

VARIA

REMARKS ON THE COMPARISON BETWEEN 'EXCHANGE'
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In this paper we intend to investigate the comparison between linguistic and economic data. More precisely we shall consider the comparison between the 'exchange' phenomenon, described and elaborated in economic theory, and the 'communication' phenomenon elaborated in linguistics. Before concentrating on this particular comparison, we shall review the conceptions of exchange in economic science properly. In the first section we shall insist on some striking similarities between the Smithian, Marxian, Gossenian and Walrasian expositions of the 'exchange', phenomenon. In the second section we attempt to answer the question, whether the relationship between 'communication' and 'exchange' fits in with the treatments of economic science and linguistics, seen from the point of view of unified science. The core of our arguments bears upon this question, in so far as we intend to show a lack of precision in the attempts of unification. Related to the questions in the second section stands our concluding treatment: if both 'exchange' and 'communication' are examples of interpersonal relations (which they obviously are), how can the social scientist occupied with the study of one of them gain profit from the results of the investigations of his fellow-scientist. We intend to argue that this peculiar question brings us to the problems of reduction, problems of methodological and epistemological import to all the social and human sciences.

I.

First we wish to review the different conceptions of 'exchange', the elements they are formed of, and the context within which 'exchange' appears. It needs to be said that we want to review the *conceptions*, and not the phenomenal forms of 'exchange'. As one

knows a great difference exists between these two (see below the discussions between 'substantivists' and 'formalists' in economic science and economic anthropology).

In his first book of "The Wealth of Nations", A. Smith drew our attention to the conveniences of the division of labour, and he showed how exchange became necessary after the generalization of the division of labour in society. He stressed one of the principle contextual circumstances, namely the *extent* of the market, which played a great part in dividing the labour tasks of men¹. After the division of labour had been established, men could no longer provide themselves with all necessary products of labour, in order to satisfy their wants. Their dependence upon their fellow-men had become much greater than before. But through 'exchange' and exchange-relations (even exchange-patterns) they were enabled to satisfy their needs. First these exchange-relations were complex, because of the lack of a common measure. Even when not obliged to, men had to exchange whole quantities of goods. Later on some specific products took the position of exchange mediating products, and afterwards a common measure was accepted by all partners of exchange. This common measure bore some peculiar features fitting in with its part of general exchange product: it could easily be divided; it was made of a durable substance, it could be weighed rather easily, and so on.

D. Ricardo held very similar ideas in his "Principles...". His most important aim was to show :

That it is really the foundation of the exchangeable value of all things, excepting those which cannot be increased by human industry, is a doctrine of the utmost importance in political economy; for from no source do so many error, and so much difference of opinion in that science proceed, as from the vague ideas which are attached to the word value.²

Neither author paid much attention to the exchange-relations.

In building the classical conceptions of 'bourgeois'-economics their main concern was to idealize the principal origins of incomes, wages, profits and rents. With this intention they spent most of their work explaining the forms of value.

Generally K. Marx did the same, but both his intentions and the content of his assertions changed. Marx insisted very explicitly on the object-form of the exchange relations between men, in his first book of Capital. Because he further developed the classical doctrine

of value, he dealt in the first chapter of his book with commodities, the so-called carriers of both modes of value (value-in-use, and value-in-exchange). In the second chapter he switched to the 'guardians of commodities'. Commodities cannot exchange themselves, one must consider the activities of their guardians, the owners of commodities. When commodities enter into relation one with each other the guardians of the commodities also must enter into relation. They behave in such a way that no one appropriates the product of his partner, nor parts with his, except by means of an act "performed with mutual consent"³.

However most of Marx' interest went to the material, or substance dimension of the relations between the carriers of the commodities. Speaking of money, the so-called "general and socially accepted equivalent' form of value, he drew our attention to the common error, which consists of considering money merely as a *symbol*. He wrote :

Since people were unable to account for the origin of the perplexing forms assumed by the social relations between man and man, they tried to divest them of their uncanny characteristics, temporally at least, by ascribing to them a conventional origin.⁴

Which light did Marx shed upon the 'perplexing forms of social relations between man and man' ? In his analysis of the 'general and social equivalent form of value' he pointed at some illuminating features of the social process in which the general equivalent finds its origin. In the exchange between two owners, no one is willing to part with a commodity in exchange for others unless these other commodities satisfy his wants. So far, said Marx, the exchange remained a purely 'private transaction' (an expression he didn't specify). But the owner wishes to realize his commodity as value (in Marx' terminology) and thus to convert it into a commodity of equal value and as consequence the exchange develops into a 'general social process' (as stated before, he left the significance of this expression unspecified). For every owner the proper product reveals itself as a general equivalent (see below Walras' position). However this cannot be true for all the owners at one and the same time. Exchange-partners need a general equivalent form, which is socially accepted :

But the only way in which a particular commodity can become a general equivalent is by a social act. The social

act performed by all other commodities therefore sets apart a particular commodity in which they all express their values⁵.

Our conclusion is, that Marx quite clearly saw the complexity of the social relations in exchange, but that he didn't succeed in disentangling the perplexing phenomenal forms (which wasn't however his aim). The expressions as 'private transaction', 'general social process' and 'social act' are left undefined. Moreover he related this complexity to the extent, as was done by A. Smith, although he never tried to specify the significance of the word 'extent', which would lead him to specify the simple observables (such as quantity of needs, and quantity of persons, quantity of relations, and so on) that may constitute the significance of 'extent'. Before, we asked what light Marx has shed upon the so-called 'perplexing forms of social relations' between man and man. Although he contributed further-on to the answer to this question in the other chapters of his book, and in his later activities in writing the second and third parts of his immense work, he didn't concentrate on the properties of social relations, nor did he try to specify specific modes of combination of the relations, nor did he try to specify specific modes of combination of the relations. To a large extent this is a consequence of his own point of view. He handled the question of the complexity of the social relations through the treatment of the objects of exchange. He differentiated between the so-called phenomenal and the essential characteristics of these objects (in his terminology) and so he aimed at instructing us on both the unique and historically determined patterns of human interaction. Marx' description of the exchange-process turned out to be a description of the process of commodity-production and distribution.

Nevertheless he considered two forms of exchange: first, the simple form of exchange, written in the following form x of A = y of B, the simple equation of value; and second, the social and generalized form of exchange, x of money = y of B, the social and generalized equation of value⁶. The historical evolution from the first to the second implied that human beings began behaving atomistically, in the extant social relations, and consequently the material forms of their relations grew independent of their own control and of their conscious individual activities.

The specific components of the human intercourse in market-exchange have been formulated in greater detail in the theoretical constructions of H. H. Gossen, W. S. Jevons and L. Walras (later-on also V. Pareto). In one way they repeated the analysis of A.

Smith, who considered the exchange-process, proceeding from the division of labour, and the derived necessity of exchange. Contrary to Marx the marginalists did not pay much attention to the historical development of the modes of exchange. They are more interested in the general and always existing features of the exchange process between humans, whatever the social context. They substituted the analysis of the ideal types of exchange, which received an analytical description, for the analysis of the historical evolution of exchange. They insisted strongly on the aspect of 'inner transaction' (Marx' private transaction ?), namely the relation between people's wants and the exchange circumstances they are acting in. As subjectivists they tried to build assertions about exchange of products upon assertions about these 'inner transactions'.

We do not intend to repeat in full the marginalist constructions, but we shall indicate however their clarification of the exchange-situations. To do this, Gossen, Jevons and Walras simplified the stage-setting they were describing in order to eliminate highly complex data. Their constructions were all of the following form : (a) for every person and for every object there exists a corresponding utility function; this utility function determines the relation between certain qualities of the object and the needs of the person. (b) the transaction of objects between persons involves the realization of a social relation, and a proportion between products. (c) The realization of the social relation and the proportion depends upon the utility-functions. (d) There exist very simple conditions for the social context : an atomized society, in which every individual acts 'egoistically', and in which no coalitions are being entered in. These circumstances imply the elaboration of general equilibrium for all products in transaction. The divergencies in the early formulations of the neo-classical theory (in Keynes' terminology) arise because of the generalization of the particular relationships between products at one hand, and persons at the other, and because of the role of the general equivalent originated in the market.

Gossen's first construction of exchange is as follows. Two persons A and B, and two objects (products of labour) meet in an *ideal social context* (which means, no group-determined behaviour, no institutions, no social rules, and so on). The utility functions of products I and II are exactly alike for A and B. When A and B both own twice the quantity they need of their own products, and when they own merely these quantities, an exchange can realize a duplication of the total volume of utility⁷. This primitive construction of exchange between two persons, and two products was based on an unrealistic supposition. In order to possess exactly

the same utility functions, persons A and B must live in exactly the same ecological and physiological circumstances (age, time, place, and so on)⁸. Gossen therefore constructed another model of exchange, in which A and B possess different utility functions for the two products of exchange. He never developed another besides this second barter-model. As far as money is concerned he merely supposed that a medium of exchange, working as general equivalent, proceeds from the generalization of barter.

Like Gossen, Jevons intends to show at what point the exchange between 'trading bodies' (persons as well as groups of persons) would cease to be beneficial to both parties. This depends on both the determination of the 'exchange-ratio' and the degrees of utility. He showed that the degrees of utility of the products are in the inverse ratio to the exchange ratio between these products⁹. Unlike Gossen, however, Jevons generalized this simple exchange relation. He did so for three exchange partners and three products, and he continued supposing that the law of indifference was applicable, so that exchange relations remained independent of one another. He stressed the fact that for the theoretical activities complicated exchange relations might always be decomposed into simple ones¹⁰, for which he relied on the custom of building 'ideal constructions' in economic science. He listed some striking difficulties for the realization of exchange: firstly too great a gap between the preferences of the persons involved in exchange may exist; and secondly, the indivisibility of the products to be exchanged, so that exchange cannot be performed.

Walras further elaborated the conditions of the generalization of the exchange equations. This holds for the extent of persons, and the extent of goods or products. Walras' description of exchange-relations was based on the existence of a well developed market and the existence of prices for the goods exchanged. Prices must be understood, although money (numéraire) hasn't been introduced yet, as a pre-established ratio of quantities exchanged. Walras started his elaboration with the exposition of the demand-offer relationships, and it wasn't until Lesson 8 that he correlated the exchange relations on the market, determined by the pre-supposed prices, with the utilities of the products exchanged (he continued the work of A. Cournot and therefore repeated the demand-offer analysis of the latter). He then proceeded further in formulating assertions that involve the exchange of two products between all holders of those products. So he intended generalizing his proposition of the maximum satisfaction for *all* holders of two commodities exchanged at the same ratio of exchange throughout the market, to the same

kind of assertions for all commodities exchanged at equilibrium prices, which makes it possible to introduce money as such.

In generally Gossen's analysis was marked by the following features: a single exchange situation, precisely elaborated; the supposition that it must be easy to generalize the simple exchange situation from the point of view of the extent of persons and goods; no explicit introduction of the general equivalent. Jevons' analysis rested upon simple exchange situations; a generalization in extent, for three 'trading bodies' and three products, insisting on the independence of the exchange equations; no explicit introduction of the general equivalent. Finally Walras relied on exchange-relations between all holders of two products, the generalization of the exchange situation as far as commodities are concerned, and the explicit introduction of the general equivalent. The marginalists tried to disentangle *analytically* the complexities of social relationships, what Marx had called the 'general social process' of exchange. So they touched the same problem Marx was struggling with. However, as a result of great simplification, they didn't succeed in realizing their endeavours (see later on the reaction against neo-classical views in economic theory), and moreover they widened the gap between empirical and theoretical activities.

II

Let's see now, how these conceptions fit in with the social relation called 'communication'. In their book "Non Verbal Communication. Notes on visual Perception of Human relations"^{1 1} they specified 'communication' as follows: by means of 'communication' information is mediated beyond the boundaries of human organisms and social groups (social organizations). 'Communication' mediates the representation of events outside an organism or an organization, in terms of information on the inside and conversely the relation between events on the inside and on the outside. 'Communication' thus specified embraces (a) perception; (b) evaluation; and (c) transmission. By means of it, organisms and organizations are enabled to perceive, to evaluate (the relationship between perception, and satisfaction of needs, embracing memory- and decision-processes) and to transmit (the expression of information).

Making use of Ruesch and Kees' specification, we can attempt to explain the social relation called 'exchange'^{1 2}. 'Exchange' relies evidently on processes of perception, evaluation and transmission. But is it not a fact that the 'communication'-phenomenon is larger than 'exchange'? They do both mediate the flow of information in

social groups and between social groups. In search for the particular elements in the whole of the process of 'communication' and 'exchange' we must concentrate upon the significance of *information* and the characteristics of social relations tied up with information. Consider the following example. Person X contacted person Y, to buy something produced by the latter. X owes \$ 100 and Y knows this. Y considers X to be solvent; he can exchange the product of his labour without the risk of damage. This is a simple 'exchange'-process, which reminds us of Gossen's barter-model. We can say however, that the barter between X and Y appears as an interchange between X and Y, based on elements of information, such as, quantities of money, quantities of products of labour and solvency of the persons involved. We can call these elements of information, the 'informatoms'. Upon this moment there seems no need of differentiation between 'communication' and 'exchange'. The latter also embraces the perception, the evaluation and the transmission of 'informatoms'. Above we asked whether it was unsound to look at 'communication' as a somewhat larger phenomenon than 'exchange' is. This may suggest the formulation of the following sentence: "the interchange of \$ 100 for a particular quantity of labour products between X and Y corresponds to the interchange of 'informatoms' between X and Y, if and only if those linguistic and the economic 'informatoms' stand in the same relationship to particular human needs". Other sentences stressing the other features of the social relation, called interchange, with the same grammatical structure, may be formulated as well. All those propositions show the following structure :

$$(A = B) \equiv (\text{elements } A . \text{ elements } B)P$$

Interchange A and B correspond, if and only if the elements of the two forms of interchange (we gave the name 'informatoms') have the same property P. Property P stands for instance for, "to possess the same relation with particular human needs". Or, more general :

$$(A = B) \equiv (\text{elements } A . \text{ elements } B)P,Q,R,\dots$$

Interchanges A and B correspond, if and only if the 'informatoms' have the same properties. More precisely, 'communication' and 'exchange' do correspond if the equivalence relation is correct. The question whether the equivalence is correct, depends upon several points of empirical relevance. To insist on those implies entering the epistemological domain of our discussion. First, the possibility to

give a very precise definition of the elements of the interchange-processes. E.g. the concept we introduced was of a great generality. The question is whether this generality of the concept may provoke difficulties in introducing it in larger theoretical construction, so that scientists of both disciplines can build upon it scientifically relevant and verifiable systematizations. Secondly, the possibility of giving a precise delimitation of the different properties one wishes to invoke. This may constitute a rather difficult task for scientists; for instance talking about 'human needs' confronts us with heavy problems of identification of needs, the problems of culturally determined needs and so on. Third, the possibility to stipulate the relations existing between the 'informatoms' and the different relevant properties P, Q, R..., in such a way that it would be easy for scientists to comment favourably upon the equivalence relation.

The consideration of these difficulties forces us to give epistemological specification. Some brief remarks can here be made; in the third section of our paper we shall further comment on these. Within the endeavours of unification, it seems important to facilitate the formulations of both the interchanges, 'communication' (verbal communication) and 'exchange' (economic exchange), or other forms of interchanges, in such a way that the *reduction* of the sentences about one of them to the sentences about the other becomes possible. In our opinion those endeavours depend upon the specification and the comparison of the peculiar contexts of the interchanges, and the properties of the social relations underlying them. Going from the observational level to the theoretical level does not so much raise principal questions but rather practical ones. Throughout the development of scientific activities, abstraction and consequently subsumption of empirical phenomena under general concepts and theoretical construction is the aim of the scientist. But, we have to face a very difficult situation when it comes deciding the procedures to jump from the first to the second level and the reverse. A similar difficulty is raised by some interdisciplinary endeavours in linguistics recently.

The fact that we asked the question, whether it is sound to suppose that verbal 'communication' is a larger phenomenon than 'exchange', may be the consequence of the *phenomenal interference* of the different forms of interchanges and the different modes of social relationships, in such a way, that they even appear entangled in the same time-sequences. Perhaps this entanglement of the forms of interchange took the social scientists too precipitate to the conclusion that one cannot investigate these forms of interchange separately. Among others, Emile Durkheim and Marcel Mauss¹³

developed such arguments, which have found followers in sociology and anthropology ever since¹⁴. In linguistics some argued in favour of specific combinatory possibilities of the forms of interchange in the theoretical field. Roman Jakobson proposed a hierarchy of 'communication' types¹⁵, and Claude Lévi-Strauss spoke of the three kinds of exchange : the exchange of goods and services, the exchange of women, and the exchange of linguistic signs¹⁶.

We suggest that these different modes of entanglement should receive further investigation and description, which could force us to give theoretically relevant specifications of the different cases of entanglement. For instance, from a 'synchronic' point of view, we could distinguish the different *types of entanglement*, and from a 'diachronic' point of view, we could concentrate on the different *processes of entanglement*.

Before returning to a further discussion of the epistemological problems we raised, we have to mention some other striking features of 'communication'. Ruesch and Kees drew our attention at one peculiar aspect of 'communication', namely the aspect of *codification*. When someone wishes to make statements about some events, he must succeed in formulating these statements in a comprehensible way. Alongside this process another interchange between persons takes place : when communicating, people also transmit messages about the communication process itself. Ruesch and Kees called it the metacommunicative messages¹⁷, which contain (a) rules of interpretation, and interpretations; (b) indications of role; (c) institutionalized indications, inherent in the structure of social situations and in the rules governing the flow of messages. It seems to us a rather difficult task to give a precise meaning to the last two expressions. We said earlier, that the interchange-process using economic 'informatoms', makes use of the interchange process of linguistic 'informatoms'. Hence, the problem of describing and investigating the relational patterns between persons within existing social groups or systems will even be rendered more difficult to solve, when we know that both the interchange-processes contain in turn other forms of interchange. What has been said about the interchanges, can be repeated about the obviously different forms of codification which may be involved.

At this point it may be recalled that Charles Morris saw three dimensions in the process of 'semiosis' : (a) the semantic dimension, the relation between sign and designatum, (b) the syntactical dimension, the relation between signs; and (c) the pragmatological dimension, the relation between persons involved, or more precisely, "the pragmatological rule...a rule which states the conditions in the

interpreters under which the sign vehicle is a sign"¹⁸. These ideas brought Morris to his conception of language :

A language in the full semiotical sence of the term is any intersubjective set of sign vehicles whose usage is determined by syntactical, semantical, and pragmatcal rules¹⁹

So, we touch the very important point of the existence and the development of codification systems in social group and in society. The coherence existing between interpersonal relationships, the relations between signs and designata, and the relations between signs among themselves is not only of importance to linguists, but also to economists, praxeologists and ethical theorists. We must always keep in mind, that the difficulties which may arise in the different disciplines, arose from the integration and the mixing up of what we indicated as the different forms of interchange (the decomposition of interchange-processes). Moreover the problem of codification is connected with the process of *institutionalization* in social groups and society, and so with the universalistic and the relativistic points of view in the sciences listed above. Kenneth Pike referred to similar points when he remarked :

The fact that language must be treated as human behavior, as a phase of an integrated whole, by showing (1) that language behavior and non-language behavior and fused in single events, and (2) that verbal and non-verbal elements may at times substitute structurally for one another..²⁰.

What Pike said about behaviour may also be said about the means of regulation of behaviour, such as codification and institutionalization aspects in the lives of social groups. Long before Pike, L. Bloomfield insisted on a similar fusion of elements of human behaviour, when he said :

Language enables one person to make a reaction (R) when another person has the stimulus (S).²¹

It seems clear to us, that the early economists, classics as well as neoclassics (see our review above), were faced with similar difficulties, from their points of view. We insisted upon the fact that in Marx 'Capital' as well as in Walras' 'Eléments de l'économie pure', the authors tried to give a reconstruction of the genesis of the

codification of economic interchanges between people, if we accept for a moment that a parallel may be drawn between 'codification' and the appearing of the general equivalent (or la numéraire). Moreover we said that both authors tried to relate this phenomenon of regularization in the lives of social groups with the aspects and the features of human relations they described or supposed. Further investigation is necessary in order to perform precise relationships between these different classes of phenomena.

III

We shall conclude our considerations of the comparison between 'exchange' and 'communication' with some programmatic statements. Afterwards we shall summarize our main epistemological arguments against some endeavours of comparing 'economic events' with 'linguistic events'.

We have already revealed one of our most important aims, namely to unify the scientific investigations upon the linguistic interchange and the economic interchange around intense investigations about patterns of interpersonal relations, and the features of these relations. Relevant information to defend this point of view may be found in Thomas Luckmann's "Soziologie der Sprache"²². Luckmann considered in detail the problem of the 'Institutions-spezifische Sprache' :

Institutionen (author's) bz. Institutionsbereiche bestimmen den Aufbau institutionsspezifischer Kommunikationsnetze.(...) Das institutionseigene Kommunikationsnetz und der ihm zugeordneten Regeln des Sprachgebrauchs ergeben den Rahmen, innerhalb dessen die pragmatischen Erfordernisse eines institutionellen Bereichs die Ausbildung einer institutionsspezifischen "Sprache" motivieren²³

In general he holds the wellknown conception, which says that the social specification of the forms of communication are developed by means of institutions. The same could be stated about the forms of exchange. In this context we can remind the reader of the discussion, which started after the publication of Karl Polanyi's controversial work²⁴). Roughly, substantivists disagreed with the formalists as was done much earlier in economic and anthropological literature by A. Marshall and B. Malinowski²⁵.

They stressed the fact that the formal theory of exchange neglected to take account of the 'institutional', the group-tied

characteristics of exchange. They denied the possibility of applying the theoretical assertions about exchange, as the formalists pretended, to the well developed modes of exchange in the different social systems, ethnologists and sociologists were investigating. These points of view brought substantivists to almost similar relativistic positions in economics and economic anthropology as is known in linguistics²⁶.

The development of a 'Sprachstil' towards a 'language' happens to be linked with the features of the life of the social group and the evolution of the social group. We are brought to the same conclusions we already arrived at in the second section. However, here we are more precisely interested in the sociological implication of these conclusions. Luckmann, for instance, thought it necessary to construct a theory which can explain the differentiation of language, hence, the differentiation of semantical, syntactical and pragmatical rules of 'communication', under the influence of institutional settings²⁷. We think that such a theory must rest on the scientific study of social relations, including the systematic study of the features of these relations. Differentiation in language, thus, in the flow of 'communication' must be considered as a consequence of the development of the division of the procedures of labour, the genesis of attitudes, relating behaviour and experiences, and the evolution of the modes of experience, in such a way, that (a) secrecy and relative isolation is made possible against outsiders,²⁸ (b) transmission and continuity of knowledge and organization is secured²⁹. Up to a certain point the viability of knowledge and of praxis of the social group or system lies embedded in the differentiation of the means of communication. We can rely on sociological information about the frequency and density of 'communication' and 'exchange', the size of the groups, the hierarchy and the role-patterns in the group, the ways of recruiting people, related to the forms of educations, and so on. In this way the systematic study of the phenomena of language and the phenomena of economic activities can be made a part of a much wider systematic study of the social relations. 'Exchange' and 'communication' phenomena, combined with the sociological relevant information listed above³⁰, can be treated as forms of social relationships with very similar, although different features.

We suggested higher that the main difficulty in the comparison between 'exchange' and 'communication' proceeded from the difference between the observational and the theoretical level in scientific activities. Phenomena of 'communication' and of 'exchange' can be investigated from two points of view : a descriptive and a theoretical point of view. For instance, when an anthropologist

studies linguistic- and economic activities of a social system, he can ask himself how these two work conjointly in the social system. He asks a question of merely empirical importance. A different situation arises for someone wanting to construct a theory in which both linguistic and economic phenomena are explained, so that he intends to reduce the theoretical assertions about one of these phenomena to the assertions about the others³¹.

It is a striking feature of some theoretical constructions making use of the similarity between 'exchange' and 'communication'³², or the similarity between economic 'value' and the 'value' of signs³³, that the assertions have no clear implication for empirical phenomena; they lack the possibility of test and they do not imply explanatory and predictive use. They imply the failures of all metaphorical formulations: they cannot be put to trial because the metaphorical assertions do not specify the empirical conditions of their test³⁴. Up to date the unitary treatments of linguistic and economic data do not correspond to the demands of analogy as a syntactical isomorphy³⁵. As a result these treatments are characterized by vagueness and a lack of specificity and of explanatory force.

A good, though a somewhat aged, example of the failures of analogic reasoning in the domain of linguistics and economics, is a part of Lévi-Strauss' famous book "L'Anthropologie Structurale, I"³⁶. When he spoke of the 'avunculat', he remarked that both the linguist and the anthropologist are confronted with the diversity of phenomena. On one side the diversity of sounds, which gave birth to a system of a limited number of sounds; on the other hand the diversity of attitudes which gave birth to a system of a very limited number of attitudes. This analogy, on the level of phenomena, suggests an analogy on the level of procedures of investigations, and even on the level of explanation. Lévi-Strauss stated:

De tous les phénomènes sociaux, seul le langage semble aujourd'hui susceptible d'une étude vraiment scientifique, expliquant la manière dont il s'est formé et prévoyant certaines modalités de son évolution ultérieure. Ces résultats ont été obtenus grâce à la phonologie et dans la mesure où elle a su, au-delà des manifestations conscientes et historiques de la langue, toujours superficielles atteindre des réalités objectives. Celles-ci consistent en systèmes de relations, qui sont eux-mêmes le produit de l'activité inconsciente de l'esprit. D'où le problème: une telle réduction peut-elle être entreprise pour d'autres types de

phénomènes sociaux ? Dans l'affirmative une méthode identique conduirait-elle aux memes résultats ? Enfin, et si nous répondions par l'affirmative à la deuxième question, pourrions-nous admettre que diverses formes de vie sociale sont substantiellement de même nature : systèmes de conduites dont chacun est une projection, sur le plan de la pensée consciente et socialisée des lois universelles qui régissent l'activité inconsciente de l'esprit ? Il est clair que nous ne pouvons résoudre d'un coup toutes ses questions...³⁷

These speculative considerations confront us with many epistemological questions, which refer to broader philosophical discussion about the relationship between knowledge and reality, between essential structures of phenomena and the structures of phenomena presupposed in the theory of social behaviour.

Lévi-Strauss supposed that phenomena of kinship are phenomena of the same type compared with linguistic phenomena. In his book, cited above, he never hesitated to speak of an analogy on the phenomenal level. Hence, he didn't suppose a reduction of conjectures, with empirical content, but rather a reduction of phenomena to each other, and the same problem arises with respect to economic phenomena. Though one cannot always reproach Lévi-Strauss the first type of reduction, frequently Nagel's precise delimitation³⁸ of reduction of phenomena and reduction of empirical statements or lawlike statements has been neglected in the book, as a consequence of the belief that there may exist 'ontological identities' between the phenomena. In linguistics itself Lévi-Strauss comparison between three exchange-phenomena, exchange of goods and services, exchange of sexual partners, and exchange of sounds has been repeated more recently in Jakobson's "La Linguistique"³⁹.

Similar efforts may be reproached for the following failures :

(1) A confusion exists between three phenomenal levels. Firstly, usually authors refer to the similarities between 'communication' and 'exchange', i.e., verbal communication and the economic exchange. Secondly, sometimes authors do refer to the similarities between a system of 'language' and a 'monetary' system. Both systems are said to represent symbolic wholes, by means of which relations between persons in a social system are given a regular and codified course. Thirdly when comparing exchange and communication, authors insist on the similarities between the 'sign' and the 'general equivalent'. It is however not at all clear in which way 'sign' and 'general equivalent' must be compared. The problem seems to be the

exact identification of the linguistic units (phoneme, morpheme, word, phrase, recitation, and so on), and the corresponding monetary unit (see above our term 'informatom' to avoid these difficulties). Moreover we must keep in mind that economic interchange-processes may also include production, distribution as consumption.

(2) We suggested a vagueness of terms in the attempts to compare 'exchange' and 'communication', and we think the same can be said referring to other linguistic and economic phenomena. One consequence of the vagueness of terms is the error to use pre-scientific connotations (for instance, the term 'exchange', 'valeur', etc.) instead of scientific denotations (for instance, the term 'exchange' as used in economic science). We consider this failure a consequence of the features of the unitary treatment of linguistics and economics: the interdisciplinary endeavours can hardly be considered as scientific realizations, but rather as scholarly comments upon existing or desirable scientific activities.

(3) The transition from the level of empirical verifiable statements to the level of supposed properties of phenomena, or to the level of phenomena, confronts us with the problems of reduction. It may be remembered, that Ernest Nagel spoke of the false supposition which says that to reduce one science to another, one must deduce the properties (or natures, or essences, etc.) of one subject matter from the properties of another subject matter. An empirical and logical question thereby is converted in a speculative one⁴⁰.

(4) These reduction errors go together with a repeated entanglement of the empirical and the theoretical activities in social science. We refer also to Kenneth Pike's discussion of the activities of social scientists and the broader philosophical problem of realism and nominalism⁴¹. One can ask oneself whether it isn't the principal aim of the comparison of linguistic and economic phenomena, to find paradigmata, which could enable scientists to describe and theorize social data in a new and a better way. Further treatment of this point will show, that we touched a methodological problem of a certain fame in social sciences, namely the difficulties of theoretical constructions and the exigences of the falsifiability of assertions⁴².

(5) Finally, we suggested quite programmatically, developing the comparison of the linguistic and economic phenomena, and if possible the reduction of linguistics and economics to each other, so that the principal aim would be the consideration of the features of the relations, underlying both 'exchange' and 'communication'. We pleaded for a better understanding, and consequently, the identification of the elements of the relationships, being referred to in the theoretical constructions and observations. Institutional

'variables' must be introduced, to complete the domain of investigation. So, we pleaded for a sociological treatment of the two subjects of inquiry.

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NOTES

¹ In the "Wealth of Nations", Book I, Chap. III, "That the division of labour is limited by the extent of the market", pp. 15-19.

² David Ricardo, "The Principles of Political Economy and Taxation", p. 7.

³ Karl Marx, "Capital", p. 59.

⁴ Karl Marx, "Capital", p. 67.

⁵ Karl Marx, "Capital", p. 61.

⁶ Karl Marx, "Capital", p. 68.

⁷ H. H. Gossen, "Entwicklung der Gesetze des menschlichen Verkehrs...", p. 82.

⁸ H. H. Gossen, "Entwicklung der Gesetze des menschlichen Verkehrs...", pp. 82-83.

⁹ W. S. Jevons, "The Theory of Political Economy", p. 99.

¹⁰ W. S. Jevons, "The Theory of Political Economy", p. 117.

¹¹ J. Ruesch and W. Kees, "Non Verbal Communication...", p. 6.

¹² We insist here on the possibilities of explanation by means of the conceptformation, the methods of analysis and the patterns of explanation, of other scientific disciplines. Despite this, we are not supposing that those concepts, methods of analysis and ways of explanation give satisfaction in the domain they were taken.

¹³ "Les faits sociaux" in E. Durkheim's "De la division du travail social"; Marcel Mauss, "Sociologie et Anthropologie".

¹⁴ M. Godelier, "Rationalité et Irrationalité en économie".

¹⁵ Roman Jakobson, "La Linguistique".

¹⁶ See Claude Lévi-Strauss, "Anthropologie Structurale I", "Les structures élémentaires de la parenté".

¹⁷ J. Ruesch and W. Kees, "Non Verbal Communication...", p. 7.

¹⁸ Charles Morris, "Foundations of the Theory of Signs", p. 34.

- ¹⁹ Charles Morris, "Foundations of the Theory of Signs", p. 35.
- ²⁰ Kenneth Pike, "Language...", p. 26.
- ²¹ L. Bloomfield, "Language", p. 24.
- ²² Thomas Luckmann, "Soziologie der Sprache", in R. König, "Handbuch der Empirischen Sozialforschung", Band II, pp. 1050-1102.
- ²³ Th. Luckmann, "Soziologie der Sprache", p. 1072.
- ²⁴ Karl Polanyi, "The Great Transformation".
- ²⁵ See also G. Dalton, "Economic Theory and Primitive Society", in American Anthropologist; R. Burling, "Maximization Theories and the Study of Economic Anthropology", in American Anthropologist; E. E. Leclair Jr., "Economic Theory and Economic Anthropology", in Am. Anthropologist; F. Cancian, "Maximization as norm, strategy, and theory...", in Am. Anthropologist. Bronislaw Malinowski, "The Argonauts of the Western Pacific"; Alfred Marshall, "Principles of Economics".
- ²⁶ See the "Whorf-Sapir hypothesis", the position of W. von Humboldt, in Helmut Gipper, "Sprachliches Relativitätsprinzip".
- ²⁷ Th. Luckmann, "Soziologie der Sprache", p. 1072.
- ²⁸ See Marcel Mauss' investigations, published recently in "Oeuvres", esp. "Les fonctions du Sacré", the coherence of myth, labour processes, exchange, art, and language.
- ²⁹ Compare with Popper's opinions in his "The Open Society and its Enemies, vol I", the tribal origin of thought.
- ³⁰ See M. D. Sahlins, "On the Sociology of Primitive Exchange", "Exchange Value and the Diplomacy of Primitive Trade".
- ³¹ See for a discussion of similar difficulties, Claude Lévi-Strauss, "Critères Scientifiques dans les Sciences Sociales et Humaines", in reprint in his "Anthropologie Structurale II", and also in his "Anthropologie Structurale I", pp. 305-317.
- ³² Roman Jakobson, "La Linguistique", p. 512.
- ³³ F. De Saussure, "Cours de linguistique générale", p. 154, p. 160, p. 162.
- ³⁴ C. G. Hempel, "Aspects of Scientific Explanation", p. 413.
- ³⁵ C. G. Hempel, "Aspects of Scientific Explanation", p. 435.
- ³⁶ Claude Lévi-Strauss, "Anthropologie Structurale", p. 60.

- ³⁷ Claude Lévi-Strauss, "Anthropologie Structurale", pp. 66-67.
- ³⁸ Ernst Nagel, "Structure of Science", chapter on reduction of theories.
- ³⁹ Roman Jakobson, "La Linguistique", p. 512.
- ⁴⁰ Ernst Nagel, "Structure of Science", p. 365.
- ⁴¹ Kenneth Pike, "Language..."; the discrepancy between the 'emic' and the 'etic' standpoints may lead to confusion which will be rendered even greater when comparing different phenomena. Pike remarked on p. 37: "The etic organization of a world wide cross cultural scheme may be created by the analyst. The emic structure of a particular system must, I hold, be discovered".
- ⁴² See also R. Boudon, "La crise de la Sociologie...", his article, "Théories Théorie et Théorie"; the difficulties of ideal constructions in social science. Roman Jakobson evoked a particular problem for the development of linguistics, which seems also to have its counterpart in economic science. In his "La Linguistique", p. 508, he says, "Comme Chomsky l'a nettement indiqué, l'indépendance relative des langages artificiels formalisés par rapport au contexte créent une grande différence entre ces deux catégories sémiotiques...". We can remark a similar relative independence between the formalistic systems of economic activities and interaction and the substantivists descriptions of economic activities and interaction. Reference can be made to a remarkable article of T. W. Hutchinson, 1937, "Theoretische Oekonomie als Sprachsystem", in *Zeitschrift für Nationalökonomie*.

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