural disciplines. The official channels of scientific research funding are very limited in the field of sociology, regardless of whether funding comes from international or national agencies or any other public or private entities that fund research. Instead, most resources come from the public administration, which demands research to gain information and for policymaking purposes. In other words, the best-equipped sociological projects in terms of economic resources are applied projects. Or to put it another way, if large-scope, long-term empirical studies come from sources outside the habitual channels of science, a large portion of quadrant 1 (empirical generalizations) and quadrant 2 research (contrasted theories) can only be conducted using the resources of applied research. Applied research thus plays a third role that is fundamental to our discipline: it produces results that serve to advance current knowledge. One of the roles of public centers is to make use of applied research resources to produce strategic research material that can provide fundamental knowledge on social reality and aid in resolving practical problems. The key, then, is to use applied projects as a means to achieving three objectives: improve our knowledge of social reality and increase sociological knowledge in general, provide knowledge which is useful for decision-making processes and uphold the legitimacy of the discipline so that the first two tasks can continue to be accomplished.



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## Notes

<sup>1</sup> The division between basic and applied research has been widely criticized in studies on R&D systems that have been conducted in the fields of political science (Stokes, 1997) and economics (Rosemberg, 1982). For a critical sociological analysis of basic science as a professional ideology see Restivo (1984).

<sup>2</sup> Lester Ward was the first to establish the division between pure and applied sociology in the framework of the positivist ideas of the late 19<sup>th</sup> century. The purpose of applied sociology was to demonstrate how principles discovered in pure sociology can be used to promote progress. For Ward's conception of science see Nelson (1972). In the twenties and thirties the Chicago School used to assume the typical definition of applied research as oriented towards documenting social problems and exposing them to the public domain. See, for example, Bossard (1932). For more on the Chicago School see Bulmer (1984). The longest-standing

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meaning of applied sociology comes from the fifties and sixties, when sociologists increasingly began to use their skills to resolve problems of interest to other organizations such as market research, media studies and research designed to support public policies. See Lazarsfeld et al. (1967) Lazarsfeld and Reitz (1975) Zetterberg (1962) and Gouldner and Miller (1965). These works laid the ground for the divisions that prevail in current literature (Hamilton and Thompson, 2001), (Sullivan, 1992), (Freeman, et al. 1987), albeit a distinction is now made between the role of the sociologist as an applied social scientist (Costner, 1987) (Stern, 1992) (Steel et al., 1998) and the role of the sociologist as a consultant who does not necessarily conduct research (Iutovich and Iutovich, 1987) (Rebach and Bruhn, 2001).

<sup>3</sup> Recent analytical distinctions on the uses of sociology which distinguish applied or policy sociology from other types of disciplinary endeavors can be found in Boudon (2001) and Burawoy (2005).

<sup>4</sup> For an analysis of situational explanations from a sociological point of view see Giner (1997). A complementary approach is the sociology of science that refers to sociology as a discipline. See, for example, Friedrichs (1977) and Turner and Turner (1997).

<sup>5</sup> The epistemological position that is mid-way between extreme foundationalism and epistemological relativism appears to be most widely-accepted in modern philosophy of social sciences as the extremes represented by scienticism and radical epistemologies of the seventies and eighties are gradually being eschewed. A similar position can be seen in Giner (1997). For contemporary discussions in the philosophy of the social sciences see Turner and Roth (2003) and Hammersley (1996).

<sup>6</sup> The development of this idea from a popperian point of view is in Wallace (1971). An alternative and more updated analysis of research practices and its relationship with theoretical traditions in the social sciences can be seen in Turner (1994).

<sup>7</sup> A notion of scientific theory similar to that of the Vienna Circle has been used by Boudon when defending the pre-eminence of what he calls “cognitive sociology” or “sociology as social science” represented by the “TWD research program” (Tocqueville, Weber, Durkheim). For Boudon, the importance of these classic sociologists lies in the fact that they explain initially opaque social phenomena by taking their causes into account; causes which are represented as

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comprehensible actions or beliefs. The explanations are convincing given that they are congruent with observed data and are constructed on easily accepted empirical and non-empirical notions (Boudon, 2001).

<sup>8</sup> This idea has been most recently developed in *Foundations of Social Theory* (Coleman, 1990). We are more interested in the explanatory capacity of the idea and its usefulness in establishing an operative analytical framework rather than the general approach employed by Coleman nor his attempt to establish a reflexive social theory. Coleman has used the notion of the world of action since the seventies to refer to the practical role of social research, albeit the original notion was based on theoretical suppositions that differ greatly from his most recent work (Coleman, 1972, 1974). However, these early works are the most useful for our purposes.

<sup>9</sup> Typical examples can be found for cases a) and c). At one extreme we find contracted research or research conducted for the specific purposes of an organization. At the other extreme we find unrestricted academic research. Case b) is somewhat more abstract. Examples in which third actors intervene could include projects sponsored by non-profit organizations or public scientific funding agencies. In both cases results are disseminated publicly and sponsors represent the interests of social groups or citizens in general.

<sup>10</sup> Previous discussions on selection of variables and research design errors in applied sociology have been made by Freeman and Rossi (1984), Rossi (1980) and Rossi and White (1987).

<sup>11</sup> An already classical point of view on the role of the theory in applied sociology is Gouldner (1957). A contemporary assessment can be seen in Weinstein (2001).