1. MEANING AND PRAGMATICS

One of the obvious levels of empirical reality of what we call science corresponds to the PRODUCTS of scientific activity: bodies of linguistic materials consisting, in different proportions, of propositions made up of signs of a natural language and elements of artificial or formal languages. With regard to any system of signs, there is a traditional distribution of areas: (a) SYNTACTICS, the study of the relationships among signs themselves. Syntactics has been characterized as the study of the rules for constructing "acceptable" expressions within a given language system, irrespective of their meanings. (b) SEMANTICS, the study of how signs are related to what they stand for, refer to, or "represent". Semantics is supposed to state the rules of correspondence between signs and their denotata. (c) PRAGMATICS, the study of the relationships between signs and their human users, i.e., those who send and receive the signs available in particular situations. From this point of view, therefore, the science of sign-phenomena comprises three basic chapters: the analysis of the formal relationships between signs, the analysis of meaning, and the analysis of use.¹

An empirical science considered as a linguistic system and studied without taking into account the associated processes relating signs to the communicators, could be described by the set of its syntactic-semantic construction rules. As, for the time being, the social sciences use

natural languages in a much greater proportion than artificial languages, so, the specialization of natural languages within social sciences requires the introduction of additional rules, syntactic as well as semantic, aimed at reducing the high degree of ambiguity of the ‘non-scientific’ use of natural languages.

Pragmatics begins when this whole set of rules is considered as a body of norms of procedure that a given user of the system applies under certain empirical conditions of language. In any particular situation, the emission (construction) and reception (consumption) of a body of signs require the application of some of these rules. What is usually called ‘methodology of social research’ is the normative body of syntactic-semantical rules that any user of the system has to take into account when engaged in the scientific process leading to a final result: the emission of signs consisting of a (supposedly) adequate description, meaningful to other users of the system, of certain properties of a given set of empirical facts. A report, an article, a book: these are the objective forms, the empirical reality of what we call ‘knowledge’. Under a most important perspective, science exists empirically as an open corpus of texts.

Given a set of syntactic-semantical rules, any emission or reception operation within a given context of communication is a decision-making process. This means that although the syntactic-semantical rules define a certain field of restrictions for the users of the system, there are always several degrees of freedom or indetermination. The body of syntactic-semantical rules is never a deterministic or closed set of rules. As everybody knows, the decisions underlying the production of any set of signs aimed at a ‘scientific’ description of reality imply a complex system of operations: selection of concepts; formulation of hypotheses; operationalization; model construction; building of instruments for collecting evidence; data analysis according to rules with different degrees of standardization; and so on. The study of the empirical conditions under which these decisions take place corresponds to the pragmatics of science.

In social sciences, there is a typical repertoire of problems that most of the time are discussed as if pragmatics did not exist: scientific objectivity; the role of value judgments; the relationships between science and ideology and other related issues. These problems have been almost exclusively approached from a syntactic (logical) and/or semantic (epistemological and methodological) point of view. It is the central contention of this paper that these and other crucial problems can be satisfactorily formulated only at the level of pragmatics.

The fact that most speculations around scientific objectivity in the social sciences have excluded pragmatics considerations stems from the particular theory of meaning associated with the logical background of positivism. In fact, the classical triad of syntax, semantics, and pragmatics is built entirely upon a basic assumption: the description of the formal rules of a language system, plus the study of the rules of correspondence between signs and things, give us a complete picture of the process of meaning; the remaining area, that of the ‘use’ of the system, involves empirical problems that are ‘external’ to the basic syntactic-semantic model. If this may perhaps be true in reference to artificial languages, it is obviously wrong when a natural language (and therefore processes of social communication) is involved. This does not mean that the syntactic-semantic levels of analysis are useless when dealing with social systems of communication; it simply means that syntactic-semantic descriptions are partial or incomplete descriptions of meaning processes. From the point of view of human communication theory, meaning is a social process. Syntax and semantics, as they have been classically defined, state some of the general conditions to which this process is subject. Pragmatics is not the study of how signs (and therefore meanings) are ‘used’; it describes how meaning comes into being as an empirical fact of social communication.

Since a fully developed theory of social communication is not available, the tendency has been to try to solve pragmatic problems (like those of scientific objectivity, the alleged freedom from value judgments, and the relationships between science and ideology) within the narrower limits of syntactic-semantic considerations. This situation has led, in fact, to an impossible task, because the pragmatic issues involved in scientific practice cannot be decided in terms of syntactic-semantic rules of procedure.

Let me express this idea in terms of a distinction which, under one form or another, has been very important in the development of contemporary linguistics, and has been recently reshaped by Chomsky as the difference between competence and performance. Competence refers to the knowledge we must impute to the ‘normal’ speaker or a language in order to explain his capability to produce an infinite number of “correct” utterances of that language. “A grammar, in the traditional view, is an account of competence.” Performance, on the other side, is what the speaker does when he uses his native language system.

Both aspects are of course related to one another, at least by virtue of the fact that “performance provides evidence for the investigation of competence”. But the relationship between competence and performance is not entirely clear, even within the limits of the transformational models of generative grammar. One of the current assumptions underlying many discussions about scientific objectivity in the social sciences has been to suppose that the decision-making process that is at work at the level of actual scientific performance can be directly inferred from the existing model of scientific competence. But in fact there exists a gap between the two. In order to build a bridge leading from scientific competence to scientific performance we need a theory of human communication. This implies a rejection of the definition of pragmatics as the study of the relationships between signs and their users. I would propose that the theory of pragmatics has to cover the complex and unexplored field that begins beyond denotation. We do not have such a theory yet. But let me try to show that we need it, in this particular case, in order to reach a better understanding of the boundaries between science and ideology. The recent developments of semiotics, under the impact of contemporary linguistics and a broader approach to communication processes, imply a new look at the problems of scientific language.

2. METACOMMUNICATION

In what follows, we shall be concerned with linguistic discourse produced and consumed with a predominantly referential function, i.e., linguistic material that is supposed to describe in a certain way the extralinguistic universe of reality. Scientific discourse belongs to a subtype of this class of messages.

Let us take a sort of science-fiction illustration. Suppose a world inhabited by intelligent beings, with a communication system such that the pragmatic analysis of their communications would be uninteresting: a syntactic-semantic analysis would explain all meaningful properties of the messages transmitted. In other words: the model of competence would explain in an exhaustive way the phenomena of performance.

Communication in such a world would have to fulfill the following conditions:

(a) The language used by these beings would be strictly formal; we can imagine an entirely formalized digital system wherein the relationships between signs and denotata are strictly arbitrary.

(b) Communication would have to take place through a single channel; i.e., there exists only one informational series between communicators.  

(c) There would have to be no possible variations of the signals. If these beings communicate through visual signals, there has to be one and only one way of representation of each signal, without variations in size, shape, etc.; if we imagine an auditory system, there have to be no variations of tone, volume, pitch, etc., that could affect referential meaning.

(d) There would have to be no body language of any kind.

(e) The syntactic rules of composition of messages would have to be strictly deterministic at all levels of complexity; the user has no options concerning the combination of signals to build a message.

(f) The semantic rules would have to be strictly biunivocal; i.e., for each thing, quality, or process that may be referred to, there would be one and only one sign or combination of signs to denote it, and each sign or combination of signs would correspond to one and only one denotatum in reality. So, for each possible message content, the sender would have one way and only one to transmit it, and the receiver would have one and only one way to interpret.

(g) The reciprocal perception of the communicators would have to be void of temporal dimension (i.e., it would have to be ‘instantaneous’) and each receiver would have to be able to codify the content of the messages but not the identity of the sender. Were it not so, the sole presence of one communicator before another, even if there were no transmission of information through the existing channel, would convey non-denotative meanings.

(h) Contextual rules, i.e., the rules concerning what is communicated in what situation, would also have to be deterministic.

(i) The rules of relationships between communications and silences would also have to be deterministic; that is to say, silence would have no meaning.


In each communicational situation between two beings of this world, the content of the messages would be unknown to the receiver before communication takes place.

Condition (j) is necessary to avoid the consequence of this world being entirely redundant, in which case communication acts would be useless. Therefore, we do not need to identify our intelligent beings as gods; they must have some degree of ignorance or, in other terms, we suppose that, in spite of their intelligence, they live in an empirical reality that still has sectors unknown to them.

Let us consider this imaginary example, regardless of whether these conditions make sense empirically, i.e., whether they are — in the weberian sense — 'objectively possible'. The important point is that in such a world the science of communication would have only two interesting chapters: syntactics and semantics. For all practical purposes, the messages would have only a denotative function; connotation would not exist or would be reduced to a minimum. In human communication, of course, this does not happen: the meaning of a message goes far beyond its denotative function. All human messages denote at one level, and connote at other levels. Thanks to this, no doubt, we live in a world much less boring than the one we have described or — what amounts to the same — we live in a much more complex and ambiguous communication universe.

Connotation is a level of meaning that exists as far as the rules of message construction are not entirely deterministic in the different dimensions of human communication. Therefore, the sender has, in each concrete situation, a number of ALTERNATIVES open to him for constructing the messages, and these options are not decidable in terms of the syntactic-semantic rules of the system. A sender within a system of communication with certain degrees of freedom performs two basic operations to send a message: among the repertoire of units composing the code of the system he selects those that will compound the message, and he combines the selected units in a certain way within the message. The connotative meaning of the message, i.e., its metacommunicational dimension, depends then on the selective and combinatory options at the disposal of communicators.

Prieto has referred to the manner according to which a given operation is executed, "as far as it is not the only possible manner", and he has called it style. Prieto's conception of 'style' coincides with what we call here, from the point of view of information transmission, metacommunication. The manner according to which an operation (denotation) is carried on, manifests itself through the selective and combinatory decisions made by the sender. It makes sense to speak of a decision-making process only when there is more than one possible way of denoting some set of extralinguistic entities. This decision-making process generates messages having two levels of meaning. On the one hand, we have the message composed by linguistic signs fulfilling a denotative function. Each of them may be analyzed into significans and significatum. This is the level of communication. On the other hand, the fact that the sender has made these particular decisions concerning selection and combination, within this particular communicational situation, creates a second level of meaning: the field of connotation. This field comprises what may be called the metacommunicational phenomena. The notion of metacommunication refers to a process of transmission of information concerned not with the content of the messages, but with the selective and combinatory operations made by the sender.

Ashby offers a classical example directly related to the fundamental principle of metacommunication. Two countries, A and B, are at war. Each of them takes a soldier of the other as a prisoner. Some time after, the wives of both prisoners receive the following message:

"I am well"

It is known that in country A the prisoners may send to their families one of the following messages:

"I am well"
"I am slightly ill"
"I am seriously ill"

8 In many papers, Gregory Bateson and his co-workers in the USA have developed the concept of metacommunication. See in particular Bateson's chapters in J. Ruesch and Gregory Bateson, Communication: The Social Matrix of Psychiatry (New York, Norton, 1951), and P. Watzylawick, J. Beavín, and D. Jackson, Pragmatics of Human Communication (New York, Norton, 1967). An analysis of connotative processes as they relate to ideology has been carried out by Roland Barthes. See especially his paper "Le mythe, aujourd'hui" in: Mythologies (Paris, Éditions du Seuil, 1957).
In country B, only one message is authorized to the prisoners:

"I am well"

which simply means "I am alive", the other alternative being the absence of any message.

It is evident that the messages received by the soldiers' wives, though identical in their communicated content, are very different in their metacommunicational value. **We can therefore say, following Ashby, that 'meaning' is not an intrinsic property of a message, but depends on the set of alternatives the message comes from.** Any message determines its connotative meaning in a given situation in relation to other messages that could have been transmitted instead, and in relation to different combinations of the same elements integrating the message.

All this may seem so general as to be useless. Notwithstanding, it must be taken into account that metacommunication is a pragmatic notion, i.e., it refers to a process of meaning that can only be studied in relation to the empirical communication system: sender, receiver, and the concrete situation in which the transaction takes place. Otherwise, the repertoire of possible alternatives for a given verbal message would be the whole set of messages that may be constructed within the system of a given language. It is well known that this set is, for all practical purposes, infinite, and so any intent of establishing the metacommunicated meanings would be a hopeless task: instead of the emitted message, we could have simply found any other imaginable message in the same language. Pragmatic considerations, which include the identity of the communicators, their social characteristics as well as the social nature of the communicational relationship existing between them, and also the subject matter the communication is about, if we are studying messages centered in the referential function, drastically reduce the potential universe of discourse for a given situation.

Let me introduce some additional examples corresponding to different levels of social communication, in order to clarify the functioning and significance of metacommunicational processes. The establishment of new interpersonal relationships (formal or informal) is a typical case where connotation acquires a particular value. The exchanged messages transmit something through their content, but at the same time they orient each receiver in the understanding of how the other communicator interprets the interpersonal relationship. If I greet a person I have just been introduced to and in doing so I use a tone of voice and terms implying a certain familiarity, I am metacommunicating, besides trans-

mitting a greeting, the decision I have taken concerning the future character of the relationship; this metamessage is a sort of proposal: "I am ready to engage in a cordial, relatively close relation with you". This message exists by virtue of the fact that I could have chosen other words and I could have combined them in a cool and formal fashion, but instead I have made a different decision. In these cases, each message through metacommunication proposes norms for the future development of the relationship. This function is carried out as far as each participant metacommunicates that he has decided to send that message and to exclude several others he could have selected, and therefore that the message transmitted is for him the 'adequate' one. **10**

In cases of ongoing interpersonal relationships, the mechanism of metacommunication becomes evident in those circumstances when the already established norms of transaction are suddenly altered. If a friend whom I am seeing every day greets me one morning using an unusual phrase, this will provoke my surprise and perhaps my confusion. Why, instead of his usual greeting, has he said this or that, or talked that way, or kept silent? This question is not directed toward the message content, but toward coding operations.

The case of synonymy is one of the simplest examples mentioned by linguists in connection with the selective operations of the sender. In Argentina there exists a humorous mass-media personage, Mirna Delma.**11** Where her cousins speak of thieves, Mirna Delma says "poltroons"; where everybody would speak about horse races, Mirna Delma refers to a "cavalry competition". Both kinds of discourse are identical with regard to the communicated content but the personage and the facetious effect are based on the difference established within a certain synonymic field stemming from the selective operations. Mirna Delma's speech metacommunicates her candid search for prestige, her snobbery, her vulgarity, and, in the last instance, her marginality with regard to the in-group culture of her social class.

3. SCIENCE AND IDEOLOGY

At the societal level, connotation is the communicational dimension through which ideological metamessages are transmitted embodied in

10 This point has been developed within the context of a communicational theory of neurotic disorders in: E. Veron and Carlos E. Sluzki, Comunicación y neurosis (Buenos Aires, Editorial del Instituto, 1969).

11 Created by Landru, an Argentine humorist.
messages having a manifest referential function. Just as in interpersonal relationships, communicators transmit through metacommunication the ‘image’ they have with regard to the ongoing relationship and its norms, so the social mass-messages always metacommunicate a certain ‘image’ of society, a certain conception of social reality, the way of organizing it, and the way of understanding its different aspects. As this image and these ways of conceiving and understanding social reality are not the only possible ones, and as they are transmitted through metacommunication, i.e., at an implicit level of meaning, the term IDEOLOGICAL COMMUNICATION seems fairly adequate.\(^{12}\)

Let us take a computer analogy. Suppose a machine able to produce ideological material of a given type: we must NOT identify ideology with the ‘output’ of the machine. This means that an ideological system is NOT a body of propositions of a certain kind, but instead a set of semantic rules defining the constrictions to which the production of a certain kind of propositions is subject. The set of propositions that may be generated by the rules is, for all practical purposes, infinite. The set of rules is a finite set representing the semantic properties of a given semantic universe: they state the decisions about selection and combination of the semantic units needed to construct the messages. Therefore, our ideological system is not the ‘output’ of the computer but its PROGRAM. From this point of view, then, and at this level of analysis, an ‘ideology’ may be defined as a SYSTEM OF SEMANTIC RULES TO GENERATE MESSAGES.\(^{13}\)

The consequences stemming from the operation of different ‘semantic programs’ in the field of ideology can be clearly seen when studying how the relevant social facts are incorporated into mass-media messages, a process we have called elsewhere SEMANTIZATION.\(^{14}\) Suppose an event taking place within society at a given moment. We shall call it ‘X’. In this particular case (and my own description is itself a process of semantization) it was the assassination of a Union leader in Buenos Aires in 1966. Two mass-media of the ‘newsworthy’ type included information about it. These were the headings:

Mass-medium A  
(middle-class circulation)  
The Nation:  
The first gunfires

Mass-medium B  
(working-class circulation)  
Political assassination

The middle-class magazine has internal permanent sections, and the note about the assassination was the first of one of them: ‘The Nation’. The other magazine has no internal permanent structure. If we look at these headings in some detail, we may find several interesting facts.

Mass-medium A: The combination of the section title with the heading carries a metasemantic that we may express tentatively in the following way: ‘You will read something that has national significance, something that has happened this week within the context of the Nation’. (In fact there is in this magazine an implicit but easily detectable rule consisting in putting the most important event of the week in the first place within ‘The Nation’ section). Let us call this operation CONTEXTUALIZATION. Second, ‘first’ as a semantic unit belongs to a temporal paradigm: something will follow. The fact you will read about is the first manifestation of something that is going on, and that will have some other manifestations later. In a word: the fact you will read about is not an isolated one; it belongs to a process. Let us call this operation TEMPORALIZATION. It must be remarked that if we talk about ‘the first gunfires’, we are referring to a conflict that began before, and is now assuming a more violent character. And by virtue of the fact that if we talk about the first gunfires we are assuming that there will be more of them, we can also argue that there is something like a PREDICTION involved.

Mass-medium B: What about the other magazine? The operation underlying the heading is transparent: it says that there are in society political events; that there are also criminal events, and that we are facing an intersection of these two classes: this intersection defines the event we will read about. Let us say that this operation is a sort of CLASSIFICATION.

Within the narrow limits of two- or three-word headings, the two mass-media have begun to give structure to two semantic universes that we may suspect will be very different:\(^{15}\) one of them has CONTEXTUALIZED and TEMPORALIZED the fact ‘X’ and has made a PREDICTION; the other has simply CLASSIFIED the fact ‘X’ by means of a class intersection, an intersection of semantic fields. These operations are the kind

\(^{12}\) If we define ideology as a level of meaning of messages manifestly centered in the referential function, PROPAGANDA may be distinguished from ideology as the discourse centered in the conative function. On the functions of linguistic messages, see Jakobson, *Essais de linguistique générale* (Paris, Editions de Minuit), chapter 11.

\(^{13}\) See E. Veron, “Ideología y comunicación de masas: la semantización de la violencia política”, in *Lenguaje y comunicación social*.

\(^{14}\) Ibid.

\(^{15}\) A more detailed analysis of connotative mechanisms in mass-media, from which this example has been extracted, may be found in E. Veron, “Ideología y comunicación de masas…”, loc. cit.
of mechanisms involved in the decision-making process taking place at any source in social communication, when we look at the construction rules underlying their messages.

An important consequence of what has been said is that the difference between 'science' and 'ideology' has not to be understood as a difference between two types of language or discourse. The difference is one of LEVELS OF MEANING of the messages circulating in society. Since selection and combination (which create the connotative dimension of language) are PRAGMATIC concepts referred to the decision-making process operating in the source, that conclusion radically modifies the basis of many traditional discussions around the problem of objectivity.

In science, the ideological level of meaning stems from all those options in the construction of scientific language that are not decidable in terms of the formal rules of scientific procedure. This field, as everyone knows, is very wide in the social sciences today. When carrying out investigations, social researchers must choose between stratification models where boundaries between social groups are conceptualized as quantitative, and social class models; between a concept of mental illness as a deviation from the existing social norms and a concept of mental disturbance as a form of adaptation to social contradictions; between a theory of social development cast in the traditional/modern continuum, and a theory excluding the idea of a linear progression towards increasing 'rationality'; between a functional model of total society focused on consensual mechanisms and the reciprocal adjustment of social institutions, and a model emphasizing conflict areas, and so on. At the present state of the social sciences, the theoretical and conceptual decisions concerning these alternatives (and many others) make room for 'sociological discourses' having an ideological dimension: there exist neither logical-methodological nor empirical criteria allowing us to adopt a definite option in each of these cases.

We are simply looking at the pragmatic conditions under which the exercise of the norm of objectivity takes place. It is convenient here to take into account several possible misunderstandings of our argument. First, from this point of view the ideal of objectivity consists in the effort to get as close as possible to the conditions stated in our science-fiction example; an effort to obtain a purely denotative language about reality. This is certainly utopian, a theoretical norm orienting the system of social action we call 'science'. SCIENTIFIC LANGUAGE MAY BE DEFINED AS THE CONSTANT AND UNINTERRUPTED STRUGGLE AGAINST CONNOTATION. In the empirical sciences, this struggle manifests itself in many ways.

The most important one is the effort toward a neutralization of connotative meanings BY MAKING EXPLICIT THE DECISIONS THAT GENERATE THEM. The scientific character of the construction of a descriptive and explanatory language about reality expresses itself through the introduction of elements DENOTING THE OPERATIONS THEMSELVES WHICH HAVE BEEN CARRIED OUT BY THE SENDER. This does not eliminate the ideological nature of the decisions made, but neutralizes its 'ideological effect' in communication processes. On many occasions the scientist, like the ideologist, makes a selection of certain concepts referred to social reality that cannot be based either on logical-methodological or empirical criteria; but the scientist, unlike the ideologist, tries to make explicit the very fact of having made a selection under these conditions. He decides, for instance, to describe social structure processes in terms of class struggle, but he warns the receiver about the fact that there exist other possible descriptions he has decided not to choose, and that the option involved cannot be solved, in the present state of his science, on purely scientific grounds. As a result of this sort of DENOTATION OF THE CONNOTATION, the basis of the sender's operations are still ideological, but the resulting discourse is not. The connotative level of meaning always exists, but the 'ideological effect' derived from it only operates when the discourse generated by the sender is presented as 'naturally' the only possible way of talking about its subject. The 'ideological effect' disappears when the selective and combinatory operations are denotated within the language, making explicit in this way the conditions under which the messages have been produced. To restate the difference between science and ideology in terms of presence or absence of the 'ideological effect' implies that this difference holds at the level of RECEPTION, i.e., at the level of message-consumption, and not at the level of the CONDITIONS OF PRODUCTION of messages. If a set of theoretical decisions cannot, in the present state of the social sciences, be justified by means of the formal rules of 'scientific method', the resulting discourse has been constructed under ideological conditions of production: it is impossible to neutralize these conditions by 'flatt'. What may certainly be neutralized is its ideological consumption.¹⁰

Second, if what has been said is true, it also becomes evident that any analysis of the problem of scientific objectivity carried on at the level of the isolated 'scientific propositions' is entirely irrelevant. The central issue is that of THE CONDITIONS OF PRODUCTION-CONSUMPTION of scientific

¹⁰ In this connection, see the different "readings" of the myth pointed out in Barthes, op. cit., fn. 8.
discourse within society. This issue leads us far beyond any isolated proposition, and forces us to ask for the properties of the semantic universe from which a given scientific text has been originated.

Third, it should be clear from what has been stated that the relationship between science and ideology has nothing to do with the issue of 'value judgments' nor with the difference between value judgments and factual statements. This is a typical approach to the problem that makes sense only at the level of isolated propositions. The presence of an ideological dimension in scientific discourse is independent from that distinction: it stems from the system of implicit decisions underlying the construction of scientific messages. This system supposes an evaluative dimension, but the manifest product at the level of social communication processes is a body of propositions that are assertive or descriptive in form. As far as evaluation operates at the level of the conditions of message production, it does not appear within discourse itself.

Fourth, the analysis of these problems from the viewpoint of pragmatics liberates us from a useless discussion. Sociology of knowledge has always had a tendency to translate the fact of the social conditioning of knowledge into an epistemological principle. As a consequence, we face a lot of difficulties. The most classical one is that of relativism and its internal contradiction. If we affirm that knowledge about the social is always socially conditioned and relative, then this very statement is relative, and so it is not true that social knowledge is relative, et cetera. These circles are vicious, and there is no utility in following them. Epistemology defines, at a formal level, the conditions of the possibility of knowledge; methodology, also at a formal level, states the norms designed to fulfill these conditions. But the problem of objectivity begins where these norms end, because it is an empirical problem. And as everybody knows, questions of fact have to be investigated, and formal rules do not help us to decide about empirical matters. Social scientists, once the consensus around the formal principles has been obtained, often make an illegitimate transposition: if the possibility of objectivity cannot be denied, we are objective in our work. To raise doubts about this fact is to be against scientific ethos. Nevertheless, all difficulties concerning the role of ideology begin at the level of scientific practice, and therefore this is the point where the question arises of the responsibility of social scientists and their commitment to truth.

4. THE IDEOLOGICAL USE OF THE MODEL OF SCIENTIFIC COMPETENCE

Controversies around 'scientific social science' have seldom taken pragmatic considerations into account. This is true — and particularly important — of the developing nations, where great efforts devoted to the introduction and diffusion of modern social sciences have been pursued in recent years. In fact, the current situation allows for an ideological interpretation. To face criticisms coming from 'the left', most 'modern' or 'empirical' sociologists in developing countries resort to the formal rules of scientific method: all you have to know about actual scientific performance may be inferred from your scientific competence. According to Germani, for instance, all problems concerning the introduction of the theoretical orientations of American sociology into Latin American countries may be solved by means of the rules of 'scientific method': "... the reception of theories born in different societies or historical periods presents itself as a problem, a problem that may be solved in a completely satisfactory way through the general procedures of scientific knowledge. This means that it is a purely methodological issue,"17

For Galtung, the discussion of ideological problems is an expression of 'traditionalism'. His general answer to the issues involved in the development of the social sciences in Latin America is as simple as this: "We know of no evidence to refute a two-way model: modern society fosters modern science, and modern science may help create modern society."18

A recent article by Cintra is another plain example of the same attitude: opposing the strong marxist approaches within Brazilian sociology, he does nothing but remind the reader of the principal items of an elemental course of methodology of social research.19 At the other extreme, many critics from 'the left' adopt the complementary position, manifesting an implicit or explicit tendency to attack the formal rules themselves, to question the whole analytical model of scientific procedures. It seems to me that both positions fall into the same error: to face problems involving scientific praxis (i.e., involving the empirical conditions of production of the social discourse we call science), by way of the sole analysis of logical, epistemological, or methodological issues. The first position

represented in Latin America by influential writers such as Germani and Galtung, is one strictly deserving the name of **Scientificism**. Scientificism consists in the use of the normative statements referred to the formal rules of scientific procedures, to handle problems that correspond to the pragmatics of science. This mechanism usually emerges in situations of strong ideological cleavage. In fact, most of the problems referred to the relationship between the practice of the social sciences in highly developed countries and in underdeveloped ones, and to the introduction of the social sciences in the latter, are undecidable in terms of the formal norms of scientific procedure, and therefore imply ideological decision-rules.

Within this framework, **Psychologism** becomes the ‘natural’ companion of scientificism; ideology intrudes into scientific activity as a result of the influence of the scientist’s ‘subjectivity’ or of ‘emotional’ processes. In this light, ideology appears as an alien factor within scientific praxis, as a disruptive element coming from ‘outside’. Long ago, Popper pointed out the fundamental mistake of the traditional sociology of knowledge, which consisted in referring the problem of scientific objectivity to the problem of the subjectivity of the scientist. From the point of view of communication theory, ideology is a level of meaning, and this implies that it is a **structural condition of production of messages within a human language system, including scientific communication**.

5. THE TWO STEPS OF PRAGMATIC ANALYSIS

Let us summarize our central argument. We think that the pragmatic approach is the only way of stating, in an adequate and complete way, the problem of scientific objectivity and of the relationships between science and ideology. It is adequate since it allows us to locate the level at which the problem of objectivity actually appears: science viewed as an empirical system of social activity oriented toward knowledge. At the same time, it allows us to unmask what is nothing else but an ideological operation: trying to solve an empirical problem with formal criteria, those stemming from epistemological and methodological principles. It is complete, because it integrates the other levels of analysis of scientific activity within the global context of functioning of science. It would then be a serious mistake to consider that the pragmatic analysis of scientific communication is in some way opposed to the viewpoints and approaches derived from modern epistemology and methodology of the social sciences. The study of the formal conditions of scientific knowledge and that of the norms regulating their exercise are two indispensable levels of analysis of science. But the third level (that of pragmatics) integrates the other two, and is the only one giving a complete picture of scientific knowledge as a process of production within society.

As we pointed out before, the analysis of the rules of procedure, of the techniques and of the conceptual bodies existing in a discipline at a given moment as fields of alternatives within which scientific decisions are moving, constitutes the starting point of pragmatics, which comprises two large aspects or steps: one of description, the other of explanation.

First, there is the task of ‘mapping’ these fields of alternatives (theoretical, methodological, technical) at a given moment of development of a discipline; which version of methodology of science is predominantly used; what techniques of data gathering are preferably applied to what problems; which are the structural properties of the conceptual frameworks used to locate the different aspects of social phenomena, etc.

Second, once this picture has been drawn, we may ask why it presents such characteristics. This leads us by necessity to the social context: relationship of intellectual and scientific elites with the dominating classes; state and dynamics of class conflict within the country under study and location of that country in the international system. This type of analysis must include the study of the mechanisms mediating the relationship between the sociological variables and the products of scientific knowledge: organizational characteristics of academic institutions; systems of distribution of power among different academic groups and of allocation of financial resources; personnel selection and training rules; rules of control and diffusion of the produced knowledge, etc.20

It goes without saying that such a research program cannot be ‘neutral’. So we find here again, on a new level, the same problems we have discussed before, and the same criteria have to be applied. The development of explanatory models in pragmatics demands theoretical and methodological decisions, and the selection of particular research techniques. Since pragmatics as we have presented it is in fact a social science of scientific communication, it could be said that our argument implies a


21 An analysis of the current situation of social sciences in Latin America may be found in E. Veron, "Idéologie et production de connaissances sociologiques en Amérique Latine", L'Homme et la société (forthcoming).
contradiction or contains a vicious circle. This objection is purely formal and deserves, therefore, a formal answer: there is no contradiction or circularity inasmuch as it is clearly established that pragmatics of science is, with regard to scientific language, a metalanguage, a level of description of a higher degree of complexity. The distinction between levels of language eliminates the possible logical or formal contradictions. In return, I deem it correct to say that this way of stating the problem contains a regression to infinity, since one can imagine a pragmatic analysis of pragmatics of science, and so on indefinitely. This is a particular illustration of a known principle: the hierarchy between levels of language implies an 'open system' that cannot be axiomatically closed. And a regression *ad infinitum* is something that should not trouble us: it is certainly a long way, but free of contradiction.

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