

TRANSACTIONS OF THE SIXTH
WORLD CONGRESS OF SOCIOLOGY

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ACTES DU SIXIÈME
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VOLUME I

UNITY AND DIVERSITY IN SOCIOLOGY

UNITÉ ET DIVERSITÉ EN SOCIOLOGIE

SOCIOLOGY OF INTERNATIONAL RELATIONS

SOCIOLOGIE DES RELATIONS INTERNATIONALES

CROSS-NATIONAL RESEARCH

RECHERCHES COMPARATIVES D'ORDRE INTERNATIONAL

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AVANT-PROPOS

Le présent volume réunit les communications qui ont été inscrites au programme des trois premières séances plénières du 6e Congrès mondial de sociologie (Evian, 4-11 septembre 1966) consacrées, la première au thème «Unité et diversité en sociologie», la deuxième à la «Sociologie des relations internationales» et la troisième — séance plénière spéciale — aux «Recherches comparatives d'ordre international». Une quatrième et dernière séance plénière a été prévue pour clore le congrès.

Les auteurs des études présentées ici ont été choisis par le Comité exécutif de l'Association internationale de sociologie, selon des propositions formulées par la commission chargée d'élaborer le programme du congrès.

Deux auteurs pressentis, MM. E. Scheuch (Université de Cologne) et E. Shils (Université de Cambridge et Université du Michigan) ont dû différer la remise de leur manuscrit. Leur communication paraîtra dans un autre volume.

EDITORIAL NOTE

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This volume contains the papers placed on the programme of the first three plenary sessions of the 6th World Congress of Sociology (Evian, September 4-11, 1966) entitled, the first «Unity and Diversity in Sociology», the second «Sociology of International Relations», and the third — a special plenary session — «Cross-National Research». A fourth and last plenary session will close the Congress.

The authors of the papers here presented have been chosen by the Executive Committee of the International Sociological Association, according to the propositions formulated by the committee charged to elaborate the programme of the Congress.

Two authors, Messrs. E. Scheuch (University of Cologne) and E. Shils (University of Cambridge and University of Michigan) were obliged to defer the remittance of their manuscript. Their paper will be published in another volume.

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SOCIOLOGY AND BIOLOGY

UNITÉ ET DIVERSITÉ EN SOCIOLOGIE

UNITY AND DIVERSITY IN SOCIOLOGY

I. FORMULATION OF THE PROBLEM

We live in a world where a sharp ideological struggle is being fought, a struggle between differing ideas, world outlooks, social ideals and socio-political theories. This is quite natural and inevitable in a world divided into opposing socio-political systems, its societies divided into antagonistic social layers and classes, and in a period characterized by the greatest social changes and revolutions as well as by political, social and national liberation movements. In these conditions the sociologist is confronted with the problem of finding objective truth, uninfused by diverse problems, biased judgments and ideas — a truth whose content is independent of the subject, of man and even of mankind.

Is this possible?

The sociologist, like an economic historian, and in contrast to a mathematician, a physicist, a chemist or an astronomer, has to deal with one specific object of research — society, social relations, man and man's will, taking account of the varying social interests represented by different social forces. He deals with a world where a predominant role, or even a decisive one, is played by ideas, views, social theories, ideologies and world outlooks.

A physicist studying nuclear processes, interrelations of elementary particles, their nature and behaviour can abstract himself from the ideological struggle taking place in society. But is it possible for a sociologist in this study of society, its structure, social processes, the laws and forms which determine social development, the struggle of ideas and world outlooks, — is it possible for him, like a natural scientist in search of objective truth, to abstract himself and to free himself from the influence of his or that ideology and to carry out theoretical research leading to objective truth?

Of course, the complexity and ambiguity of the problem of the

SOCIOLOGY AND IDEOLOGY

F. KONSTANTINOV

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We live in a world where a sharp ideological struggle is being fought, a struggle between differing ideas, world outlooks, social ideals and socio-political theories. This is quite natural and inevitable in a world divided into opposing socio-political systems, in societies divided into antagonistic social forces and classes, and in a period characterized by the greatest social changes and revolutions as well as by political, social and national liberation movements. In these conditions the sociologist is confronted with the problem of finding objective truth, uninfluenced by desires, passions, biased judgments and ideas — a truth whose content is independent of the subject, of man and even of mankind.

Is this possible?

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A physicist studying nuclear processes, interrelations of elementary particles, their nature and behaviour can abstract himself from the ideological struggle taking place in society. But is it possible for a sociologist in this study of society, its structure, social processes, the laws and forces which determine social development, the struggle of ideas and world outlooks, — is it possible for him, like a natural scientist in search of objective truth, to abstract himself and to free himself from the influence of this or that ideology and to carry out theoretical research leading to objective truth?

Of course, the complexity and acuteness of the problem of the

relationship between sociology and ideology are determined primarily by the specific features of the very subject matter of the research, i.e. social relations. But these in turn produce yet another factor, adding further to the complexity and acuteness of the problem. The fact is that the character of the results of theoretical activity depends not only on the subject of the research and on its peculiarities, but also — and to the same degree — on methodological and philosophical trends, which affect the methodological means of elaborating the material and determining an approach to it, its division into parts, their synthesis, etc. In order to make a study of the results of theoretical activity, it is necessary to take into account not only the characteristics of the subject matter, but also to apply a strictly scientific method actively reflecting the researcher's scientific philosophy. When a physicist makes a study of the interrelation of particles, the scientific value of its results is determined both by the conformity of the theory with the physical objects studied and the correctness of his method. However, the situation there is facilitated by the remoteness of the field of enquiry from man's ordinary ideas and the absence, in relation to the problems studied, of any special ideas originating not in the field of science but outside of it. If a physicist succeeds in freeing himself from the usual ideas, not related to the object of his study, then no one will impose on him — if very special questions only are to be dealt with — biased, preconceived ideas relating to his problems. That is why it is, on the whole, easier for a physicist to achieve the ideal of a genuinely scientific and truthful method — one which is no more and no less than a concentrated extract of all past and present experience in cognition of the same, unchanging objective world, and not a mere subjective method of approach to an object. In other words, it is easier for a physicist to achieve a wholly objective method (we stress the word «wholly»), even though, as far as this question is concerned, it may prove to be very closely dependent on the influence of a given philosophy on his thinking. A physicist is «fortunate» in that to a certain extent he can apply an objective, scientific method in his research work, frequently not even being aware of it, because he is a spontaneous materialist and spontaneous dialectician... The reason is the powerful influence of the studied subject itself. After all, particles of the microcosm do not mould a particular ideology or special forms of knowledge and do not dictate them to the physicist.

In sociology we have an entirely different situation. The sociologist has to deal with an immeasurably more complicated subject; more-

over, he is a member of the society he studies, of mankind, i.e. is actually involved in the struggle between progressive and reactionary forces, in relation to which his neutrality on fundamental issues is absolutely impossible. At the same time it is much more difficult for the sociologist to cleanse his method of class prejudices, notions and preconceived ideas based on a world outlook and on traditional forms of thinking. These notions and prejudices often dictate a biased attitude to the subject and, what is most important, they make it possible for ready-made concepts, forms of consciousness and ideas which spontaneously arose and took shape prior to the researcher and irrespective of him, to penetrate the very core of the study. Through methodology subjectivism too can penetrate into the study itself — subjectivism which at times is extremely refined, disguised, which is hardly perceptible even to the researcher himself, who is its victim. A sociologist never has to deal with «a vacuum», he always finds a whole system or, to be more exact, a whole collection of the most varied ideas at all levels, ranging directly from empirical descriptions up to the highest philosophical generalizations, which seem «objective», or self-evident, but which in reality are vehicles of subjectivism.

A tremendous effort is necessary if social science is to develop the ability to treat the spontaneous forms of knowledge it finds as objects of strict examination. These forms must be critically studied and understood, they must not be taken blindly as a postulate, and must not be introduced into the fabric of the investigation.

If the scientist is not to accept as self-evident what merely seems self-evident he must always check sociological knowledge against the total facts of accumulated social experience. In order not to become a victim of subjectivism in cognition, a scientist must not only be highly competent in his field, but he must be courageous and take his stand on principle, rejecting the most commonly accepted and the most desired deductions and evaluations, if they conflict with the facts.

We speak here, as will be seen further on, not of renouncing ideology in general, but of rejecting unscientific and anti-scientific ideology. Nothing can save a social research from subjectivism, except a scientific, strictly objective ideology monistic to the very end — such as, the dialectical-materialistic ideology.

The task of a sociologist, as of any other scientist, is to discover the truth. But what is truth in social research? This question has always exercised, and is still exercising, philosophers, economists and

historians. In raising the question of truth as such, we immediately get into the realm of philosophy.

From the history of philosophy we know that some philosophers and sociologists define truth itself as the organising of human experience to conform to an ideological pattern, i.e. in a subjectivist manner. Naturally, under such a definition of truth, the question of the relationship between sociology and any ideology whatsoever becomes irrelevant, since these concepts are totally identified.

The adherents of historical materialism are against such a subjectivist view of sociology. By truth we understand theoretical theses and principles which reflect reality, whether embodied in nature or society, correctly and adequately, irrespective of ourselves.

«From the standpoint of modern materialism, i.e., Marxism, the *limits* of approximation of our knowledge to objective, absolute truth are historically conditional, but the existence of such truth is *unconditional*, and the fact that we are approaching nearer to it is also unconditional. The contours of the picture are historically conditional, but the fact that this picture depicts an objectively existing model is unconditional. When and under what circumstances we reached, in our knowledge of the essential nature of things, ... or the discovery of electrons in the atom is historically conditional; but that every such discovery is an advance of «absolutely objective knowledge» is unconditional. In a word, every ideology is historically conditional, but it is unconditionally true that in every scientific ideology (as distinct, for instance, from religious ideology) there corresponds an objective truth, of an absolute nature»¹.

The truth and objectivity of the discoveries, postulates and deductions of physics and chemistry are verified by practice and experience. But what of sociology, which is the science of society? Here again, the truth of judgments or propositions relating to various bodies and enterprises, to this or that social institution, is verified by everyday practice. The matter becomes far more complicated when we come to deal with sociological theories and the formulation of the laws of social life and social development, including those that necessarily determine the trend of this development within the confines of a period, running into many decades. How are we to verify the truth of these theories, their laws and deductions? Here, of course, as everywhere, the social development and historical experience of peoples may serve as a criterion for determining the

¹ LENIN, *Collected Works*, Vol. 14, p. 123 (Russian text).

truth. Here, however, the scope of these experiences is correspondingly broadened both in time and in space.

As to the sphere of scientific sociology, which deals with whole social formations, embracing many countries and the most varied and extensive processes of material, political and spiritual life, a sociologist is compelled to resort, and does resort, to theoretical abstraction, constituting one of the indispensable elements of the scientific method of research, in order to establish the objective laws relating to a social entity.

This is a further element which we must bear in mind if we want to define the character and essence of the actual correlation between sociology and ideology: many are the sociologists representing the empirical school of sociological thought who from the outset deny the role of the abstract-theoretical method in sociology and declare all theoretical theses of a general character to be ideology.

II. WHAT HAS HAMPERED THE PROBLEM'S SCIENTIFIC SOLUTION ?

A positive approach to the question of the correlation between sociology and ideology during the whole of the last half-century has been considerably hampered by the wide spread prevalence and constant resurgence of a strange myth, a myth which either assumes the aspect of a discussion on «freedom from values» in sociological theory or proclaims an end to all and every ideology — the end of the «ideological era».

We have here a paradox, which can be explained, and which lies in the fact that it is precisely in our century, with the unprecedented rise in the role of ideas and ideologies, which grip the minds of large masses, thus having come to constitute a kind of material force — a time when all the tribulations of the ideological struggle in the world are acquiring the greatest importance for each individual — that wide currency has been gained by concepts either generally denying a connection between sociological science and ideology or claiming that the possibility of such a connection is a negative factor for the advance of sociology itself.

For quite a few Western sociologists the basic issue often is not so much the substance, content and character of the connection between sociology and ideology, as the very existence of that connection.

No conscientious and objective student of the problem of interrelations between sociology and ideology can ignore a plain, reliable

and obvious fact: that each generation of human beings finds itself caught up in the clash of ideological systems and the struggle of social ideas. From their first steps in life people are constantly exposed to this influence, including sociologists — all of them, without exception. The idea that sociology can exist in some «non-ideological» sphere, or that a sociologist can create uninfluenced by, or in opposition to, of any kind — this is one of the myths farthest remote from reality, to which anti-Marxian sociological thought has given birth in the 20th century. At the same time, it must be specified that there are many non-Marxian sociologists, who do not share this false view concerning the neutrality of sociology, or its full independence from ideology.

Non-Marxian sociology has directly experienced and keenly felt the pernicious consequences which the adherence of sociologists to the ideology of the obsolescent reactionary social forces, whether overt or covert, involves for sociological thought. It could not but convince itself that anti-scientific notions instilled in the sociologist by the prevailing ideological system constitute an obstacle to objective description of, and research on, social development. The question raised by Max Weber regarding «the freedom of the sociologist from values» — especially «values» of an ideological character — was not by any means a limited, purely academic problem. For Max Weber and his followers in sociology the question of the objectivity of sociological research has become a sore subject. One of the factors underlying M. Weber's theory is, of course, the struggle against Marxism — the need for creating a counterbalance to Marxian sociology, with its emphasis on social development as a natural historical process.

As it is well known, Max Weber was of the opinion that sociological research «free» from ideological values was possible and that ideologically unbiased analysis is the first requisite for genuinely scientific sociology.

Weber's slogan was received with enthusiasm in German social science circles in the 1910s and 1920s. Of course, there were objections and doubts. Nevertheless, many sociologists, historians and legal theorists actually believed that a sociology which would be «free from values», politically neutral and unburdened by ideological prejudices, was a real possibility. On the wave of neutralism and liberalism, there appeared theories of an above-class élite (Max Scheler), a «free-soaring intelligentsia» (Karl Mannheim), allegedly able to implement a scientific «synthesis of categories» as a tool for cognition of society and

to pursue a genuinely scientific approach uninfluenced by class considerations. However, that wave itself was only a part of the general flood of indifferentism, Philistine indifference and petty-bourgeois ideological impotence. Subsequently German fascism brutally destroyed these illusions of theoretical and ideological neutralism. By its man-hating policy and ideology fascism exposed the actual dependence of bourgeois sociology on a certain «system of values» and on the diffuse ideology and complex distribution of class and political forces. Fascism cynically and graphically demonstrated how deluded were those who, by voluntarily refraining, as they thought, from following widespread ideological standards inimical to science, presumed to achieve objectivity and truthfulness in sociological research. The real force of reactionary sociology proved to be much more powerful than the naive wishes of the sociologists to free themselves from it. In reality «freedom» from ideological values proved to be nothing else than an ideological value of a special kind.

Those trends, whose forefathers were Max Weber, with his slogan of sociology free from values, and Karl Mannheim, with his concept of the illusoriness and falsity of every ideology, are deeply rooted today in sociological teachings disseminated in Western Europe and the United States.

They reflect and simultaneously (due to the reverse ideological effects of sociology) strengthen the fragile illusions of a certain portion of the intelligentsia regarding the possibility of living in a society and be free from pressures exerted by ideologies and social institutions.

Today the fight against «ideologism» —irrespective of the sincerity of intent of a number of sociologists — is one of the characteristic forms of the struggle against Marxist sociology, which honestly and openly admits its connections with a definite system of views and convictions, i.e. the socialist working-class ideology and scientific socialism.

According to today's exponents of «anti-ideologism», one of the peculiarities of our time is the collapse of ideological thinking in general. «Today we witness the end of an ideological era» — thus declares, for instance, the American sociologist Daniel Bell; and, sociology — of unbiased, objective and passionless social research. he adds, we are now witnessing the birth of totally non-ideological

Efforts are made to persuade us that ideology is always deliberately false and illusory because of its direct class content, and to dismiss it as a negative result of alienation and a fruitless attempt to «weaken»

it. Ideology is being slighted as empty rhetoric. The advocates of de-ideologisation consider that scientific sociology does not have and should not have anything to do with ideology. Scientist-sociologist and ideologist are, according to these teachings, two diametrically opposite social types. Such in brief, is the position of those who advocate the «de-ideologisation» of sociology.

III. A KNOT OF DIFFERENCES. SOCIAL SUBSTANCE OF IDEOLOGIES

As it appears to us, the core of the discussion as regards the question of the relation between sociology and ideology is centred not on intersecting points of science and ideology, mobile social experiment and ossified dogmas, as those who speak of the «end of the ideological era» would have us believe, but in the core of the concept of the content of ideology, in the struggle of the two opposing ideologies of our time.

Whether the anti-ideologists realise it or not, the essence of the present-day differences in regard to sociology and ideology consists primarily in the inter-relations between the two contending ideologies: the scientific, socialist ideology on one side, and the ideology dominating capitalist society on the other. Of course, things must not be oversimplified. Among the antagonists of ideology there are some sociologists who are sincerely striving to free themselves from ideological influences alien to science, which give a false and distorted picture of social reality. These honest intentions are understood by us. Marxism and Marxist sociology themselves originated in and grew out of the struggle against ideologies alien to science. But in criticising idealistic, fetishist ideologies which gave a distorted picture of reality, and in criticising the utopian socialism of their time, Marx and Engels created scientific socialism, which was a new, consistently scientific ideology. Marxian ideology was the logical result of thoroughgoing, strictly objective studies in the realm of philosophy, political economy and history of the class struggle. So when today we examine the problem of the interrelation between sociology and ideology, it should not be discussed in abstract terms, but from a concrete, historical viewpoint, and we should be quite clear as to what ideology it is we are talking about.

The pitting of science against ideology, of the cognitive against the ideological elements of sociology and ideology, proceeds from a distorted interpretation of the idea that socially conditioned knowledge was for the first time introduced in social sciences and philo-

sophy by Marxism. By discovering in the material conditions of social life and the classes of society the basis for ideologically creative work, the creators of history's materialist concept revealed the conditions for spiritual achievements in general.

Reflected in various forms of social consciousness, the very development of the process of reproduction of society's material life and the development of social experience emerge in the minds of human beings in the form of varying concepts of the ideal order, incentives, interests and aims, and is moulded into a definite ideological line. We get into the substance of ideology as soon as we realize that in a socially heterogeneous class society any concept of the ideal order, whether pertaining to law, ethics or aesthetics, not to mention politics and incentives to toil, always expresses in some form or other definite, quite substantial basic interests of a given class. The ideology itself appears partly in a non-conscious form, i.e. as an unsystematized sum of ideas and views, partly as a more or less systematized expression of ideas, interests, aims, incentives, motives and social ideals peculiar to large groups of people, characterized by similar positions in society, and primarily in the system of social production.

Ideology does not originate independently and by itself, i.e. outside the concrete forms of man's spiritual mastery of the world, but through the forms of social consciousness, as the result and summary of their social content. The concepts of «ideology» and «forms of social consciousness» mutually intertwine and do not coincide fully with each other. Ideology constitutes a very complex form of spiritual activity.

That is why we hear complaints about the many different meanings of the concept of «ideology». Irwing L. Horowitz², one of representatives of «Sociology of Knowledge», points out that there are only a few words in the dictionary of social studies which have proved to be as disputable and nevertheless as influential as «ideology». Indeed, the existing methodological difficulty of analysing the problem of ideology itself in its correlation with science and a wide area of social studies depends in the solution of the problem of the social nature and conditioning of the development of society's spiritual life.

Generally speaking, if there is no understanding of social con-

² HOROWITZ, L. IRWING, *Philosophy, Science and Sociology of Knowledge*. USA, 1961, p. 79.

sciousness as a necessary and natural feature of the socio-historical process, and if the connection between social consciousness and the development of social experience simply is disregarded, then the development of the ideological forms itself appears to the theoretician as a totally independent process determining the course of history. F. Engels wrote of this ideology:

«Ideology is a process accomplished by the so-called thinker consciously, it is true, but with a false consciousness. The real motive forces impelling him remain unknown to him; otherwise it simply would not be an ideological process. Hence he imagines false or apparent driving forces»³.

The illusion of ideology's total independence and of its emancipation from the world, the exaggeration of its actual relative independence, the alleged existence of intrinsic laws governing cognition of the world — all of these are expressions of each dominating class endeavour to give its ideology and the spiritual expression of its interests a semblance of universal human validity. In an effort to endow their ideology with a permanent and unchangeable value, the dominating classes in societies based on private ownership appeal to allegedly universal and immutable «human nature». Of course, it must be added that in all of history, prior to capitalism real conditions for the objective and accurate reflection of social reality had not yet ripened. As a result, it was not yet possible to reveal the genuine, universal theoretical basis for ideologically creative work.

This was the context in which Marx and Engels formulated their well-known proposition, viewing ideology as a false and distorted consciousness and as an extremely broad generalization of the previous ideological material, which they subjected to sociological analysis and comprehensive criticism (in books such as «Sacred Family», «German Ideology», etc.). Speaking as ideologists of the proletariat, Marx and Engels did not deny scientific ideology. They entered into polemics with the content of idealistic clan-limited ideologies, as well as with idealism in their interpretation.

Today when assertions are made about the falsity of every ideology, when every ideology is identified with false consciousness, it has become fashionable to allude to Marx. In his article «What is Ideology? Conception and Problems», Jacob von Barion wrote that today we use the word «ideology» in the negative sense, just as it was used by Marx and Engels. It has been preserved primarily in the socio-political sphere. Ideological thinking is defined as thinking which

³ K. MARX and F. ENGELS, *Selected Works*, Vol. II, p. 477.

bears no relation to reality, for it regards as real and possible a purely ideal social system, inferred from a preconceived «idea», whose implementation it demands.

In reality Marxism and Marxist sociology have always discerned two types of ideology — scientific ideology and idealistic ideology, the latter being a distorted and corrupted reflection of reality. «If in all ideology men and their circumstances appear upsidedown as in a camera obscura, this phenomenon is just as much a consequence of their historical life-process as the inversion of objects on the retina is a consequence of their physical life-process»⁴.

But if interests, aims and strivings of different social groups are reflected in every ideology, is it then right to raise the question of the scientific objectivity and truth of a given ideology? Does not the class position in ideology inevitably imply a distortion of reality?

There exist different interpretations of objectivity and the partisan spirit in ideology. In the voluntarist concept, based on subjective idealism, ideologists emphasize the function of social and psychological orientation in life, whose course depends on allegiance to one idea or another, to one principle or another. Thus, for example, R. Dies writes that the strength of ideology is in the strength of passion and adherence to an idea. Ideology gives the one who possesses it self-justification and an impulse to action. It is something that one believes in, that gives one a sense of direction in life and experience. Ideology has a function analogous to religious affiliation, which determines changes in the life of an individual and, as a consequence, in the life of those who surround him⁵.

Here the very existence of ideology in society, as well as its content, are accounted for by reference to the psychological need, allegedly inherent in man, to believe in something at all costs, to entertain hopes, to live in expectation, to anticipate something in the future. In ideology they see some sort of a channel of escape for emotions, fears and hopes. Some authors (for instance, K. Linton) frankly use a terminology borrowed from Freudian theories, in which ideology is deprived of any objective basis. It is worth pointing out that, under such theories, the question of the tie between ideology and science is left hanging in mid-air, that it becomes superfluous. If every ideology is merely the sum total of the idols which man worships, amounting to a sort of fetishism, then the ideological con-

⁴ MARX and F. ENGELS, *Works*, Vol. 3, p. 25.

⁵ R. DIES, *Social Science and Ideology*. *Social Science. An International Quarterly of Political and Social Science*, Vol. 31, N° 2. pp. 234-243.

sciousness derived from such premises can only be fetishist and distorted.

If it becomes a matter of freeing sociology from perverted, fetishist, anti-scientific ideological influences, then we Marxists are entirely on the side of those who demand that it be so freed. But the question of the social determination of scientific sociological knowledge, and its objectivity and truthfulness, still remains to be solved.

There is a concept of ideology which claims to have some resemblance to Marxism and which outwardly rests on Marx's utterances regarding ideology. The followers of this concept regard every ideology, in any society as the mere expression of selfish and narrow class positions, and deny that it can ever have anything in common with objective truth. In so far as it is based on the thesis that knowledge in general and ideology in particular are socially determined, this interpretation can be regarded as vulgar sociology. This point of view, supported by K. Mannheim, is widespread, and many Western sociologists frequently refer to it. Mannheim made an attempt to analyse Marxist sociology and to subject it to criticism. «What is the basis of Marxian sociology?» he asks; and, in reply, he states that it is class sociology, and that it operates only through a given sociological category, namely a class. Within this narrow framework, each phenomenon is either of a class nature or not of a class nature. This technique, based on a biased attitude towards the subject of research, had also been used frequently in the past with a view to undermining the opponent's self-confidence by setting off against him an alternative and trying to imprison him in it⁶.

Of course, this really is a caricature of Marxism. It is just as far removed from Marxism as heaven is from earth, as anyone who has read Marxist works will readily appreciate. Nevertheless certain sociologists do not disdain the use of caricature.

The Marxian thesis of the social conditioning of knowledge, the social basis of creative ideological work and the development of self-consciousness is replaced here by vulgar economism, and ideology is reduced to a mere function of the economic situation. The truth, of course, is that each class, because of its specific position in society and the historical problems facing it, creates through its ideologists its own historically conditioned ideology — but it is wrong to regard it as a false consciousness. Only ideology, correctly reflecting, or at least coming close to an objective understanding of,

⁶ K. MANNHEIM. *Essays on the Sociology of Culture*. London, 1956, p. 103.

the problems of social development facing a given class can contribute to their progressive solution. In the past, elements of objective truth were present in the ideology of historically progressive classes, the trend of development of which coincided with the onward march of history. Humanistic views and ideas of great representatives of the Renaissance constituted such an ideology. The ideas and views of the ideologists of the Great French Revolution, the ideas of Montesquieu and Voltaire, Rousseau and Diderot, Helvetius and d'Holbach also constituted such an ideology. Their works contained errors, but they also contained the objective truth in that they called for replacement of the moribund reactionary regime by a new progressive socio-political system, and of the feudal-absolutist regime by a bourgeois democratic state. Scientific ideology, objectively reflecting the processes and laws of reality, developed fully only after the emergence of the class whose historic interests coincided with the objective trend of historical development.

It is historically incorrect to paint a consistently black picture of the development and change of ideologies, as if they reflected nothing more than narrow, selfish group interests. However, it is methodologically no less fallacious to represent ideological constructions as a black and white mosaic made up of little bricks of truth and untruth. The development of sociology, like the development of sociological thought itself, must be understood as a socially conditioned process, approximating more or less to objective truth at different times.

IV. THE POSITION AND INTERESTS OF CLASSES AND SOCIOLOGY

The problem of the interrelation of sociology and ideology is closely connected with the broader problem of the interrelation between all scientific knowledge (including natural science) and questions of philosophy and world outlook.

All of us remember the fate of great discoveries by Giordano Bruno, Copernicus, Galileo, Charles Darwin and others in the field of natural science. But natural science is only remotely, and not at all directly, connected with the ideological struggle.

The laws of nature, their discovery and their utilisation in themselves do not affect the interests of classes. And nevertheless a passionate struggle raged around the discoveries of Copernicus, Galileo and Darwin. The subject of sociology — the laws and forces determining society's development touch directly upon the interests of

the struggling classes, and the interests of all people. The profound significance of Thomas Hobbes's utterance is fully applicable here: «If geometrical axioms affected the people's interests, then they would probably be refuted».

The results of sociological research, sociological generalizations and deductions, the formulation of laws and trends of social development, and even the mere identification and description of social processes as a rule affect the interests of social groups and their real status in society in one way or another. As a matter of fact, the intensive development of sociology as a science in modern society can be explained by the very complexity of social structure and a striving to discover the real position and prospects in regard to the development, interests and requirements of the various social forces.

Scientific socialism has as its main objective the study of the social laws which apply depending on the radius of action and scope of social phenomena contemplated... It is known that groups of social laws differ in the range of social phenomena they cover. Marxism discerns the general sociological laws, determining those conditions which have a common, substantial influence on the whole of human history, and the forces guiding the development of the human race. These laws are effective in all socio-economic formations; an example is the decisive influence of the means of production on the social structure of any society. These laws are quite broad and do not manifest themselves in «pure form» outside the specific conditions of a historically defined period, with well-defined methods of production and socio-economic structures, and accordingly their effect in variably changes, depending on specific conditions. They can and must be studied sociologically. This is one of the major tasks of scientific sociology — the study of the general laws of social development and their peculiarities, for example the law of society's forward movement, or of mankind's ascending trajectory, or the study of social differences, viewed as the driving force behind social development.

The many common features encountered, together with the wide range of social phenomena makes it particularly difficult to formulate sociological laws and to determine methods for studying them. Here it is impossible to start with some specific «call» in any given society; and it is important not to get lost among the countless random occurrences and opposing tendencies in attempting to discover the course of social development, and the driving force behind it. Marxism found the backbone and the foundation of research — the concept of socio-economic formation, viewed as a whole complex of

definite production relationships, qualitatively corresponding to a definite stage in society's development. And that was indeed a tremendous achievement of sociological thought, which could hardly be overestimated, since no experiments for its verification could be carried out. We have here, as Marx pointed out, a powerful instrument of abstract generalization based on a huge accumulation of facts and information obtained from real history. It is precisely this group of general sociological laws which is linked most closely with ideology and philosophy.

Socio-political revolutions had taken place in the remote past, and they are taking place in various countries today. What are they? An anomaly, a disease, purely fortuitous events — or the result of definite historical laws? In sociological literature, a reply to this question frequently depends both on the school of thought to which the sociologist happens to belong and the influence of a particular ideology. Take, for instance, the sociological law of the objectivity of social progress and its criteria. It is disputed by some sociologists, while others relegate it to the ideological sphere. Still others — and primarily Marxists — regard it as one of the cardinal laws of world history and social life. But even among those who acknowledge this law, disputes and clashes of opinion still go on and will go on in the future.

The departure from the scientific analysis of the correlation between ideology and general sociological laws may lead — and is leading — to narrow empirical sociology. But even in capitalist countries there are many representatives of prevailing sociological theories whom this trend in sociology does not and cannot satisfy. We do not necessarily deny the scientific significance of empirical sociological research. However, scientific sociology cannot confine itself to research of this kind. A sharp delimitation between sociology and ideology presupposes an understanding of sociology as being concentrated only on private aspects of reality. This leads to the emasculation of all ideas about the objectivity of laws of social development and makes nonsense of the very concept of objective social law. Refusal of cognition of substantially general facts, recognition of the principled impossibility of registering general substantial conditions and interrelation of social processes, deprives sociology of criteria of objectivity of sociological theory itself and criteria of the objectivity for approaching the phenomena studied, and implies ultimately the extreme relativist principle of the selection of facts themselves.

Having thus demarcated sociology and ideology and having requested to conduct sociological research on the other side of rigid and fruitless ideological controversy, sociologists fall into the quagmire of vagueness in their initial positions. Their initial positions are subjective and arbitrary, and his subjectivism inevitably leads to rigid formal constructions of an apologetic type, which close the door to the study of the real prospects for social development. Any social reality thus receives a theoretical sanction, and the need for genuine social changes is denied. At the beginning of the century Max Weber himself confessed that his theory of arbitrary ideal types was aimed directly against Marx's concept of objective social law.

Let us examine another aspect of the problem. Marxist sociology achieves an organic unity of theoretical and concrete sociological research, in which a definite interrelation exists between ideological premises and sociological deductions. True, this connection is not equilinear and is not easily deciphered. Engels wrote that in social interaction "... the final result always arises from conflicts between many individual wills, of which each again has been made what it is by a host of particular conditions of life. Thus there are innumerable intersecting forces, an infinite series of parallelograms of forces, which give rise to one resultant — the historical event"⁷. The complexity of specific manifestations of social progress, composed as if of individual, unique manifestations, does not at all imply that the method of their achievement is free from ideological influences. Relying on this, efforts are made to establish social sciences on a positivist basis as an exact copy of a model provided by the empirical data of natural sciences. In his presidential address to the American Society for Study of Social Problems in 1961 Alvin Gouldner said sarcastically that all sociology, from Parsons to Lundberg, was aimed at instilling as a dogma that "we must not bind ourselves with value judgments". As a result of this, many young people engaged in sociology began to flee from the world, and in this sense they freed themselves from worry about it. At the same time, they remain connected with the world to the extent of using any justification for moving ahead with the aid of a "neutral technique" which can be sold on the market place to any customer. Gouldner thought that such sociology was scientifically unreal and socially dangerous (Published in a magazine in 1964).

Here sociology's false neutrality is pointed out in relation to value, i.e., ideological principles.

⁷ MARX and ENGELS, *Selected Works*, Vol. II, pp. 468-469.

Is it possible, generally speaking, to separate the study of facts from judgments of value, or so-called judgments of fact from judgments of value? In examining this question it must be considered that any socially significant appraisal includes a colossal amount of social experience. The actual requirements of social development, once consciously expressed, are reflected in many different instructions, standards and social ideals. Naturally, in a class society these results of mankind's mastering of its own behaviour have a class tendency, which in turn is modified by the subjects of activity. Passing through individual or group consciousness, the appraisals assume a subjective orientation. They become charged with individual nuances, coloured by human experience in an industrial society. Another important factor is that the very act of singling out any fact, even its plain ascertainment, implies an appraisal relating to the study of phenomena or the whole process. In psychology this is called fixation of the meaning of a word, action, event, etc. Fixations of the meaning can be referred to as judgments of value.

Conclusion

It is impossible to speak of the relationship of sociology in general with some kind of abstract ideology, for there are no such ideologies in existence. There are specific trends in sociology in the West and in socialist countries and there are specific forms and kinds of ideology. Each of these sociological trends is linked somehow with this or that existing ideology, even when in words the link is denied. As for pure sociology, totally independent from ideology and from the present world ideological struggle, there is and can be no such thing. Sociology can and must make a study of the history and character of the ideological struggle, the struggle of ideas in the past and now. An unscientific ideology, which gives an inaccurate reflection of the world of social relations and a distorted and illusory picture of social life, confuses the sociologist, causes him to have preconceived ideas about things and to see all social processes, and indeed everything that surrounds him, in a deforming mirror. Sociology, which is called upon to reveal and defend the truth, and to formulate the real laws and describe the real forces which determine social life, must be completely objective to the utmost degree. Any preconceived portrayal of reality, departing from objective truth, converts sociology into a pseudo-science.

Only a truthful, honest, objective sociological study, yielding objective truth, can preserve its force. The tribulations of history, the zigzags in the development of social life cannot shake the truth and the objective laws revealed by sociology.

On the contrary, life and the historical social process increasingly confirm the objective truth and the real laws and trends disclosed by scientific sociology. Of course, even in scientific sociology, which on the whole allows of objective, impartial and unbiased scientific investigation, some details and premises may nevertheless become out of date. In our stormy times, characterised by rapid change, sociological thought must not remain static, but must keep pace with life; otherwise it runs the risk of either lagging behind or coming into conflict with it. It must test its theoretical affirmations in the crucible of life and socio-historical experience.

Dogmatism is the enemy of any science, Marxian sociology included. As is known, Marxian sociology regards social development as a strictly law-governed natural historical process. Historical necessity asserts itself through countless accidents. A colossal role in social life is played by the will of people, by human passions, by the struggle of ideas, philosophies and ideologies. A considerable part is played by certain commanding personalities, which dominate events and put their imprint on them. All this distinguishes the laws of social life from the history and the life of nature, from physical, chemical and biological phenomena and processes, etc. Yet, human society is nevertheless a part, though a specific one, of the great whole, of the world of nature. Like everything in the world, its development is strictly determined in all its numerous fortuities. Only recognition of determinism in social life and the operation of objective laws can provide the basis for an objective and truthful science of sociology. Only such a science can serve as a reliable guide for peoples in their historical evolution; only objective truth and the objective laws formulated by sociology can provide a reliable orientation to progressive social forces in exerting a purposeful influence on the course and outcome of events. Errors, distortions of truth, wishful thinking, everything that is dragged into science by false ideology — all of this sooner or later, today or tomorrow, is bound like a boomerang, to hit back at those who perpetrate such errors, distortions, illusions and false ideological teachings. Only truth, objective truth, verified and proved by life and historical experience can correctly and reliably orient social activities and, in the historical movement of peoples, serve as their guiding star.

LE PROBLEME DES MECANISMES COMMUNS DANS LES SCIENCES DE L'HOMME *

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Un certain nombre de circonstances expliquent que sur le terrain des sciences sociales et humaines, les recherches interdisciplinaires, quoique reconnues, en général comme comportant un grand avenir sont beaucoup moins fournies que dans les sciences de la nature.

Les deux raisons principales en sont, d'une part, qu'il n'existe aucune hiérarchie dans la filiation des concepts entre des sciences telles que la psychologie, la sociologie, l'anthropologie culturelle, la linguistique, l'économie, la logique etc. de telle sorte que chacun peut travailler longtemps en son domaine propre sans se trouver contraint de faire appel aux autres, tandis que, dans les sciences de la nature, il existe un ordre de complexité croissante et de généralité décroissante (Comte) en passant des mathématiques à la mécanique, à la physique, à la chimie, à la biologie et à la psychophysologie.

D'autre part, et *a fortiori*, il se pose peu de problèmes de réduction d'un groupe de phénomènes à un autre, tandis que les sciences naturelles soulèvent de continus problèmes de réduction du «supérieur» à l'«inférieur». Mais à cela s'ajoutent au moins deux circonstances contingentes et qui ont pourtant joué un rôle historique indéniable.

L'une est la tragique répartition des enseignements en Facultés universitaires de plus en plus séparées ou même en Sections intérieures à ces Facultés mais néanmoins étanches. Tandis qu'en une Faculté des Sciences la formation de n'importe quel spécialiste exige une culture multidisciplinaire plus ou moins étendue, il peut arriver qu'un psychologue ne sache rien de la linguistique, de l'économie, ni même de la sociologie.

La seconde raison d'ordre général qui a pesé sur le passé des sciences de l'homme est l'idée que sortir des frontières de sa propre discipline implique une synthèse et que la discipline spécialisée dans

* Ayant été chargé par l'Unesco d'étudier les mécanismes communs et les relations interdisciplinaires en vue d'un rapport sur les tendances actuelles des sciences de l'homme, nous présentons ici pour les soumettre à la discussion des sociologues quelques-unes des idées que nous comptons développer en ce rapport.

la synthèse, si l'on peut dire (et le seul fait de s'exprimer ainsi montre la fragilité d'une telle supposition) n'est autre que la philosophie elle-même. Or, la philosophie comporte assurément une position synthétique, mais qui est relative à la coordination de toutes les valeurs humaines et non pas à la coordination des seules connaissances. Si donc des branches telles que la psychologie ou la sociologie scientifique ont péniblement conquis leur autonomie en opposant la vérification expérimentale ou statistique aux méthodes de réflexion, ce n'est pas pour revenir à ces méthodes lorsqu'il s'agit de connexions interdisciplinaires imposées par les faits et non pas par esprit de système.

Cela dit, si l'on veut juger de l'avenir des recherches interdisciplinaires entre des sciences qui toutes comportent leurs méthodes éprouvées d'approche et de vérification, mais que leurs traditions n'ont point encore habituées à ce qui est devenu courant dans les sciences de la nature, le meilleur procédé consiste peut-être à commencer par une comparaison des problèmes.

Or, on est immédiatement frappé à cet égard par trois faits fondamentaux : c'est d'abord la convergence de certains grands problèmes, qui se retrouvent en toutes les branches de notre immense domaine; c'est ensuite le fait que ces grands problèmes n'ont à peu près rien à voir avec ceux du monde inorganique mais qu'ils prolongent par contre assez directement certaines questions centrales des sciences de la vie; c'est enfin que pour résoudre ces problèmes, on en vient nécessairement à recourir à certaines notions cardinales qui recouvrent en fait des mécanismes communs. Si tout cela est vrai, on voit alors immédiatement combien l'étude de ces mécanismes communs exige et exigera toujours davantage un effort interdisciplinaire concerté, qu'il s'agirait de favoriser de toutes manières entre les sciences humaines, cela va sans dire, mais en relation en certains cas avec la biologie.

A s'en tenir, d'abord, aux problèmes les plus généraux, il n'est guère douteux que les trois questions à la fois les plus centrales et les plus spécifiques des sciences biologiques (car elles n'ont guère de signification sur le terrain physico-chimique) sont celles (1) du développement ou de l'évolution dans le sens de la production graduelle de formes organisées avec transformations qualitatives au cours des étapes; (2) du fonctionnement sous ses formes équilibrées ou synchroniques; et (3) des échanges entre l'organisme et son milieu (milieu physique et autres organismes). En d'autres termes, les trois notions cardinales exprimant les principaux faits à expliquer

sont celles (1) de la *production* de structures nouvelles, (2) de l'*équilibre* mais dans le sens de régulations et d'autorégulations (et non pas simplement de balance des forces) et (3) de l'*échange*, dans le sens d'échanges matériels, mais tout autant (car c'est aussi le langage de la biologie contemporaine¹) de l'échange d'information.

Cela dit, il est évident que ces trois problèmes des transformations diachroniques, de l'équilibre synchronique et des échanges sont également les trois questions principales que l'on retrouve en chacune des sciences de l'homme. Et non seulement on les retrouve sous des formes très spécifiques en chacune d'entre elles, mais encore les relations entre la dimension diachronique et la dimension synchronique diffèrent d'une manière très significative selon les types de phénomènes étudiés.

Structures et Fonctions

Reprenons nos comparaisons biologiques, car, en l'absence d'une «théorie générale» des sciences humaines dont on n'aperçoit aujourd'hui que les visions d'avenir, ce sont les références biologiques qui fournissent le cadre le plus clair. Et la comparaison s'impose d'autant plus que la psychologie dépend étroitement de la biologie, et la démographie en partie.

Les notions fondamentales sont à cet égard celles de *structure* et de *fonction*. Mais dès ce départ on se trouve en présence de problèmes assez effrayants, car ce sont à la fois les termes les plus usités et ceux dont le sens demeure souvent le plus imprécis, tant en leurs significations respectives qu'en leur coordination.

Mathématiquement on peut caractériser une structure par l'opération d'isomorphisme qui permet de la retrouver en des domaines différents. On dira ainsi que deux ensembles d'éléments ont la même structure si, en faisant abstraction de la nature de ces éléments, on peut établir entre eux une correspondance bi-univoque et réciproque ainsi qu'entre les relations qui les unissent, considérées terme à terme y compris leur direction (par exemple $\langle \text{ou} \rangle$).

Une telle méthode peut s'appliquer à des structures «organisées» ou biologiques, mais en ajoutant les précisions suivantes. Une structure vivante constitue un système «ouvert» (Bertalanffy) en ce sens qu'il se conserve au travers d'un flux continu d'échanges avec l'ex-

¹ Par exemple chez Schmalhausen.

térieur. Il n'en comporte pas moins un cycle se refermant sur lui-même, en tant que ses éléments s'entretiennent par interactions tout en puisant leur alimentation au dehors. Une structure peut être décrite statiquement, puisqu'elle se conserve malgré sa perpétuelle activité, mais elle est en principe dynamique puisqu'elle constitue la forme plus ou moins stable de transformations continues.

Considérée en son activité une structure «organisée» comporte donc un fonctionnement qui est l'expression des transformations qui la caractérisent. On appelle alors en général «fonction» le rôle (c'est-à-dire le secteur d'activité ou de fonctionnement) que joue une sous-structure par rapport au fonctionnement de la structure totale, et, par extension, l'action du fonctionnement total sur celui des sous-structures.

Tout fonctionnement est à la fois production, échange et équilibration, c'est-à-dire qu'il suppose sans cesse des décisions ou choix, des informations et des régulations. Il en résulte que les notions mêmes de structure et de fonction entraînent, et cela déjà sur le terrain biologique comme tel, les notions dérivées d'utilité fonctionnelle ou valeur et de signification.

En premier lieu, toute fonction ou tout fonctionnement comporte des choix ou sélections parmi les éléments internes ou externes. On dira en conséquence qu'un élément est utile lorsqu'il entre à titre de composant dans le cycle de la structure et qu'il est nuisible s'il menace ou interrompt la continuité du cycle. Mais il faut distinguer deux sortes d'utilités fonctionnelles ou «valeurs» :

1) Les utilités *primaires*, c'est-à-dire l'utilité d'un élément interne ou externe (production ou échanges) par rapport à la structure considérée, mais en tant que cet élément intervient qualitativement dans la production ou la conservation de cette structure comme forme organisée : par exemple l'utilité d'un aliment contenant du calcium pour l'entretien des os ou utilité d'un groupe de gènes dans une recombinaison génétique susceptible de survie.

2) Les utilités *secondaires*, relatives au coût ou au gain afférents à l'élément utile au sens 1 : coût d'une transformation, d'un échange, etc., intervenant dans les fonctionnements.

Cette distinction se réfère donc, d'une part, à l'aspect relationnel ou formel des structures, donc à l'aspect structural comme tel, et, d'autre part, à l'aspect énergétique du fonctionnement. Il va de soi que ces deux aspects sont inséparables, car il n'y a pas de structure sans fonctionnement et réciproquement. Mais ils sont différents, car en toute production et en tout échange, il est nécessaire de distin-

guer (1) ce qu'il faut produire ou ce qu'il faut acquérir ou échanger, eu égard aux structures à entretenir ou à construire, et (2) ce que coûte ou rapporte cette production ou cet échange eu égard aux énergies disponibles.

Mais il est encore une distinction à ajouter au rappel de ces notions biologiques générales pouvant servir de cadre à l'analyse des mécanismes communs propres aux différentes sciences humaines. C'est une distinction relative au rôle de l'information, celle-ci étant nécessaire aux productions comme aux échanges et aux régulations. Il est, en effet, indispensable de faire intervenir, en plus des structures et des valeurs de fonctionnement la notion des *significations*, en tant qu'un élément donné peut ne pas être intégrable comme tel ou actuellement en une structure déjà produite, ni ne présenter de valeur fonctionnelle directe ou immédiate, mais constituer le représentant ou l'annonce de structurations ou fonctionnements ultérieurs. Deux cas sont alors à distinguer : (a) le représentant n'est pas reconnu comme tel par l'organisme, autrement dit ne concerne pas le comportement, mais participe d'une sorte de stockage ou de réserve d'information qui sera utilisée ultérieurement: c'est en ce sens qu'on parle d'information génétique, etc., ou de la transmission d'information qui caractérise le feedback par opposition au processus énergétique principal dont ce feedback assure la régulation; (b) ce représentant est utilisé dans le «comportement» et devient ainsi stimulus «significatif», etc. Nous sommes alors au seuil des systèmes de significations intéressant le comportement humain.

Au total, nous nous trouvons ainsi en présence de trois grandes catégories de notions : les *structures* ou formes de l'organisation, les *fonctions*, sources de valeurs qualitatives ou énergétiques et les *significations*. Toutes trois donnent naturellement lieu à des problèmes soit diachroniques ou d'évolution et de construction, soit synchroniques ou d'équilibre et de régulation, soit d'échanges avec le milieu, mais on voit immédiatement que les relations entre les dimensions diachroniques et synchroniques ne sauraient être les mêmes selon qu'il s'agit des structures, des utilités fonctionnelles ou des significations.

Ce qu'il convient de faire, pour passer à l'analyse des mécanismes communs envisagés par les différentes sciences de l'homme, est alors de traduire ce cadre général en termes de conduites humaines. Mais une remarque demeure nécessaire au préalable. Les productions, régulations ou échanges qui se manifestent sous les formes qu'on vient de rappeler peuvent être aussi bien organiques

que mentales ou interpsychiques et nous sommes partis, à titre de référence initiale, du langage organique. Or, si la plupart des sciences humaines traitent des conduites ou comportements de l'homme sans chercher à délimiter dans le détail ce qui relève de la conscience et ce qui n'est pas conscient, les disciplines où une mise en relation explicite entre la conscience et le corps peut faire sans cesse problème, comme en psychologie, se sont orientées vers un principe de parallélisme ou d'isomorphisme. Nous avons proposé d'interpréter le «parallélisme psychophysique» dans le sens d'un isomorphisme plus général entre la *causalité*, dont le domaine d'application concerne en fait exclusivement la matière, et l'*implication* au sens large qui est de relation *sui generis* unissant les significations propres aux états de conscience. Il convient donc maintenant de traduire en termes d'implications conscientes les quelques notions générales dont il a été question en ce paragraphe.

RÈGLES, VALEURS ET SIGNES

Si toute science humaine s'occupe de production, de régulations et d'échanges et que chacune emploie dans cette étude la notion de structure, d'utilité fonctionnelle et de signification envisagées tour à tour diachroniquement et synchroniquement, il reste que ces concepts se présentent sous des formes différentes selon que le chercheur se place à un point de vue théorique ou abstrait, ou qu'il tient compte de la manière dont le comportement des sujets se réverbère en leur conscience et correspond à des expériences vécues. Au premier de ces deux points de vue le spécialiste cherchera ainsi le langage le plus objectif pour décrire les structures et il le fera en termes variables, mais en principe formalisables ou mathématisables : il décrira, par exemple, les structures de parenté en termes de «réseaux» comme Lévi-Strauss, les grammaires structurelles en termes de monoïdes comme Chomsky, ou les structures micro- et macro-économiques en termes de schémas aléatoires ou cybernétiques, etc. Mais rien de tout cela ne concerne directement la conscience du sujet.

Par contre, on peut chercher aussi la manière dont ces structures se traduisent dans la conscience même du sujet, dans la mesure où ses raisonnements s'expriment verbalement et s'accompagnent de justifications intentionnelles variées : et ce que nous trouvons n'est naturellement plus une structure abstraite, mais un ensemble de

règles ou de normes intellectuelles se traduisant par des impressions de «nécessité» logique, etc. Quand le sociologue du droit étudie pourquoi un système juridique (par ailleurs formalisable ou codifiable sous les espèces d'une construction normativiste «pure», à la manière de Kelsen) est «reconnu» valable par les sujets de droits, il se trouve en présence d'une série de relations bilatérales ou multilatérales telles que le «droit» des uns correspond à une «obligation» pour les autres, etc. et ce que ces faits comportent se traduit à nouveau en termes de règles particulières. Quand le logicien axiomatise un certain nombre d'opérations avec les conséquences qui en découlent, il peut ne se soucier en rien du sujet qui les applique. Mais il peut tout aussi bien se préoccuper de l'aspect normatif des liaisons qu'il manipule et même en venir à construire avec Ziembinski, Weinberger, Peklo, et d'autres une logique de «normes» (et même l'appliquer avec Weinberger à la norme juridique). De même les structures linguistiques se traduisent dans la conscience des sujets par des règles de grammaire, même si cette traduction est inadéquate, comme d'ailleurs bien d'autres traductions (par prises de conscience) des structures sous la forme de règles.

Un autre grand système de notions intéressant l'expérience vécue par les individus en leur vie mentale ou en leurs relations collectives est le système des *valeurs* ou prise de conscience des utilités fonctionnelles dont nous parlions plus haut. Et ce qui est remarquable et montre à nouveau l'unité profonde des réactions de tous les êtres vivants sur les terrains sociaux et humains aussi bien que biologiques est que la distinction entre les utilités primaires ou relatives aux aspects qualitatifs de la production ou de la conservation des structures et les utilités secondaires ou relatives à l'énergétique du fonctionnement se retrouve dans le domaine des valeurs vécues sous la forme de ce que nous appellerons les valeurs de finalité et celles de rendement.

Les valeurs de finalité comprennent en particulier les valeurs normatives qui sont déterminées par des règles : une valeur morale telle que celles qui, en toutes les sociétés humaines, opposent les actions jugées bonnes à celles jugées mauvaises ou indifférentes, se réfère nécessairement à un système de règles. Il en va *a fortiori* de même des valeurs juridiques. Dans le domaine des représentations individuelles ou collectives, les jugements sont valorisés en vrais ou faux (valeurs bivalentes), ou vrais, faux et plausibles ou encore indécidables, etc. (tri- ou polyvalence) en fonction des règles admises. Les concepts sont élaborés, acceptés ou rejetés en vertu de multiples

jugements de valeur, et tout en constituant des structures ils sont sans cesse valorisés, mais à nouveau en fonction de structures normatives d'ensemble. Les valeurs esthétiques ne dépendent pas de règles aussi impératives, mais se réfèrent néanmoins à des structures plus ou moins réglées. Sur le terrain plus individuel, les intérêts d'un sujet pour tel groupe d'objets ou tel genre de travail sous forme de finalités diverses peuvent s'éloigner de toute structure normative et ne plus dépendre que de régulations mais aussi s'organiser en échelles de valeurs plus ou moins stables.

Mais il existe aussi des valeurs de rendement liées aux coûts et aux gains du fonctionnement. On répondra que les valeurs économiques sont toutes de près ou de loin encadrées par des normes juridiques : un individu qui ne paie pas ses dettes est poursuivi, etc. Mais autre chose est un cadre prescrivant les frontières entre ce qui est permis et ce qui ne l'est pas, et autre chose est une détermination même de la valeur par la norme : or, la valeur économique obéit à ses lois propres que ne peuvent déterminer les règles juridiques et qui ne prescrivent en elles-même aucune obligation (une norme se reconnaît à une obligation qu'on peut honorer ou transgresser, par opposition à un déterminisme causal qui contraint mais n'«oblige» pes en ce sens normatif). Bien entendu la valeur économique est inséparable de toutes sortes de valeurs de finalité et de valeurs normatives, de même que l'économie interne de l'organisme ou du comportement individuel (cette économie dont certains psychologues font le principe de l'affectivité élémentaire) est liée à de multiples questions de structure, mais les problèmes généraux de coût et de gain sont bien distincts de ceux que soulèvent les autres formes d'évaluation et ne peuvent que donner lieu à de multiples recherches interdisciplinaires comme le montrent les applications multiples et toujours plus étendues de la théorie des jeux.

En troisième lieu interviennent dans tous les domaines du comportement humain les systèmes de *significations*, dont la linguistique étudie le principal avec le système collectif du langage. Mais si celui-ci a joué dans les sociétés humaines un rôle de première importance dans la transmission orale et écrite des valeurs et des règles de tous genres, il ne constitue pas le seul système de signes et surtout de symboles relevant du mécanisme des significations. Sans parler du langage animal (abeilles, etc.) qui soulève toutes sortes de problèmes de comparaisons, il faut se rappeler que l'apparition de la représentation dans le développement individuel n'est pas due au langage seul mais à une fonction sémiotique bien plus large com-

prenant en plus le jeu symbolique, l'image mentale, le dessin et toutes les formes différées et intériorisées d'imitation (celui-ci constituant le terme de transition entre les fonctions sensori-motrices et représentatives.) D'autre part, dans la vie collective, le langage, qui constitue pour ainsi dire un système de signification à la première puissance se double de systèmes à la seconde puissance comme les mythes qui sont à la fois des symboles et des signifiés véhiculés par les signifiants verbaux ou graphiques. La sémiologie générale soulève donc les plus larges problèmes interdisciplinaires.

Structures et Règles (ou Normes)

Les problèmes ayant été ainsi posés sous leurs formes les plus générales, cherchons maintenant à entrer dans le détail des mécanismes communs en suivant le plan tracé par la distinction des règles, des valeurs et des signes.

LES CONCEPTS DE STRUCTURES

L'une des tendances les plus générales des mouvements d'avant-garde dans toutes les sciences humaines est le structuralisme, se substituant aux attitudes atomistiques ou aux explications «holistes» (totalités émergentes).

La méthode destinée à dominer les problèmes de totalités qui semble au départ la plus rationnelle et la plus féconde, parce qu'elle correspond aux opérations intellectuelles les plus élémentaires (celles de réunion ou d'addition), consiste à expliquer le complexe par le simple, autrement dit à réduire les phénomènes à des éléments atomistiques, dont la somme des propriétés rendrait compte du total à interpréter. De telles manières atomistiques de poser les problèmes aboutissent à oublier ou à déformer les lois de la structure comme telle. Elles sont loin d'avoir disparu du champ des sciences humaines et on les retrouve, par exemple, en psychologie dans les théories associationnistes de l'apprentissage (école de Hull, etc.).

La seconde tendance qui s'est manifestée en des disciplines bien distinctes les unes des autres est celle qui, en présence de systèmes complexes, consiste à insister sur les caractères de «totalité» propres à ces systèmes, mais à considérer cette totalité comme «émergeant» sans plus de la réunion des éléments et comme s'impo-

sant à eux en les structurant grâce à cette contrainte du «tout»; et surtout à considérer la totalité comme s'expliquant d'elle-même, du seul fait de sa description. Deux exemples peuvent être donnés d'une telle attitude, l'un correspondant toujours à certaines tendances psychologiques actuelles, l'autre lié à un école sociologique aujourd'hui éteinte. Le premier est celui de la psychologie de la «Gestalt», née surtout des études expérimentales sur la perception, mais étendue par W. Koehler et M. Wertheimer au domaine de l'intelligence et par K. Lewin à celui de l'affectivité et de la psychologie sociale. Pour ces auteurs nous partons en tous les domaines d'une conscience de totalités, avant toute analyse des éléments, et ces totalités sont dues à des effets de «champs» qui déterminent les formes par des principes d'équilibre quasi-physique (moindre action, etc.).

Dans un tout autre domaine la sociologie de Durkheim procédait de façon analogue en voyant dans le tout social une totalité nouvelle, émergeant à une échelle supérieure de la réunion des individus et réagissant sur eux en leur imposant des «contraintes» diverses. Il est intéressant de noter que cette école, dont le double mérite a été de souligner avec une vigueur particulière la spécificité de la sociologie par rapport à la psychologie et de fournir un ensemble impressionnant de travaux spécialisés, est également morte de sa belle mort faute d'un structuralisme relationnel qui eût fourni des lois de composition ou de construction au lieu de s'en référer inlassablement à une totalité conçue comme toute faite.

La troisième position est donc celle du structuralisme, mais en tant que relationnel, c'est-à-dire en tant que posant à titre de réalité première les systèmes d'interactions ou de transformations, subordonnant donc dès le départ les éléments à des relations qui les englobent, et concevant réciproquement le tout comme le produit de la composition de ces interactions formatrices. Il est d'un grand intérêt, dans notre perspective interdisciplinaire, de noter qu'une telle tendance, de plus en plus évidente dans les sciences humaines est bien plus générale encore et se manifeste tout aussi clairement en mathématiques et en biologie. En mathématiques, le mouvement des Bourbaki a conduit à supprimer les cloisons entre les branches traditionnelles pour dégager des structures générales, abstraction faite de leur contenu. En biologie, l'«organicisme» représente de même un *tertium* entre l'atomisme pseudo-mécaniste et les totalités émergentes du vitalisme, et le théoricien le plus convaincu de cet organicisme a créé un mouvement de «théorie générale des systèmes» dont l'ambition est interdisciplinaire et vise entre autres la psychologie (Ber-

talansky a été influencé par la «Gestalttheorie», mais la dépasse largement).

Cela dit, il existe toute une gamme de «structures» possibles qui se distribuent dans trois directions, dont le premier problème est de comprendre les relations :

(1) Les structures algébriques et topologiques, y compris les modèles logiques, puisque la logique est un cas particulier d'algèbre générale (la logique usuelle des propositions repose par exemple sur une algèbre booléenne). C'est ainsi qu'en anthropologie culturelle Lévi-Strauss réduit les relations de parenté à une structure de réseau (lattice). En théorie de l'intelligence nous avons cherché à décrire les opérations intellectuelles dont on peut suivre la formation au cours du développement individuel en dégagant les structures d'ensemble sous forme de structures algébriques élémentaires ou «groupements» (variétés de groupoïdes) puis, au niveau de la préadolescence et de l'adolescence, de réseaux et de groupes de quaternarité réunis. La linguistique structuraliste recourt de même à des structures algébriques (monoïdes, etc.) et l'économétrie également (programmes linéaires et non linéaires).

(2) Les circuits cybernétiques, qui décrivent les systèmes de régulations et dont l'emploi s'impose en psychophysiologie et dans les mécanismes d'apprentissage. Ashby, le constructeur du célèbre homéostat permettant de résoudre des problèmes par un processus d'équilibration, a récemment fourni dans son *Introduction to Cybernetics* un modèle de régulation dont les actions en retour sont elles-mêmes déterminées par une table d'imputation du type de la théorie des jeux. Un tel modèle, qu'il considère comme l'un des plus simples et des plus généraux à réaliser biologiquement montre une liaison possible entre les régulations psychologiques et économiques.

(3) Les modèles stochastiques utilisés en économétrie, en démographie et souvent en psychologie. Mais, si le hasard joue un rôle constant dans les événements humains et demande donc à être traité pour lui-même, il n'est jamais pur, en ce sens que la réaction au fortuit, favorable comme défavorable, est à des degrés divers une réaction active, ce qui nous ramène aux régulations.

LES SYSTÈMES DE RÈGLES

Le problème qu'on vient de soulever reçoit en bien des cas une solution possible sous la forme suivante : en suivant la formation

d'une structure on assiste lors de son achèvement à des modifications du comportement du sujet qu'il est difficile d'expliquer autrement que par cet achèvement même, autrement dit par la «fermeture» de la structure. Tels sont les faits fondamentaux qui se traduisent dans la conscience du sujet par les sentiments d'obligation ou de «nécessité normative» et dans son comportement par l'obéissance à des «règles». Rappelons que selon la terminologie, non pas générale, mais habituelle aux spécialistes de l'étude des «faits normatifs»², une règle se reconnaît au fait qu'elle oblige, mais qu'elle peut être violée aussi bien que respectée, contrairement à une «loi» causale ou à un déterminisme, qui ne souffrent pas d'exceptions sinon à titre de variations aléatoires dues à un mélange de causes.

Un certain nombre de problèmes interdisciplinaires se posent alors, qui sont loin d'être résolus mais dont on constate la double tendance à les soulever en tous les domaines et à les traiter par liaisons bilatérales. Nous en distinguerons trois :

(a) La première question est d'établir si les règles ou obligations sont nécessairement de nature sociale, c'est-à-dire supposent l'interaction entre deux individus au moins, ou s'il peut en exister de nature individuelle ou endogène. La question n'est qu'un sous-problème d'une question plus générale qui est de savoir si toute structure «réelle» ou naturelle (par opposition aux «modèles» exclusivement théoriques) se traduit dans le comportement des sujets par des règles.

Les tendances dominantes semblent être les suivantes. D'une part, on s'accorde de plus en plus à douter de l'existence de règles «innées» telles qu'une logique ou une morale transmises par voie héréditaire. Les opérations logiques naturelles ne se constituent que très graduellement (en moyenne guère avant 7 ou 8 ans dans les sociétés développées) selon un ordre de succession constant, mais sans cette fixité dans les niveaux d'âge qui témoignerait d'une maturation interne ou nerveuse. Elles sont certes tirées des formes les plus générales de la coordination des actions, mais il s'agit aussi bien d'actions en commun que d'actions individuelles, de telle sorte qu'elles apparaissent comme le résultat d'une équilibration progressive de na-

² Un «fait normatif» est la constatation par le sociologue (en sociologie du droit, etc.) du fait que le sujet reconnaît une norme en tant que l'obligeant, cette constatation n'étant pour l'observateur que le relevé de ce fait, sans qu'il prenne lui-même parti normativement, donc sans qu'il évalue la norme du sujet étudié.

ture psycho-sociologique bien plus que comme héritées biologiquement (le cerveau humain, autrement dit ne contient pas de programmation héréditaire comme ce serait le cas si les comportements logico-mathématiques constituaient des sortes d'instincts, mais il présente un fonctionnement héréditaire dont l'utilisation permet à la fois la vie en commun et la constitution de coordinations générales dont ces structures tirent leur point de départ). Les obligations morales, comme l'ont montré J.M. Baldwin, P. Bovet et Freud sont liées en leur formation à des interactions interindividuelles, etc.

D'autre part, il semble de plus en plus probable que si toute structure équilibrée impose plus que des régularités, mais une certaine «prégnance» due à ses régulations, et si tout système de régulations comporte, par le fait même de ses réussites ou de ses échecs, une distinction obligée entre le normal et l'anormal (notions propres au vivant et dénuées de signification en physico-chimie), il existe cependant une sorte de point limite séparant, tout en les unissant, les régulations et les opérations. Or, ce point de transition pourrait bien être aussi en bien des cas celui de l'individuel à l'interindividuel.

(b) Un second problème général, qui prolonge ce qui vient d'être dit, est celui des types d'obligations ou de règles. La nécessité logique se traduit par des opérations cohérentes susceptibles de constituer des structures déductives, mais il est un grand nombre d'obligations et de règles sans consistance intrinsèque et dues essentiellement à des contraintes plus ou moins contingentes ou momentanées : le cas extrême est celui des règles de l'orthographe dont l'histoire montre suffisamment le caractère arbitraire.

(c) Le troisième grand problème que soulèvent les systèmes de règles est celui de l'interférence entre des règles appartenant à des domaines différents. Ce problème se présente sous deux formes. Il y a d'abord celle des intersections effectives de structures, ce qui conduit à des interférences de règles : un système juridique, par exemple, est un ensemble de règles *sui generis*, c'est-à-dire irréductibles aux règles morales ou logiques, mais il présente objectivement toutes sortes d'interférences avec ces deux autres systèmes du seul fait qu'il ne doit contredire ni l'un ni l'autre (ce qui peut être d'ailleurs plus facile dans un cas que dans l'autre). Mais il y a ensuite les intersections dues aux prises de conscience de la structure par le sujet, ces prises de conscience pouvant être adéquates mais partielles, ou déformantes sous des influences subjectives diverses. La grammaire usuelle des pédagogues n'est ainsi qu'une prise de conscience très incomplète et en partie déformante des structures lin-

guistiques et elle interfère en général avec des obligations de type quasi-moral.

Fonctionnement et Valeurs

Les valeurs se caractérisant par la désirabilité ou l'attrance, indépendamment de leur connexion avec des normes mais en relation nécessaire avec des structures individuelles ou collectives, s'achemine-t-on vers une théorie générale des valeurs, non pas par réflexions philosophiques *a priori* ou *a posteriori*, mais en fonction d'interconnexions spontanées imposées par les déroulements de la recherche ? Tel est le nouveau problème de mécanismes communs qu'il s'agit d'aborder maintenant.

PSYCHOLOGIE DE L'AFFECTIVITÉ, FINALITÉ ET ÉCONOMIE

Nous ne partons pas de l'analyse des réactions mentales parce que l'individu serait au point de départ de tout ce qui est humain et social, mais parce que, dans les perspectives d'interactions qui dominent d'aujourd'hui, chaque individu est un point d'interférence d'innombrables interactions collectives, en même temps qu'il est un point de jonction entre les mécanismes biologiques et sociaux, et cela sans que l'on renonce pour autant à la spécificité des processus mentaux.

A cet égard les tendances actuelles de la recherche en psychologie affective sont assez éclairantes, tant du point de vue des difficultés que l'on rencontre à vouloir préciser les relations entre les valeurs et les structures que de la nécessité qui s'impose de faire appel à une sorte d'économie générale, dont les processus interindividuels étudiés par la science économique sont une manifestation particulièrement remarquable mais une manifestation parmi d'autres. L'examen des problèmes que soulève la vie affective est donc, si l'on veut partir du concret, une bonne manière de distinguer les types de valeurs et de dégager les questions interdisciplinaires que posent leurs relations.

Une première constatation est très significative et de nature à intéresser toutes les sciences de l'homme : c'est la difficulté surprenante que l'on rencontre à vouloir caractériser la vie affective par rapport aux fonctions cognitives (en tant que celles-ci sont relatives aux

structures) et surtout à vouloir préciser leurs relations dans le fonctionnement même des conduites. Un tel fait soulève immédiatement le problème général de savoir si les valeurs ou certaines d'entre elles sont déterminées par les structures et en quel sens, si ces valeurs ou certaines d'entre elles modifient au contraire ou en retour les structures et lesquelles, ou si valeurs et structures sont deux aspects indissociables mais pour ainsi dire parallèles de toutes les conduites quelles qu'elles soient. On voit immédiatement en quoi le problème dépasse largement le terrain de la psychologie.

Sur ce dernier, la tendance générale est aujourd'hui de distinguer en toute conduite une structure, qui correspondrait à son aspect cognitif, et une «énergétique», qui caractériserait son aspect affectif. Mais que signifie ce terme un peu métaphorique d'énergétique ? Freud, qui a été élevé dans l'atmosphère de l'école «énergétiste» (par opposition à l'atomisme) du physicien E. Mach, psychologue à ses heures, a conçu l'instinct comme une réserve d'énergies dont les «charges» sont investies en certaines représentations d'objets devenant de ce fait désirables ou attirants. Les termes d'«investissement» ou de cathexis sont devenus courants à cet égard. K. Lewin se représente la conduite comme fonction d'un champ total (sujet et objets) sur le mode gestaltiste, la structure de ce champ correspondant aux perceptions, actes d'intelligence, etc., tandis que sa dynamique détermine le fonctionnement et aboutit à attribuer aux objets des valeurs positives ou négatives (caractères d'attraction ou de répulsion, de barrière, etc.). Mais le problème qui subsiste est qu'un mécanisme opératoire comporte à coup sûr une dynamique et qu'il y faut encore distinguer la structure des transformations comme telles et ce qui les rend possibles en leur désirabilité, intérêt, vitesses, etc. et ce second aspect nous ramène à une énergétique. P. Janet distingue en toute conduite une action primaire, ou relation entre le sujet et l'objet ce qui correspond aux structures (cognitives), et une action secondaire qui règle la première quant à ses activations (intérêt, effort, etc. en positif ou fatigue, dépression en négatif) et quant à ses terminaisons (joie pour le succès et tristesse pour l'échec). La vie affective élémentaire traduirait donc les régulations de la conduite, mais quelles sortes de régulations (car il en existe de structurales ou cognitives) ? Janet fait explicitement l'hypothèse de forces physiologiques en réserve, qui s'accumulent, s'épuisent ou se reconstituent selon des rythmes variables; et ce sont elles que l'affectivité réglerait selon une «économie de la conduite» coordonnant les gains et les pertes d'énergies. Généralisant ensuite au plan interindividuel Janet

analyse de ce point de vue les sympathies et les antipathies, les gens sympathiques étant des sources ou des excitants d'énergie et les antipathiques des personnages fatigants ou « coûteux ».

Mais un second problème est plus important encore et intéresse davantage toutes les disciplines humaines : c'est celui de la multiplicité des valeurs ou de leur réduction à leur seule dimension énergétique ou économique. Or, si l'économiste nous parle de production d'échange, de consommation, de réserves ou investissements, etc., on voit assez que ces termes se retrouvent exactement partout, y compris dans l'affectivité du nourrisson avant tout langage (en termes de dépenses ou récupérations d'énergies, d'investissements sur les objets ou les personnes, etc.), mais il reste à savoir s'il s'agit toujours de sens comparables. Or, il est impossible d'essayer un classement, sans constater aussitôt qu'il intéresse toutes les sciences de l'homme (y compris bien sûr la linguistique, ne serait-ce que parce que F. de Saussure s'est inspiré de l'économie et parce que le « langage affectif » décrit par Ch. Bally a donné lieu à une théorie des valeurs par le sociologue G. Vaucher...).

Pour introduire à cette classification il est d'abord à rappeler que, sur le terrain des valeurs individuelles aussi bien qu'interindividuelles, il existe une dualité fondamentale qu'on retrouve partout³ : celle des valeurs de finalité (ou instrumentales : moyens et buts) et des valeurs de rendement (coûts et gains) qui sont inséparables mais bien distinctes. Sur le terrain individuel cette distinction repose sur le double sens du mot intérêt. D'une part, toute conduite est dictée par un intérêt au sens qualitatif général, en tant qu'elle poursuit un but, qui a de la valeur parce que désiré, et ce but peut être entièrement désintéressé (au second sens du terme) quoique très intéressant (en ce premier sens du terme). D'autre part l'intérêt est un réglage énergétique, qui libère les forces disponibles (Claparède et Janet), donc augmente le rendement, et, dans cette seconde perspective, une conduite sera dite « intéressée » si elle est destinée à accroître les rendements du point de vue du sujet. C'est en jouant sur ces deux sens du terme sans vouloir les distinguer que l'utilitarisme a cherché à expliquer l'altruisme par l'égoïsme, sous le prétexte que toute conduite est intéressée, ce qui est faux, alors qu'elle est toujours dirigée par un intérêt au premier sens du terme et peut donc être comme on vient de le voir à la fois désintéressée et intéressante ! Ce sophisme suffit à lui seul à justifier les deux types de valeurs. D'autre part,

³ Cf: les utilités primaires et secondaires distinguées plus haut.

quand Janet explique la sympathie et l'antipathie par les valeurs de rendement, il a raison en un grand nombre de cas, par exemple quand on choisit un compagnon de voyage ou de table, mais on peut aimer un personnage épuisant et l'on n'épouse pas toujours une femme du seul fait qu'elle est économique au sens où elle nous fatiguerait peu. On peut même penser que les « investissements » de charges affectives qui interviennent dans l'amour sont fonction d'une échelle commune de valeurs, de projets de production à deux dans le sens le plus large et à la rigueur de valeurs très désintéressées quoiqu'engageant l'intérêt (dans l'autre sens du terme) à un degré exceptionnel.

CLASSIFICATION DES VALEURS

Le sens des remarques qui précèdent est donc que l'économie est partout, mais qu'elle n'est nulle part seule en jeu. Il est impossible d'accomplir un acte moral ou d'effectuer une opération logique sans une dépense d'énergie, ce qui touche aux valeurs de rendement, tandis que les conduites étudiées par la science économique peuvent présenter n'importe quelle finalité intrinsèque et que les notions de production et de consommation sont nécessairement relatives à des structures accompagnées de leurs propres valeurs ou finalités. Il est donc clair que l'ensemble des sciences de l'homme conduisent à la recherche d'une classification des valeurs.

I. Il faut d'abord justifier la première dichotomie suggérée par la psychologie de l'affectivité et qu'on retrouve partout. Les valeurs de *finalité* ou instrumentales groupent celles qui sont, par leur qualité même, relatives à des structures, autrement dit qui correspondent aux besoins d'éléments qualitativement différenciés, en vue de la production ou de la conservation de structures. Ce n'est pas à dire que les valeurs se confondent avec les structures : une structure existe de par ses lois propres, qui peuvent se décrire en termes d'algèbre (y compris la logique) ou de topologie sans référence aux vitesses, forces ou énergies comme capacités de travail; cette même structure peut être désirable et il faut même qu'elle le soit pour que le sujet s'en occupe, ce qui suppose alors une intervention de charges affectives ou d'investissement, etc. donc d'énergie. Et de ce second point de vue il faut encore distinguer le choix des éléments à investir (valeurs de finalité) et les quantités en jeux. Les valeurs de *rendement* sont alors précisément relatives à cet aspect quantitatif, si l'on admet par définition qu'un rendement se distingue d'un résultat qualitatif

en raison de la quantité produite ou dépensée : quantité d'énergie pour l'économie intra-individuelle ou la production technique ou quantité vénale et comptable pour les échanges commerciaux.

II. Les valeurs de finalité peuvent donner lieu à une seconde dichotomie. Les structures auxquelles sont attachées ces valeurs peuvent se traduire par des règles plus ou moins logicisables ou non ou demeurer au niveau de simples régulations. Dans le premier cas, on peut parler de *valeurs normatives* dans la mesure où la valeur est obligée ou même déterminée par la norme, tandis que dans les échanges spontanés et libres on peut parler de *valeurs non normatives*. Pour ce qui est des premières on se demandera à nouveau si valeur et norme ou structure se confondent. Mais ce n'est encore une fois pas le cas, car la norme comporte sa structure (cognitive), d'une part et sa valeur, d'autre part, et celle-ci relève comme d'habitude de l'affectivité : par exemple, la norme morale n'est acceptée qu'en fonction de sentiments particuliers de respect, qui sont une valorisation de la personne qui donne une consigne ou des partenaires d'un rapport de réciprocité. La norme juridique, d'autre part, n'est valorisée qu'en fonction d'une attitude de « reconnaissance », qui est la valorisation d'une coutume ou d'un rapport transpersonnel.

III. Enfin les valeurs de rendement accompagnent toutes les précédentes mais donnent lieu à des valorisations spécifiques se manifestant tant dans l'économie énergétique interne de l'action (Voir les conceptions de P. Janet) que dans l'économie interindividuelle dont s'occupe la science économique. Il est frappant de noter dans les deux cas le primat de la quantification par opposition au caractère qualitatif des valeurs précédentes. Autrement dit les valeurs qualitatives non normatives deviennent « économiques » dès l'instant où elles sont qualifiées : un étudiant s'occupant de physique peut prendre plaisir et intérêt à échanger ses idées avec un étudiant en biologie et leur conversation périodique n'a rien alors d'un échange économique, mais s'ils conviennent de se donner tour à tour une heure de physique contre une heure de biologie, ce troc prend un caractère économique du seul fait qu'il est ainsi quantifié parce qu'en ce cas l'accent est mis sur le rendement.

RÉGULATIONS RELATIVES AUX VALORISATIONS DE FINALITÉ

La notion de finalité intéresse l'ensemble des sciences de l'homme car il n'est guère de conduite humaine qui ne comporte des intentions. Et pourtant l'on sait assez combien le finalisme soulève de dif-

ficultés et a fait problème en biologie jusqu'aux solutions actuelles qui semblent donner satisfaction du moins sur le terrain des principes. On peut distinguer trois phases à cet égard.

Durant la première phase, d'origine psychomorphique, la finalité paraissait comporter son explication en elle-même, en tant que principe causal. Aristote, qui attribuait une finalité à tout mouvement physique aussi bien qu'aux processus vivants, distinguait des «causes finales» à côté des causes efficientes, comme si l'existence d'un but entraînait la possibilité de l'atteindre, ce qui suppose ou une conscience (dans laquelle le but correspond à une représentation actuelle) ou une action du futur sur le présent.

En une seconde phase, le caractère inintelligible de cette cause finale conduit à dissocier la notion de finalité en ses composantes et à chercher pour chacune une explication causale : la notion de direction trouve ainsi son explication dans les processus d'équilibration, celle d'anticipation dans l'utilisation d'informations antérieures, celle d'utilité fonctionnelle dans le caractère hiérarchique de l'organisation, etc. Quant à la notion centrale d'adaptation, on cherche à la réduire aux deux concepts de variation fortuite et de sélection après coup, ce qui substitue à la finalité un schéma de tâtonnements (au niveau phylétique comme individuel) dirigé du dehors par les réussites et les échecs.

La phase actuelle, qui correspond à des courants d'idées très comparables dans le domaine des sciences de l'homme, est née de la conjonction de trois sortes d'influences. En premier lieu, si le finalisme n'a jamais fourni d'explications satisfaisantes il a toujours excellé à dénoncer les insuffisances d'un mécanisme trop simple. En second lieu l'analyse des phénomènes qui débute toujours sur un mode atomistique, conduit en tous les domaines de la vie à la découverte de régulations : après les régulations physiologiques (homéostasie) et embryogénétiques, on a renoncé à voir dans le génome un agrégat de particules indépendantes pour dégager l'existence de coadaptations, de gènes régulateurs, de «réponses», etc. En troisième lieu et surtout ces tendances organicistes, nées en partie indépendamment de modèles mathématiques, se sont trouvées converger avec l'une des découvertes fondamentales de notre époque : celle des mécanismes d'autorégulation ou d'autoguidage étudiés par la cybernétique. On s'est alors rapidement aperçu de la possibilité de fournir une interprétation causale des processus finalisés, et de trouver des «équivalents mécaniques de la finalité» ou, comme on dit aujourd'hui, une «téléonomie» sans téléologie.

C'est bien entendu dans un tel contexte que se dessinent actuellement un certain nombre de tendances orientées vers l'analyse des régulations dans le domaine des fonctionnements et valeurs comme dans celui des structures. Mais il faut remarquer en plus que, dans les sciences humaines comme dans toutes les autres mais en particulier comme dans les disciplines biologiques, les efforts portent avec raison d'abord aux deux extrémités de l'échelle des phénomènes, car c'est en les comparant que l'on a le plus de chances de comprendre l'ensemble des mécanismes. Cette oscillation est bien visible en économie: après s'être confinée longtemps dans une microéconomie (Walras, etc.) la science économique à la suite des intuitions de Quesnay et Malthus et surtout des visions de Marx s'est engagée dans une macroéconomie dont la méthodologie difficile s'est précisée avec Keynes et bien d'autres influencés par lui sans qu'ils partagent toutes ses vues. Mais avec la recherche opérationnelle et l'économétrie un courant nouveau a remis en valeur l'approche microéconomique. En sociologie, où la précision est naturellement bien moindre du fait de la complexité des problèmes, on assiste à des navettes instructives entre la macro- et la microsociologie. Dans le domaine des valeurs de finalité, il va de soi que la double approche s'impose, car si les échanges globaux, etc., présentent des aspects irréductibles dépendant de mécanismes d'ensemble, ce n'est que sur le terrain des réactions et échanges élémentaires que l'on peut espérer assister à la naissance des valorisations et en certains cas déterminer leurs connexions avec le fonctionnement psychologique.

Dans le domaine des valeurs normatives, il va de soi que les faits moraux sont surtout étudiés sous l'angle psychologique et microsociologique, en particulier faute de méthode suffisante aux échelles supérieures, sauf quand les sociétés sont de dimensions restreintes comme celles qu'étudie l'anthropologie culturelle. Mais, même en un domaine où les considérations d'ensemble paraissent s'imposer, comme en sociologie juridique (puisque le droit positif est lié à la vie de l'Etat entier jusqu'en ses applications les plus individualisées), il existe un mouvement qui a abordé l'étude de processus pour ainsi dire microjuridiques.

Dans le domaine des valeurs qualitatives non normatives nous avons essayé d'analyser le mécanisme de l'échange déterminant les valorisations et ses relations avec les consolidations normatives⁴. Dans un rapport quelconque entre deux individus A et B, ce que fait

⁴ Voir J. PIAGET, *Études sociologiques*, Droz, pp. 100-142.

l'un, soit rA est évalué par l'autre selon une satisfaction sB , positive ou négative, qui peut se conserver sous la forme d'une sorte de dette ou de reconnaissance psychologiques tB , laquelle constitue de ce fait un crédit ou une valorisation vA pour A (processus habituellement déroulable dans le sens rB , sA , tA , et vB). Un grand nombre de circonstances peuvent naturellement empêcher l'équilibre sous forme d'équivalences $r=s=t=v$: sur- et sousévaluations, oublis, ingratitude, usure du crédit, inflation, etc. et surtout les discordances entre les échelles individuelles de valeurs, momentanées ou durables. Mais le schéma permet de décrire les situations les plus variées : la sympathie entre deux individus en tant que reposant sur une échelle commune et des échanges bénéficiaires, la réputation d'un personnage avec ou sans inflation, les échanges de services réels ou fictifs qui jouent dans le crédit en micropolitique, etc. Mais, sans intérêt pratique, ce genre d'analyse permet deux petites constatations théoriques.

L'une est l'analogie souvent frappante entre ces processus d'échange qualitatif et certaines lois économiques élémentaires. Tout d'abord il va de soi que les évaluations et réputations s et v sont soumises d'assez près à la loi de l'offre et de la demande : un même talent moyen donne lieu à des estimations toutes différentes dans une petite ville où il bénéficie d'une certaine « rareté » et dans un milieu plus dense. D'autre part on retrouve, malgré l'absence de quantification, un équivalent de la loi de Gresham (la mauvaise monnaie chasse la bonne) dans les situations de crise ou de déséquilibre où de nouvelles échelles de valeurs se substituent à d'autres et où les réputations sont facilement surfaites mais fragiles, etc.

En second lieu il est facile de voir que la conservation des valeurs virtuelles t et v (par opposition aux valeurs réelles ou actuelles r et s) demeure en partie aléatoire tant que l'échange reste non normatif, tandis que tout processus engagé dans la direction de l'obligation consolide ces valeurs (de même qu'en économie la vente au comptant exige peu de contraintes juridiques, tandis que la vente à crédit suppose plus de protections). C'est ainsi que la valeur t s'effrite d'elle-même par oubli ou ingratitude, etc., tandis que l'intervention d'un sentiment moral de réciprocité conduit à la conservation (le mot français « reconnaissance » désigne tour à tour la gratitude spontanée et le fait de reconnaître une dette ou une obligation). Le passage du spontané à la réciprocité normative se marque alors par un nouveau type d'échange où il n'y a plus simplement correspondance approximative des services et des satisfactions, etc. mais substitution

des points de vue, c'est-à-dire accès aux attitudes décentrées ou désintéressées.

Ce domaine des valeurs qualitatives constitue donc un champ possible assez large de recherches comparatives, et cela même quant au passage des régulations aux opérations réversibles. Un tel passage est à l'étude sur le terrain proprement structural (régulations et opérations cognitives). Mais il n'est pas de raison qu'il n'en soit pas de même sur le terrain des valeurs, en termes d'attirances ou «d'investissements» de charges affectives et cela en isomorphisme avec ce qu'on observe pour les régulations et opérations structurales. Un fait instructif à cet égard est la forme logique que prennent les échelles de valeurs : sériations, arbres généalogiques, etc. et des auteurs comme Goblot se sont essayés à une «logique des valeurs»⁵.

Les Significations et leurs Systèmes

Toute structure ou règle et toute valeur comportent des significations, de même que tout système de signes présente une structure et des valeurs. Il n'en reste pas moins que le rapport de signifiant à signifié est d'une autre nature que celui de désirabilité (valeur) ou que la subordination structurale (ou normative) d'un élément à la totalité à laquelle il appartient. Et cette relation de signification est à nouveau de portée extrêmement générale, de telle sorte que les mécanismes communs sont aussi importants en ce domaine que dans les précédents.

SIGNALISATION BIOLOGIQUE ET FONCTION SÉMIOTIQUE

On trouve à presque tous les niveaux du comportement animal des réactions déclenchées par des indices ou signaux, et il existe tous les intermédiaires entre la simple sensibilité du protoplasme chez les unicellulaires ou du système nerveux et ces réponses à des indices significatifs. D'autre part, ce genre de significations liées à des signaux ou indices est le seul qui s'observe chez l'enfant de l'homme jusque vers 12 à 16 mois (niveaux sensori-moteurs) et il demeure à l'œuvre en ce qui concerne les perceptions et les conditionnements

⁵ On peut aller jusqu'à considérer la volonté elle-même comme une opération de conservation et d'application des valeurs.

moteurs durant toute la vie. Il importait donc de commencer par rappeler le rôle de ce premier système de signalisation.

On appelle indice un signifiant non différencié de son signifié (sinon par sa fonction signalisatrice), en ce sens qu'il constitue une partie, un aspect ou un résultat causal de ce signifié : la vue d'une branche dépassant un mur est l'indice de la présence d'un arbre ou les traces d'un lièvre sont l'indice de son passage récent. Un signal (comme le son de la cloche déclenchant chez le chien de Pavlov un réflexe salivaire) n'est qu'un indice sauf s'il lui est attaché une signification conventionnelle ou sociale (signal téléphonique, etc.), auquel cas il est un « signe ».

Chez certains primates supérieurs et chez l'homme (à partir de la seconde année) on voit apparaître un ensemble de signifiants différenciés de leurs signifiés en ce sens qu'ils n'appartiennent pas sans plus à l'objet ou à l'événement désignés mais sont produits par le sujet (individuel ou collectif) en vue d'évoquer ou de représenter ces signifiés, même en l'absence de toute incitation perceptive actuelle de leur part : tels sont les symboles et les signes et l'on appelle fonction sémiotique (ou souvent symbolique) cette capacité d'évocation par signifiants différenciés, qui permet alors la constitution de la représentation ou pensée. Mais il faut encore distinguer deux niveaux dans ces instruments sémiotiques, bien que chez l'enfant normal ils apparaissent à peu près tous en même temps (sauf en général le dessin).

Le premier niveau est celui des symboles, au sens où de Saussure les oppose aux signes : ce sont les signifiants « motivés » par une ressemblance ou une analogie quelconque avec leurs signifiés. On les voit apparaître chez l'enfant de la façon la plus spontanée avec le jeu symbolique (ou de fiction), avec l'imitation différée, l'image mentale (ou imitation intériorisée) et l'image graphique. Le caractère initial de ces symboles est que le sujet individuel peut les construire à lui seul, bien que leur formation coïncide en général avec le langage (sauf chez les sourds-muets qui ajoutent alors un nouveau terme à la série précédente : le langage par gestes). Leur source commune est l'imitation, qui débute dès le niveau sensorimoteur où elle constitue déjà une sorte de représentation, mais en actions seulement, et qui ensuite se prolonge en imitations différées ou intériorisées, d'où les symboles précédents.

Le second niveau caractéristique de la fonction sémiotique (et un niveau qui jusqu'à plus ample informé semble spécial à l'espèce humaine) est celui du langage articulé, dont les deux nouveautés par

rapport au niveau précédent sont: d'abord qu'il suppose une transmission sociale ou éducative et dépend donc de la société entière et non plus seulement des réactions individuelles et, ensuite, que les signifiants verbaux consistent en «signes» et non plus en symboles, le signe étant conventionnel ou «arbitraire», comme le comporte sa nature collective.

Les premiers grands problèmes interdisciplinaires que soulève un tel tableau sont alors, d'une part, de déterminer les mécanismes communs et les oppositions entre ces diverses manifestations de la fonction sémiotique, mais en remontant jusqu'au niveau des indices significatifs et des formes actuellement connues de langage animal, et, d'autre part, de préciser leurs liaisons avec le développement de la représentation ou pensée en général, indépendamment des relations éventuelles et plus spéciales entre le langage articulé et la logique.

On peut à cet égard être tenté de chercher dans le langage par signes la source de la pensée elle-même et c'est là l'opinion de nombreux psychologues et linguistes. Mais si le système des signes présente incontestablement un avantage exceptionnel à cause de sa mobilité constructive et du nombre considérable de significations qu'il est capable de transmettre, deux sortes de considérations sont cependant à rappeler quant aux limites de ses pouvoirs.

La première est que si le langage est un auxiliaire nécessaire à l'achèvement de la pensée en tant que celle-ci constitue une intelligence intériorisée, il n'en est pas moins animé par l'intelligence, qui le précède sous sa forme sensori-motrice.

D'autre part, l'intériorisation de l'intelligence sensori-motrice en représentation ou pensée ne tient pas seulement au langage mais à la fonction sémiotique en son ensemble. A cet égard les données psychopathologiques sont d'un grand intérêt et l'on peut attendre encore beaucoup d'une collaboration entre les linguistes, les psychologues et les neurologistes. Sans aborder ici le problème si complexe de l'aphasie, qui est encore en plein développement, mais dont les incidences neurologiques sont si nombreuses qu'il n'est pas facile d'isoler les facteurs de langage et de pensée, notons seulement ce qu'on observe chez les enfants sourds-muets ou aveugles de naissance mais par ailleurs normaux. Chez les premiers il y a bien sûr quelque retard dans le développement des opérations intellectuelles par rapport aux sujets capables de parole, mais les opérations fondamentales de classification, sériation, correspondance, etc. ne sont nullement absentes jusqu'à un certain niveau de complexité, ce qui té-

moigne d'une organisation préverbale des actions⁶. Chez les aveugles le retard paraît par contre plus considérable, faute d'un contrôle sensori-moteur lors de la formation des schèmes d'action et si le langage supplée en partie à cette carence il ne suffit pas à remplacer les coordinations générales et s'appuyer sur elles lors de leur constitution retardée.

LES SYMBOLISMES SUPÉRIEURS

La sémiologie générale souhaitée par F. de Saussure comporte des comparaisons systématiques entre les systèmes des signes et les divers symbolismes ou signalisations de nature inférieure au langage articulé. Mais elle suppose aussi des comparaisons avec ce que l'on pourrait appeler des symbolismes à la deuxième puissance, ou de nature supérieure au langage, c'est-à-dire utilisant le langage mais constituant des signifiants dont les significations collectives sont idéologiques et situées à une autre échelle que la sémantique verbale : tels sont, par exemple, les mythes, les contes populaires, etc., véhiculés par le langage, mais dont chacun est lui-même un symbole à signification religieuse ou affective obéissant à des lois sémantiques très générales comme le montre leur propagation surprenante de souvent intercontinentale.

Mais le problème n'est pas facile à dominer ni même à poser. Dans une conception nominaliste de la logique et des mathématiques, on pourrait dire que tout concept ou structure particulière est encore un signe qui symbolise, avec les mots qu'il désigne mais en plus de ces mots, les objets auxquels il s'applique : la notion de «groupe» mathématique ne serait ainsi qu'un symbole supérieur dont la signification se réduirait aux divers déplacements, états physiques, etc. qu'il permet de décrire. Dans la conception opératoire, au contraire, le «groupe» ou n'importe quel autre concept logique ou mathématique constituerait un système d'actions sur le réel, actions véritables quoique intériorisées et qui n'auraient donc en elles-mêmes rien de symbolique, le symbolisme intervenant dans les signes arbitraires désignant ces opérations mais non pas dans les opérations comme telles.

Si l'on admet cette dernière interprétation, toute pensée ne serait

⁶ Et préverbale collectivement comme individuellement, puisque les jeunes sourd-muets établissent entre eux un langage par gestes.

donc pas symbolique, mais le symbolisme réapparaîtrait en toutes les formes de pensée dont la valeur ne tient pas à la structure opératoire mais au contenu affectif, conscient ou inconscient: il n'en demeure pas moins, en une telle interprétation, un champ immense de productions humaines, avec la «pensée symbolique» plus ou moins individuelle étudiée par les psychanalystes de diverses écoles, les symboles mythologiques et folkloriques, les symboles artistiques et finalement peut-être certaines formes d'idéologies en tant qu'exprimant des valeurs collectives momentanées et non pas des structures rationnelles (chacune de ces manifestations pouvant naturellement être «rationalisée» à des degrés divers). On voit qu'à ces échelles, le domaine de comparaison d'une sémiologie générale serait considérable et que celle-ci, guidée par les méthodes linguistiques n'en serait pas moins essentiellement interdisciplinaire.

La psychanalyse freudienne, aidée en cela par les travaux de Bleuler sur la pensée «autistique» et suivie par l'école dissidente de Jung, a mis en évidence l'existence d'une «pensée symbolique» individuelle visible dans le rêve, dans le jeu des enfants et dans diverses manifestations pathologiques. Le critère en est que, si la pensée rationnelle cherche l'adéquation au réel, la pensée symbolique a pour fonction la satisfaction directe des désirs par subordination des représentations à l'affectivité. Freud a commencé par expliquer ce symbolisme inconscient par des mécanismes de camouflage dus au refoulement, mais il s'est rallié à la conception plus large de Bleuler qui, avec l'«autisme» expliquait le symbolisme par la centration sur le moi et il a prolongé ses recherches dans la direction des symboles artistiques. Jung, d'autre part, a vu rapidement que ce symbolisme constituait une sorte de langage affectif et par de vastes comparaisons avec les mythologies en est venu à montrer le caractère assez universel d'un grand nombre de symboles ou «archétypes» qu'il a considérés sans preuve comme héréditaires mais qui sont (ce qui est autre chose) d'extension très générale.

La soudure ainsi établie entre le symbolisme plus ou moins inconscient que les psychanalystes découvrent chez les individus et le symbolisme mythologique ou artistique (on se rappelle l'exemple type du mythe et du «complexe» d'Edipe) montre assez que les lois d'un tel symbolisme intéressent les réalités collectives autant que psychologiques. Il va donc de soi que sur le terrain de l'anthropologie culturelle, l'étude directe des représentations mythiques fournit un apport de première importance à cette sémiologie générale de niveau supérieur au langage et quand Lévi-Strauss, par exemple, la

conçoit en termes saussuriens, il introduit par cela même en ce champ immense et difficile une méthodologie indispensable qui a trop manqué aux analyses jungiennes et freudiennes.

Seulement le travail ne fait ainsi que de commencer car il est évident que des lois qui seraient générales à une certaine échelle de civilisations ne sauraient être sans applications en des sociétés qui connaissent par ailleurs la pensée scientifique. Quand K. Marx a posé le problème de l'opposition entre des infrastructures économiques et techniques et des superstructures idéologiques, il a soulevé de ce fait un nombre considérable de questions quant à la nature et au fonctionnement des divers types possibles de production idéologique. Pour montrer combien nécessairement se posent ces questions, il n'est pas sans intérêt de rappeler que l'un des adversaires les plus décidés des doctrines marxistes, V. Pareto, a repris en sa sociologie une distinction visiblement inspirée par elles : pour Pareto, en effet, les comportements sociaux seraient dirigés par certains besoins ou invariants affectifs qu'il appelle les «résidus», mais ceux-ci, et c'est le seul point qui nous intéresse, se manifesteraient en fait non pas sous une forme nue ou directe, mais enveloppés en toutes sortes de concepts, de doctrines, etc. que Pareto nomme des «dérivations». On voit alors aussitôt que ces «dérivations» constituent une superstructure idéologique, mais de nature essentiellement symbolique puisque comportant des significations affectives essentielles et constantes, sous un appareil conceptuel variable et secondaire.

En cet essai destiné à dégager les mécanismes communs et à souligner les problèmes interdisciplinaires d'un point de vue méthodologique et surtout prospectif, on ne saurait donc ne pas signaler à titre de tendance extrêmement significative les recherches portant sur la signification symbolique de doctrines de forme intellectuelle et de contenu affectif, parce que ces recherches constituent un point de jonction frappant entre les extensions possibles d'une sémiologie générale portant sur les systèmes symboliques de niveau supérieur et les analyses sociologiques et même économiques d'inspiration marxienne. Un exemple remarquable de ces conjonctions a été fourni par L. Goldmann dans ses études sur le jansénisme, et si nous choisissons cet exemple, c'est qu'il s'agit d'un des cas assez rares en sociologie où la recherche théorique a conduit à la prévision de l'existence d'un fait jusque là non relevé, sous les espèces de la découverte d'un personnage historique mais oublié par l'histoire. Goldmann explique le jansénisme par les difficultés sociales et économiques de la noblesse de robe sous Louis XIV : le retrait to-

tal du monde, prêché par la doctrine, constituerait ainsi la manifestation symbolique d'une situation affective et collective de fait, etc. Mais le jansénisme pur, reconstitué par cette analyse en termes de symbolisme social n'était pas réalisé en sa forme intégrale dans les personnages connus de l'histoire (Arnaud, etc.). Il fallait donc faire l'hypothèse du janséniste complet, inconnu précisément parce qu'entièrement conséquent, qui aurait dirigé le mouvement sans se manifester au dehors : ayant ainsi «calculé» si l'on peut dire l'existence d'un tel personnage, Goldmann l'a retrouvé sous le nom de l'abbé Barcos, et a pu démontrer son rôle historique effectif et jusque là insoupçonné.

On voit ainsi le nombre de productions littéraires, artistiques et métaphysiques qui pourraient relever de telles analyses, dont les aspects syntactiques et sémantiques doivent demeurer essentiels bien que les plus difficiles à dégager et dont les aspects sociologiques et même économiques sont évidents.

DIVERSITY AND UNITY IN SOCIOLOGY

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Sociology of today looks like a double-faced Janus. At a first glance it appears as a mere ensemble of diverse and mutually discordant sociological theories: biological, psychological, philosophical, structural, functional, behavioristic, formal, positivistic, neo-positivistic, physicalistic, mathematical, statistical, organismic, neo-organismic, personalistic, historical, *verstehende*, cybernetic, ecological, instinctivist, psychoanalytical, dialectic, evolutionary, cultural, phenomenological, materialistic, idealistic, and other sociologies¹.

No less diverse and discordant appear the methods and techniques of sociological research used by these diverse sociologies. They also widely range beginning with dialectic-deductive-inductive-symbolic-mathematical logics and ending with statistical, sociometric, psychometric, psychodramatic, scalogrammatic, groupdynamic, operational, projective, cybernetic, semantic, experimental, clinical, functional-structural, analytical and other techniques of research.

If one observes only this face of today's sociology one is compelled to conclude that sociology is indeed a mere name for a collection of various theories, ideologies and research-techniques. As such an ensemble, it hardly deserves the name of a science because a mere pile of various views does not make a real science, no matter how vast such a pile may be. Most of the critics of sociology see only this face and therefore refuse to consider sociology as a real science. The grave error of these critics is due to their oversight of the other face of sociology that shows it as a system of logically consistent and mutually complementary principles and empirically verified propositions and formulae of uniformities. This system gives us a valid

¹ All these and additional «sociological denominations» can be found in most classifications of main varieties of sociology. See the examples of such classification by A. CUVILIER, DON MARTINDALE, N. TIMASHEFF, PAOLO DOURADO DE CUSMAO, H.R. WAGNER and others in P. SOROKIN, *Sociological Theories of Today*, Harper & Row, New York, 1966, Ch. 1.

knowledge of the generic and typical dimensions of the «superorganic» (sociocultural) reality in its structural and dynamic aspects. These principles, propositions and uniformities of this system make the central part of general sociology as a scientific discipline *sui generis*. This central corpus is supplemented by *the valid* part of diverse sociologies that furnish us with a more detailed knowledge of specific dimensions of sociocultural reality and of the relevant — physical, biological and psychosocial — milieux amidst which this reality is situated and with which it is connected by tangible empirical ties.

The central corpus and the valid parts of diverse sociological theories display sociology as a truly unified scientific discipline quite different from a mere ensemble of diverse, often discordant, theories and ideologies. The principles and propositions of this science are accepted as valid by practically all competent sociologists — in about the same degree and proportion in which the main principles and propositions of other, especially psychosocial and historical sciences, are regarded as valid by the scientists and scholars of these disciplines.

Subsequently I shall give a typical enumeration of the generally accepted basic principles and empirical propositions of sociology, but before that I shall point out a few reasons which are largely responsible for the fairly common impression of sociology as a mere ensemble of various and frequently contradictory views and ideologies.

First of these reasons is a wrong assumption of the critics of sociology that in other sciences there is no diversity and discordance of their theories, explanatory principles and empirical conclusions. As a matter of fact, any scientific discipline, beginning with mathematical, physical and biological sciences and ending with psychological, historical, and social sciences has, side by side with a hard core of generally accepted theories and conclusions, a large portion of diverse and discordant ones. Perhaps, as we move from mathematical and physical to biological and then psychosocial and historical sciences, the proportion of the hard core of valid propositions tends to decrease in the total corpus of each science while the proportion of discordant theories tends to increase (as August Comte already noticed). Despite this, each scientific discipline has its own share of diverse and mutually contradictory hypotheses and conclusions. Even more: some of the basic principles of each science fluctuate in their validity in the course of time: accepted as valid at one period, they become questi-

onable at another period². If we take only psychological, historical and social sciences, there is no serious ground to claim that in sociology the portion of the hard core of valid propositions is lesser and that of diverse and discordant ones is larger than in psychology, anthropology, economics, political science, history, ethics, law or philosophy. For this reason the presence in sociology of diverse and discordant theories does not prove at all that sociology is a mere collection of various theories.

Second reason for the discussed prejudicial opinion about sociology as a mere ensemble of discordant views is in a considerable degree the fault of sociologists themselves. More precisely, it consists in a lack of a uniform scientific terminology in sociology, in a proclivity of sociologists to use different terms and linguistic expressions for essentially similar sets of ideas and conclusions.

Beginning with the definition of sociology, its subject matter, of «society», «social group», «culture», «personality», componential structure of social phenomena, and ending with the conceptions of «social evolution», «social change», «factors determining this or that sociocultural configuration or transformation», these and other sociological realities are often defined in quite different terms and described in heterogeneous linguistic phrases. Meanwhile, if a careful investigator tries to find out to what extent under the apparent semantic differences there are hidden similar, sometimes even identical, ideas, in many cases he finds indeed an essential similarity or concordance among the semantically discordant formulae, definitions, and meaningful statements. Subsequently I shall give actual examples of an essential similarity of meanings whose similarity is screened by linguistically different formulations of sociologists affiliated with different «sociological denominations».

Third and fourth reasons for an apparent disunity of sociology are the neglect of several basic laws of logic, particularly of «the principle of limit» (within which the proposition is valid and beyond which it becomes meaningless or wrong)³ and, combined with it, sociologists' forgetfulness of multidimensional nature of sociocultural reality. Many propositions of practically each sociological school

² See on this fluctuation of the basic hypotheses in physical and biological sciences P. SOROKIN, *Social and Cultural Dynamics*, The Bedminster Press, New York, 1962, Vol. 2, Chprs. 11, 12.

³ See on the principle of limit P. SOROKIN, *Social and Cultural Dynamics*, Vol. IV, Chprs. 14, 15, 16, *Society, Culture and Personality*, Harper, New York, 1947, Ch. 46.

— geographic, biological, psychological, sociologicistic, formal, phenomenological, and others — are essentially valid within certain specified limits of their validity. If, however, respective sociologists forget to specify these limits or extrapolate and generalize their propositions or uniformities beyond the legitimate limits of their validity, such «unlimited» or arbitrarily extended statements and uniformities become fallacious or invalid. This sort of error is committed by almost all sociologists. It is one of the most frequent ways of degradation of a theory valid within its limits into the class of a fallacious and incorrect one⁴.

Connected with this defect is the intentional or unintentional neglect of multidimensionality of sociocultural reality by most sociologists. Absorbed by a study of one or a few of its numerous dimensions, «ecological» or «biological» or «psychological» or «behavioral» or «physicalistic» or «cybernetic» or other, the sociologist spontaneously exaggerates the importance of the studied dimension, extends its place and functions beyond its legitimate limits, and neglects other dimensions of sociocultural reality and their causal-meaningful relationships to the studied dimension. Such an overstress of the selected dimension and understress of the other dimensions leads to fallacious simplification of the total sociocultural reality and results in several mistakes of the respective theories. They become one-sided, truncated and simplicistic. None among competent sociologists can deny the existence and significant role of either geographic or morphological, biological or psychological, economic or technological, or ideological (scientific, religious, ethical or philosophical) dimensions or conditions; and none among competent scholars can negate the cognitive value of a detailed study of each of these and other dimensions of sociocultural reality. But few, if any, would accept either the reduction of multidimensional superorganic reality to any one of the picked up dimensions or enormously inflated importance ascribed to the selected dimension in the total sociocultural

⁴ In my *Contemporary Sociological Theories* (Harper, New York, 1928 and 1964) and *Sociological Theories of Today*, this fault is systematically shown in my analysis of all sociological schools. The important works of each school contain many propositions that are valid within their limits, if such limits are formulated by respective sociologists. Unfortunately most sociologists do not indicate the limits of validity of their generalizations and frequently extrapolate their validity far beyond their legitimate limits; in this way they invalidate the scientific correctness of their conclusions. My criticism of all theories examined in these volumes is directed mainly against and based *exactly upon, this shortcoming* of most sociological theories.

world. The more so as the nature, functions, and change of each selected dimension can hardly be adequately understood without consideration of other dimensions of this reality amidst which and with which it is usually connected by tangible causal-meaningful ties. This erroneous procedure of inflation of the dimension studied and deflation or neglect of other aspects of the sociocultural and personal-phenomena is quite common in sociology. Among other evidence, the common character of it is demonstrated by continuous mutual criticism of such one-sided theories by one another.

Without mentioning here other reasons, these four reasons account largely for the persistence of opinion about sociology as a mere ensemble of different, often discordant views and theories.

II

If we purify existing sociological theories (a) of their terminological differences hiding essential similarity of the ideas coined in diverse terms, (b) of illegitimate extrapolation of these theories beyond the legitimate limits of their validity, and (c) of the mistake of inflation of the studied dimension and of neglect or deflation of other dimensions of sociocultural reality; and if we keep in mind that all sciences have, side by side with the corpus of valid theories, a portion of different, often contradictory hypotheses and conceptions; then it is fairly easy to see the real face of sociology as a unified science *sui generis*. Here are some of the basic principles and propositions which are explicitly or implicitly accepted as valid by about all competent sociologists regardless of the sociological «denominations» to which they belong.

1. Explicitly or implicitly, all currents of sociological thought now accept the meaningful, normative, value-laden, superorganic character of sociocultural phenomena as a realm of reality different from inorganic and organic realities. They also agree that, so far, this meaningful form of reality is found in its fully developed form only in the world of «mindfully» (symbolically) interacting human beings. A few extremely mechanistic or biological theories that try to reduce sociocultural reality to inorganic or organic realities either completely miss it in their verbal reductionism or acknowledge the specific character of this reality as a *sui generis* combination of biophysical realities different from all the other physical and biological phenomena.

2. Whether or not the recent currents of sociology spell out clearly the componential structure of sociocultural phenomena, they all ad-

mit (directly or circuitously) three distinct components of these phenomena: (a) the meaningfully interacting human individuals that create, realize, and exchange in their meaningful actions-reactions (interactions) meanings-values-norms; (b) the meanings-values-norms (often called symbols or images) that are superimposed upon the inorganic and the organic phenomena and by that transform them into a superorganic reality; and (c) the biophysical media in which and through which the interacting individuals objectify, materialize, and exchange their immaterial (symbolic) meanings-values-norms. These biophysical media serve as vehicles of meaningful interactions and as solidified conserves of the meanings-values-norms accumulated in the countless meaningful interactions during the historical existence of the human race. This component of the vehicles and the materialized conserves is often called the material culture or material substratum of society. Though some sociological theories mention only either the meaningfully interacting individuals, with their behavior or roles, or only the material substratum of sociocultural phenomena as their component or unit, they all bootleg the other two components into their theories as necessary elements of all superorganic or sociocultural phenomena.

3. From this three-componential theory follows the thesis that sociocultural phenomena have three different levels of realization: a *purely meaningful-ideological* level, existing in the mind; a *behavioral* level, realized in the overt meaningful actions-reactions of interacting individuals; and a *material* level, objectified by and solidified into biophysical media of vehicles and conserves. These three levels are recognized, again under different terms (material culture, material basis of society, ideologies, ideological superstructure, social behavior, social roles), by practically all the sociological theories of our time.

4. From the same three-componential theory follows the thesis that, viewed from a different standpoint, all *sociocultural phenomena have cultural, social, and personal aspects*. Though in their empirical forms these aspects are distinctly different from one another, nevertheless, like the Christian Trinity of God the Father, God the Son, and God the Holy Ghost, they all represent three main concrete forms of being of multidimensional superorganic phenomena. For this reason, the empirical forms of cultural, social, and personal aspects of sociocultural realities are closely interdependent. None of these forms can be adequately understood without understanding the other two. This theory is, again in diverse formulations, professed by many recent

sociologists, psychologists and psychiatrists, or indistinctly «mumbled» by other sociological and psychological theories.

5. The same can be said of today's sociology's clearly defined and empirically demonstrated theory of *cultural systems* (with their subsystems and supersystems and *congeries*; of *social systems* (organized groups) and *social congeries* (unorganized and disorganized plures of individuals); and of *integrated personality systems* and *unintegrated and disintegrated* personality types. During the last three decades we have observed a strong upsurge of systemic theories in all sciences, including sociology. In their own variations, all the systemic theories of today's sociology support the theory of social-cultural-personal systems. On the other hand, sociology's theory of atomistic-singularistic congeries is supported by all the recent singularistic-atomistic theories. The objective ground for the systemic as well as for the singularistic theories is the undeniable fact of the existence in the total sociocultural universe of causal or meaningful or meaningful-causal unities (systems) as well as of singularistic congeries, whose parts are united only by spatial and/or time adjacency devoid of any causal or causal-meaningful relationships. Insofar as some sociocultural realities exist in the form of the singularistic-atomistic congeries, the singularistic-atomistic approaches to the study of these congeries are fully justified scientifically and notably contribute to our knowledge of this kind of sociocultural reality. The confused and incorrect theories result not from applying singularistic-atomistic methods and principles to the study of congeries but from failing to distinguish between congeries and systems. This failure often leads to a misapplication of the methods proper for a study of congeries to that of systems and the methods proper for an investigation of systems to that of congeries. A clear distinction between sociocultural systems and congeries prevents this sort of error and thereby reinforces the validity of these theories. As mentioned, this distinction is now accepted by most of the recent sociologies.

6. From the acceptance of this distinction three other principles that are also increasingly recognized by most of today's sociologists follow. The first of these principles consists in distinguishing cultural systems and congeries from social system and congeries. Cultural and social systems with their congeries are separate dimensions of the total superorganic reality and must be studied separately. That they are being studied separately is evident in the establishment of the theories of *culturology* as contrasted with those of sociology; in the macro- and microsociological theories of cultural systems (civili-

zations, Hochkulturen, and supersystems) as differentiated from those of social systems; in two kinds of Wissensoziologie — one taking for its independent variable the category of social groups (to explain cultural systems and congeries), the other taking for its independent variable the category of cultural systems (to explain social groups and phenomena as dependent ones). Scientific sociology systematically carries on separate studies of both kinds of systems and then unifies the results in a higher synthesis, thereby clarifying the relationships of cultural and social systems to each other and restoring their interdependence in the same total superorganic reality.

The increasing acceptance of this distinction and synthesis implies the decreasing acceptability of the theories that make one of these dimensions a mere feature of the other, thereby denying their profound differences and individuality. This error is still committed by some of the singularistic and behavioristic and even by some of the systemic theories that otherwise acknowledge the essential difference between, and irreducibility of the cultural, social and personal dimensions.

7. The second principle following from the distinction of systems and congeries is the growing efforts to classify the cultural as well as the social systems in a logical order, beginning with the smallest units and sub-sub-sub... systems, continuing with the larger systems, and ending with the vastest cultural and social supersystems. In the field of cultural systems, this trend is exemplified by Danilevsky's, Spengler's, Toynbee's, Northrop's, Kroeber's and Sorokin's theories of «civilizations» and cultural supersystems.

In the field of social systems, it is manifested in attempts to grade social systems, beginning with the smallest social units and ending with the largest of social supersystems, like Parsons' and Levy's self-sufficient society, Martindale's self-sufficient community and nation-state, and Gurvitch's global society.

Despite the fragmentary and incidental character of practically all of these classifications, the desire to find the logical hierarchy in their systems is common to almost all of today's sociologists.

A knowledge of these systems and supersystems is necessary for an understanding of the structural and dynamic aspects of the socio-cultural universe and of the great role they have played in determining the mentality and behavior of millions of individuals, the character of social processes, and the historical destiny of humankind.

8. The third principle resulting from the distinction between systems and congeries concerns the proper methods of studying them.

Since a congeries is made up of either one unique singularistic-atomistic phenomenon or a mass of such phenomena, the problem of the proper methods of study (and also of the kinds of cognitive results expected from each method) can be summed up by indicating the proper method for, and the kind of cognitive results expected from, a study of (a) unique and unrepeated sociocultural phenomena, (b) a singularistic-atomistic mass of phenomena repeated in time and/or space; and (c) social, cultural and personality systems.

Unique sociocultural realities correspond to the single atom. They can only be described and understood by empathy and inner experience, for they are not amenable to generalized conclusions or to the formulation of uniformities. «Singularistic causalities», as some call them, are unique in that they are incapable of being extended to other phenomena. Unique sociocultural realities correspond to the single atom or particle in the microphysical world. The physicists call this world the «microcosm of lawlessness», and the «realm of discontinuity and uncertainty». «No theory has yet been proposed to render vagaries (of single atoms or particles) understandable in detail, none is able to predict them... Indeed Heisenberg's principle says precisely that such predictions are impossible... Discontinuity and ambiguity mark the microscopic subatomic world». This describes well unique sociocultural phenomena. They are a poor hunting ground for uniformities, generalized propositions, or scientific predictions.

Mass singularistic psychosocial phenomena, frequently repeated in time and space (like births, deaths, marriages, divorces, fluctuations of prices, etc.), lend themselves to statistical mass observation and once in a while to inductive or experimental tests. They correspond to ever-repeated macrophysical phenomena, like large aggregates of atoms, that are susceptible to mass observation by statistical and inductive methods. In the physical as well as in the psychosocial sciences, these methods often discover chance uniformities in the relationships of such phenomena. On the basis of the discovered uniformities, their future states can often be predicted with varying degrees of accuracy within specified conditions and time-space limits. These mass phenomena represent a good ground for factorial analysis, diverse probabilistic correlations, co-variations, and even for causal-functional uniformities. In this field, an investigator can theoretically take for his independent and dependent variables any singularistic

phenomena he finds promising and can try to discover and measure the degree of probabilistic relationship between his variables, which may range all the way from zero to a tangible positive or negative correlation or uniformity.

The modern biophysical sciences sharply separate the class of biological and psychosocial systems from the «lawless physical microcosm» of single atoms or particles and from the large aggregations of atoms or particles of macrophysics with their probabilistic relationships and uniformities. Subatomic phenomena display discontinuities, irregularities and uncertainties, and the large macrophysical aggregates manifest statistical chance uniformities, but biological and sociocultural systems, no matter how small an aggregation of atoms they represent, display orderly relationships and, now and then, uniformities quite different from the other two classes. Physicists call this order by different names. A. Eddington calls it the «inner law of direction». M. Planck calls it an order determined by a «free will». E. Schrödinger calls it «conscious mind», or Athman, and H. Margenau calls it «conscious, voluntaristic decision». Schrödinger's analysis of genes and biological organisms well demonstrates this difference between a biological system and microphysical and macrophysical phenomena. Genes, he says, represent a small aggregation of atoms, and belong to the microphysical world; as such, they should display the discontinuity, uncertainty, unpredictability, and «lawlessness» of microphysical phenomena. Instead, genes appear to be highly integrated systems. They contain in themselves a «plenitude pattern» or the «plenotype» of the respective organism — the totality of its hereditary characteristics. Even more, genes preserve their specific individuality unimpaired from generation to generation. Amidst ever-changing environmental conditions they carry on their integrity and plenotype and, through it, predetermine the essential characteristics of an organism and the stages of its life-course. Thus, «incredibly small groups of atoms, too small to display exact statistical laws, do play a domineering role in the very orderly and lawful events within a living organism».

These properties of an organism as a system that bears in itself its individuality unimpaired from generation to generation, amidst passage through immanently predetermined phases in its life-career, are applicable, with slight variation, to all sociocultural systems. From the moment of their emergence, they also bear in themselves the main phases of their life-career, and this life-career consists largely of an unfolding or realization of their potentialities. Like

genes and organisms, they have a tangible margin of autonomy from external forces. The external forces can hinder or facilitate the full realization of their potentialities (their inherent «phenotype»), and now and then they can even destroy a system, but they cannot radically change their inherent properties or the succession of states or phases in their history, if such a succession is an inherent part of their life-career. In Spengler's terms, «they have destiny as an organic necessity of potentiality passing into actuality ... in the time process, flowing from the past through the present to the future». The forms of change of a family are different from those of a political party or a business corporation. The forms of change of a «univariant» socio-cultural system are different from those of «bivariant» or «multivariant» systems. The forms, phases, rhythms, periodicities and directions of their quantitative and qualitative changes differ in each system according to its nature. In this sense any personal or socio-cultural system largely molds its own destiny.

These properties of systems require several modifications in the methods used to study them:

a. A system has to be studied as a unified, meaningful-causal whole with triple interdependence of each important part upon other parts and upon the whole system and of the whole system upon its important parts.

b. The study has to proceed not only from parts to the whole and from each part to the other parts but still more so from the whole to the parts (along the lines of the triple interdependence).

c. An explanation of the important structural properties of the whole system as well as those of its essential parts, and an explanation of its «physiological» (repeated) processes as well as of the phases through which the system passes in its life-course — its rhythms, periodicities and other changes — has to be sought, first of all, in the system itself, in its «immanent» potentialities and the self-direction of its life-functions, in the nature of its components of meanings-values-norms, in its «vehicles and material conserves», and in its human members and their relationships to one another; second, in the relationships of the system to other systems of which it is a subsystem or a larger system; and third, in the total sociocultural environment of the system. Residual problems may be «explained» now and then by the biophysical milieu of the system and by the interference of some extraordinary — unforeseen and unpredictable — factors, forces and events of the sociocultural and biophysical universes.

d. This means that the system's structural dynamic properties or its life-course cannot be «explained» by merely environmental factors, or by taking the system's part as the «factor» of the whole system (e.g., its «economic» or «ideological» or «technological» part). Nor can it be explained by the formulae of «stimulus-response», «challenge-reaction», or by other procedures that largely neglect the system as a unified whole.

e. This means that a statistician who has almost unlimited liberty in choosing his independent and dependent variables in a study of congeries is greatly limited in an investigation of sociocultural systems. He cannot take for his variables a part of one system (for instance, the Newtonian law of gravitation in a system of physical science) and correlate it with a part of a different system (for instance, the financial fund of a business corporation). Nor can he take as his variable any part of any system isolated from its system. This sort of operation is as unscientific as the operation of a biologist who tries to study and correlate the swimming behavior of a fish with the buzzing of a bumblebee or the heartbeats of a human with the flying behavior of a bird or the anatomical, physiological and psychological changes of a human organism when it passes from the state of childhood to that of maturity by one of these changes, like the increase in the organism's height or the appearance of his mustache.

This should give an idea of how the principles and methods of studying systems differ from those of studying congeries. Though all the main methods of scientific cognition can be used in a study of systems, these methods and principles must undergo considerable modifications. The methods of studying sociocultural congeries and systems outlined above are in an essential agreement with the corresponding conclusions of the biophysical sciences. In today's sociology, these conclusions, with some variations, are also supported by most sociologists competent in the problems of epistemology, methodology, and logic.

9. An essential agreement also exists concerning the abstract-empirical character of important «substantive» sociological theories. No significant theory can be purely abstract and devoid of relevant empirical content, nor can it consist of a mere collection of empirical facts devoid of an adequate explanatory theory. The recent «fact-finding» research in sociology has been enormous and has accumulated a mountain of empirical data; but only a modest part of this research has resulted in significant conclusions or has discovered uniformities of a «middle-range» generality. The bulk of this research

has produced purely local, temporary, «informational» material devoid of general cognitive value. The main reason for these meager results has been a lack of an adequate theory in this kind of empirical research.

In contrast, many recent abstract theories suffer from an ascetic detachment from empirical sociocultural realities. These abstract schemes represent a peculiar mixture of those «ghostly» models of social systems that are devoid of empirical content and frequently peppered with mechanistic analogies of «equilibrium», «inertia», «thermodynamic laws», and speculative prerequisites of systems' self-preservation⁵. The meshes of the abstract nets are so large that practically all the empirical fish slip through, leaving nothing in the hands of the fisherman-researcher.

In their preoccupation with verbal equilibriums, inertias, and abstract prerequisites for the continuity of systems, these speculative schemes are constructed in such a static way that they can hardly register most of the changes in the fished sociocultural waters. As a result of their ascetic detachment from the empirical sociocultural facts they are not helpful in the cognition of empirical realities.

At the present time, the inadequacy of both of these one sided theories is generally acknowledged and sociologists of all denominations try to avoid it.

10. Despite the considerable variety in contemporary sociological theories, they are mutually exclusive or contradictory only on some of their wrong points; on a number of their points they are mutually complementary rather than exclusive. The critical examination of these theories⁶ shows that each of them has, side by side with its defective and questionable points, a body of correct propositions that are quite reconcilable with and complementary to the valid propositions of other theories. Considering the multidimensionality of the total sociocultural reality, it is but natural that each of the currents of sociological thought should stress different aspects of it. Insofar as these aspects are real and are accurately depicted by different theories, each theory is sound and reconcilable with the sound parts of other theories. Even more, these sound parts can be unified and incorporated into a more «multidimensional» and more adequate integral theory that gives a fuller and more accurate knowledge of the super-

⁵ These mechanistic analogies are cognitively much more misleading than the organismic analogies of the preceding period.

⁶ See my *Contemporary Sociological Theories, Sociological Theories of Today, and Society, Culture and Personality*.

organic universe than each of the existing theories. Some imperfect attempts to build such integral theories are already being made. There is hardly any doubt that much better, finer and more adequate integral systems of sociology will be built in the future.

In their sound parts, the singularistic-atomistic theories of social, cultural and personal congeries are reconcilable and complement the sound body of systemic theories: each class of these theories gives a real knowledge of the singularistic and systemic forms of the total superorganic reality. The sound part of macrosociological theories of vast sociocultural systems and supersystems complements the microsociological studies of small groups and small cultural unities. Sociologies of cultural systems and congeries complement sociologies of social systems and congeries. Valid contributions of the analytical, structural-functional, dialectic, empirical, integral and other currents of sociological thought are quite reconcilable with one another. The same can be said of dualistic, triadic and other typologies: each of these «opens» a particular dimension of sociocultural reality and thereby enriches our knowledge of it. Each of them is like the different kaleidoscopic forms of the same bits of colored glass changing with each turn of the optical tube. The dimensions of the *Gemeinschaft-Gesellschaft*, the militant-industrial, the sacred-secular, the familistic-contractual-compulsory, the primary-secondary and other dyadic and triadic typologies of sociocultural realities do not contradict but complement one another. In their totality they deliver to us a fuller knowledge of more dimensions of the human universe than each of these typologies alone. If all these typologies are logically and empirically integrated into a vast unified system, our knowledge of the total superorganic reality will become richer and more adequate.

This applies to almost all other differences in the seemingly discordant sociological theories of social change, in the taxonomic classifications of social groups and cultural systems, in the repeated «physiological» processes in the systems, in their evolutionary trends, and in practically all other surveyed theories. Almost all of them contain a part of the truth — some larger, some smaller — and these sound parts can, are and will be increasingly integrated into the more scientifically adequate integral theories of the future sociology.

In some divisions of sociology, the existing, partially true theories are already sufficiently numerous and correct to permit their tentative synthesis into a multidimensional integral theory. In other divisions of sociology, particularly in its taxonomy of social and cultural sys-

tems and in its physiology of the repeated processes — their natures, rhythms, tempi, periodicities, reasons, functions and interrelationships — the existing, partially true theories are still too few and too uncertain for such an integral synthesis at the present time. A great deal of research in these fields has to be done before such a synthesis becomes possible. Even in these less developed fields of sociology an intensified study of their basic problems is proceeding crescendo and several significant theories with their relevant empirical evidence have already been formulated. Several others are in a *status-nascendi*.

To sum up, the growing agreement of different currents of sociological thought is likely to continue in the future.

III

This hypothesis raises the question of the shape of sociology to come, of the predominant character of the next phase of general sociology. Any prognosis of the future course of science or of any creative activity can be but conjectural. My guess is that the next period of general sociology is likely to be the period of great sociological syntheses, of grand integral systems of sociology. In this sense, the next period will markedly differ from the period from 1925 to 1965. In the terms of H. Spencer's, Claude Bernard's, G. Tarde's, and A. N. Whitehead's theory of alternating analytical (fact-finding) and synthesizing periods repeating themselves in science and philosophy, the recent period 1925-1966 has been preparatory, analytical and fact-finding rather than synthesizing. The main achievements of the recent period consist largely in excavating and analyzing an enormous mass of relevant and irrelevant empirical facts, in testing and correcting preceding sociological theories, in elaborating various techniques of sociological research and in formulating a few «middle-range» generalizations and significant sociological and historico-philosophical theories, like the macrosociological theories of vast cultural systems or civilizations and the dialectic and the integral systems of sociology.

In creating vast sociological syntheses and grand systems of sociology, the recent period has been notably poorer than that of the second half of the nineteenth and the early twentieth centuries. The theories of Comte, Spencer, Marx, Durkheim, Weber, Simmel, von Wiese, Ward, Sumner, Tarde, Tönnies, Pareto and other leaders of

sociology of this period not only established sociology as a science, but still serve as the basic frameworks and referential systems for today's general sociology. In their totality, these systems make the preceding period much more synthesizing than the recent period examined. The «preparatory» character of today's sociology accounts for its concentration on technique, for its preoccupation with fact-finding labor, and for the comparative dearth of significant syntheses and grand systems of sociology. Today's sociology has excavated so many facts that it often does not know what to do with them. Likewise, in its analysis of various — important and unimportant — techniques of research, it has become as finicky as the «angelology» of the medieval Scholastics. In its revolt against the «grand systems of sociology», it has increasingly neglected a study of the fundamental problems of sociology and has progressively wasted its creative energy in research on comparatively trivial, cognitively unimportant problems.

Further research along these lines will yield not bigger and better scientific harvests but progressively diminishing returns, not new breakthroughs but an increasing stagnation and routinization of sociology.

Whether we like it or not, sociology today has come to a crossroad: One road leads it to the new peak of great syntheses and more adequate systems of sociology, the other leads it to a hackneyed, rubber-stamped, greatly mechanized set of dogma's devoid of creative *élan* and cognitive growth.

My guess is that, of the two roads, sociology will choose the road of creative growth and will eventually enter a new period of great syntheses. I hope that this prognosis may be as lucky as my previous prognostications of the changes in the sociocultural life of mankind that I made at the end of the 1920's⁷.

⁷ See these predictions in my *Social and Cultural Dynamics and Crisis of Our Age*.

THE SOCIOLOGY OF INTERNATIONAL RELATIONS,
EMPIRICAL AND EXPERIMENTAL STUDIES

SOCIOLOGIE DES RELATIONS INTERNATIONALES

Center for Research on Conflict Resolution

SOCIOLOGY OF INTERNATIONAL RELATIONS

It would be necessary to begin this paper with a definition of the sociology of international relations and a brief characterization of empirical and experimental studies. Unfortunately there are serious underlines affecting both. The sociology of international relations is not a term that has been used enough to have developed an agreed meaning, and the word empirical in social science parlance at least, seems to have derived from its definition in the dictionary.

One way to conceptualize the sociology of international relations — and the one that has been followed here — is to proceed inductively, to discover what subjects are treated by sociologists when they are concerned with the relations among national societies. When this is done, it is clear that sociologists are, for the most part, interested in the influences affecting intrasocietal relations that lie outside the governmental sphere. These influences seem to assert themselves chiefly in three contexts: (1) through direct relations between persons and groups across national boundaries; (2) in domestic groups and circles that lie below the political process itself and affect foreign policy indirectly through pressures on political parties, contacts with politicians, and the like; and (3) in the social interaction of diplomats, delegates to international governmental organizations, and members of their secretariats.

There would be wide agreement that experimental studies are those in which variables are manipulated by the sociologist, but there is confusion about empirical studies. The dictionary tells us that the empirical is that which is observed or experienced. This marks off empirical studies from purely theoretical ones, but that does not carry us far. All data have been observed or experienced by someone. Is a study then empirical simply because it features as data? Or must the data have been produced by the scientist himself? The dictionary does not say. What seems to have happened is that social scientists

THE SOCIOLOGY OF INTERNATIONAL RELATIONS: EMPIRICAL AND EXPERIMENTAL STUDIES

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It would be customary to begin this paper with a definition of the sociology of international relations and a brief characterization of empirical and experimental studies. Unfortunately there are serious unclaritys affecting both. The sociology of international relations is not a term that has been used enough to have developed an agreed meaning, and the word empirical, in social science parlance at least, seems to have drifted from its definition in the dictionary.

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have implicitly accepted a definition of their own, one that emphasizes not only the presence of solid data but the fact that they have been systematically gathered. According to this conception, the observations or experiences need not be those of the investigator himself so long as he can count on the objectivity and reliability of the process of data collection. It must have been carried out by a qualified person using rigorous methods. This is a fairly clear standard when applied to work in psychology, anthropology, sociology and economics. It is less clear in history and political science. In these fields it is very difficult to be sure that the concrete data that one has are not a biased sample of those that are relevant to the problem in hand. Perhaps the touchstone of empirical work in such cases is the careful search for negative evidence.

The studies to be reviewed here are the fruit of a methodical canvass of the literature for the period 1950-1964. *The International Bibliography of Sociology*, *Sociological Abstracts*, and *International Political Science Abstracts* were the main guides to the search. A great many studies were examined that will not be discussed because they fell outside the rules of inclusion that were gradually worked out. The principal exclusions, and the reasons for them, are as follows :

- Studies in which the variables are exclusively legal, political, economic, or psychological, because they do not use a sociological type of analysis.
- Studies of the relations of colonies to their metropolitan powers, because, until they have become in fact new nations, the relation is not an international one, but one between a nation and indigenous peoples.
- Studies of migrants that deal only with acculturation, because it is the effect of migrants on the relations between their new and old countries that is of interest here.
- Studies of attitudes toward foreigners in which no attempt is made to discover the social antecedents of these attitudes, because mere descriptive classification of them throws no light on social organization or process.

Since all the studies included had to be examined, the paper is somewhat limited by the holdings of libraries that were accessible. This is only a slight limitation, however since there were very few studies which, from their titles, seemed likely to be empirical that were not available. Fully 90 % of the promising titles have in fact been examined. To the degree that the bibliographical sources used did not cover the entire field of relevant publications, however, there is of course further omission of significant research.

One hundred six studies constitute the basis of this paper — six that are clearly experimental, and 100 that are otherwise empirical. The latter will be taken up first, and will be divided into three broad categories, with subdivisions in each of the first two. The first category comprises 39 studies that take a dependent variable or situation of importance to international relations as the focus of interest and seek to find causes of different states of that variable. These studies move, in other words, from effect to cause. The second category comprises studies of the opposite sort, in which a cause of presumed importance to international relations is the starting point for determining its effects under differing conditions. These studies move from independent variable to dependent variable. The third category is made up of six studies that cannot be classified in either of the first two because they analyze patterns of relationship without concern for cause or effect. In all cases the studies will be listed in the text and not in footnotes or an appended bibliography so as to avoid repetition of titles in the discussion. Where the same study has been reported more than once its fullest treatment will be cited first, but the other citations will be listed. A brief indication will always be given of the methods of research employed.

Within each of the first two categories of empirical studies the subdivisions will be ordered according to the breadth of the central variable. Studies of effects or causes at the level of international organization will precede studies of effects or causes within countries.

Effect-to-Cause Studies

In all of the 39 studies classified here the broadest effect whose causes are investigated is what has been called a security-community — two or more national states so linked together that war between them is unthinkable. The one important study of this subject is:

Deutsch, Karl W. *et al.*, *Political Community and the North Atlantic Area*. Princeton, Princeton Univ. Press, 1957, xiii-228 p.

The authors review the documentary evidence on the history of ten security-communities, two of which failed. The analysis of the background factors and of the dynamic processes that make the difference between success and failure is very sophisticated. In general, it proceeds from the communication model that Deutsch has developed in his theoretical writings. More than any other one work, perhaps, this volume points the way to important possibilities in the sociology of international relations.

A study oriented to a splitting rather than a uniting of nations, and also very important, is:

BERNARD, Stéphane, *Le conflit franco-marocain 1943-56.*, Bruxelles, Editions de l'Institut de Sociologie de l'Université Libre de Bruxelles, 1963, 3 vols.

This study is a model of combined historical and sociological scholarship. It gives a history of the French-Moroccan conflict, reconstructs the sociological mechanisms involved, and analyzes the groups and institutions that played leading roles. Sources are largely documentary, but informed persons were also interviewed.

A third unique study is:

GALTUNG, Johan, «Summit Meetings and International Relations.» *J. of Peace Research* (1) 1964 : 36-54.

The conclusion is reached, using documentary sources, that summit meetings are most frequent among allies that are engaged in an external conflict and next most frequent among polar opposites in a conflict *after* the situation has crystallized. Such meetings are less frequent among allies not engaged in an external conflict and among conflicting parties *before* the conflict has crystallized.

An interview study that takes the views of personnel in the State Department of the United States as the dependent variable and seeks light on causes is:

PRUITT, Dean G. «An Analysis of Responsiveness between Nations.» *J. of Conflict Resolution* 6(1) March 1962 : 5-18.

The most interesting finding is that specialists in certain areas of the world are responsive to the needs of countries of those areas not so much because of interpersonal ties as because of a desire to build up a fund of good will that will result in the reciprocation of favors in the future.

Foreign policy is taken as the dependent variable in three studies :

DEUTSCH, Karl. W., and Edinger, L.J. *Germany Rejoins the Powers : Mass Opinion, Interest Groups, and Elites in Contemporary German Foreign Policy.* Stanford: Stanford Uni. Press, 1959, xvi 320 p.

KLINGBERG, F.L. «The Historical Alternation of Moods in American Foreign Policy.» *World Politics* 4(2) Jan. 1952 : 239-273.

ZANINOVICH, M.G. «Pattern Analysis of Variables within the International

System : the Sino-Soviet Example." *J. of Conflict Resolution* 6(3) Sept. 1962 : 253-268.

The Deutsch and Edinger study uses many kinds of data — from polls, parliamentary votes, and interviews. The focus is on the interplay between mass opinion and elites in West Germany. Klingberg's study is a documentary one that supports a cyclical view of history. Zaninovich bases his research on Soviet and Chinese policy statements — 1500 of them in a month in which the situation between the two countries was critical and 1500 in a month in which it was not critical. By measuring such variables as hostility, frustration, and change of status-quo in the statements, and analyzing the sequential pattern among them, the author projects the possibility of distinguishing a «healthy» series of crisis patterns from an «unhealthy» one that may lead to violence.

The most frequent datum for which causal factors are sought are the attitudes of persons on matters of international importance. We shall divide the studies into those investigating attitudes toward international issues and the United Nations and those starting from attitudes toward other countries and their peoples. There are 20 studies of the first type:

ANGELL, R.C., DUNHAM, V.S., and SINGER, J.D. «Social Values and Foreign Policy Attitudes of Soviet and American Elites," *J. of Conflict Resolution* 8 (4) Dec. 1964 : 329-491.

AUBERT, Vilhelm, FISHER, B., and ROKKAN, S. «A Comparative Study of Teachers' Attitudes to International Problems and Policies," *J. of Social Issues* 10 (4) : 25-39.

BAUER, Raymond, POOL, ITHIEL DE SOLA, and DEXTER, Lewis A. *American Business and Public Policy : the Politics of Foreign Trade*. New York, Atherton Press, 1963, xxxii 649 p. BAUER, Raymond, and POOL, Ithiel de Sola, *American Businessmen and International Trade: Code Book and Data from a Study of Attitudes and Communications*, Glencoe, III, Free Press, 1960, xxviii-145 p.

DE BIE, Pierre «Certain Psychological Aspects of Benelux," *International Soc. Sci. Bulletin* 3 (3) Aut. 1951 : 540-552.

BLAU, Peter M. «Orientation of College Students toward International Relations," *American J. of Sociology* 59 (3) Nov. 1953 : 205-214.

CHESLER, M., and SCHMUCK, R. «Student Reactions to the Cuban Crisis and Public Dissent," *Public Opinion Quart.* 28 (3) Fall 1964 : 467-482.

KRIESBERG, L. «Die Europäische Gemeinschaft für Kohle und Stahl im Urteil der Deutschen, 1950-56," *Kölner Ztsch. für Soziologie und soz.-Psych.* 11 (3) 1959 : 486-515. KRIESBERG, L. «German Public Opinion and the European Coal and Steel Community," *Public Opinion Quart.* 23 (1) Spr. 1959 : 28-42. KRIESBERG, L. «German Businessmen and Union Lea-

- ders and the Schuman plan," *Social Science* 35 (2) Apr. 1960: 114-121.
- LAULIGHT, Jerome «Public Opinion and Foreign Policy Decisions," *J. of Peace Research* (2) 1965 : 147-160.
- LERNER, Daniel, «Britain Faces the Continent," *Virginia Quart. Rev.* 39 (1) Wint. 1963 : 12-25.
- LERNER, Daniel «French Business Leaders Look at EDC : a Preliminary Report," *Public Opinion Quart.* 20 (1) Spr. 1956: 212-221.
- LERNER, Daniel and ARON, Raymond *France Defeats EDC*. New York, Frederick A. Praeger, 1957, xvii 225 p.
- LERNER, D., and KRAMER, M.N. «French Elite Perspectives on the United Nations," *International Organization* 17 (1) Wint. 1963 : 54-73.
- OWEN, J. «The Polls and Newspaper Appraisal of the Suez Crisis," *Public Opinion Quart.* 21 (3) Fall 1957 : 350-354.
- ROPER, Elmo, «American Attitudes on World Organization," *Public Opinion Quart.* 17 (4) Wint. 1954 : 405-442.
- ROSENAU, James N. *National Leadership and Foreign Policy*, Princeton, Princeton Univ. Press, 1963, xviii 409 p.
- SCOTT, W.A., and WITHEY, S.B. *The United States and the United Nations: the Public View 1945-55*. New York, Carnegie Endowment for International Peace, 1958, xxxii, 649 p.
- STOETZEL, Jean *Without the Chrysanthemum and the Sword*. New York, Columbia Univ. Press, 1955, 334 p.
- SUCHMAN, E.A., GOLDSSEN, R.K., and WILLIAMS, R.M. Jr. «Attitudes toward the Korean War," *Public Opinion Quart.* 17 (2) Sum. 1953: 171-184.
- SVALASTOGA, Kaare «Factors Associated with Belief in Permanent Peace," *International J. of Opinion and Attitude Research* 5 (3) Fall 1951 : 391-396.
- VAN WAGENEN, R.W. «American Defense Officials' Views on the U.N.," *Western Political Science Quart.* 14 (1) Mar, 1961 : 104-119.

Three of these studies deal with specific crises — the Korean War, the Suez crisis of 1956, and the Cuban missile crisis of 1962. Suchman, Goldsen, and Williams surveyed male graduates of 11 American universities. They found that, although ideological conviction and internationalist beliefs were linked with both a favorable attitude toward the Korean policy of the United States and willingness to serve in the armed forces, political knowledge was linked to the former but not to the latter. The realistic knowledge that the atom bomb could be used to win the war led them to think military service was unnecessary. Owen's study of the Suez crisis is interesting because it compares the results of public opinion polls in Britain and France with the stories sent by correspondents of *The New York Times* concerning public opinion in those countries. Wide discrepancies occur. In particular, the attitude of French Communists was ignored in dispatches. Chesler and Schmuck queried a small sample of American college students. They find that scores on an armament-disarmament attitude scale are better predictors of the reaction to

the Cuban crisis than scores on scales of ethnocentrism, patriotism, conservatism, or dogmatism.

Four studies deal exclusively with attitudes toward the United Nations. Lerner and Kramer, in a large panel study in which members of French élites were interviewed five times over a seven-year period, found that the respondents tend to think that the United Nations has become a victim of the Cold War and is no longer an effective political means for promoting peace. They believe in internationalism, however, and think that the United Nations has a role to play in the development of underdeveloped countries. The Roper report of a national survey that shows very general support for the United Nations is the basis for interpretations given by several prominent Americans. Scott and Withey review more than 100 surveys conducted in the United States during a ten-year period. One of the interesting findings is that the well-informed on international matters have more stable attitudes toward the United Nations than do the ill-informed; another is that when satisfaction with the current functioning of the United Nations is low the respondents want to give it more power, not less. Van Wagenen interviewed 25 middle-range officials in the U. S. Defense Department. They were almost evenly divided between those who see the United Nations as a bridge between the U.S. and the U.S.S.R. and those who see it as an instrument of United States foreign policy. But most of the respondents think it *should be* a bridge.

There are seven studies that deal rather broadly with international issues, including, in several of them, material about the United Nations. The most elaborate is that reported by Aubert *et al.* Sample surveys of teachers in seven European nations were conducted to discover attitudes toward war and peace, perceptions of particular countries as threats, and the like. Another multinational study was that by Pool in which the most prestigious newspaper in each of five countries — France, Britain, West Germany, the Soviet Union and the United States — was analyzed to trace attitudes toward other countries and toward international organizations. The Angell-Dunham-Singer study also used content analysis of newspapers (and magazines) to get at the values relevant to international policy and the policy preferences themselves of members of six élites in the United States and six in the Soviet Union.

Four studies are concerned with attitudes in one country only. Laulicht reports an investigation by the Canadian Peace Research Institute in which attitudes toward nuclear war, conventional forces,

coexistence policy, the United Nations, and foreign aid were obtained from samples of the English-speaking mass public, the French-speaking mass public, the informed public, business leaders, labor leaders, and politicians. Stoetzel's study of the Japanese is based upon interviews with a large national sample of adults, a small number of depth interviews, and written «autobiographies of the future» obtained from college students. Of special interest is the very high level of concern for, and information about, international affairs among Japanese youth. College students in particular think that world war is avoidable in principle but unlikely to be avoided in practice because of the Cold War. Svalastoga reports a study made by the Washington (State) Public Opinion Laboratory. It finds that the most optimistic groups about peace are professional, semi-skilled, and clerical workers. The pessimists are managers and officials, laborers, and service workers. Blau discusses the results of sampling students in 11 American universities on international questions. His main conclusion is that those who are power-oriented internationally tend to be conservative in domestic politics and those who have faith in international cooperation to be liberal or progressive. Persons who do not follow either of these patterns but cut across them are put under great strain by their friends (who usually share the same domestic political stance) and frequently change their international stance.

Two studies deal with economic relations among nations rather than the broader spectrum of political relations. Bauer, Pool and Dexter report on an investigation in which U.S. business leaders were interviewed about foreign trade policies. In addition, eight community studies were conducted. The results comprise a mine of information on the communication networks of these leaders, the pressures they feel, the relative importance of self-interest and ideology in the positions they take. A study on foreign aid is reported by Rosenau, based upon questionnaire responses from 647 members of United States élites. The general conclusion is that non-governmental makers of opinion are more in favor of foreign aid than are legislators because the latter are constrained by pressures from local groups that are somewhat isolated from the larger world of today.

Finally, in the group of studies on international issues there are five that concern West European problems. Kriesberg analyzes the correlates of differing attitudes toward the Coal and Steel Community, Lerner looks at the projected European Defense Community by means of returns of a mailed questionnaire to French business

leaders, and in the book by Lerner and Aron there are interesting studies by Stoetzel, using poll data, of the evolution of French opinion on EDC and by Marchand on the positions taken on the same issue, the grounds for the criticisms, and the influence exercised by leading French newspapers. Lerner's British study probes the views of a small group of leaders on their evaluation of the relative importance to Britain of the various organizations to which she belongs. Results show that the Commonwealth is thought to be most important, and then in order the Anglo-American connection, NATO, the European Community, and the United Nations. (This was in 1961 before Britain was excluded from the Common Market). De Bie's study of Benelux is based on interviews with students in Belgian universities and technical colleges. The most significant finding is that the Flemings in Belgium, who have a cultural affinity with the Dutch and have had more contact with them, want Benelux to take on cultural in addition to economic functions, but also see the difficulties of cooperating with the Dutch more than do the French-speaking Walloons.

There are six studies of the attitudes or beliefs of people of particular countries toward the regimes or the peoples of other countries, as follows:

BELL, W. «Images of the United States and the Soviet Union Held by Jamaican Élite Groups,» *World Politics* 12 (2) Jan. 1960 : 225-249.

BUCHANAN, William and CANTRIL, Hadley, *How Nations See Each Other*. Urbana, Univ. of Illinois Press, 1953, ix 220 p. Buchanan, William «Stereotypes and Tensions as Revealed by the UNESCO International Poll.» *International Soc. Sci. Bulletin* 3 (3) Aut. 1951 : 515-528.

GAMSON, William A. «Evaluating Beliefs about International Conflict,» pp. 27-40 in *International Conflict and Behavioral Science* (Roger Fisher, Ec.), New York, Basic Books Inc., 1964, xii 290 p.

ISAACS, Harold R. *Scratches on our Minds*. New York, John Day, 1958, 416 p.

MAYNTZ, Renate and PERLMUTTER, Howard, «Einige Versuchsergebnisse zum Problem der Vorstellungsbildung und Interpretation von Kommunikationen,» *Kölner Ztsch. für Soziologie und Soz.-Psych.* 8 (3) 1956 : 450-476.

WOLF, Heinz, «Stellungnahmen Deutscher Schüler zu Ost-europäischen Völkern,» *Kölner Ztsch. für Soziologie und soz.-Psych.* 15 (3) 1963 : 478-510.

The largest of these, reported by Buchanan and Cantril, was sponsored by UNESCO and carried out by polling organizations on national samples of approximately 1000 respondents each in eight countries. It was found that the kind of stereotype held about foreigners

is closely related to the degree of friendliness felt toward them, and that friendliness in turn is affected by sympathies in the Cold War, by alignments in World War II, and by similarity of language (except for Dutch feeling toward Germans). Near neighbors are quite as frequently disliked as liked.

The Bell study is a small one conducted by questionnaire. It shows that elite Jamaicans tend to think the United States more often morally right in its foreign policy than the Soviet Union, but 56 % of them believe the Soviet Union more effective in winning the approval of the people of underdeveloped countries. The groups least impressed with the United States on both points are the young, women, the highly educated, low income groups, teachers and doctors. The civil servants and businessmen are more favorable. The poorly educated are skeptical about U.S. influence but felt that the United States is in general morally right.

The Isaacs study is a very thorough one, carried out by long interviews with well informed Americans about their images of Indians and Chinese. Information was obtained on the sources of their impressions, their knowledge of Asian politics, their opinions of what was being done by the United States in this area of the world, and what should be done. It formulates careful generalizations about the typical images held.

Two of the studies have great methodological interest. The one by Mayntz and Perlmutter reverses the normal procedure and, instead of asking attitudes toward certain foreign groups, gives the respondent a statement purporting to emanate from abroad and asks him to guess the nationality of the author. He is then asked to give the reasons for his choice. One significant result is that the greater the social distance between the respondent and the nationality named the more likely is he to attribute the statement to the national character of the speaker and the less likely to attribute it to situational factors.

The Gamson article is not an empirical study, but rather the outline of a detailed design for such a study (which has since been carried out). It lays the theoretical foundations for an evaluation of the correctness of alternative beliefs about the Cold War behavior of the Soviet Union held by Americans. The types of Soviet action that are consistent with each belief system are spelled out and it is indicated how empirical verification could be sought in the course of historical events.

The five studies remaining in the effect-to-cause category are concerned not so much with the causes of particular international at-

titudes as with the factors influencing attitudes of this kind in general. These studies are :

ADLER, Kenneth P. and BORROW, Davis, «Interest and Influence in Foreign Affairs,» *Public Opinion Quart.* 20 (1) 1956 : 89-101.

GALTUNG, Johan «Foreign Policy Opinion as a Function of Social Position,» *J. of Peace Research* (3-4) 1964 : 206-231.

GRACE, HARRY A. and NEUHAUS, Jack Olin «Information and Social Distance as Predictors of Hostility,» *J. of Abnormal and Soc. Psych.* 47 (2 Suppl.) April 1952 : 540-545.

PIAGET, Jean and WEILL, A.M. Le développement chez l'enfant de l'idée de patrie et des relations avec l'étranger,» *Bulletin international de sci. soc.* 3 (3) aut. 1951: 605-611.

SMITH, P.A. «Opinions, Publics and World Affairs in the United States,» *Western Political Quart.* 14 (3) Sept. 1961 : 698-714.

Piaget and Weill survey school children in Geneva with respect to their ideas about the homeland and foreign countries. They conclude that international understanding stems, not from teaching, but from developing reciprocity in thought and action with one's fellows when still young. The study by Grace and Neuhaus is also socio-psychological in character. It was carried out on a sample of college students. The most interesting finding is that, although knowledge about, and hostility to, a foreign people are in general negatively related, extreme hostility requires some knowledge, so that there is a reversal of the curve in the area of little knowledge and much hostility. One does not hate the people one knows least about as much as some of the people one knows more about.

The other three studies deal with the character and influence of élites in the public opinion process. Adler and Bobrow, by a nomination technique, chose and interviewed a set of «influentials» in a suburb of a large American city and a set of persons interested in foreign affairs who were not influentials. The influentials proved to be much better educated, more traveled, to have larger incomes, and to use direct rather than indirect channels to governmental leaders. Smith analyzes public opinion polls during four international crises and concludes that there are three distinct publics in the United States: (1) an attentive or engaged one that tends to be college-educated, business or professional in occupation, and Republican in domestic politics; (2) a poorly informed public, with only elementary education and semi-skilled or unskilled jobs, which, though Democratic in domestic politics, is highly stereotyped in political thinking and wants direct, aggressive action internationally; and (3) an in-between public, with high school education, rather passive, confused,

but with more understanding of world affairs than the second public. Galtung uses Norwegian poll data to develop the notion of an urban elite «center» that has rational and informed views on foreign-policy matters and a rural, lowerclass «periphery» that is ill-informed and somewhat irrational. The center is gradualist in its thinking about social change, the periphery has absolutist ideas — either no change at all is desired, or it should be immediate.

Cause-to-Effect Studies

There are 61 studies in the second broad group — those that look for the effects of a presumedly important cause. Again we start at the top, so to speak, by considering investigations of the effects of contacts through the United Nations and through multilateral diplomacy generally. There are four studies here:

ALGER, Chadwick, «Non-resolution Consequences of the U.N. and their Effect on International Conflict,» *J. of Conflict Resolution* 5 (2) June 1961 : 128-145. ALGER, Chadwick, «Personal Contact in Intergovernmental Organizations», pp. 523-547 in *International Behavior* (Herbert Kelman, Ed.). New York, Holt, Rinehart and Winston, 1965.

GALTUNG, Johan and RUGE, Mari Holmboe, «Patterns of Diplomacy: a Study of Recruitment and Career Patterns in Norwegian Diplomacy,» *J. of Peace Research* (2) 1965 : 101-135.

HAAS, Ernst B. *Beyond the Nation-State: Functionalism and International Organization*. Stanford, Stanford Univ. Press, 1964, x 595 p. HAAS, Ernst B. «System and Process in the ILO: a Statistical After-Thought,» *World Politics* 14 (2) Jan. 1962: 322-352.

SHARP, Walter R. «International Bureaucracies and Political Development,» pp. 441-474 in *Bureaucracy and Political Development* (J. La Palombara, Ed.) Princeton, Princeton Univ. Press, 1963.

Chadwick Alger has studied the delegates to the United Nations at intervals for several years by personal observation and informal interview. The two citations are therefore related to the same continuing study. As compared with diplomats in embassies abroad, he finds that those assigned to the United Nations have more frequent contact with their counterparts, the contact is less written and more oral, it cuts across diplomatic ranks more often, is more often with unfriendly countries, is more likely to carry off-the-record information, and is more important as a source of information to their governments. The cross-cutting of nations' interests that occurs on

the seven main committees makes for differing alignments and shifting partners. The general system of channelling information makes national perceptions less distorted, so that positions of other governments are better understood. Enough *esprit de corps* develops through committee work to give the delegates a sense that the United Nations has achieved something when a serious crisis is surmounted.

The Haas study is the only detailed one of a Specialized Agency of the United Nations — in this case the International Labor Organization — that tries to assess the degree to which its activities bring corresponding groups in different nations to know and trust each other, and hence to promote world integration. A great mass of evidence is examined and analyzed with skill and objectivity. Although the book is oriented to theoretical questions and opens and closes with a discussion of sociological theory and internationalism, the empirical core has to do with the actual functioning of the ILO since World War II, with careful analysis of the relationship between participation in its works and compliance with the standards set by its industrial committees. The achievements are seen as modest, with more to be hoped for from the unintended consequences than the intended.

The two other studies in this group are concerned with the effects of the new structure of international society. Galtung and Ruge examine the change in the role of Norwegian diplomats, using documentary sources. As compared with the early part of this century, diplomats are becoming specialized and more tied to problems and to international organizations and less to particular countries. Sharp's study is largely descriptive of the nature and extent of international bureaucracies devoted to further economic development, but he does suggest that the effects of the United Nations efforts are not so much direct, in accomplishing particular projects, as indirect, in engendering a whole modern atmosphere and spirit.

There are many studies of the adaptation of immigrants to the surroundings in their new homelands, but most of these make no reference to the effect of their presence on the relationships between their lands of birth and of adoption. Eight that do so are:

CLÉMENS, René, VORSE-SMAL, Gabrielle, and MINON, Paul *L'assimilation culturelle des immigrants en Belgique*. Liège, H. Vaillant-Carmanne, 1953, x 389.

CLÉMENT, Pierre «Attitudes de la population de Vienne-en-France vis-à-vis de groupes raciaux et culturels différents.» International Sociological Association, Liège Congress, 1953, Section II.4.

DAHLSTROM, Edmund, «Esthonian Refugees in a Swedish Community,» International Sociological Association, Liège Congress, 1953, Section II.4.

DOMINÉDOM, Francesco M. «How Migration Affects the Country of Immigration,» *Migration* 2 (2) 1962 : 49-60.

DOWNER, Alexander R. «The Influence of Migration on Australian Foreign Policy,» *Migration* 1 (1) 1961 : 7-22.

GIRARD Alain «L'adaptation des émigrés en France,» International Sociological Association, Liège Congress, 1953, Section II.4.

RIESELBACH, L.N. «The Basis of Isolationist Behavior,» *Public Opinion Quart.* 24 (4) Wint. 1960 : 645-657.

RUSSETT, Bruce M. «Demography, Salience, and Isolationist Behavior,» *Public Opinion Quart.* 24 (4) Wint. 1960: 658-664.

Quite different types of effects are investigated in these studies. Four of them — those of Clémens, Clément, Dahlstrom and Girard — look at the attitudes engendered by the immigrants in the local populations that are in contact with them. One is left to infer the impact, if any, on foreign policy. Clémens, for instance, shows that interviews in the Liège area reveal that French and Dutch immigrants are well thought of, Moroccans and Algerians are not, and Polish and Italians are in between. Clément, from a survey of more than 3000 adults and a small number of school children, finds that the oldest children and the youngest adults have the most favorable attitudes toward strangers. Favorable attitudes are correlated with cultural similarity. Thus, despite the fact that Italy and France fought each other in World War II, Italians are more favorably regarded than Armenians. Dahlstrom took more than 1300 interviews among Swedes and more than 100 among Esthonian refugees. The generally satisfactory accommodation between the two groups implies favorable Swedish attitudes toward Esthonia, but no inferences are made with respect to attitudes toward the Soviet Union. Girard's study is based upon a national sample of the French population and five sets of Italian and Polish immigrants. It is found that the more immigrants in a region, the less the discrimination, and each class or occupation of Frenchman think that immigrants of their own type are making the best adjustment.

Two of the studies look more directly at foreign policy by investigating the effect of large blocks of immigrants on parliamentary votes. Rieselbach analyzes the American congressional situation in 1939-41 and 1949-52. He finds that ethnic influences are relatively slight, being less powerful than rural-urban difference or than party preference. Russett uses poll data and finds that the salience of an issue makes a difference. When the issue is salient to an immigrant

group, there is considerable influence on the foreign-policy votes of their congressional representatives.

The last two of these studies — those by Dominedo and Downer — are at the margin of empiricism. Both make rather sweeping statements about effects of immigration on the two countries concerned, but they seem to have looked closely at the facts. Dominedo, writing from an Italian position, sees reciprocal benefits. The receiving nation obtains the skills it needs, the sending one obtains access to a new market. All sorts of relationships with one another are expanded. Downer indicates the accuracy of these generalizations for the migration of Europeans to Australia since World War II.

College or university study abroad is almost always for at least one academic year. It may therefore leave a lasting impression. Because of the ease with which social scientists can investigate this phenomenon, there are more studies of this kind than of any other. Twenty are listed below :

BEALS, Ralph, «The Mexican Student Views the United States,» *Annals of American Acad. of Political and Soc. Sci.* 295, Sept. 1954: 108-115.

BEALS, Ralph, and HUMPHREY Norman D. *No Frontier in Learning.* Minneapolis, Univ. of Minnesota Press, 1957, xi 148 p.

BENNETT, John W., PASSIN, Herbert and MCKNIGHT, Robert K. *In Search of Identity.* Minneapolis, Univ. of Minnesota Press, 1958, xii 369. PASSIN, Herbert and BENNETT, John W. «The America-educated Japanese,» *Annals of American Acad. of Political and Soc. Sci.* 295 Sept. 1954: 83-96.

BENNETT, John W. and MCKNIGHT, Robert K. «Misunderstandings in Communications between Japanese Students and Americans,» *Social Problems* 3 (4) Apr. 1956 : 243-256.

DAVIS, F.J. «Cultural Perspectives of Middle Eastern Students in America,» *Middle East Journal* 14 (3) Sum. 1960 : 256-264.

GARRATY, John.A. and ADAMS, Walter, *From Main Street to the Left Bank.* East Lansing, Michigan State Univ. Press, 1959, 216 p.

GOLDSSEN, R. K., SUCHMAN, E. and WILLIAMS, R. Jr. «Factors Associated with the Development of Cross-Cultural Social Interaction,» *J. of Social Issues* 12 (1) 1956 : 26-32.

HART, Henry, *Campus India,* East Lansing, Michigan State Univ. Press, 1961, 217 p.

KELMAN, Herbert C. and BAILYN, Lotte, «Effects of Cross-cultural Experiences on National Images,» *J. of Conflict Resolution* 6 (4) Dec. 1962 : 319-334.

LAMBERT, Richard D. and BRESSLER, Marvin, *Indian Students on an American Campus,* Minneapolis, Univ. of Minnesota Press, 1956, xi 122 p.

LAMBERT, Richard D. and BRESSLER, Marvin, «Indian Students in the United States,» *Annals of American Acad. of Political and Soc. Sci.* 295, Sept. 1954: 62-72.

LAMBERT, Richard D. and BRESSLER, Marvin «The Sensitive-area Complex: a Contribution to the Theory of Culture Con-

- tact," *American J. of Sociology* 60 (6) May 1955: 583-592.
- LOOMIS, Charles P. and SCHULER, Edgar A. «Acculturation of Foreign Students in the United States. *Applied Anthropology* 7 (1) 1948 : 17-34.
- MORRIS, Richard T. *The Two-way Mirror*. Minneapolis, Univ. of Minnesota Press, 1960, xii 215 p. MORRIS, Richard T. «National Status and Attitudes of Foreign Students," *J. of Social Issues*, 12 (1) 1956: 20-25.
- PACE, C. Robert *The Junior Year in France*. Syracuse, Syracuse Univ. Press, 1959, 69 p.
- RIEGEL, O. W. «Residual Effects of Exchange of Persons," *Public Opinion Quart.* 17 (3) Fall 1953: 319-327.
- SCOTT, Franklin D. *The American Experience of Swedish Students : Retrospect and Aftermath*. Minneapolis, Univ. of Minnesota Press, 1956, xiii 129 p. SCOTT, Franklin D. «The Swedish Students' Image of the United States," *Annals of American Acad. of Political and Soc. Sci.* 295 Sept. 1954: 136-145.
- SELLTIZ, Claire, HOPSON, Anna Lee and COOK, Stuart W., *Attitudes and Social Relations of Foreign Students in the United States*. Minneapolis, Univ. of Minnesota Press, 1963, xiv 434 p. SELTZ, Claire, HOPSON, Anna Lee and COCK, Stuart W. «The Effects of Situational Factors on Personal Interaction between Foreign Students and Americans," *J. of Social Issues* 12 (1) 1956: 33-44.
- SEWELL, William H. and DAVIDSEN, Oluf *Scandinavian Students on an American Campus*. Minneapolis, Univ. of Minnesota Press, 1961, 134 p.
- SEWELL, Williams H. and DAVIDSEN, Oluf «The Adjustment of Scandinavian Students," *J. of Social Issues* 12 (1) 1956: 9-19. SEWELL, William H. et al. «Scandinavian Students' Images of the United States," *Annals of American Acad. of Political and Soc. Sci.* 295 Sept. 1954: 126-135.
- SINGH, A.K. The Impact of Foreign Study : the Indian Experience. *Minerva* 1 (1) Aut. 1962 : 43-53.
- USEEM, Ruth Hill and USEEM, John. «*The Western-Educated Man in India: a Study of his Social Roles and Influence*. New York, Dryden Press, 1955, xiii 237 p. USEEM, Ruth Hill and USEEM, John «Images of the United States and Britain Held by Foreign-educated Indians," *Annals of American Acad. of Political and Soc. Sci.* 295 Sept. 1954: 73-82.
- VEROFF, Joseph «African Students in the United States," *J. of Social Issues* 19 (3) 1963 : 48-60.
- WILDER, Emilia «America as Seen by Polish Exchange Scholars," *Public Opinion Quart.* 28 (2) Sum. 1964 : 243-256.
- WILSON, Elmo C. and BONILLA, Frank, «Evaluating Exchange of Persons Programs," *Public Opinion Quart.* 19 (1) Spr. 1955 : 20-30.

One of the great stimuli to this sort of research was the decision taken by the Social Science Research Council in the United States in 1952 to set up a Committee on Cross-Cultural Education. The studies stimulated and guided by this committee are reported in the seven books by Beals and Humphrey; Bennett, Passin and McKnight; Lambert and Bressler; Morris; Scott; Selltitz, Hopson and Cook; and

Sewell and Davidsen. The Useem study was undertaken under separate auspices, but there was cooperation with the committee. There is material on both the experience in the United States and after the return home of Japanese, Mexicans, Scandinavians and Indians. There is also in the books by Morris and Selltiz *et. al.* and in the Lambert and Bressler article analysis of the American experiences of a broad range of foreign students.

It is impossible to summarize here this impressive set of investigations. It is to be said, however, that their focus is largely on the individual student, his problems of adjustment in the United States, and after his return. If one can infer that satisfaction with the foreign experience makes for better relations between the two nations involved, then one can say that in general study abroad tends to knit countries together. There is, however, relatively little explicit attention given to whether this experience makes for a livelier sense of participating in "one world." There is some slight evidence of this in the Useem and Scott studies. And in both of these and in the Benneth *et al.* study of Japanese students there is discussion of the interplay between the returned students and fellow-nationals, with attention to the wider effects of study abroad.

On the remaining 13 investigations into study abroad, four others focus on the experience of foreign students in the United States. The studies by Davis and by Loomis and Schuler are small but interesting because of the areas — the Middle East and Latin America — from which the students come. Loomis and Schuler found a decrease in favorableness toward the United States between the time of arrival and the time of departure. Veroff has one finding not brought out in other studies: African students become less generally internationalistic and more interested in the problems of their own nations as a result of their experience. The inference is that they see the developmental gap more clearly than before leaving home and realize how much effort it will take to close it. Kelman and Bailyn analyze their data on Scandinavian students in an original way. They discovered that the effects of experiences in the United States were strongly influenced by the pre-existing personality type and the strength of motivation to study abroad. Those who were more flexible and more motivated to go abroad reacted more openly to the United States, evaluated their experience more objectively, took longer to adjust, but their adjustment was deeper, and had more differentiated reactions to their home countries, seeing limitations as well as strong points. Those of more rigid type and less motivated

to study abroad reacted negatively to the United States, adjusted easily but superficially, and tended to have globally favorable reactions to their own countries.

Three other studies concentrate on the obverse phenomenon — United States students in other countries. The Garraty and Hart studies are based upon interviews with those studying in India and France respectively. Garraty reaches one of the most pointed conclusions with respect to intersocietal effects: «It is probably safe to assume that, as a group, the students who go to Europe are already more interested than the average in such matters [international affairs], but individual after individual expressed the conviction that a deeper concern for the trend of world affairs is one of the chief results of foreign study...» (p. 141). Hart reaches a similar conclusion. Pace proceeded systematically by comparing students who spent a year abroad with a matched sample who did not. He finds the former consistently taking a more internationalist stance. He also analyzes the effect of travel abroad in both groups, independently of study abroad. His findings are clear that «there is an impact [of study abroad] which is both strong and pervasive. It goes far beyond the impact of travel for personal pleasure.» (p. 159).

The study by Goldsen, Suchman and Williams is unique in that the focus is on the American students who are on the same university campus with foreign students. The aim is to discover why some come to know the foreign students well and some do not. Ideological beliefs prove unimportant. Physical proximity in living, friendly personality, and membership in organizations seem to be the main factors in producing interaction.

Of the remaining four studies, three deal with the effects after return of study in the United States, and one of study in Britain. Riegel finds that Belgians, after a long period at home, retain friendships with individual Americans, but that there is no more political sympathy with the United States than among comparable persons who never studied abroad. The summary by Wilder of a review by J.J. Wiatr of eight books published by a few of the 1500 Polish students in the United States between 1958 and 1962 is so brief as to throw little light on the effects of this experience. The very publication of the books, says Wilder, indicates the interest in the subject and the regime's belief that the image of the United States needs to be corrected. Wiatr declares that the books furnish knowledge of the United States that can be used in the ideological struggle against capitalism.

The Wilson and Bonilla article covers four studies done by International Research Associates. Two of them deal with returned college students from the United States — Argentinians and West Germans — using control groups that stayed home. In both cases the experience improved their opinions of the United States. The Argentinian result seems to contradict the findings of Loomis and Schuler, but it is possible that unfavorable impressions at the time of leaving the United States are replaced by more favorable ones after some time at home; or it may simply be that the two groups of students lived in different contexts in the United States. A third study reported on is one of teen-agers who had returned to West Germany after a high school year in the United States. The chief finding is that they came back with American ideas to which their communities were not receptive, so that they felt frustrated. The fourth study is on the effects of visits to the United States by German leaders. It will be discussed in connection with two other studies of leaders below.

Finally, Singh interviewed 400 Indians who had studied in Britain. The most striking finding is the strain the returnees feel between their enthusiasm for the efficiencies of industrialism, coupled with their desire to obtain its benefits for India, and the pressures of vested interests and traditional viewpoints represented in their families and friends.

There are nine studies of a miscellaneous set of experiences that are neither study abroad in the full academic sense nor work abroad in its ordinary meaning. We turn to them now :

- BJERSTEDT, Ake, «Reduction of 'Barrier Tendencies' during Experience of International Co-living,» *Acta Psychologica* 14 (5) 1958 : 329-346.
- BJERSTEDT, Ake, «Informational and Non-informational Determinants of Nationality Stereotypes,» *J. of Social Issues* 18 (1) 1962 : 24-29.
- DEUTSCH, Steven E. and WON, George Y.M. «Some Factors in the Adjustment of Foreign Nationals in the U.S.,» *J. of Social Issues* 19 (3) 1963 : 115-122.
- ISAACS, Harold R. *Emergent Americans : a Report on «Crossroads Africa.»* New York, John Day Co., 1961, 158 p.
- KELMAN, Herbert C. «The Reactions of Participants in a Foreign Specialists Seminar to their American Experience,» *J. of Social Issues* 19 (3) 1963 : 61-114.
- POOL, Ithiel de Sola, «What American Travelers Learn,» *Antioch Review* 18 (4) Wint, 1958 : 431-446.
- ROSE, Arnold M. «Some Consequences of Brief Cultural Contact,» *Phylon* 13 (2) 1953 : 125-133.
- SMITH, Howard P. «Do Intercultural Experiences Affect Attitudes?» *J. of*

Abnormal and Soc. Psych. 51 (3) Nov. 1955: 469-477. SMITH, Howard P. «The Effects of Intercultural Experience — a Follow-up Investigation,» *J. of Abnormal and Soc. Psych.* 54 (2) Mar. 1957: 266-269.

TABA, Hilda, *Cultural Attitudes and International Understanding*, New York, Institute of International Education, 1953, iii + 84 p.

WATSON, Jeanne and LIPPITT, Ronald, *Learning across Cultures*. Ann Arbor, Institute for Social Research, University of Michigan, 1955, x-205 p. WATSON, Jeanne and LIPPITT, Ronald, «Cross-cultural Experience as a Source of Attitude Change,» *J. of Conflict Resolution* 2 (1) March 1958: 61-66.

Bjerstedt reports research on effects of participation in Childrens' International Summer Villages, of which several are held each year in various countries with children of different nationalities as campers. He compares campers with suitable controls, mainly through interviews. The children coming to the camps are already more internationally oriented than are the controls, but their experience does make them even more so.

Three of the studies attempt to evaluate the results of summer programs abroad. Smith compares American secondary school and college students participating in a European program of Experiment in International Living, Inc. and other similar programs with a control group for the period immediately after the experience and five years later. He finds that the experimental group increased its personal relations with Europeans as a result of the summer but found no general attitude change toward foreigners in either the experimental or control groups. On specific points, both favorable and unfavorable reactions of the foreign sojourners increased. Five years later the world-mindedness of both groups had decreased, but the change was more pronounced in the control group. Pool, studying a similar summer group, finds that the experience has different effects depending upon the original motives for going. He sketches five types of young person: those trying to escape from constraints at home, those wanting to test their adulthood, those who see foreign travel as increasing their social status, those seeking release of instinctual impulses, and those so timid that they retreated into mere observation. Taba did a before-and-after study of 45 members of an American study tour that spent most of its time in Paris. She too finds little effect of the experience and concludes that the results challenge the assumption that cultural contact alone creates cultural tolerance and broader insights and the assumption that foreign experiences automatically create «international-mindedness.»

A unique study is that of Isaacs, who looked at work camps in Africa, not only from the standpoint of the participants but from the standpoint of those in the host community with whom they worked. The Africans were impressed by the willingness of American college students, and especially young women, to do manual work enthusiastically. They were also surprised that young people from different parts of so large a country as the United States could get along so well with each other. The Americans interviewed were critical both of themselves and of the Africans but were also proud of what is worthy in both cultures.

The studies by Deutsch and Won and Rose are much less comprehensive and reach no startling conclusions. The former concerns specialists from 29 countries brought to an American university for training in connection with the Aid for International Development program, the latter with 11 instructors in French lycees at an American university for six weeks.

The two remaining investigations try to evaluate the success of programs in the United States for foreign leaders — Germans in the Watson and Lippitt study, Scandinavians in the Kelman study. Watson and Lippitt make a thorough analysis of all aspects of a learning-abroad experience — the selection of the persons, the nature of the program, the attitudes of the host nationals engaged, the sources of tension, change in attitudes, and reception in the home country. The findings on these points are too complex to summarize. One conclusion is, however, of peculiar significance: that it is better for the visitor to return home during the stage in which he has opened himself up to the new influences but before he completes the reorganization of his previous patterns of belief. That reorganization is better done at home. The Kelman study is more modest and, so far as international relations are concerned, chiefly makes the point that it is activities with colleagues in the host country that specialists find most rewarding. It is give-and-take relationships rather than teaching-learning relationships that leave a warm feeling for the other country.

It was earlier stated that the Wilson and Bonilla includes an account of one study on the United States program for foreign leaders. This was a before-and-after interview study of German leaders, their close friends and associates at home, and a large random sample of the residents of their home communities. American race relations was a subject of special interest. As a result of the program both exchanges and their contacts received a better im-

pression of race relations in the United States, but the attitudes of exchangees improved more than did those of their contacts.

Studies of the effects of working abroad are far less frequent than of study abroad. Only five empirical investigations were found :

CLEVELAND, Harlan, MANGONE, Gerard and ADAMS, John Clarke. *The Overseas American*. New York, McGraw-Hill, 1960, xv 316 p.

GULLAHORN, John T. and GULLAHORN, Jeanne E. «Visiting Fulbright Professors as Agents of Cross-cultural Communication,» *Sociol. and Soc. Res.* 46 (3) Apr. 1962: 283-293. GULLAHORN, John T. and GULLAHORN, Jeanne E. «The Role of the Academic Man as a Cultural Mediator,» *American Sociol. Rev.* 25 (3) June 1960: 414-417. GULLAHORN, John T. and GULLAHORN, Jeanne E. «An Extension of the U-curve Hypothesis,» *J. of Social Issues* 19 (3) July 1963: 33-47.

GUTHRIE, George M. and SPENCE, Richard, *American Professors and Overseas Technical Assistance*. University Park, Pennsylvania State Univ., 1965, (mimeo.)

HUMPHREY, Norman D. «The Mexican Image of Americans,» *Annals of American Acad. of Political and Soc. Sci.* 295 Sept. 1954 : 6-125.

SCIGLIANO, Robert, «They Work for Americans: a Study of the National Staff of an American Overseas Agency,» *American Sociol. Rev.* 25 (5) Oct. 1960 : 695-704.

The book by Cleveland *et al.* is the most ambitious attempt in this field. It is mainly concerned with the effectiveness of U.S. government personnel in overseas positions, but there are also chapters on business men and missionaries. Two hundred forty-four Americans were interviewed. Since the study was undertaken for the practical purpose of improving the selection and training of overseas personnel, there is little attention to the consequences of working abroad for relations among nations. The Scigliano study, done from records, questionnaires, and interviews, was concerned with foreign personnel working for an American governmental agency in Vietnam. Their attitudes are almost twice as often favorable to the United States as are the attitudes of other Vietnamese toward these workers. It is clear that the more Westernized Vietnamese are marginal men, not wholly accepted in the nationalistic regime nor in the Western enclave.

The Gullahorns interviewed 300 grantees under the U.S. Fulbright Act and gathered questionnaires from 3500 more at various periods after their return from overseas. The respondents were mostly graduate students, but 958 were senior scholars. The students have many more problems of readjustment to the United States than do the senior scholars. Nearly 90% of the latter maintain their con-

tacts even after four years and they frequently arrange for foreign scholars to come to the United States. In short, lasting linkages result. The Guthrie study also concerns American professors overseas but on technical assistance projects rather than at universities. Interviews indicate that the experience increases their interest in international affairs.

The Humphrey study is quite different. It was done by participant observation and informal interviewing in Mexico. It includes reactions to the United States of both lower-class and middle-class persons who have worked in the United States. The former are more favorably impressed than the latter. Middle-class youth are drawn to American technology but reject other features of American culture. Returned technical specialists often have to appear hostile to the United States to become accepted in their home communities.

There are only two studies that investigate the effects of mere contact with foreigners :

POOL, Ithiel de Sola, KELLER, Suzanne and BAUER, Raymond A. «Influence of Foreign Travel on Political Attitudes of American Business Men,» *Public Opinion Quart.* 20 (1) Spring 1956: 143-160.

REIGROTSKI, Erich and ANDERSON, Nels «National Stereotypes and Foreign Contacts,» *Public Opinion Quart.* 23 (4) Wint. 1960 : 515-528.

Pool *et al.* split off some of the data from the larger study cited above by Bauer, Pool and Dexter and investigated the effect of foreign travel on political attitudes. They find that there is little effect until a threshold of five trips abroad has been passed, and then the influence is not so much toward an international point of view as one of convergence by these business men toward a moderate position on tariffs. The explanation of the authors is that by gaining a broader experience of the world a business man comes to understand the problems of his fellow nationals and concludes that existing governmental policy is not far wrong. Reigrotski and Anderson report on a study in which large samples were interviewed in Belgium, France, West Germany and the Netherlands to ascertain the effects of contacts among these groups on their attitudes toward each other. The general result is that the more contacts across borders there are, the less unfavorable the images of the foreigners.

Two small studies of the effects of cultural exchange were discovered :

BOWER, R. T. and SHARP, L.M. «The Use of Art in International Communication : a Case Study,» *Public Opinion Quart.* 20 (1) Spr. 1956 : 221-229.

WHITE, Ralph K. "Soviet Reactions to our Moscow Exhibit: Voting Machines and Comment Books," *Public Opinion Quart.* 23 (4) Wint. 1960: 461-470.

The Bower and Sharp study involves 800 interviews with persons in Seattle, Chicago and Boston who viewed an art exhibit sent to the United States by the Japanese government. Its effectiveness as cross-cultural communication depended largely on the previous knowledge of the viewer. Those not already acquainted with Oriental art were not attracted to it. White reports a study of the results from "voting machines" and the "comment books", that were available to visitors to the United States exhibit at the Moscow Fair of 1958. The votes were more favorable than the comments and both were more favorable than the estimates of the American guides, who believed that the reactions were approximately half favorable, half unfavorable.

The five remaining studies in the cause-to-effect set are quite miscellaneous in character:

FAGEN, Richard, "Some Assessments and Uses of Public Opinion in Diplomacy," *Public Opinion Quart.* 24 (3) Fall 1960: 448-457.

HOLSTI, Ole R. "The Belief System and National Images: a Case Study," *J. of Conflict Resolution* 6 (3) Sept. 1962: 244-252.

LESLIE, Gerald R. and BERRY, Brewton "An Experiment in Social Change," *Social Forces* 32 (1) Oct. 1953: 87-90.

STAR, Shirley and HUGHES, Helen M. "Report on an Educational Campaign: the Cincinnati Plan for the United Nations," *American J. of Sociology* 55 (4) Jan. 1950: 389-400.

YANDORF, Walter "American Civil Liberties in the Foreign Press," *Studies of Public Communication* (2) Sum 1959: 66-76.

The Yandorf study is the only one that looks at the effect of domestic national behavior on foreign opinion: in this case, American race relations incidents as viewed in the European Communist press. The chief result is the finding that the Eastern European papers are more selective in their treatment of the incidents than the Western European ones.

Two studies deal with the effects of foreign-policy statements and propaganda abroad. Fagen examines 879 German documents before the outbreak of World War I to assess the success of German embassy attempts to gauge public opinion in various countries and to influence the local press by "public relations" and other means. Holsti's study is an analysis of 434 documents containing the state-

ments of U.S. Secretary of State Dulles about the Soviet Union. He classifies 3584 evaluative assertions in four categories. Holsti believes the data demonstrate that Dulles saw the Soviet leaders as having «inherent bad faith,» so that when he saw them less hostile he attributed it to weakness, not to good motives. His inclination therefore was to press the advantage rather than to reciprocate. Thus perceptions of low hostility were self-liquidating, and perceptions of high hostility were self-fulfilling.

The last two studies in this group could almost be classified as experimental, but the sociologists did not actually manipulate the main independent variable, — they took advantage of an intrusive event and studied its effects. For Leslie and Berry the event was the taking of a college course on the United Nations. Students in that course were compared with students in a course on the family. Two attitude scales were used, one testing faith in the United Nations, the other testing internationalist beliefs more generally. On both scales the students in the U.N. course scored higher than the controls at the start. At the end the students in the U.N. course had increased their margin on faith in the U.N. but not on internationalism, thus showing that the course had a specific rather than a general influence. Star and Hughes investigated the effects of a special campaign conducted in Cincinnati to inform the public about the United Nations, by interviewing broad samples before and after the campaign. The level of information about the U.N. hardly changed at all, and attitudes became more favorable only among those already well disposed. Lack of interest was the great bar to the effectiveness of the campaign.

STUDIES OF PATTERNS OF RELATIONSHIPS

Effect-to-cause and cause-to-effect empirical studies have been reviewed. There are left six empirical studies that examine patterns of relationships without considering causal relations at all:

DEUTSCH, Karl W. «Shifts in the Balance of Communication Flows,» *Public Opinion Quart.* 20 (1) Spring 1965: 143-160. DEUTSCH, Karl W. «The Propensity of International Transactions,» *Political Studies* (Oxford) 8 (2) June 1960: 147-155.

HARARY, Frank «A Structural Analysis of the Situation in the Middle East in 1956,» *J. of Conflict Resolution* 5 (2) June 1961: 167-178.

International Press Institute, *The Flow of the News*, Zurich, 1953, xi 237 p.

- MOSEL, James N. «Communication Patterns and Political Socialization in Transitional Thailand,» pp.184-228 in *Communications and Political Development* (Lucian Pye, Ed.). Princeton; Princeton Univ. Press, 1963.
- RUSSETT, Bruce M. *Community and Contention : Britain and America in the Twentieth Century*. Cambridge (Mass.), M.I.T. Press, 1963, xii 252 p.
- RUSSETT, Bruce M. «International Communication and Legislative Behavior.» *J. of Conflict Resolution* 6 (4) Dec. 1962 : 291-307.
- SMOKER, Paul, «Sino-Indian Relations : a Study of Trade, Communication and Defence.» *J. of Peace Research* (2) 1964 : 65-76.

Deutsch has been a pioneer in the study of matrices of transactions among nations. The two articles cited examine the flow of mail, of railway passengers, trade, and the like. He points out that both the ratio of inflow to outflow for a particular country and the ratio of internal to external flow are revealing for the place of a nation in the world. Russett, who has worked closely with Deutsch, has applied these ideas, as well as adding new series like investment, travel, and personal ties, in his study of Britain and the United States. He works with a formula that states that the integration between any two nations can be measured by their capabilities for responsiveness divided by the loads put upon those capabilities. Two more specialized studies are the one carried out by the International Press Institute, which deals with news flows into the United States, Western Europe, and India, and the Smoker study that is concerned with trade between India and the People's Republic of China, their defense expenditures, and their intergovernmental communications for 1950-1964.

The Mosel study of Thailand seeks to determine the proportion of various groups in the population that have had any contacts with Americans, Britons, and other Westerners.

The Harary study is quite unique. It uses the psychological balance theory to construct a mathematical model of relations among nations, and then tests the model by an empirical examination of the alignments of nations at the time of the Suez crisis and the Hungarian crisis of 1956.

EXPERIMENTAL STUDIES

The studies that have been considered thus far are empirical but not experimental. It is obviously impossible for social scientists to manipulate any but the smallest elements that might influence international relations. Even groups of citizens can do little. The only

case discussed where the latter was attempted — the Star and Hughes study of a campaign to increase public commitment to the United Nations — was not conceived as a social science experiment but as an effort to achieve a goal, an effort whose success social scientists were alert enough to evaluate. It is therefore no accident that the really experimental studies that have been done so far have been accomplished by simulating the real world, not by operating upon it. Listed are six of these :

BLOOMFIELD, Lincoln P. and PADEFORD, Norman J. «Three Experiments in Political Gaming,» *American Political Sci. Rev.* 53 (4) De. 1959 : 1105-1115.

BRODY, Richard A. «Some Systemic Effects on the Spread of Nuclear Weapons Technology: a Study through Simulation of a Multi-Nuclear Force,» *J. of Conflict Resolution* 7 (4) Dec. 1963 : 663-753.

COHEN, Bernard C. «Political Gaming in the Classroom,» *J. of Politic:* 24 (2) May 1962 : 367-381.

DAVIS, Robert H. «Arms Control Simulation: the Search for an Acceptable Method,» *J. of Conflict Resolution* 7 (3) Sept. 1963 : 590-602.

GOLDHAMER, Herbert and SPEIER, Hans, «Some Observations on Political Gaming,» *World Politics* 12 (1) Oct. 1959: 71-83.

GUETZKOW, Harold *et al.* *Simulation in International Relations: Developments for Research and Teaching.* Englewood Cliffs, N.J., Prentice-Hall Inc., 1963, viii 248 p.

GUETZKOW, Harold, «A Use of Simulation in the Study of Inter-nation Relations,» *Behavioral Science* 4 (3) July 1959 : 183-191.

Military gaming is very old, but political gaming seems to have arisen in 1929 when German military leaders made their war games more realistic by adding a political dimension. Social scientists have practiced gaming only since World War II. Goldhamer and Speier give an historical account, and then go on to discuss the political games carried out at the RAND Corporation in the 1950s. In these, as in subsequent games carried out elsewhere, nations are represented by individuals or teams (usually the latter), scenarios are written to state what the problems are that the countries face, the players are told what their resources are, and rules are laid down specifying other constraints, what communications with the allies and enemies are allowed, and the like. Sometimes, as in the RAND games, the players have expert knowledge of the countries they represent, sometimes there is no attempt to achieve this degree of reality. Guetzkow's book goes into matters of this kind in great detail. It also describes the series of games that have been played at Northwestern University by graduate students under Guetzkow's

general direction. Bloomfield and Padelford discuss three games — one having to do with the United Nations, one with the Berlin problem, and one with a Great Power Meeting in Geneva.

A particular application of the Northwestern simulation is the basis for the monograph on nuclear weapons proliferation by Brody. The Davis paper gives the results of an elaborate simulation by the Systems Development Corporation of an arms control simulation.

Cohen reports on a game about a Middle Eastern crisis played by students at the University of Wisconsin. In most simulations the country teams are small, but in this one there were 45 on the United States team, including an 11-man Congress.

It has been argued at one time or another that political gaming has three values. The first is as a teaching device. Most teachers who have tried this technique think that it gives students of international relations a more interesting experience than the reading of books. Cohen, however, argues that it is almost impossible to make the games realistic enough for them to be good pedagogical tools. A second claimed value is that gaming brings out important variables in the conduct of international relations that policy-makers have not sufficiently appreciated. This is a heuristic value. It might lead to more thorough research and better decisions. The third value that has been suggested, but which all writers on the subject are inclined to discount, is that games are close enough to the real world to be fruitful in exploring policy alternatives. There is obviously great danger here. Since the scenarios, the conditions, and the rules are necessarily less complex than the real world, the games are not isomorphic with the international political system. Were policy-makers to take the results as predictions of what would happen in actuality if they took certain decisions, the gravest mistakes might occur.

RETROSPECT AND CONCLUSION

The examination of 106 empirical and experimental studies in the sociology of international relations leaves one with mixed feelings. There are some great studies, several of which have been done by political scientists like Deutsch and Haas who have been infected by sociology, not by sociologists themselves. But on the whole the research product is not impressive in significance. A political scientist might argue that this is necessarily so, since the important variables

in international relations are the political ones which his discipline traditionally studies. It is too soon to acquiesce in this judgment, however, since the plain fact of the matter is that very few distinguished sociologists have turned their attention to this field.

At only one period in the history of sociology has there been much interest in intersocietal relations. When the implications of Darwinism for the social sciences were being explored, Gumplowicz, Ratzel and Novicow applied the idea of the survival of the fit to the struggle among nations. With the shift away from sweeping theory toward empiricism that occurred after World War I, sociologists, desiring to be rigorously scientific, turned their attention to well-defined wholes whose internal relations were systematic. This meant that the largest unit they studied was a national society, since between nations there seemed to be a minimum of system. Only venturesome souls have lately re-entered the arena of intersocietal relations.

A majority of the studies considered here were done by social scientists in the United States. This is not because of any nationalistic bias of the author. Extra efforts were made to discover more empirical studies by scholars from other countries. Three reasons may account for the failure to find them: (1) the bibliographies and abstracting services may not cover the product of other countries as well as they do the product of the United States; (2) there may be more pecuniary support for this type of research in the United States than elsewhere; and (3) scholars from other countries may doubt that it is wise to approach large questions of international relations by using empirical methods. Although I am sure there is some validity to the first reason, I do not think there are many important empirical studies in the sociology of international relations that have not come to light. I am inclined to give more weight to the second reason. There is no doubt that scholars in many countries are handicapped in doing research of this type by lack of funds. Certainly the third reason is influential too. American pragmatism has made few converts among philosophers in other countries, and in many circles empirical social science smacks of pragmatism.

Another impression one receives from the list of studies is that the coverage is spotty. This undoubtedly reflects the fact that there is not a well developed theory of intersocietal relations. The studies do not add up to much because the scholars who do them have no sense of an over-arching structure to which they are contributing. For the same reason it is very difficult to make a systematic criti-

cism of this «spottiness.» All one can do is to point to obvious gaps in our knowledge.

There are two linkages of long standing between nations that seem hardly to have been investigated empirically at all. These are the effects on international relations of the missionary efforts of non-indigenous religions and of international non-governmental organizations. An connection with the former subject there has been some statistical analysis of trends and a great deal of polemical discussion but the scientific approach has been rare. The number of international non-governmental organizations in the world has been increasing rapidly since World War II but, beyond the general awareness of this fact, there is almost no knowledge of what the effects on the participants are or what the indirect effect on their countries may be.

A relatively new and important unit that has not been studied empirically is the secretariat of large intergovernmental organizations like the United Nations or its Specialized Agencies. In this case the reason seems to be less the unimaginativeness of social scientists than the unwillingness of the officials of these bodies to have the secretariats investigated. This unwillingness, understandable in the first years of an organization's existence, may disappear as these bodies mature and as the value of sociological research becomes more widely appreciated.

One circumstance that makes it likely that fewer such omissions will occur in the future is that the concept of operations research is being brought over from engineering into what has been called social engineering. The United States Peace Corps, for instance, is doing research on the effectiveness of its programs. The technical assistance operations of individual countries and of the United Nations are being studied as they proceed. The same could be done for any new departure, even if it is only a new program within an international agency.

Although operations research can fill gaps in our knowledge of the value of certain programs, it cannot throw light on broad questions of the relations of systems to one another. But research of this kind is not being done and it needs to be done. One puzzling question is : Under what conditions do or do not bilateral ties impede multilateral ties ? The same kind of question is : Under what conditions do regional organizations help or hinder world-wide organizations ? Perhaps these questions are beyond the power of social science to answer at the present time. But, if so, we should be working at the development of theory that would make them researchable.

observers agree that there is slowly growing in the world an international social system. Because it is still very inchoate, functional

This need for theory is revealed in a more crucial way. Almost all analysis is not appropriate to its study. A system as a whole must have objectives of some kind before the functions of the parts can be defined and the growth of new wholes analogously, at lower levels of organization. But at whatever level involvement is studied, the need is great. The sociology of international relations will not progress very far until it has better theory from which fruitful hypotheses can be deduced for empirical testing.

be analyzed. What we need in this situation is a sociology of the processes of mutual involvement. We need to learn how separate systems grow together. Deutsch and his colleagues have made a start, but security-communities do not take us far enough along the road of «multilateralness.» It may be necessary to study multi-unit invol-

THE STRATEGY OF PEACE IN THE NUCLEAR AGE

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1. FORMULATION OF THE QUESTION

The present period represents a turning point in World history, not only in the sense that, owing to profound revolutionary changes, a new socio-economic formation and a new type of social relations between peoples are being created, but also in the sense that mankind is confronted with a global alternative affecting the destinies of all nations: either it must ensure the requisites for the progressive development of all peoples in conditions of peace or it must face catastrophic war, unprecedented in its scope and consequences and endangering the achievements of human civilization. With the total means of mass destruction now in existence — atomic thermo-nuclear weapons — military aggression is fraught with unusually grave and terrible consequences. Awareness of this danger has stirred millions of people in all countries to work for peace and circumstance has made it imperatively necessary and vitally important to make a scientific study of the problem of war and peace, as this problem is directly connected with the future of the entire human race.

A scientific analysis of the problem of peace today must include at least the following elements:

First, an analysis of the basic reasons for, and chief sources of the war danger, and a criticism of pseudo-scientific concepts which seek to justify aggression.

Secondly, an inquiry into the real possibilities for the prevention of a new world war and elimination of «local» aggression.

Thirdly and finally, a comparison of the various approaches to the problem of peace and a theoretical analysis and exposition of the practical ways of redoing it. Indeed, the ideology of contemplative pacifism, i.e. that which does not envisage *active practical action*, cannot be regarded as an effective means for the prevention of war. «To defeat» war in the sphere of ideology is a necessary, but not sufficient condition for universal peace. It is necessary to eliminate the

real causes which give rise to real wars, to find effective means of combating the war dangers.

2. SOURCES OF THE WAR DANGER

Wars between states have been waged throughout the centuries, and each generation in different parts of the world has experienced their staggering impact and has borne the heavy sacrifices which they impose. This could lead people to believe — falsely — that wars are inevitable, and that they will always be a part of history.

But war is not an eternal curse hanging over mankind. War is a result of definite social conditions. It is a specific means employed in antagonistic class societies, and in rivalry between hostile states, to attain definite political and economic aims — those of the dominating classes, whose interests determine and direct the policy of the states concerned.

An analysis of the historical roots of military conflicts is linked with an understanding of the problem of eliminating wars. «Liquidation of wars, peace among nations, an end to plunder and violence — that is our ideal»¹. These words of Lenin serve as our motto.

The question of the sources of military conflicts has preoccupied the minds of thinkers and political leaders since olden times. In all the different approaches to this question, one can single out, first of all, two historical tendencies, each reflecting definite political aspirations: (a) an attempt to define war as an inseparable, organic element of human progress; (b) an attempt to ascribe war primarily to socio-economic causes.

The first tendency ultimately provided a basis for justifying militarism as a permanent institution of human civilization. The militarist concept of war began distinctly to advance in the second half of the 19th century due to the increasingly aggressive aims of capitalism, at the time in the process of monopolization. It was then that the militarist thesis, according to which war is a built-in feature of human society, obtained pseudo-scientific support from «social biologists». As a result, war was regarded as one of the manifestations of «universal law», which ensures the survival of those nations and peoples only which possess «the greatest degree of adaptability».

The principles of the organic school of sociology, applied to a

¹ V.I. LENIN. *Works*, Vol. 26, p. 304.

nation, were used to formulate warlike doctrines of national and racial expansion. The predatory claims of monopoly capital were disguised as national duties. The struggle for markets, for seizure of sources of raw materials and spheres of influence and for world hegemony was pictured as the struggle for the nation's vital interests. In this respect, one need only refer to the works of the Austrian sociologist L. Gumplowicz², or the Portuguese sociologist J. P. Oliveira Martins³. The chauvinistic gospel which regards war as the natural state of society was spread with particular zeal by the German philosopher F. Nietzsche⁴ and his followers. The ideas of racialism and world hegemony were sharply expressed in H. S. Chamberlain's works⁵.

President Theodore Roosevelt of the United States, addressing his countryman, called for «energetic aspirations» in the rivalry for world supremacy, saying that: «if we shrink from the hard contests where men must win at hazard of their lives and at the risk of all they hold dear, then the bolder and stronger peoples will pass us by, and will win for themselves the domination of the world»⁶.

«The energetic aspirations» to which imperialism appealed for the purpose of asserting the «super-nation», or the «super-man», when applied to international relations provided the ideological justification for aggression and war.

A particularly baneful role in this respect was played by racist-fascist theories advocating the fight for the supremacy of «the Aryan race», or for «Lebensraum», under the guise of which Hitlerites plunged mankind into a abyss of incalculable calamities, and slaughtered millions of absolutely innocent people.

Though the totally unscientific and inhuman positions of biologism in sociology were shattered by the fiasco of the racist theories, to this day a tendency persists to regard war as something inherent in human nature. Von Wiese, for instance considers that one of the

² L. GUMPLOWICZ, *Grundriss der Soziologie*, Wien, 1885, S. 125.

³ J. P. OLIVEIRA MARTINS, *As Raças Humanas*, etc. 11, 55. In: *War, Studies from Psychology, Sociology, Anthropology*. Ed. by L. Bramson and C. Goethals, New York, 1964, p. 213.

⁴ F. NIETZSCHE, *Der Wille zur Macht*, Werke, Leipzig, Nymann, Bd. 15, 1901.

⁵ H. S. CHAMBERLAIN, *Die Zuversicht*, München, 1915; *Rasse und Nation*, München, 1918.

⁶ TH. ROOSEVELT, *The Strenuous Life*, Essays and Addresses, London, 1903, p. 20.

sources of war lies in the «aggressive instincts» inherent in man⁷. «It is clear that war corresponds to the deep seated instincts» of man...» W. Theimer echoes him⁸.

Man's deepest instinct is the life instinct; the thesis that, in keeping with this instinct, man must always place himself on the verge of destruction is socially dangerous and logically absurd.

We have dwelt on these statements about the causes of war not to trace the history of the problem, but to stress the sociologist's responsibility to society and history. While condemning the war apologists and exposing the delusions of certain theoreticians, we must bear in mind the interests of human progress, mankind's present and future.

The historical tendency, which tried to link the origin of wars with socio-economic processes, merits greater attention, although here too we find some very contradictory interpretations. This approach, however, has on the whole delineated objective prerequisites for the creation of some sort of a social model, in which it would be possible to escape wars as a means of solving certain problems. As far back as in the works of ancient philosophers such as Plato and Lucretius, and of French enlighteners as Voltaire and Diderot, we find an understanding of the connection between military conflicts and the quest for riches — the striving to seize foreign land, property and slaves, and to secure other material gains. The Russian thinker N. G. Chernyshevsky demonstrated that annexationist wars were caused by the material interests of the rich classes, whereas for the poor classes war was unnecessary and ruinous.

At the turn of the century the socio-economic essence of military conflicts was disclosed with especial clarity, when a number of works by Western authors exposed war as an undertaking originating in a desire to amass property.

It is necessary, however, to stress that as early as the mid-19th century Marxism gave a concrete analysis of the socio-economic sources of wars, not only in the conditions obtaining under earlier systems but also in conditions of capitalism. Yet, even after this, the contradictory interpretations of many bourgeois scientists stopped half-way, limiting themselves to general references to the conquerors' economic reasons. Thus, for example, W. Sumner asserted that: «Men have fought for hunting grounds, for supplies which are locally limited

⁷ L. VON WIESE, *Die Sozialwissenschaften und die Fortschritte der moderne Kriegstechnik*, Mainz, 1951.

⁸ W. THIEMER, *Die Geschichte der Politischen Ideen*, 1959, S. 380-381.

and may be monopolized, for commerce, for slaves, and probably also for human flesh»⁹.

Analogous views were voiced by W. James in his description of the character and causes of ancient wars. He said: «Those wars were purely piratical. Pride, gold, women, slaves, excitement were their only motives»¹⁰.

A still greater economic motivation for war is given by G. F. Nicolai, the author of «Biology of War», who has written that real wars begin only when culture has laid the foundations for the amassing of property¹¹.

Western sociological concepts very frequently combine in an eclectic way elements of economic, biophysic and geopolitical explanations in trying to explain the origin of wars. They speak of economic motives, but at the same time they cite as causes of military conflicts such factors as «surplus of vital energy», «national feeling or vanity», «overpopulation», etc. In doing this the «economic factor» is treated abstractly and superficially, so that the source of wars can be perceived in the material interests of all people in general; in other words, it is reduced again to human nature. Concepts of this kind do not so much explain the causes of wars as, in substance, they justify them, and hence cannot form the basis for a constructive approach to the problem of the peaceful coexistence of states.

Marxism's historical merit consists in having proved quite thoroughly that national policies, including those leading to wars, are not at all directed by the material interests of people in general but, ultimately, by the class interests of the economically and politically dominating classes, which exploit the majority of the population. These classes, which own the means of production and possess state power, present their own interests as the interests of the nation, as the interests of the whole people.

History shows that the source of military conflicts has been territorial, economic and political expansion and encroachments on the national sovereignty of other countries by the exploiting classes dominating in society and striving to multiply their riches and extend their rule. As a rule wars have been instigated by countries where military institutions and traditions blossomed to the full and at-

⁹ W. SUMNER, War. - In: *War*, Ed. by L. Bramson and G. Goethals, New York, 1964, p. 212.

¹⁰ W. JAMES, The Moral Equivalent of War. In: *War*, Ed. by L. Bramson and G. Goethals, New York, p. 22.

¹¹ G. F. NICOLAI, *Die Biologie des Krieges*, Zürich, 1919.

tained dominant status, thanks to the support of the political power exercised by the ruling, exploiting classes. In the 20th century militarism found a favourable soil for unusual possibilities, i.e., political power directed by political monopolies. Twice humanity has undergone the unprecedented holocaust of world wars.

A proper understanding of the organic connection between militarism and the policy of aggression on the one hand, and the interests of definite social groups on the other, will enable us to solve a theoretical problem of utmost importance in present conditions — namely to locate the real roots and the genuine causes of military conflicts likely to lead to the unleashing of world war, and the main source of the threat to peace and the independence of peoples — the threat of a new world war¹².

The concept that military conflicts are linked with the so-called transitional period in the development of countries from a «traditional» to an «industrial» society must be considered as an attempt to lead public opinion astray from this path. The authors of this concept are trying to prove that today, when a relative «atomic equilibrium» has been reached between the «developed» countries, the territory of the developing countries becomes the main potential source of future wars. In the opinion of W. Rostow, war in this world zone — referred to as «regional aggression» — will be one of the methods for solving problems of national «modernization»: «... regional aggression, based on a «bloody shirt» politics which recalls past humiliation, can help maintain cohesion in a society where the concrete tasks of modernization raise difficult and schismatic domestic issues»¹³.

¹² In the USSR problems of war and peace are the subject of research work by many sociologists, historians and economists. In recent years a number of works devoted to various aspects of this vitally important problem of contemporary social science have been published, among them: *International Relations after the Second World War*, Vol. 1-3, Moscow, 1962-1964; *Historical Materialism and Social Philosophy of Contemporary Bourgeoisie*, Moscow, 1960; A. A. ARZYMANYAN, *Struggle of Two Systems and World Development*, Moscow, 1964; E. S. VARGA, *Cardinal Questions of Economy and Policy of Imperialism (after the Second World War)*, Moscow, 1957; E. S. VARGA, *Modern Capitalism and Economic Crises*, Moscow, 1962; *The Soviet Union's Struggle for Disarmament, 1946-1960*, Moscow, 1961; V. K. SOBAKIN, *Collective Security-Guarantee of Peaceful Co-existence*, Moscow, 1961; O. V. BOGDANOV, *Universal and Complete Disarmament*, Moscow, 1964; N. M. NIKOLSKY, *The Basic Problem of Today — The Problem of Abolition of Wars*, Moscow, 1964; and others.

¹³ W. W. ROSTOW, *The Stages of Economic Growth*, Cambridge, 1960, pp. 113-114.

Thus, according to this theory, the threat of regional aggressions proceeds not from the imperialist states, but from the young national states.

However, it is well known that states which have embarked on the road of independent economic and political development, but which only recently were under colonial oppression, face enormous difficulties in their development. In these conditions, the greatest efforts are required to overcome age-old backwardness. Precisely because of that, any diversion of material resources and manpower from these countries for unproductive purposes of a military character acts as a brake on their development.

Peace is vitally necessary for peoples having achieved their independence. They have no need of wars. Their road must be the road of construction, and not destruction. Of course, when external or internal enemies endeavour with the aid of arms to crush the will of the people to freedom and constructive social endeavour, then the national liberation struggle of the peoples, taking up arms against the armed invaders and enslavers, is legitimate self-defence.

Stress must be laid on the fact that the national liberation movement does not at all presuppose the inevitability of war. That is why we can by no means agree with attempts to justify theoretically so-called «regional aggressions».

National liberation wars are not aggressions, they constitute a struggle for the freedom of the people, for national sovereignty and independence, forced on the people by the imperialists. All «regional aggressions» and so-called «local wars» are actually inspired by the imperialist states or by reactionary circles within countries, influenced by imperialists, or by reactionary elements striving to preserve or restore lost positions of economic and political supremacy.

The desire to link objectively the building of a modern society in the developing countries with war is an attempt to give the most expansionist forces, i.e. the forces which are guilty of two world wars, a theoretical carte-blanche for unleashing war in the immense peace zone. It is imperialism, which has created a colossal war machine with the economic aid of big monopolies, that carries within itself a permanent threat of war.

Today it is not difficult to see that the centre of aggression is located there where the greatest concentration of the forces of monopolistic capital is to be found, where the so-called «military-industrial complex» tries to determine the internal and external policies of the

state. This «military-industrial complex» is asserting its claim to world domination.

At present, the concentration of economic and political power has reached the highest degree in the United States, where monopoly domination has brought about the coalescence of militarist, industrial, banking, and political circles which is so dangerous for the cause of peace. Militarization of foreign policy, and the growth of the influence of military institutes in various spheres of life in America arouses natural anxiety among the democratic and liberal circles of the soberly thinking intelligentsia¹⁴.

The main danger for the cause of peace lies in the fact that the notorious «world leadership» actually means violation of the peoples' will, violation of the course of historical development.

More than 20 years have passed since the end of the Second World War. During this period there was not a year when the blood of people was not shed in some part of the world due to the lawless policies and activities of aggressive elements which are striving to impose their dictatorial policies everywhere.

Those who aspire at present to the leadership of the world or, to be more exact, to world leadership, strive not only to stop the movement of history but to turn it backwards. They have made up their minds to suppress and prohibit the peoples' liberation movement for national independence and social progress and to abolish social and national achievements which have been won by many peoples in the difficult and stubborn fight with the reactionary forces.

The enemies of social and national progress openly condemn the peoples of the countries of Eastern Europe for setting up new forms of social life; they spread most hideous untruths about the so-called enslaved peoples, and their statesmen carry on propaganda aimed at restoration in these countries of obsolete and bankrupt socio-political regimes.

On various pretexts they intervene rudely and unceremoniously in the internal affairs of other countries and resort to suppression of

¹⁴ «Everywhere now there are the generals and captains who, by their presence, create and maintain a militarist atmosphere... Now, however, military institutions and aims have come to shape much of the economic life of the United States without which the war machine could not exist... Military men have entered political and diplomatic circles, they have gone into the higher echelons of the corporate economy; they have taken charge of scientific and technological endeavor; they have influenced higher educational institutions». CW.. MILLS, *The Causes of World War III*. New York, 1958, p. 54.

liberation movements by the military. Such advocates of the «free world» have shed the blood of peoples in Asia, Africa and Latin America for a number of years; they have tried to set up or to save puppet regimes. Actually, their aim was to strengthen their own positions.

Experience, however, shows that history cannot be stopped, and certainly cannot be turned backwards. Attempts to strangle progressive national and social movements has ultimately always met with defeat, and life has continued its course.

In the eighteenth century British colonialists tried to crush the American Revolution, but were ousted by the revolutionary army. A coalition of monarchic states tried to strangle the Great French Revolution, but their attempts to restore the feudal regime in France met with complete failure.

Fourteen countries in various parts of the world took up arms against the conquests of the Great October Revolution. Relying on the internal counter-revolutionary forces they planned to crush the young Soviet State. But no interventionist forces were able to put the chains of slavery on the peoples of Russia, who took their destinies into their own hands, achieving social and national liberation.

After the Second World War history again demonstrated the futility of reactionary efforts to halt social and national progress. All the attempts of the imperialists to save China's rotten anti-popular regime, and to preserve their influence and their dominating positions there could not prevent the people of China from throwing off the feudal yoke and ridding themselves of colonialist oppression. Likewise, the imperialists' disgraceful attempts to bring the Koreans to heel and destroy the Korean People's Republic ended in complete failure.

All of progressive mankind has stigmatized the dirty war which has been waged for many years by the colonialists and imperialists in Viet-Nam. The U.S. imperialists are unable to crush the will of the people of Viet-Nam to freedom and independence.

The main prerequisite for the peaceful coexistence of the different countries of our planet is non-interference in the internal affairs of other countries, and respect for peoples' rights and national sovereignty. No country, even the most powerful one, should be permitted to impose its will on other countries. No country or coalition of countries has the right to take it upon itself to resolve questions of internal organisation in other countries, be they big or small.

Recognition of the principle of non-interference in the affairs of

other states is tantamount to recognition of the right of peoples to determine their own destinies.

We are against the export of revolutions, i.e., against spreading of revolutionary processes by means of war or armed intervention in the affairs of other countries. We are resolutely against the export of counter-revolutions, against all attempts of foreign countries to suppress revolutionary movements in various countries.

Peaceful co-existence should not be reduced only to the settlement of disputed questions between great powers. For peaceful co-existence it is necessary that settlement of disputed questions should be reached peacefully between all countries, big as well as small. So-called local wars undermine the foundation of universal peace, and lead to major world war.

At present it is obvious to all that, not only does there exist a danger of war, but also that it is possible to prevent world disaster. The peoples of the world are interested neither in small wars nor, *a fortiori*, in a world war. The question is this: are peoples able to bridle and control those who aspire to world domination? That is the goal towards which world public opinion must bend its efforts. That is the true significance of the scientific examination of problems of contemporary international relations, and the meaning of the so-called strategy of peace.

3. REAL POSSIBILITIES FOR PREVENTION OF WAR

Our time has thrust upon us with great suddenness the problem of preventing a new world war and aggressive «local» wars, as well as dangerous attempts at resolving disputed international questions by armed action. More and more thinkers representing diverse political trends are beginning to realise the importance of this problem.

In the light of a sober appraisal of the possible consequences of a new war, and a realisation of the inevitability of crushing retaliatory blows to the aggressor, an agonizing reappraisal of «values» is taking place even in those circles which only recently distinguished themselves by their extreme bellicosity. There is more food for mediation thought for, having regard to present-day military techniques, strategy and tactics, war cannot be regarded as an acceptable tool of international policy. An idea proving the absurdity of a war involving extensive use of modern means of destruction is very clearly expressed, for example, in the work of C.W. Mills «The Causes of World

War III»: «No political aims can be achieved by means of total war» No truly 'national interests' of any nation can be served by it»¹⁵.

An objective foundation for the positive solution of this problem lies not only in the very realisation of the absurdity of war as a political instrument in contemporary conditions, but in the vital interest of the overwhelming majority of the earth's population in the preservation of peace.

Wide recognition of the thesis that war is a transitory phenomenon of history, jointly with the realisation of the absurdity of waging wars in modern conditions, may become an important theoretical prerequisite in the discussion of the problem of banning wars from the code of relations between nations.

The question of the exclusion of wars from international relations has long preoccupied the progressive thinkers of various periods. Bourgeois socio-political thought has brought forth a galaxy of outstanding humanists who were passionate champions of peace. History shows that, beginning with Erasmus of Rotterdam, the author of the famous satire «Moriae Encomium...» and on up to Saint-Simon, the search for ways of achieving peace was carried on intensely. Immanuel Kant made an important surmise regarding objective law leading to the establishment of peace and the inevitability of the union of peoples on a peaceful basis. There exists a force in society, which, irrespective of the personal aspirations of men, will ultimately compel countries to conclude agreements among themselves. The sad experience of wars accumulated by mankind must, in Kant's opinion, help peoples to escape from the lawless state of savagery and achieve a union of peoples in which each state, even the smallest, can be confident of its security and rights, not due to its own strength or its own understanding of what constitutes right, but due exclusively to the great union of peoples (Foedus Amphictyonum), to their united force and to the decisions made by a common will in conformity with the laws¹⁶.

However, the ideas of peace of the great humanists of the past remained illusions. The establishment of capitalism in Europe, and the victory over the feudal Middle Ages, did not mean at all the triumph of a harmonious Realm of Reason. On the contrary, instead of the promised peace mankind saw an endless series of aggressive wars, and the ideals of the Age of Enlightenment came to naught.

It was not the «Realm of Reason», that came about with the advent

¹⁵ C.W. MILLS, *The Causes of World War Three*, New York, 1958, p. 3.

¹⁶ I. KANT, *Zur Geschichtsphilosophie*, Berlin, 1946, S. 12-20.

of imperialism, but the reign of irrationalism and voluntarism. Together with reason, which is the ideological basis of bourgeois humanism, humanism itself is being discarded more and more. A sharp socio-political crisis in a number of countries, and primarily in Germany, known for her extraordinarily strong militarist traditions, spawned the most monstrous and man-hating of ideologies — fascism. The tragic experience of two world wars demonstrated to the entire world the criminal nature of war and of the socio-political machine engendering it.

The question of what are the real possibilities preventing war, depends in essence on the question of what social forces can be enlisted for the defence of peace and whether those forces are capable of curbing the promoters of aggression and to save humanity from thermonuclear disaster.

Probably no scientist at all will take it upon himself to assert that the capitalist monopolies which form the economic foundation of the «military industrial complex» can serve as the basis for peace. The very opposite is true — that the forces of peace must be thought in circles, combating capitalist monopolies or, at the very least, in circles not linked with them economically or politically.

In our opinion, the working people constitute the main social force and pillar of peace in all countries, though the degree of their organization and activity in various countries is by no means the same. Hardly anyone will dare to assert that the masses of people in any country are interested in the growth of militarism and aggressive wars.

Karl Marx showed profound scientific foresight when he said that «the union of the working class of various countries will ultimately make wars impossible»¹⁷.

Today the working class and other working people in most countries are united to some degree or other in trade unions, political parties and various other social organisations and movements. In socialist countries the working people's organisation has reached its highest level and is becoming more and more universal, since it is embodied in the State itself.

Expressing the will of organized masses of people, socialist countries fight for peaceful co-existence of states with different socio-political structures, thus creating the fundamental pre-condition for strengthening peace and international security.

¹⁷ K. MARX and F. ENGELS, *Works*, Vol. 16, p. 556.

The development of the organisation and activity of masses the world over is accompanied by an increase in their influence on the national policies of their own countries as well as on international life.

In the struggle for peace and against imperialist aggression, an ever greater role is played by the young national states born on the ruins of colonialism. Peoples of Asia, Africa and Latin America struggling for their national independence are resolutely opposing imperialist aggression; they are striving for favourable conditions for their socio-economic and cultural progress.

It is worth nothing that the policy of peaceful co-existence is supported by certain elements of the bourgeoisie in various capitalist countries. They realise what terrible consequences modern war will inflict not only on the masses of the people, but on their capitalist system as well.

The strategy of peace in our nuclear age envisages the amalgamation of all antiwar forces, including bourgeois elements, in the fight against foolhardy, aggression-bent policies.

We are aware of the narrow-mindedness of bourgeois pacifism, its indecisiveness in stigmatizing imperialist aggression, the dimness and abstract nature of its views on ways of preventing wars. However, we are against indiscriminate negation of the role of bourgeois pacifism — against attempts to fence us off from those pacifist movements with which we have no unity of views on questions of world outlook or socio-political structure of society.

For all those who desire to understand correctly our position on this question, we would point the following words of V. I. Lenin: «It is not a matter of indifference to us whether we have to deal with representatives of the bourgeois camp who are inclined to settle things in a military way, or with those representatives of the bourgeois camp who lean to pacifism, even though it be the very poorest kind which, from the point of view of Communism, cannot withstand even the slightest criticism». (Works, Vol. 33, p. 236).

The main social weapon in the struggle to prevent wars lies in the solidarity of all peaceloving forces against imperialist aggression and the isolation of those who advocate aggressive warlike policies.

In contrast to the allegation of the apologists of aggression that the progressive social and national movements constitute a danger of war, we build our reasoning on the fact that social progress and free national development strengthen the cause of peace. Social progress, national independence and peace are inseparable.

4. THE ALTERNATIVE OF WAR IS PEACEFUL COEXISTENCE

A particular feature of the present stage of history is that mankind's future depends to a considerable degree on how decisive an influence society's peaceloving forces can exert on the course of national policies, and how that influence will ensure the preservation of peace.

To put an end to wars and establish lasting peace on earth — such is the programmatic goal and historical mission of Communism in international relations. That is the position from which we start in evaluating sociological conceptions regarding questions of war and peace.

In attempting, to answer the question whether man has a future, the distinguished British scientist Bertrand Russell has said that the future that awaits man is the one he has prepared for himself¹⁸.

In this connection, attention must be drawn to the fact that in some Western countries, especially the United States and the Federal Republic of Germany, large quantities of pseudo-scientific publications are produced, in which attempts are made to defend and justify warlike policies. At the same time, efforts are made to accustom the man in the street to the idea that war is a «normal phenomenon». Reactionary ideologists urge that nothing should impede the implementation of so-called «liberating missions» on the earth; appeals are heard demanding that atomic bombs be thrown on socialist countries. As a rule, such utterances are made under the banner of rabid anti-communism; they frequently assume that ideological differences between socialist and capitalist countries must unavoidably lead to war between them. And this sort of reasoning continues to be propagated, despite history's tragic lessons, testifying to the fact that anti-communism is fascism's midwife. The myth of Communism's aggressiveness is being spread in every way, and various «theories» justifying preventive war against socialist countries are concocted. Advocates of such policies see in Communism a major evil and consider that thermonuclear war, even though it threatens the existence of entire nations, is nevertheless preferable to the dissemination of Communism in conditions of peaceful co-existence. Of course, at the bottom of this nightmarish blabbing lies a lack of confidence in the ability of the capitalist system to withstand peaceful economic competition with socialism. Thus the author of the book «The Limits of Wonder», W. Schlamm, deprecates the policy of peace and disarmament be-

¹⁸ B. RUSSELL, *Has man a Future?* London, 1961.

cause, as he says, «to display genuine readiness to co-existence, of course, means not only to renounce the claim to the victory of the West in the cold war, but consciously to invite defeat...»¹⁹.

Humanistic scientists cannot ignore the views disseminated by a group of sociologists working in the field of international affairs at the scientific Research Institute of Foreign Affairs of the University of Pennsylvania — Robert Strausz-Hupé, William R. Kintner and Stefan T. Possony. In their books «The Protracted Conflict» (1959) and «A Forward Strategy for America» (1961) they regard global thermonuclear war as an acceptable prospect, their final aim being to obtain «surrender of power by the Communist governments».

Another proponent of war as an effective means of setting foreign policies is H. Kahn, author of the books «Regarding Thermo-Nuclear War» and «Meditations about the Inconceivable». It is H. Kahn who fathered the idea of «permanent escalation», i.e. escalation of aggressive actions from «crisis at the low level» through a series of intermediate steps up to the global armed conflict. The «escalation» theory has gained wide support in the United States, as the «scientific» basis for the policy of counterrevolutionary violence; actually, this doctrine represents an elaborate programme for drawing mankind into global thermonuclear war²⁰.

Though on the surface they appear less aggressive, efforts to justify so-called «local wars» are nevertheless fraught with grave consequences for the destinies of the world. An active part in the elaboration of this doctrine has been played by Prof. H. Kissinger²¹ and General Maxwell Taylor, among others. It was thus that the fashionable doctrine of «pliable reaction» was born. This doctrine purports not merely to provide a tactical basis for the policies of Western countries, but also to offer a strategic solution to mankind's problems before it is faced with a plain choice between peace and total destruction.

Such an approach is not a strategy of peace, but a strategy of war under modern conditions. This was unambiguously recognised by the Chief of the U.S. Centre of Strategic Studies, former Chief of Staff of the U.S. Navy Admiral Burke, who tried to show the importance of waging «peripheral wars» which, in his opinion, must in the final account lead to a strategic victory.

¹⁹ W. SCHLAMM, *Die Grenzen des Wunders...*, Zürich, 1959, S. 214.

²⁰ H. KAHN, *Escalation as a Strategy*, *Fortune*, April 1965.

²¹ H. KISSINGER, *The Necessity for Choice, Prospects of American Foreign Policy*.

It completely escapes the authors of such conceptions that today war on any «periphery» might end in world catastrophe. They also forget that the Second World War did not break out unexpectedly, that mankind slowly crawled into it through «local wars» which at that time seemed to many bourgeois theoreticians not to constitute a threat for World peace, in view of their notoriously anti-Communist aims.

In contrast to the militarist strategy, many Western ideologists realise that the preservation of peace is the first and most important prerequisite for saving human civilization, yet they ignore the objective basis for peace and appeal to feelings, moods and volitional impulses. Fear of inevitable destruction — the «balance of terror» — must become the basis for the building of positive peace; that is the idea of «peace» which characterizes some bourgeois theoreticians. Thus, for example, P. Gallois asserts that at the present stage mankind's only chance consists in the preservation of peace because of that horror which the mere thought of thermonuclear war instils in people. «World born of fear? But that is not the first and not the worst of wit's cunning»²².

In this connection, R. Aron explains that the armaments race results from a quest for security backed by force. Therefore, he continues, in the future technical progress will possibly stabilise «mutual intimidation» and will permit contradictions in policies. Meanwhile the armaments race remains the main guarantee of peace²³.

What can be said in regard to such reasoning?

For one thing, it can certainly be said to reflect contempt for the human race, for though it mentions «wit's cunning» it nevertheless assumes lack of intellect or its total absence. When dealing with homo sapiens, with the whole of mankind, one must not appeal to the feeling of fear, but to man's intellect. A world order based on «mutual intimidation» is not the best way of strengthening international security. A world oversaturated with thermonuclear weapons, is a bivouac located at the volcano's crater, from which a death-dealing lava stream may erupt. Without even mentioning the instability of such an «equilibrium», we need only point out that economic and material expenditure connected with the competition

²² R. ARON. Ed: P. GALLOIS, *Stratégie de l'âge nucléaire*, Paris, 1960, Writer's translation.

²³ R. ARON, *Paix et guerre entre les nations*, Paris, 1962.

in «intimidation», is a luxury which cannot be afforded when millions of people are suffering from hunger or are on the verge of famine. Besides, fear has its own internal «logic» — a logic of stupidity, not subject to reason's control. The «logic of fear» and the «logic of intimidation» must be combatted with the logic of intellect and effective guarantees of security.

Far be it from us to suggest that in Western countries only reactionary and scientifically unsound theories dealing with questions of war and peace are disseminated and propagated. In recent years many valuable and interesting scientific works, upholding the idea of peaceful co-existence and an end to the armaments race, and proposing concrete plans for the cessation of the cold war, have been published in the United States and other countries.

The problem of peaceful co-existence is touched upon also in the works of many foreign scientists, such as B. Russell, E. Fromm, A. Etzioni, I. Galtung, S. Melman, F. Baade and others.

These scientists criticise the policy of aggression and show militarism's baneful influence on one side and the advantages of disarmament and international cooperation on the other. Their theories differ in some ways and are not always consistent in respect of questions discussed by them. Thus, for instance, the Soviet Union's policy is not always depicted correctly and objectively. However, their favourable attitude towards international recognition of the principle of peaceful co-existence cannot be doubted.

In this connection, mention must be made, for example, of the symposia «Preventing World War III», (N.Y., 1962) and «Disarmament, Its Politics and Economics», in which prominent American scientists working in various fields took part. The following publications also belong in this category: a book by the noted American historian and expert on international affairs D. Fleming, entitled «The Cold War and Its Origins» (London, 1961); book by Fred W. Neal of the University of California on the German question, condemning United States' foreign policy and appealing for a realistic approach to the problem («War, Peace and Germany») and Prof Stewart Hughes' book «An Approach to Peace» (N.Y., 1962) containing concrete suggestions for strengthening the policy of peaceful co-existence.

Norman Thomas expresses rational views when he declares that there is not a single all-embracing prerequisite for peace... But the political prerequisites he says, are obvious: disarmament, separation of military forces and strengthening of the United Nations.

He then points out that, consciously or unconsciously, one judges

the striving of an individual, party or nation to peace on the basis of their attitude to the problem of disarmament²⁴.

The economic aspects of the armaments race and its grave consequences have been studied by the well known U.S. economist V. Perlo in his work «*Militarism and Industry: Arms Profiteering in the Missile Age*» (N.Y., 1963, p. 208).

It is a positive fact that the problem of the prevention of war is being discussed more and more frequently in terms of its practical implementation.

Particularly noteworthy in this connection is the work by the British scientist and Nobel Prize winner, John Bernal, entitled «*World without War*» (London, 1958). The book is a passionate appeal for an end to the arms race and contains a thorough scientific analysis of the possibilities and prospects of peaceful co-existence.

Problems of peace occupy an important place in the social philosophy of J.-P. Sartre, d'Astier de la Vigerie and other progressive French intellectuals. A well-reasoned statement of the Communist position concerning problems of peace is given in the book of the French philosopher G. Cogniot entitled «*What is Communism ?*» (Qu'est-ce que le communisme ?).

The idea of peaceful co-existence of states with different social systems as advocated by the Soviet Union flows logically from Marxist-Leninist sociology. In this connection, it should be recalled that V. I. Lenin reaffirmed on many occasions, and quite officially, the policy of the Soviet state of establishing peaceful relations with all countries. In reply to the American correspondent who asked «*What are the Soviet plans in Asia*» Lenin said: «*The same as in Europe: peaceful co-existence with peoples, workers and peasants of all nations*»²⁵.

The principle of peaceful co-existence, as the only sensible and the only real alternative for war, has an ever greater following. Many bourgeois thinkers and political statesmen are beginning to realise that peaceful co-existence is not a tactical manoeuvre of Moscow and the international Communist movement, but a vital necessity in the present international situation. It is an acceptable principle in international relations for states with different social systems.

At the very basis of peaceful co-existence there must be, as a

²⁴ N.M. THOMAS, *The Prerequisites for Peace*, New York, 1959, p. 58, 59.

²⁵ V.I. LENIN, *Works*, Vol. 40, p. 145.

matter of principle, a renunciation of war as a means of settling disputed questions between states. This principle presupposes non-intervention in the affairs of other countries, respect for each country's sovereignty and equality in relations between states. Of course, this principle of peaceful co-existence must be backed by total disarmament of countries. Otherwise talks about peace may be interrupted by «the logic of arms». Only through disarmament, leading to the curtailment of war madness, and, with it, of the militaristic ideology, can there be any hope of achieving peace and extending political, economic and cultural ties between countries.

In this connection, we feel bound to expose the manoeuvres of the militarists, who endeavour to substitute for complete universal disarmament under strict international control a «control over armaments». Advanced public opinion has correctly appraised this conception of «control over armaments», as a theory not of disarmament, but of armaments.

The problem of banning and then destroying nuclear weapons has become tremendously urgent. If the further spread of nuclear weapons is to be allowed, then the threat of global thermonuclear war will increase many times and the solution of the problem of disarmament will become immeasurably more difficult. The establishment of atom-free zones in various parts of the world would only be a partial solution to this problem.

The interests of world security require the liquidation of foreign bases and the withdrawal of troops from the territory of other states. The prohibition of military blocks and the institution of a system of collective security in various regions of the world and at the world level would constitute an important prerequisite for peaceful co-existence.

The application and strengthening of the principle of peaceful co-existence in relations between countries at the level of the planet implies the establishment and consolidation of a definite system of international institutions. Experience accumulated over the past ten years proves that this is feasible. The very fact that the United Nations has existed for more than 20 years, even allowing for the considerable shortcomings and flaws in its activities, testifies to the possibility of united efforts on behalf of peace within the framework of the world organization. Of course such an organization must serve as a forum for all sovereign states.

We must point out here the unrealistic character of the proposals made by some bourgeois thinkers, who assert that mankind can

unite its efforts in support of peace only under a «world government», to which countries should sacrifice their sovereignty. Such a point of view is expressed by Emery Reves, who says: «Within the bounds of the present system of sovereign states we cannot realistically hope to succeed in lessening the danger of war»²⁶.

Today such a concept, irrespective of the personal convictions of its authors, is used as an apology for the policy of world domination, for the trampling of the national sovereignty of many countries.

The question of effective collaboration to remove the threat of war is a question of deep concern for all countries who want to escape war. The experience in collaboration which the USSR, Great Britain, France and the United States had during the war can serve as proof that when it is a matter of preservation of human existence it is indeed possible for states to unite — even states which adhere to opposite social and ideological creeds. It is necessary to stress, however, that the principle of peaceful co-existence does not at all imply peace at any price. Peace cannot be made to depend on a deal or a compact between a group of countries. It must come about primarily as the result of an awareness of the objective laws of social development and of the interests of all countries striving to build a worth while future. Some bourgeois ideologists are interested in peaceful co-existence primarily as a prerequisite for preserving the status quo, which implies not only the preservation of the present pattern of international relations, but also the immutability of the social structure within countries. But it is quite clear that identification of peaceful co-existence of states with preservation of the social status quo is tantamount to a repudiation of social progress, and an attempt to rationalize theoretically the need for perpetuating capitalism, protecting it from revolutionary changes and outlawing social and national liberation movements, and to justify the policy of exporting counter-revolution.

It stands to reason that such an interpretation of peaceful co-existence has nothing to do with the interests of peace. The principle of peaceful co-existence does not imply repudiation by any society of the system of social and cultural values selected by it, nor does it imply repudiation of the ideological struggle. How is it possible to

²⁶ Emery REVES, «Le faux problème du désarmement», *Le Figaro*, Paris, 14 March, p. 4.

(«Dans le cadre du système existant d'Etats-nations souverains nous ne pouvons espérer réussir dans un esprit réaliste à réduire le danger de guerre».)

«co-exist peacefully» in the sphere of ideology with theories which deny social progress?». This would mean capitulation before the forces of militarism and reaction; it would mean abandoning the ideological defence of the vital interests of peoples, their peaceful expectations and their aspirations to a happy future.

Today peace for mankind is the number one problem. Therefore the duty of students of social sciences, irrespective of their political or social affiliation, is to appraise soberly the existing world situation in order to contribute in every way towards ensuring that peace is the fundamental principle guiding the foreign policy of all countries. The great French thinker Saint-Simon, who believed in man's intelligence and human progress, once exclaimed: «The golden age of the human race is not behind, but is ahead of us; it lies in the perfection of the social system. Our fathers have not seen it, but our children will some day achieve it. It is for us to pave the way for them»²⁷. Today mankind has achieved all the objective conditions for transforming this wonderful aspiration into reality.

We Marxists firmly support the view that today, despite the complexity of contemporary political life, differences in socio-economic ways of life and in the political system of states, it is possible and necessary to avoid wars.

A sensible strategy of peace in the nuclear age must provide for a comprehensive system of world security. Sociologists can make their contribution to the cause of peace if they concentrate their efforts on scientific inquiry into all the aspects of the problem of peaceful co-existence, taking into account the concrete historical conditions of our time. Universal and complete disarmament, settlement of international problems through negotiations, liquidation of the existing hotbeds of aggression and its suppression, the strengthening of mutual confidence between countries, the development of active practical measures in defence of peace in all spheres of social life — measures backed by the broad masses of the people, by trade unions, by women's and youth organisations, by peace partisans, measures undertaken by national governments and international organisations — these are the methods which in our opinion must be taken into consideration by the sociology of peace in the present-day world.

²⁷ C.H. DE SAINT-SIMON, *De la réorganisation de la société européenne, Oeuvres*, Paris, 1865, T. 15(L), p. 247-248.

INTERNATIONAL RELATIONS AND INTERNATIONAL CONFLICTS: A SOCIOLOGICAL APPROACH*

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1. Introduction

Most analyses of international affairs are concerned with the dimensions of power and economy, whether they are conceived of as properties of the individual nation or as relations between two or more nations. Analyses in these terms are indispensable, but the basis is nevertheless limited relative to the whole spectrum of dimensions that can be brought to bear on international relations. One such framework will be presented in the following, based on the conception of a *rank dimension*, and efforts will be made to explore this type of analysis as extensively as possible. The claim will be made that this presents us with a very comprehensive scheme for analysis of international relations, and particularly of international conflicts. But there is of course no claim to the effect that all conflicts, in the international or inter-human system, can be conceived of as struggles for scarce rank.

A rank dimension is a variable, and like all other variables its values, called ranks, are mutually exclusive and exhaustive in the system of units (individuals, nations, etc.) for which it is defined¹. Unlike many other variables, however, a rank dimension is ordered²

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¹ For an extensive list of rank-dimensions at the individual and national levels see Johan GALTUNG, «A Structural Theory of Aggression», *Journal of Peace Research*, 1964, pp. 115-16 (footnote 16).

² By «ordered» we refer to «complete order», not to «partial order». If the relation is not connected so that there exist pairs of elements (individuals, nations) where one cannot decide which element is higher and which is lower, then one is not dealing with a rank dimension. In such a case one

(it has the properties of the ordinal scale) and there is a clear meaning given to «high rank» at one end of the dimension and «low rank» at the other end. Thus, one should only speak about rank-dimensions to the extent there is consensus in the system for which it is defined that high rank is to be pursued and low rank to be avoided. A somewhat less restrictive definition would be as follows: there shall at least be consensus in the system to the effect that high rank is not to be avoided and low rank is not to be pursued — for if these two conditions do not obtain one should clearly abstain from talking about a rank-dimension, and rather refer to the dimension as a general variable.

Thus, whether and to what extent a variable is a rank-dimension is a question that can only be decided empirically, although one may of course have more or less well-founded hypotheses. One way of testing this would be as follows. Imagine that the dimension has three values which we shall refer to as T (for «top dog»), M (for «middle dog») and U (for «underdog») and that all N units are classified according to where they belong and where they want to belong:

TABLE 1

*The empirical testing of rank-dimensions.
Units would like to belong*

	T	M	U
Units do belong	T	T→T	T→M
	M	M→T	M→M
	U	U→T	U→M
			U→U

Thus, as in any table of this kind: in the lower left hand corner are the three frequencies that correspond to upward mobility, the diagonal corresponds to satisfaction and the upper right hand frequencies correspond to downward mobility wishes. One can now define the criteria above operationally:

Strong criterion of rank-dimension: $T \rightarrow T + M \rightarrow T + U \rightarrow T = N$

Weak criterion of rank-dimension: $T \rightarrow M + T \rightarrow U + M \rightarrow U = O$

Thus, the strong criterion implies the weak criterion but not vice versa: if the weak criterion is satisfied it is still permissible to wish to stay where one is ($M \rightarrow M$ and $U \rightarrow U$ different from O).

may collapse some values (defining as equivalent all elements that are mutually undecidable) or split the dimensions into two or more subdimensions.

In general neither of the conditions will obtain perfectly, so there will be a need for a measure of the *degree* to which a variable is a rank-dimension. One such measure is as follows:

$$G = \frac{(M \rightarrow T + U \rightarrow T + U \rightarrow M) - (T \rightarrow M + T \rightarrow U + M \rightarrow U)}{N - (T \rightarrow T + M \rightarrow M + U \rightarrow U)}$$

This measure reflects the weak condition of rank-dimension. It is equal to +1 when the weak criterion obtains, and, of course, also when the strong criterion is satisfied. It is equal to -1 when there are no units that wish upward mobility. In this case we clearly have a rank-dimension, except that there is a wish to turn the dimension upside down. The measure is equal to 0 under a set of conditions that have one thing in common: there is an equal number who want upward mobility and downward mobility, which seems to be a reasonable definition. Finally, if all units want to stay where they are, then the measure becomes indeterminate. We think it should not become 0 in this case. The rank-dimension may become completely ascriptive (sex in Norway, caste in India, natural resources for a nation) so that a unit cannot imagine any change and for that reason prefers to stay where it is. Thus the measure is only meaningful for dimensions where mobility is to some extent permitted, or at least imagined. For ascriptive dimensions one will have to study the differential distribution of rewards or the evaluation of others rather than self to get at data to classify the dimension.

We shall refer to the measure G as the *gradient* of the rank-dimension. Its meaning is very easily seen when the rank-dimension is a dichotomy with the two values T and U :

$$G = \frac{U \rightarrow T - T \rightarrow U}{N - (U \rightarrow U + T \rightarrow T)}$$

It is simply the difference between those who want to move up and those who want to move down, evaluated relative to the maximum number possible when we «permit» units to stay where they are. If we do not, the denominator would of course be N — and in some cases this may be preferable. At any rate, we shall say that the rank-dimension is *steeper*, the higher the numerical value of G . A *flat* rank-dimension ($G=0$) evidently is no rank-dimension at all, but where the borderline should be drawn can only be established

after more theory has been developed and empirical experience been gained.

2. Fundamental Categories of Rank Analysis *

We can now proceed with a more systematic analysis of a system of units S , in terms of its set of rank-dimensions D . To see what can be done in general we shall proceed systematically, starting with one unit and one dimension, and then add units and dimensions. For our purposes the following table exhausts all interesting combinations:

TABLE 2

The dimensions of rank analysis

No. of units	No. of dimensions		
	one	two	several (n)
1	I 1. Rank	II 1. Total rank, unit 2. Rank congruence, rank disequilibrium	IV 1. Total rank, unit 2. Rank equilibrium disequilibrium
	III 1. Total rank, pair 2. Rank equality, rank difference	VI 1. Rank equivalence, rank inequivalence 2. Rank congruence, rank incongruence	VII GENERALIZATION
e- (n)	V 1. Total rank, m-tuple 2. Difference	VIII GENERALIZATION 1. Rank agreement 2. Criss-cross	IX GENERALIZATION 1. Concordance

This system should be relatively exhaustive, and at the same time suggests a standardization of the wildly fluctuating terminology in this field³. More particularly, we have avoided the use of the words

* This section is concerned with the operationalization of dimensions of rank analysis and relatively technical. The reader is advised to inspect table 3 and look at some of the definitions and then turn to section 3, unless he is particularly concerned with the exact meaning of these concepts (p.180).

³ For one list of literature, see the references on rank disequilibrium made in GALTUNG, 1964, p.118. Some other important references are: BO ANDERSON and MORRIS ZELDITCH, jr., «Rank Equilibration and Political Behaviour», *European Journal of Sociology*, 1964, pp.112-25. G. C. HOMANS, «La congruence du status», *Journal of Psychology*, 1957, pp. 22-34; Id., «Status among Clerical Workers», *Human Organization*, 1953, pp.5-10.

«status» and «inconsistency», the former because we want to make it completely explicit that we are concerned with *rank* and not with other characteristics of the status of a unit, the latter because «inconsistency» can mean so many things. Thus an individual may have «status inconsistency» because of conflict among the statuses he has, or because of difference in style — he may combine some modern with some very traditional statuses (which probably would only be a subcase of conflict). Since conflict does not necessarily involve rank, we prefer to use this more generic term of status inconsistency in a more general context⁴.

We shall now comment on all the dimensions of rank analysis in table 2 and indicate how they can be operationalized. To do so we proceed cell by cell, in a zig-zag pattern.

I. ONE UNIT, ONE DIMENSION

The only thing to be done here is to assign to the unit its rank, and we assume that can be done unambiguously. If this is not the case, one will have to collapse rank-values and simplify the dimension until ambiguity is sufficiently reduced — this will probably lead to a trichotomy or a dichotomy. In the following we shall assume that this has been done.

II. ONE UNIT, TWO DIMENSIONS

Conceptually there is little difficulty connected with the two concepts mentioned:

total rank of a unit: the rank of the unit in two-dimensional space, reduced to one dimension.

rank equilibrium: the degree to which the ranks of the unit along the two dimensions correspond to each other.

To operationalize these two concepts we may assign values 0, 1 and 2 to the three ranks U, M and T (or 0 and 1 to the two ranks U and T) and assume that this can be done according to standard methodological prescriptions. We get

⁴ For an analysis of different dimensions of status inconsistency, see Johan GALTUNG, *Norm, Role and Status: A Synthetic Approach to Sociology*, ch. 6 (mimeographed, forthcoming).

TABLE 3

Operational definitions of total rank and rank disequilibrium

D ₂ ↑					D ₂ ↑			
T(2)	2	3	4		T(2)	2	1	0
M(1)	1	2	3		M(1)	1	0	1
U(0)	0	1	2		U(0)	0	1	2
	→ D ₁				→ D ₁			
	.U(0)	M(1)	T(2)		U(0)	M(1)	T(2)	
	Total rank : sum of ranks				Rank disequilibrium : difference between ranks			

In the first case all that has been done is to construct an additive index, in the second case the absolute value of the difference between the ranks has been computed. These operations both presuppose that the two dimensions for the same unit are comparable, that it somehow makes sense to give them the same weight. One way of ensuring this would be to require that their gradients have (about) the same strength.

We can now refine these dimensions of rank analysis:

Total rank: low, score 0-1 medium, score 2 high, score 3-4

But this subdivision will, of course, depend on the statistical distribution. We also get

Rank disequilibrium: equilibrium, score 0
weak disequilibrium, score 1
strong disequilibrium, score 2

If the dimensions are dichotomies no distinction can be made between weak and strong disequilibrium⁵.

III. TWO UNITS, ONE DIMENSION

This case is actually completely parallel to the preceding case. Conceptually, we have

Total rank of pair: The combined rank of the pair, reduced to one dimension.

Rank equality: the extent to which the ranks of the two units are the same.

⁵ For other efforts to operationalize this concept, see G. E. LENSKI, «Status-Crystallization: A Non-vertical Dimension of Social Status», *American Sociological Review*, 1954, pp. 407 ff., and E. JACKSON, «Status Consistency and Symptoms of Stress», *American Sociological Review*, 1962, p. 471.

To operationalize these two concepts we do exactly the same as above, and get a table that corresponds completely to table 3. Formally tables 3 and 4 are completely equal, but there is this difference between them: in table 3 the unit is a unit and the two axes refer to two different dimensions, whereas in table 4 the unit is a pair and the two axes refer to the same dimension, but there is one axis for each unit in the pair.

TABLE 4

Operational definitions of total rank of pair and rank difference

<table style="border-collapse: collapse;"> <tr> <td style="text-align: center; vertical-align: middle;">D for S_2</td> <td style="text-align: center;">↑</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">T(2)</td> <td></td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td></td> </tr> <tr> <td style="text-align: center;">M(1)</td> <td></td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td></td> </tr> <tr> <td style="text-align: center;">U(0)</td> <td></td> <td style="text-align: center;">0</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td></td> </tr> <tr> <td></td> <td></td> <td colspan="3" style="text-align: center;">→ D for S_1</td> <td></td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">U(0)</td> <td style="text-align: center;">M(1)</td> <td style="text-align: center;">T(2)</td> <td></td> </tr> </table> <p style="text-align: center;"><i>Total rank of pair: sum of ranks</i></p>	D for S_2	↑					T(2)		2	3	4		M(1)		1	2	3		U(0)		0	1	2				→ D for S_1						U(0)	M(1)	T(2)			<table style="border-collapse: collapse;"> <tr> <td style="text-align: center; vertical-align: middle;">D for S_2</td> <td style="text-align: center;">↑</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">T(2)</td> <td></td> <td style="text-align: center;">2</td> <td style="text-align: center;">1</td> <td style="text-align: center;">0</td> <td></td> </tr> <tr> <td style="text-align: center;">M(1)</td> <td></td> <td style="text-align: center;">1</td> <td style="text-align: center;">0</td> <td style="text-align: center;">1</td> <td></td> </tr> <tr> <td style="text-align: center;">U(0)</td> <td></td> <td style="text-align: center;">0</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td></td> </tr> <tr> <td></td> <td></td> <td colspan="3" style="text-align: center;">→ D for S_1</td> <td></td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">U(0)</td> <td style="text-align: center;">M(1)</td> <td style="text-align: center;">T(2)</td> <td></td> </tr> </table> <p style="text-align: center;"><i>Rank difference: dif- ference between ranks</i></p>	D for S_2	↑					T(2)		2	1	0		M(1)		1	0	1		U(0)		0	1	2				→ D for S_1						U(0)	M(1)	T(2)	
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		U(0)	M(1)	T(2)																																																																						

Or, in a more refined version:

Total rank of pair: low, score 0-1 medium, score 2 high, score 3-4

*Rank difference: equality, score 0
minor difference: score 1
major difference, score 2*

If the dimensions are dichotomies no distinction can be made between small and big differences. It should be noted that if the dimension is power and the units are nations, then rank equality is often referred to as "balance of power"⁶.

Thus, by means of these measures meaning is given to the total rank of a pair, which then can serve as an independent variable for relational analysis⁷. But it does not discriminate too well, like all

⁶ For an analysis of this concept see Johan GALTUNG, "Balance of Power and the Problem of Perception: A Logical Analysis", *Inquiry*, 1964, pp. 277-294.

⁷ For the use of the expression "relational analysis", see LAZARSFELD, P. F. and MENZEL, H.: "On the Relation Between Individual and Collective Properties", in ETZIONI, A., ed., *Complex Organizations, A Sociological Reader* (New York: Holt, 1961), pp. 442-440.

additive indices. Thus, the total rank of 2 may be obtained by two units of rank 1 each or by two units, one with rank 2 and the second with rank 0. But if, in addition, rank difference is made use of, one can discriminate between the two: the rank difference is 0 in the first case, and 2 in the second.

Imagine now that one had not made use of trichotomies for the rank-dimensions but instead had used a scale with, for instance, 11 points, such as the deciles from 0 to 10. In that case the total rank of the pair would vary from 0 to 20. Would one get the same results if one trichotomized this in «low», «medium», «high» as one would get by first trichotomizing the basic variable and then proceed as indicated above? No, but nearly the same. It is a weakness of the methodology that it is not invariant of the order of the operations, but the difference will usually be insignificant, both theoretically and empirically.

IV. ONE UNIT, SEVERAL DIMENSIONS

In this case total rank can be computed extending the method in the left hand part of table 3 to n dimensions. We recommend the additive index since it is by far the simplest procedure and, when properly executed, can yield very good results⁸. The index may be tested to see whether it is cumulative (Guttman scale) or not. If it is cumulative or nearly so it may be indicative of some internal structure between the dimensions in the sense that a unit first has to get into the top category of one dimension, then it can start conquering dimension no. 2, then dimension no. 3 etc. However, all this is actually meaningless before one has several units, so that a discussion of this really belongs to case IX.

But this does not apply to the next two dimensions. One unit with a rank score on n dimensions has a *profile*, and since we assume that the dimensions are comparable this profile can be collapsed to a distribution that gives the number of U-statuses, the number of M-statuses and the number of T-statuses — with a total equal to the number of dimensions n . This distribution has a central tendency, which may be measured in terms of the mode, the median or the arithmetic mean (or any other measure of central tendency). If we

⁸ For a discussion of an additive index of this kind see Johan GALTUNG, «Foreign Policy Opinion as a Function of Social Position», *Journal of Peace Research*, 1964, pp. 217 ff.

use the arithmetic, then we get exactly the same as we would get by dividing the total rank of the unit with the number of dimensions. Often the mode may be just as useful, however — it tells which rank is the most frequently found rank in the rank profile of the unit. The arithmetic mean makes less sense because there is usually nothing in sociological theory that corresponds to it.

It was easy to extend the idea of total rank to several dimensions since addition is equally well defined for n as for two elements. The difficulty comes when we extend the definition of rank disequilibrium to n dimensions. Rank disequilibrium for two dimensions was simply defined in terms of a difference between the two ranks. But subtraction is only defined between two elements, not between n at the same time. One suggestion here would be to make use of one of the standard measures of dispersion, such as the standard deviation, of the distribution of ranks in the profile of the unit. But there are two objections against this measure. First of all its formula of calculation is so remote from sociological theory — there is nothing in that theory that corresponds quite to the calculation of sums of squares of differences, particularly since the differences are relative to the mean which is almost equally artificial. And secondly, it would not reduce to our simple and attractive measure of rank disequilibrium in the case of $n=2$. One might try with a simpler measure of dispersion, such as the percentage of ranks that fall in the modal category. Obviously, if the percentage is very high there is (almost) rank equilibrium, if it is low there is rank disequilibrium. In this case the first objection would disappear. But the second objection would still be valid, and in addition there would be a third objection: the measure would not be sensitive to the difference between, say, 3 T's, 1 M and 1 U; and 3 T's and 2 U's. Internal distance would not count — only whether the rank is in the modal category or not.

The measure we shall suggest is as follows:

Rank disequilibrium:

Sum of all distances for all pairs of ranks

$$\frac{\text{number of pairs}}{= \binom{n}{2}}$$

With n dimensions, hence n ranks for the unit, there are $\binom{n}{2}$ or $\frac{1}{2}n(n-1)$ comparisons to make if all ranks are to be compared with all others. For each pair a difference can be calculated since only

two elements are involved, and the expression is nothing but the average value of these differences — where we, of course, always use the absolute value of the difference, the distances. If we compare units for the same number of dimensions it is unnecessary to divide by the number of pairs.

When all ranks are equal all differences will be equal to 0, which means that the degree of rank disequilibrium becomes 0 — as it should in the case of rank equilibrium. The measure is sensitive to all rank differences, and is not too artificial. Thus, it does not involve the mean, for all ranks all *other* ranks are used as bases of comparison — and it does not involve squares of differences, only absolute values. Moreover, for $n=2$ it reduces to the measure introduced above of rank disequilibrium.

Thus, the situation of one unit in n -dimensional rank spaces is clarified operationally, and we can proceed to the corresponding case, with dimensions and units reversed.

V. SEVERAL UNITS, ONE DIMENSION

This case is so similar that there is no need for spelling out everything. The total rank of an m -tuple is measured in exactly the same way as for two units. The distribution of the m units on the dimension offers no conceptual difficulties since this is an ordinary frequency distribution. Measures of central tendency have obvious interpretations whereas the standard measures of dispersion are indicative of equality when they are (near) zero and of much internal rank difference when they are different from zero. However, much better than these measures would be the following

Rank difference:

$$\frac{\text{Sum of all distances for all pairs of units}}{\text{number of pairs}} = \binom{m}{2}$$

Hence, to arrive at a measure of total internal distance in the sense of rank difference one would compare all units, two at a time, add the distances and divide by the number of pairs, which is $\binom{m}{2} = \frac{1}{2}m(m-1)$. Actually, the latter is unnecessary if we compare dimensions for the same number of units.

* See Johan GALTUNG, *The Measurement of Agreement* (Dept of Sociology, Columbia University, 1959, mimeo).

In the case of complete rank equality between the units the measure is equal to 0, in all other cases it is positive. And in the case of $m=2$ it reduces to the measure introduced above of rank difference. Hence, we can consider this case also to be completely clarified operationally, and turn to a much more difficult case.

VI. TWO UNITS, TWO DIMENSIONS

In this case something quite new is introduced, and the additional complexity calls for great caution. We have now two different units on two different dimensions, so that all concepts and all operations from cases 1, 2 and 3 are meaningful. But in addition we need

Rank equivalence: the extent to which the ranks of two units are the same, with two-dimensional rank.

Rank congruence: the extent to which the two units stand in the same or in different relation to each other on the two rank dimensions.

These very brief descriptions actually say very little; the concepts will acquire meaning through operationalization only.

One could approach the problem of rank-equivalence by saying: two units are rank-equivalent if they are rank-equal on both dimensions. But this is trivial; if rank equivalence should comprise this only we would not need the concept since it would be enough to say «rank-equality on both dimensions». Obviously, there is a sense in which two units may add their ranks and come up with the same result and find out that they are «rank equivalent», which leads to this operational definition:

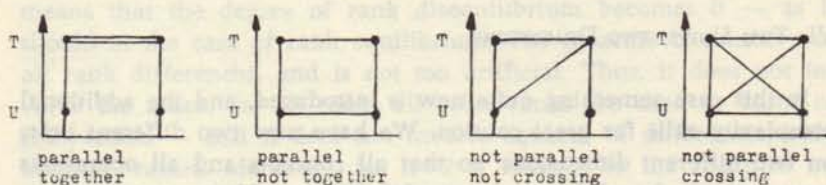
Rank inequivalence: the difference between the total ranks of the two in two-dimensional space.

Rank equivalence: the two units have the same total rank in two-dimensional space, the difference is zero.

Thus, one would locate the two units in the left hand part of table 3 and then calculate the difference between their total ranks. If they should happen to be rank-equal on both dimensions then they would both have the same total rank and consequently be rank-equivalent, which means that our more tolerant operational definition of rank equivalence includes the stricter definition as a special case — as it should. Of course, how good this definition is can only be ascertained after some empirical experimentation.

We then turn to the more difficult problem of rank congruence. To arrive at a rationale for its operationalization, consider the following combinations of rank-profiles:

TABLE 5. *Some combinations of rank-profiles.*



Here we have four different degrees of rank incongruence, where for simplicity we have used dichotomized rank dimensions. In the first case there is equality on both dimensions, in the second case there is not equality but something else is equal: the rank difference between the two units is the same for both dimensions. This actually also applies to the first case, except that the differences are equal to zero. In both these cases the two units can meet in the context of both dimensions in the same relationship; in the first case as equals, in the second case in the same superior — inferior relationship. In the third and the fourth cases we do not have rank congruence since the differences are not equal; in the third case one of the differences is positive and the other is zero, in the fourth case the differences have different signs. We use this for the following operational definition

Rank congruence: rank differences between the units are equal.

Rank incongruence: rank differences between the units are not equal

weak case: differences do not have different signs.

strong case: differences have different signs.

In the case of strong rank incongruence the relative position of the units is reversed when one moves from one rank-dimension to the other. As is immediately seen, the definitions correspond to the four cases in table 5 (we have not singled out for special attention the case of rank equality under rank congruence, however, because it is trivial). Also, the introduction of a third rank for each dimension will offer no difficulty — but the definitions become meaningless unless each rank dimension has the same number of ranks.

The operationalization has the virtue of simplicity since all that is needed is an inspection of the rank differences, always obtained by subtracting the ranks of one unit from the ranks of another unit so that the signs have a clear meaning. Thus, in this case, unlike in all preceding cases, we cannot use distances without losing important information. We can then proceed to the next case.

VII. TWO UNITS, SEVERAL DIMENSIONS

All we have to do is to see to it that nothing has been introduced so far that cannot easily be generalized.

The total rank of either unit offers no difficulty, since the generalization has already been carried out under IV above, and this means that rank inequivalence can be calculated. Since we can form the differences between the two units on each of the n dimensions we shall have no difficulty with rank incongruence either. All one has to do is to inspect the set of rank differences; if they are all equal we have rank congruence; if they are different but not of different sign we have the weak case of incongruence, and if they are different and with different signs we have the strong case of incongruence.

The only objection is that this is inelegant — one would like to express the degree of incongruence by means of one numerical characteristic alone. But this is not so easy. If one calculates the dispersion in the set of differences one may discriminate between congruence and incongruence, for the dispersion is obviously zero in the case of congruence and positive in the case of incongruence. But it does not discriminate between the weak and strong cases, and there is little doubt that there is a 'borderline there: one thing is to be below in varying degrees, another thing to be below in one context and above in another. The ideal would be an index that not only reflected the magnitude of the discrepancy from the case of rank congruence, which dispersion measures in the set of differences would do, but in addition made a discontinuous jump or changed sign when strong incongruence occurred. The trouble is that one may have strong incongruence in our sense for relatively low values of dispersion. Hence we are actually dealing with two different dimensions of incongruence: *magnitude*, and *kind*. The latter can be decided by inspection, to see whether all signs are the same or whether signs are different. And where magnitude is concerned we propose to proceed in analogy with cases IV and V. In the set of n differences all possible comparisons are made: there is a total of

$\binom{n}{2}$. For each pair of differences the distance is computed, the sum is calculated, and the average is computed. Thus

Rank incongruence, magnitude:

Sum of all distances for all pairs of diff.

$$\text{number of pairs of diff.} = \binom{n}{2}$$

Thus if one has three dimensions and the differences for the two units are 2, 0, -2 (corresponding to the two profiles TMU and UMT) the three distances between the differences will have to be taken into consideration. Thus, the sum is 8 and the average is 2.67. Hence there is rank incongruence, and inspection of the differences reveals that this is a strong case of rank incongruence. When there are only two dimensions there is only one pair of differences, hence only one distance to compute. If the distance is 0 we have rank congruence for the distance or sum of distances is 0 when — and only when — all differences are equal. Hence the operationalization above is completely consistent with what we have done in VI above.

One may now ask whether there is any new concept that can be introduced here, but we have not found any fruitful dimensions that apply to this case in addition to what we have already done.

VIII. SEVERAL UNITS, TWO DIMENSIONS

Again, the problem is the same: have we introduced something so far that we cannot easily generalize? For any *single* unit total rank and disequilibrium can still be computed, and for any *pair* of units rank inequivalence and rank incongruence will offer no difficulty.

Since we have m units and hence $\binom{m}{2}$ pairs we can also find the distributions of the m units on total rank and on disequilibrium, and the distribution of the $\binom{m}{2}$ pairs on rank inequivalence and rank incongruence. From these distributions some evaluation of the total situation can be obtained, but the problem is whether other more global measures would be of interest.

As to total rank, the total rank of an m -tuple has already been introduced. Since this can be calculated for either dimension the set of units can be compared with itself to see where it scores highest,

on D_1 or on D_2 . This, in other words, would be a measure of the extent to which the m -tuple is in equilibrium or disequilibrium where its total rank is concerned. This is already a rather abstract concept, and although it is obvious that we would analyze the m -tuple with regard to disequilibrium exactly as we did in case II for one unit, it is not obvious that the theoretical harvest would correspond to the empirical investment.

Does it make sense to generalize rank disequilibrium? Strictly speaking, rank disequilibrium is the property of α unit, and although it makes sense to speak about the central tendency, for instance the arithmetic mean, of the distribution of rank disequilibrium in the set of units — as an aggregate measure — it does not make sense to generalize in some other way. But it does make sense to generalize rank incongruence to more than two units. Thus, to return to table 5: if the profiles of m and not only 2 units were represented it would still make sense to talk about parallelism or not, about profiles touching each other or crossing each other; just as it made sense in the preceding case to talk about parallelism etc, between two profiles involving more than two dimensions.

To develop a measure of total rank incongruence one should proceed by comparing the units two at the time. Interaction between units, individuals or nations, is mostly and essentially between two units at the time (with others as a context) and this applies particularly to rank incongruence. Since there are $\binom{m}{2}$ pairs all one has to do is to proceed as in the preceding case. For each pair of units the two rank *differences* are calculated. Then they are compared by computing the *distances* between them, which is simply the magnitude of the rank incongruence for that pair. If one wants an aggregate measure of the total rank incongruence, then the central tendency of the distribution of distance should be found. But it may also be interesting to calculate the dispersion of this distribution, since it would tell something about whether the rank incongruence found between pairs varies much in magnitude, or is of the same magnitude. Thus one would calculate:

Rank incongruence, dispersion:

Sum of all distances between the distances for all pairs

$$\frac{\text{Sum of all distances between the distances for all pairs}}{\text{Number of pairs of pairs}} = \binom{m}{2}$$

Thus, if one has three units and the patterns on the two dimensions are UT, MM and TU respectively, then one would proceed as follows:

TABLE 6

An example of the calculation of central tendency and dispersion

	differences	distance (incongruence)	pairs of distances	distances
$S_1 - S_2$	-1, 1	2	2 4	2
$S_1 - S_3$	-2, 2	4	2 2	0
$S_2 - S_3$	-1, 1	2	4 2	2
SUM		8		4
average		2.67 (central tendency)		1.33 (dispersion)

In this case the average rank incongruence is 2.67 and the dispersion in the distribution of rank incongruence is 1.33 — by our measures.

That concludes the generalization and we now turn to two new concepts that are characteristic of case VIII, but would have been meaningless or almost meaningless in all preceding cases:

rank agreement: the extent to which rank-dimensions agree in their ranking of units.

lack of criss-cross: the extent to which rank-dimensions divide the units in the same groups.

It should be noted that these two concepts are by no means identical:

TABLE 7

Examples of perfect rank-agreement and perfect lack of criss-cross

I	↓	UT = 0	TT	T	↓	UT	TT = 0
U	↓	UU	TU = 0	U	↓	UU = 0	TU
		→				→	
		U	T			U	T
		Agreement: perfect				Agreement: none	
		lack of criss-cross: perfect				lack of criss-cross: perfect	

Since we have no criss-cross in two situations where the agreement is respectively perfect and perfectly absent the two concepts evidently do not coincide. We then proceed to operationalization.

The problem of agreement between two variables has been analyzed extensively elsewhere. We have agreement when, and only when, each unit is given the same rank on both dimensions. Thus

agreement is a subcase of correlation, but much more narrow; one can have correlation without agreement (as when all units are given one rank lower on the second dimension than on the first dimension). This means that all cases where the ranks are different should be treated as deviations from rank agreement regardless of whether the disagreement is by one or two steps. Thus, we get this very simple operational definition:

Rank agreement:

$$\frac{\text{No. of units given the same rank on both dimensions}}{\text{No. of units} = m}$$

The maximum value of 1 corresponds to perfect agreement, the minimum value of 0 to perfect disagreement.

But there is another way of defining operationally rank disagreement, which is much more in line with the kind of thinking we have developed here. For any one unit one would simply calculate the distance in his ranks on the two dimensions, in other words his disequilibrium — and then sum the disequilibria for all units:

Rank disagreement:

$$\frac{\text{Sum of the rank disequilibria for all units}}{2m}$$

When all units are in rank equilibrium the numerator will be 0, which corresponds to complete agreement, and when all individuals are in maximum disequilibrium (all with profiles UT or TU) the numerator will be equal to 2m and the disagreement measure will attain its maximum value. We shall prefer to use this measure.

We then turn to criss-cross. Its rationale is more involved and will not be developed here¹⁰. Suffice it only to say that in the case where both rank-dimensions are dichotomies and we have m units operationalization has been solved giving this expression:

TABLE 8

The operationalization of criss-cross

		First dimension	
		T(1)	U(0)
Second dimension	T(1)	a	b
	U(0)	c	d
Criss-cross:		$\frac{(a+d)(b+c)}{m^2}$	
		4	

¹⁰ See Johan GALTUNG, «Rank and Social Integration: A Multi-dimensional Approach,» in Berger, Zelditch ANDERSON, *Sociological Theories in Progress*, (Boston: Houghton, Mifflin Co., 1966).

This formula is developed at length elsewhere, as well as its generalization to the case of three ranks, and there is no reason to repeat all that here¹¹. In the case of perfect agreement we have $b = c = 0$ and consequently 0 criss-cross; and the same obtains if we have $a = d = 0$ (when also agreement $\frac{a+d}{m}$ would be 0) — all in agreement with table 7. The maximum value of the criss-cross coefficient is 1, which is attained when the units are equally divided between the two diagonals.

Using the symbols of table 8 we can now make a complete list of formulae for the concepts we have introduced. This makes sense because the case of two dichotomous rank-dimensions and m units, although a special case of case VIII, is fairly general and frequently encountered in the literature. Thus, we get:

Total rank of m — [tuple on first dimension:

$$1 \cdot (a+c) + 0 \cdot (b+d) = a+c$$

Total rank of m — [tuple on second dimension:

$$1 \cdot (a+b) + 0 \cdot (c+d) = a+b$$

Rank-disequilibrium of m — [tuple:

$$1 \cdot (b+c) + 0 \cdot (a+d) = b+c$$

Rank incongruence:

types of pairs	differences	distance	to calculate dispersion
TT—TU	0, 1	1 a c = ac	here are six distances, which means 15 pairs of distances. They can all be calculated, added and divided by the number of pairs.
TT—UT	1, 0	1 a b = ab	
TT—UU	1, 1	0 a d = 0	
TU—UT	1, -1	2 c b = 2bc	
TU—UU	1, 0	1 c d = cd	
UT—UU	0, 1	1 b d = bd	
SUM		(a+d) (b+c) + 2bc	

Rank incongruence,
average

$$\frac{(a+d) (b+c) + 2bc}{m}$$

Rank agreement:

$$\frac{a+d}{m}$$

Rank disagreement:

$$\frac{b+c}{m} = 1 - \frac{a+d}{m}$$

¹¹ Ibid., section 2.1 and Appendix 1.

Criss-cross:

$$\frac{(a+d)(b+c)}{\frac{m^2}{4}}$$

And that brings us to the final case.

IX. SEVERAL UNITS, SEVERAL DIMENSIONS

In this case the ranks of *m* units on *n* dimensions are given. We can calculate the total rank for each unit (case IV) and the total rank for each *m*-tuple (case V). We can calculate the total amount of rank disequilibrium for *each unit*, of rank difference for *each dimension* and rank incongruence for *each pair of units* and also for *each pair of dimensions*, and even for all units for each pair of dimensions. But what about rank incongruence for all *m* units and all *n* dimensions, what about rank agreement and what about criss-cross? And, will not all these concepts somehow meet in one master concept that measures the degree of order or disarray in the total configuration? We shall see that there is something to this, but it is not so simple. To illustrate this, let us take an example with four units and three dimensions.

TABLE 9

An example with four units and three dimensions: differences

		D ₁ - D ₂	D ₁ - D ₃	D ₂ - D ₃	Disequilibrium
To calculate	S ₁ UTM	-2	-1	1	4
disequilibrium	S ₂ TMT	1	0	-1	2
for each unit	S ₃ MMM	0	0	0	0
and disagreement	S ₄ UUT	0	-2	-2	4
for each pair					
of dimension	<i>Disagreement</i>	3	3	4	10
		D ₁	D ₂	D ₃	Incongruence
To calculate	S ₁ - S ₂	-2	1	-1	(4) 3, 1, 2 6
incongruence	S ₁ - S ₃	-1	1	0	(2) 2, 1, 1 4
for each pair	S ₁ - S ₄	0	2	-1	(3) 2, 1, 3 6
of units and	S ₂ - S ₃	1	0	1	(2) 1, 0, 1 2
distance for	S ₂ - S ₄	2	1	0	(3) 1, 2, 1 4
each dimension	S ₃ - S ₄	1	1	-1	(3) 0, 2, 2 4
	<i>Distance</i>	7	6	4	(17) 26

In this table we have computed all differences; for each unit and each pair of dimensions, and for each dimension and each pair of units. In three cases we have simply added the absolute values of

all these differences, so as to get the total amount of disequilibrium for each unit, the total amount of disagreement for each pair of dimensions and the total amount of internal distance for each dimension. We have also done it for each pair of units. But for rank incongruence we have proceeded as otherwise indicated: we have calculated the distance between each pair of differences, and then added these distances and it can be seen at a glance that it discriminates better.

We have not averaged the sums, nor have we divided by their maximum values which are not so easily found. The maximum for all differences is always 2 or -2 which means that the maximum distance is 2. But since the distances are interdependent, not all can attain the maximum value. The maximum sum, hence, is not more than twice the number of elements to be added. And the case of rank incongruence is more complicated, however, if one uses the correct formulae.

The problem is now whether the numbers 10 and 17 can be given any meaning, and it is obvious that they can. Thus, 10 is the total amount of intra-unit difference, and thus a measure of the total amount of disequilibrium or disagreement there is in the total system. Correspondingly, 17 is a measure of the total amount of intra-dimension distance there is, but not also a measure of the total amount of rank incongruence present in the system, since it does not involve the dispersion of the differences. These measures should then be compared with their maxima, which can be computed once one knows more about the particular system, how free the variation is, etc. And this is the only sense we shall give to the generalization of these concepts.

Since we have m units and n dimensions it is tempting, however, to see whether the concept of rank concordance can be of any use here. By this we mean

rank concordance: the extent to which all m units are ranked the same way on the n dimensions.

One way of operationalizing this would have been to proceed as we have done above and found the degree of disagreement for each pair of dimensions; then one could easily compute the average or divide it by its maximum attainable value. This is more or less what we do when we calculate the figure 10 above, and it is not satisfactory because it is time-consuming. A more direct method would be preferable, but we shall see that it is hardly possible.

The obvious model would be Kendall's famous *coefficient of con-*

*cordance*¹². But the difficulty is that we have no basis for determining what would correspond to Kendall's «maximum sum of squares». First of all we have only two or three ranks at our disposal — not as many as there are units. Secondly, there is no rule that the units will be evenly distributed on each dimension. On one dimension all units may have the same rank, on another they may be evenly distributed. And then: to calculate the «sum of squares of the actual deviations» from the arithmetic mean would bring us far away from the principle of staying close to the concepts. Hence, it looks as if the best we can do actually is to do as we did in the top part of table 9, and we define:

<i>Rank</i>	Sum of sums of distances for each unit and each dim.
<i>discordance:</i>	<hr/> Maximum sum of sums

The denominator should only be calculated if it is meaningful, often it is not necessary. Obviously the rank discordance is zero when and only when all distances for each unit and each pair of dimensions are zero; in this case we have rank concordance. *In general we have that rank concordance, complete rank agreement (for all pairs of dimensions) and complete rank equilibrium (for all units) imply each other and are implied by each other because they all refer to the same condition.* This means that the conditions are equivalent, which simplifies the system considerably.

This set of conditions, which we can now refer to as concordance, *also implies rank congruence.* For if any unit is classified the same way by any pair of dimensions, then any pair of units will have the same rank differences on any one of these dimensions. But the converse is not true; one may have rank congruence without equilibrium as evidenced by the two profiles MTM and UMU. A system where all units had one or the other of these two profiles would be completely congruent but no unit would be in equilibrium, nor would there be complete agreement and hence not complete concordance.

The only thing that remains now is to say something about criss-cross. The formula we have given for the special case under case VIII is not easily generalizable, unfortunately, for the concept is much more complicated than the other concepts right now, for one particular reason. The concept refers to the systemic level, but no unit as such is the systemic level. We can build a theory around

¹² See M. KENDALL, *Rank Correlation Methodes.* (New York: Hafner, 1955) to p. 179.

the concept of disequilibrium or incongruence or all the other concepts because they involve one unit or a pair of units at the time — for that reason we assume their motivating power to be strong. Unless criss-cross is internalized as an ideal no unit or no pair of units will be motivated to increase or decrease criss-cross because it is not a property of the unit or of the pair of units. This does not imply that the search for a fruitful generalization will be given up, however, for it is obvious that analysis should also be carried out at the systemic level.

That concludes our operationalization of variables that are indispensable for any serious analysis of multi-dimensional rank systems. Starting with the concept of the rank of one unit on one dimension, the matter was quickly complicated, the definitions were generalized and at the end the concepts found a fairly harmonic meeting ground in the most general case, where m units are ranked on n dimensions.

3. Propositions in Multi-dimensional Rank Analysis

We can now present some of the basic propositions in multi-dimensional rank analysis because all concepts we are going to use have been conceptualized and clarified through the operational definitions. Thus, when propositions are presented they are given a precise meaning through the definitions and there is also implicitly a set of clear prescriptions as to how to test the propositions.

The set of propositions we shall use is as follows, where we make use of table 2 and present the propositions in the order of the presentation of the concepts:

- P₁: *Units seek to maximize their ranks on all dimensions*
 - P_{1,1}: *Units seek to maximize their total rank*
- P₂: *Units try to avoid rank disequilibrium and obtain rank equilibrium*
 - P_{2,1}: *If efforts to obtain rank-equilibration are frustrated, aggression will result*
 - P_{2,1,1}: *The aggression will be directed to self if ascribed ranks are higher than achieved ranks.*
 - P_{2,1,2}: *The aggression will be directed to others if ascribed ranks are lower than achieved ranks.*
- P₃: *The higher the total rank of a pair (or m -tuple), the more interaction there will be between the units in the pair (or m -tuple), and the more associative the interaction.*
- P₄: *The lower the rank difference in the pair, the more interaction*

there will be between the units, and the more dissociative the interaction will be.

P_{4,1}: The lower the rank-inequivalence in the pair, the more interaction there will be between the units, and the more associative the interaction will be.

P₅: The higher the rank incongruence in a pair, the less interaction there will be between the units and the more dissociative the interaction will be.

P_{5,1}: If possible, interaction between incongruent units will be avoided.

P_{5,2}: If interaction cannot be avoided, interaction between incongruent units will be aggressive.

P_{5,2,1}: In case of weak incongruence the most aggressive will be the unit in strongest disequilibrium.

P_{5,2,2}: In case of strong incongruence the most aggressive party will be the unit in disequilibrium with achieved ranks highest.

P_{5,3}: The higher the average rank incongruence in a set of units, the higher the probability of zero or aggressive interaction in pairs of units.

P_{5,4}: The lower the dispersion of rank incongruence in a set of units, the higher the probability of institutionalizing the incongruence.

P₆: The higher the criss-cross, the higher the probability of finding mediators and in-betweens in a conflict between two- or n-dimensional rank-groups.

P₇: The higher the concordance, the higher the probability of the emergence of generalized rank-roles.

Since we have, essentially, seven concepts — (total) rank, rank disequilibrium, (total) rank of m-tuple, rank difference and rank inequivalence, rank incongruence, criss-cross and rank concordance — we have seven major propositions, one about each concept. Then there are sub-propositions, and in the case of rank disequilibrium and rank incongruence also sub-sub-propositions. In addition to this comes the mathematical theorem announced in connection with rank concordance: that concordance, complete agreement and complete equilibrium imply each other, and that any one of the three implies rank congruence, but they are not implied by rank congruence.

We shall now present some comments on these propositions. They are empirical propositions; they say something factual about human behaviour, whether that behaviour is organized at the individual level or at the national level. As such, these seven propositions with sub-

propositions should be distinguished from the purely mathematical theorem repeated above.

What the first proposition says is actually a tautology, since we have made use of the proposition to operationalize the concept of a rank dimension. A rank dimension is a variable that can be used to classify individuals, and on that variable the values on the one end are what units seek to obtain and the values on the opposite end are what units seek to avoid. Since this holds true for all rank dimensions, it also holds true for the total rank, since total rank is a simple additive function of the ranks on any single dimension.

The second proposition with its sub-propositions is based on ideas that have been developed in detail elsewhere¹³.

The third proposition uses as dependent variable both amount of interaction between units and quality of interaction. What the proposition says is that there is more and more, positive, interaction at the top of a social structure than at the bottom. This will be elaborated much more in connection with the theory of feudal systems developed in the following section.

The fourth proposition is the well-known proposition about rank equality or rank equivalence as a condition that favours both quantity and quality of interaction.

The fifth proposition involves the more complicated concept of rank incongruence. For rank incongruence to obtain, at least two units must be involved, but at least one of them must be in disequilibrium. What the theorem says is that rank incongruence contributes either to disintegration of the system because of interaction avoidance, or to conflict in the system because of aggression. Just as it is hypothesized that disequilibrium will lead to aggression if it cannot be reduced through equilibration, incongruence will lead to aggression if it cannot be reduced by interaction avoidance. We cannot here assume the mechanism that would correspond to equilibration, because this would mean that the two units should agree between themselves that they should make their patterns congruent to each other. But this would be a highly improbable agreement that would almost presuppose a sort of dyadic motivation. For that reason what corresponds to equilibration in the theory of rank disequilibrium is interaction avoidance in the theory of rank incongruence.

The propositions about where the strongest or more probable sources of aggression will be located are relatively obvious, and so is the

¹³ See Johan GALTUNG: «A Structural Theory of Aggression», *Journal of Peace Research*, 1964, pp. 95-119.

proposition about the effect of high average rank incongruence. More interesting is the proposition about the dispersion of rank incongruence: the lower it is, the higher the probability of arriving at some kind of solution. If the dispersion is very high it means that many different degrees of rank incongruence are represented among the pairs of units, which in turn means that there are many types of rank incongruence. But if the dispersion is very low, the number of units being the same, there will be more of a tendency for the rank incongruence to be of the same type so that *patterns* of accommodation to rank incongruence can be developed. But the general theory of rank incongruence and the reason why it should lead to effects in terms of interaction avoidance or aggressive interaction has been exposed elsewhere¹⁴. Here the general theory of criss-cross has also been presented, as well as the development of the operationalization that was presented in the text above.

The seventh and final proposition concerning concordance is something new which is not already included in the propositions above. Concordance means that there are several dimensions and that not only the pairs of units find themselves at the same relative distance on these dimensions, but any single unit also finds itself in the same position on each dimension. Thus, the society is divided into three groups of people: one group that is top dog on all dimensions, one group that is middle dog on all dimensions and one group that is **underdog** on all dimensions (or in two groups only if the middle dog status is not included). The implication of this again is that all structural conditions are present for training in generalized top dog roles, middledog roles and underdog roles. The same individual will not have to face any change in rank when he moves from one interaction context to the other, which means that general patterns of behaviour that correspond to his rank can be internalized as a permanent part of individuals: since they are in perfect rank congruence their role relations can be generalized so that the top person always can play a top dog role towards the bottom person and the bottom person always an underdog role towards the top person. There is no need for any individual for training in playing roles appropriate to different ranks, nor is there any need for any pair of individuals to change their relationship when they move from one interaction context to another. The content may differ according to the dimension,

¹⁴ See Johan GALTUNG, «Rank and Social Integration: A Multi-dimensional Approach», in Berger, Zelditch, ANDERSON, *Sociological Theories in Progress* (Boston: Houghton Mifflin Co., 1966).

but the general style will be the same; the patterns of reference etc. will be constant¹⁵.

4. Types of Rank Systems

Our procedure in this paper is synthetic. We have started with the idea of the rank of one unit on one dimension and gradually generalized to m units on n dimensions, introducing concepts on the road, operationalizing them, and then a system of propositions has been presented. We shall now combine some of these ideas in such a way that something empirically recognizable emerges.

To do this imagine that we have a system of m units and n dimensions, and that the system obeys the propositions in the preceding section. What will happen to the system in that case? This depends on a number of factors, and among them is the ease with which mobility may take place. If we imagine that mobility is possible, then the result will be equilibration upwards, by virtue of propositions 1 and 2. In other words, the system will tend to become rank concordant and rank congruent. This means that the system will be divided into equilibrated *classes*, with within-class interaction facilitated and between-class interaction impeded by the rank-equality or rank-equivalence in the first case and rank-difference or rank-inequivalence in the latter. But at the same time, by virtue of proposition 3, there is (much) more interaction between the top dogs than between the underdogs, with the interaction of top dogs with underdogs as an intermediate case.

In this kind of system there will, by virtue of the mathematical theorem, be no rank incongruence and no criss-cross, in addition to no disequilibrium. This means that there will be no built-in source of intra-personal conflict due to disequilibrium (possibly acted

¹⁵ Thomas Pettigrew comes very close to this concept of the generalized role as underdog in his *A Profile of the Negro American* (Princeton: van Nostrand, 1964), for instance on pp. 115 ff., where he demonstrates how playing the role of «Negro» serves as an inhibiting factor when white psychologists perform intelligence tests on Negro children (the percentage responding correctly to over half of the items increased by 17 and 10 percentage points in two tests when the interviewer was not white, but Negro). Mirra Komarowsky has similar findings in her study of how an American college girl plays down interests and ability in order to fit into the underdog role: «At first I resented this bitterly. But now I am more or less used to it and live in hope of one day meeting a man who is my superior so that I may be my natural self». (From her famous «Cultural Contradictions and Sex Roles», *American Journal of Sociology*, 1946, p. 185.

out as aggression) or inter-personal conflict due to incongruence (possibly acted out as withdrawal) — but neither will there be any built-in protection against disruption due to the criss-cross effect. Typically, generalized rank roles will be formed.

Let us then consider the case where mobility is frustrated, as it usually is, for reasons of scarcity or «ascription» or both. The tendency will be in the direction described above, but at some points in the social structure disequilibria will remain, producing aggression directed to self or to others, and there will be cases of incongruence, weak or strong, possibly leading to interaction avoidance and the split of the system into subsystems. Within these subsystems the structure mentioned above may emerge, but the system will be more complicated, more true to life, one may say. Thus, there will not be perfect rank congruence, the tendency for generalized rank roles to emerge will be less pronounced, and there will be some units that can function as mediators and in-betweens in a possible conflict between all top dogs and all underdogs — by virtue of having some top dog ranks and some underdog ranks.

However, the pure case that will emerge under conditions of perfect mobility is so important that we want to give it a special name, and have chosen to call it a *feudal system*. In order to identify it we make use of two of the variables used in the formulation of the propositions, *viz.*, *degree of rank-concordance*, and the degree to which the amount of interaction depends on the total rank of the pair. For short, we shall refer to the latter as the *degree of interaction-dependence*. Thus, a feudal system is characterized by being high on rank-concordance and high on interaction-dependence. The perfectly feudal system is a system completely divided in two classes, one top dog class and one underdog class (or in three classes, including a middle dog class, if that status is present), and with all interaction that exists in the system between top dogs and no interaction at all between underdogs or between underdogs and top dogs. On the other extreme would be the completely defeudalized system, which would show a maximum of rank discordance and no dependence at all of interaction on the total rank of a pair. In this system there would be just as much interaction per pair whether the pair was of the TT-type, the TU-type or the UU-type (for simplicity we disregard here and in the following the middle dog rank, since it is unlikely to occur in the kinds of feudal system we are talking about).

To understand the feudal system and to develop a more comprehensive system of multi-dimensional rank analysis we have to vary

systematically the two variables we have focused on, and arrive at this simple typology:

TABLE 10
Four basic types of rank systems
Interaction-dependence

	<i>high</i>	<i>low</i>
<i>Rank-concordance</i>	I. feudal systems	II. class systems
<i>low</i>	III. mixed systems	IV. egalitarian systems

The egalitarian system is referred to above as the defeudalized system. The other two are intermediate cases. In the class system there is still rank concordance, but the interaction frequencies are much less dependent on the total rank: interaction between underdog nations or underdog individuals has been brought up towards the level of the interaction between top dog nations or individuals. It is obvious how this can be brought about: by energetic efforts to organize the underdog groups (trade unions, emancipist organizations, rural leagues, youth clubs, Bandoeng conferences, UNCTAD, etc.). However, in the mixed system we do not presuppose that this equalization of interaction levels has taken place. Characteristic of the mixed system is the absence of rank-concordance, whether this is because the system does not permit sufficient mobility to become a feudal system, or whether it is because it has been feudal in its structure and is in a state of flux with some units in positions of disequilibrium and pairs of units in positions of incongruence.

No doubt, one could have cut into this system of thought using other variables than the two we have focused on, *viz.*, degree of rank-concordance and degree of interaction-dependence; but we shall try to justify in the remaining sections the choice that has been made. Also, one might perhaps have chosen terms that are less overused. However, these terms, we feel, can also be justified by their usage in the following sections.

5. A Dynamic Theory of Rank Systems

We shall now turn to the relationship over time between these four structures, these four types of rank systems, and to do this we shall start with a more detailed analysis of the feudal system. More particularly, we shall develop further the theme touched on above, that almost any system if «left to itself» will tend to develop towards

a feudal system by showing (1) that the two properties of feudal systems are self-reinforcing, and (2) that they reinforce each other. If this can be shown, then it is obvious that not only does the feudal system have stability, but there will also be a tendency for other systems with one of the properties to develop towards feudal systems.

Rank-concordance is a very strong condition. It implies, as has been mentioned many times, both complete agreement, complete equilibrium and complete congruence. With the equilibrium a source of motivation for mobility as well as a source of aggression has been eliminated. With the congruence another source of aggression has been eliminated, and with concordance itself a factor that may contribute to a considerable amount of stability has been introduced: the generalization of rank roles. This means that provided the system is «left to itself» in the sense that there will be no external interference with the system (no change that it will have to cope with by institutionalizing new statuses and possibly bringing disequilibrium, incongruence, disagreement and discordance into the picture), then the system will be in a state of rank concordance forever. For every single unit there is a sort of intra-unit harmony, based on equilibrium and generalization of role expectations, and for every pair of units there is a similar harmony based on congruence and generalization of role patterns.

The important point here is that rank concordance, once it has started, will tend to develop further. If one unit already has three top dog statuses and is used to associate with a unit that has three underdog statuses, then both of them will learn roles that they will easily generalize. For the top dog unit this is an asset, a resource that he may use to conquer other top dog statuses; for the underdog unit it means a kind of inhibition, a general pattern of behaviour that will not only prevent him from conquering top dog statuses but also make him more likely to accept more underdog statuses. Every disturbance brought into this system in terms of disagreement, disequilibrium or incongruence can be dealt with precisely as a disturbance, and be eliminated by bringing the elements in line again. The more concordance there is, the more facilities will be available to bring about conformity to the general pattern.

We then turn to the second condition, the condition about interaction-dependence. This condition obtains in small groups that are formed in laboratories with no prior social structure. The tendency is, as reported again and again, for small groups to develop inter-

action patterns so that most interaction is found at the TT-levels, then follows the TU-combination, then the UT, and finally the UU¹⁶. If we disregard the difference between TU and UT which is not found in all investigations and which also assumes that the interaction is of an asymmetric kind, then one result of the small group studies can be summarized as follows: the higher the total rank of the pair, the higher the amount of interaction. And this is exactly feudal condition no. 2, and also proposition no. 3.

That this condition is self-reinforcing is easily seen. Once a differential in amount of interaction has been introduced interaction will be most rewarding at the points in the social structure where there has been most interaction. Interaction will generally mean experience, and it will work like money in a capitalist economy: the more a person has of it, the more he will get, for the more he will become trained in rewarding patterns of interaction both for himself and for others. In the small group, the person who has participated much will also be a person trained in capturing the interest of others, trained in rewarding them and in getting rewards from them. And the person who is very low in general interaction participation will not develop his potentialities and for that reason lose in competition with others. This presupposes an interaction market with relatively free choice, a condition which is present in the laboratory small group, but not necessarily in the international system. However, we assume that the *tendencies* will be present nevertheless.

We now have to show that the two conditions are inter-related by positive feedback, and start by pointing out reasons why a system in rank concordance will be a system displaying the interaction pattern mentioned in condition no. 2.

Rank is a kind of resource, and rank concordance means a heavy concentration of resources among the people who are high on all dimensions and a similar deprivation of resources from the units that are low on all dimensions. Interaction will often presuppose resources just as much as it will beget resources; for that reason there will be more interaction, the more resources are present. But, in addition to that, the top dog unit will prefer to interact with another top dog unit for the simple reason that he can get more rewards from a top dog than an underdog. The top dog unit will at times want to interact with an underdog unit to get the kind of services

¹⁶ For studies showing how interaction is distributed in small groups, see BALES, R.F. et al., «Channels of Communication in Small Groups», *American Sociological Review*, 1951, p. 463, and MILLS, T.M., «Power Relations in Three-Person Groups», *American Sociological Review*, 1953, p. 353.

the underdog can give him, and the underdog will certainly want to interact with the top dog unit. But to the extent that we assume that any unit will try to interact with the top because that is most rewarding, two top dog units will be at an advantage because their wishes correspond to each other, whereas the wishes of two underdog units will never correspond to each other and the wishes of one top dog and one underdog unit only sometimes. And from this simple reasoning the proposition about how total rank of pair is related to amount of interaction is a necessary consequence.

But just as interesting is the opposite proposition that the more a unit interacts, the higher its rank will become. Again the findings on small group studies are illuminating: we are thinking particularly of studies by Bavelas and others¹⁷. These studies tend to show that if a person or a unit in our general language is put in a communication structure that directs interaction to it or from it more than to or from other units, then this unit will tend to get increased rank from the interaction. There seems to be a kind of principle of «justice» involved here, a kind of generalization of rank from what might be referred to as interaction-rank. This may also be result of incomplete induction: people are so used to the top dog being high on interaction that they wittingly or unwittingly attribute to people high on interaction top dog status. At any rate, it is interesting and highly significant that units distributed at random get their rank to some extent decided according to their structural position in an interaction network. In this context the significance is that the second condition of a feudal system will reinforce the first condition perhaps just as much as the first condition will reinforce the second condition.

With this pattern of circular causation between and within the two conditions we have established the feudal structure as not only a very stable structure, but also as, in a sense, a «natural» structure. The general thesis resulting from this is that *if one does not want systems to become feudal, then something has to be done, something active, otherwise they will develop in that direction*. And the implication of that direction is the general interaction pattern of any feudal system: between the tops, and bilaterally from one top to one underling but not between the underlings.

We have already indicated above what this «something active» may be: organization of the underdogs to strengthen them relative to

¹⁷ We are thinking of BAVELAS' famous study «Communication Patterns in Task-Oriented Groups», *Journal of the Acoustical Society of America*, 1950, pp. 730-50, reprinted in many anthologies.

the top dogs, leading to the class system with two classes pitted against each other, one favored by society and one not but more equal in strength because of the organization of the underdogs. The underdogs can now use this strength for one particular and important purpose: to increase the price of the values they contribute to the top dogs. Trade unions become instruments of a better price for the unit of labor force, organizations of developing or poor countries become instruments for a better price for their raw materials, emancipist organizations become instruments for equality between men and women (which means more similarity and hence equality in the role definitions).

But from the feudal system there is also another possible road of development in terms of our variables: towards the mixed system where there is still interaction-dependence, but the rank-concordance has been broken down. This system offers a large variety of possibilities because of the imbalances built into it, but the underdogs are still exposed to exploitation (in the sense that they yield much more than they receive, according to the value standards) and without the organizational instruments to achieve more equitable treatment. The high degree of interaction-dependence splits the underdogs, makes them dependent on their particular top dogs, but the clear structure of the feudal system is broken up by all the disequilibrated individuals and rank incongruent parts that can be found in the system.

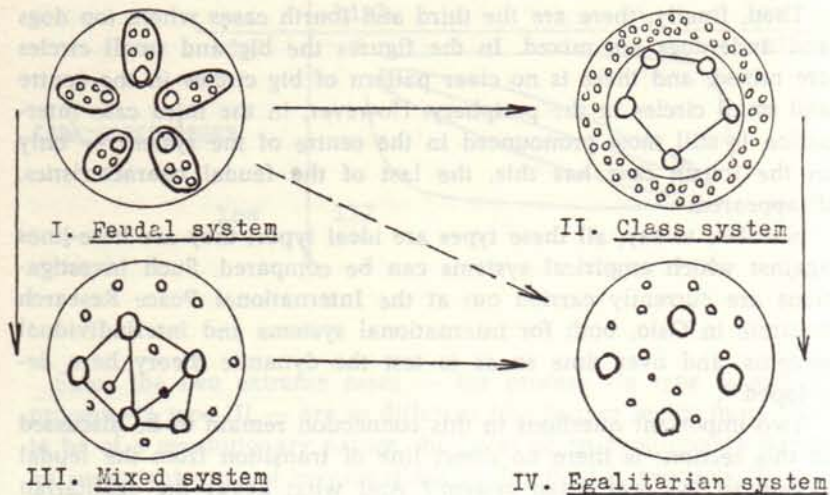
Looking at table 10 it is clear how the transition from the two intermediate systems to the egalitarian system can take place. From the class system, what is needed is a breakdown of rank concordance. Generally this takes place if more mobility is introduced into the system: talents kept down by a rigid system are permitted to move up. Agents of such changes are manumission and literacy campaigns and welfare state policies at the level of individuals and independence movements and economic development at the level of nations: they introduce differentiation between former slaves, serfs, low class members or colonies and poor countries respectively. The worker may still be a worker, but he is nevertheless an educated man; the nation may still be «developing» but it is nevertheless independent.

Thus, we are brought into systems of types II and III in table 10 — and the next step is the step to type IV, the egalitarian system. From the class system this will take place when the improved bargaining position of the underdogs leads to a change in the system. This again may take place in an evolutionary or revolutionary fashion, but

in either case the result is that some former underdogs drift upwards and some former top dogs downwards, reducing the degree of rank concordance considerably. From the mixed system it will take place by gradually increasing the interaction levels for the pairs, triples etc. with relatively low total rank. And this again is probably often brought about by means of voluntary associations, not of the trade union type referred to above, but of the usual criss-crossing type found in modern societies.

This whole set of social processes may be illustrated diagrammatically as follows, where the circle is one rank dimension, the distance from the center another:

DIAGRAM 1. An illustration of the four types of rank systems.



The diagrams correspond to the definitions given in table 10. In the first phase high rank-concordance and interaction-dependence make the underdogs dependent on *their* top dog; each top dog has *his* underdogs (the slave-owner relative to his slaves, the factory-owner relative to his workers in early capitalist society, the feudal lord or modern *latifundista* relative to his peasants; the colonial powers relative to their colonies, the big powers relative to their «sphere of interest»). Within this system the underdogs may protect themselves against excessive exploitation on the part of the top dogs by forming vertical associations of the underdogs belonging to that

particular top dog (workers' associations, cooperation between Latin-American countries to strengthen their bargaining position relative to the top dog, the United States, cooperation between Eastern European countries for the same purpose relative to the Soviet Union). But this is not the same as the situation depicted in the upper right-hand corner: here all underdogs unite in the common cause against the common class enemy and we get the *horizontal* trade unions uniting workers of the same kind all over the country — eventually all over the world. The international parallel would be the (so far not realized) trade union of all small nations, pitted against the five big powers. For this to happen there must be a change of focus and loyalties from the sphere dominated by the top dog to other underdogs in similar positions all over the world; and the conditions under which this change takes place are not too well understood.

Then, finally, there are the third and fourth cases where top dogs and underdogs are mixed. In the figures the big and small circles are mixed, and there is no clear pattern of big circles in the centre and small circles in the periphery. However, in the third case interaction is still most pronounced in the centre of the system — only in the fourth case has this, the last of the feudal characteristics, disappeared.

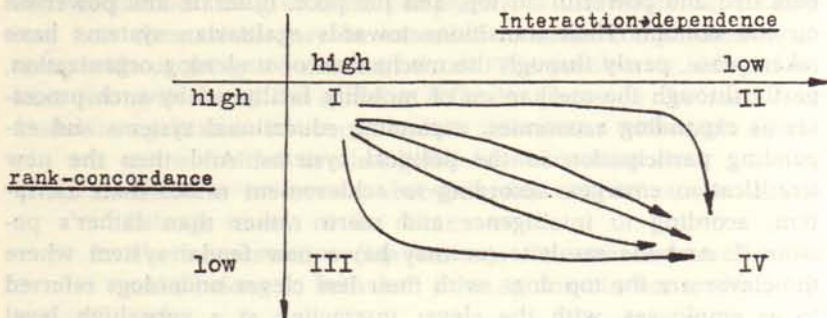
Needless to say, all these types are ideal types; they are base-lines against which empirical systems can be compared. Such investigations are currently carried out at the International Peace Research Institute in Oslo, both for international systems and interindividual systems, and over time so as to test the dynamic theory here developed¹⁸.

Two important questions in this connection remain to be discussed in this section: is there no direct line of transition from the feudal system to the egalitarian system? And what about the egalitarian system? Is that the end of the story — is there no further development from that stage on?

¹⁸ For some preliminary results, see the articles by Johan GALTUNG, Manuel MORA Y ARAUJO and Simon SCHWARTZMAN: «The Latin American System of Nations: A Structural Analysis», PRIO 1965, mimeo, and GALTUNG, Johan: «East-West Interaction Patterns», *Journal of Peace Research*, 1966, pp.146-177. The general content of the research is to use, systematically, a high number of possible objective and subjective rank dimensions as independent variables, and see how all possible kinds of unilateral, bilateral and multilateral interaction variables vary as a function of the rank of the unit, pair, triple, etc.

As to the first question, empirical investigations along these lines will probably reveal many processes of gradual transition from type I to type IV systems that do not go via types II or III. Thus, the heavy arrows in diagram 1 are there to indicate the two *components* of this process — viz., decrease in interaction-dependence and decrease in rank-concordance — and there is no principle according to which the process from I to IV cannot take place along any road in the two-dimensional space given below:

DIAGRAM 2. *The rank-concordance x interaction-dependence space.*



Since the two extreme cases — the process via type II and the process via type III — are so different (the former seems more likely to be of a revolutionary nature, the latter of an evolutionary nature) an important topic of investigations in this field is precisely the conditions that favor and impede one or the other of the two types of transition from feudal systems to egalitarian systems.

The second question: *after egalitarianism, what?* is easily discussed, if not necessarily answered in a satisfactory way, within the framework of this model. The answer is given in terms of the analysis in the preceding section, where reasons why the feudal system seems to be more stable than the others are outlined. In the egalitarian system rank-concordance and interaction-dependence are not reinforcing each other since they are both absent. But rank has not been abolished, and we know of no system pursuing values (which action-systems by definition do) where units are not differentially evaluated (i.e., ranked) in terms of their ability to realize the

value(s) of the system. This means that the egalitarian system will break down for one or both of two reasons: either units will start equilibrating and avoiding rank incongruence relative to the old rank dimensions, or else some new rank dimension is introduced or emerges. Thus the system tends to slide back to a high level of rank-concordance, and according to the general theory in the preceding section interaction-dependence will then easily follow. And this means that one is back at the point of origin again: the feudal system, but usually stratified by some new variable(s). To take the much discussed case today of interindividual systems: they used to be stratified according to the occupational position of the father in highly rank-concordant and interaction-dependent systems with the wealthy, well educated and powerful on top, and the poor, illiterate and powerless on the bottom. Then transitions towards egalitarian systems have taken place, partly through the mechanism of underdog organization, partly through the mechanism of mobility facilitated by such processes as expanding economies, expanding educational systems and expanding participation in the political systems. And then the new stratification emerges, according to achievement rather than ascription, according to intelligence and merit rather than father's position¹⁹. And the result is (or may be) a new feudal system where the clever are the top dogs, with their less clever underdogs referred to as employees, with the clever interacting at a very high level in their self-styled elite, and the less clever doing considerably less so. According to the model what would follow would be the organization of the less clever to arrive at a better bargaining position, or the introduction of new rank dimensions along which the less clever can drift upwards and the more clever downwards — or both²⁰.

Thus we see the development of systems as a pendling process with the feudal system and the egalitarian system as extremes, and the feudal system as the most stable point. But all feudal systems will in the long run lead to their own destruction because of their built-in contradiction — the exploitation that results so easily from the combination of rank-concordance and interaction-dependence. There will be a claim for egalitarianism, but once that has been

¹⁹ This is, of course, the major point in the meritocracy debate initiated by Michael Young in *The Rise of the Meritocracy 1870-2033* (London: Thames and Hudson, 1958).

²⁰ Three such possible dimensions that are less heavily correlated with intelligence are creativity, integrative capacity and different types of emotional achievement. This will be elaborated in a forthcoming article on the theory of top dog-underdog conflicts at the level of individuals.

arrived at the system will tend to slide back to more feudal varieties, whether they are organized around the old stratification variables or around some new ones.

And this circling or spiralling process, depending on whether the old or new rank-dimensions are used, is what is referred to as *history*²¹.

6. Some Further Elaborations

So far we have only discussed the case of *one* system of actors, individual or national, ranked by a set of dimensions and interacting with each other. To give more perspective to the theory, let us indicate how these ideas may be extended to more complicated structures, without going too much in detail. The problem is: what if we have *two* systems, in the same or different phase on the road from feudal to egalitarian structure, and in interaction with each other?

It seems fruitful to distinguish between three cases:

1. There is *no overlap* between the two structures: a unit belongs to one or the other,
2. There is *some overlap* between the two structures: some units belong to both and some to one but not to the other, and
3. There is *complete overlap* between the two structures: all units of one belong to the other.

As an extreme case of the latter one might include the case of identity between the two structures.

As an example of the first, we may cite the East-West system consisting of the 15 NATO nations, headed by three top dog powers, the United States, the United Kingdom and France, and the Warsaw treaty system consisting of one big power, the USSR and smaller powers²². Both structures have feudal characteristics in themselves in so far as there is both rank-concordance and interaction-depen-

²¹ The usual Marxist scheme is, in our opinion, too narrow here because it (1) is too one-dimensional (the top dog being the owner and the under-dog being the non-owner of the means of production), (2) is too tied to a particular type of rank-dimension and (3) is less open to the idea that history may offer circular or spiralling patterns of change rather than some type of rectilinear «development». But the present scheme can, perhaps, be seen in part as a generalization of some types of marxist analysis.

²² See GALTUNG, Johan, «East-West Interaction Patterns», *Journal of Peace Research*, 1966, pp. 146-177.

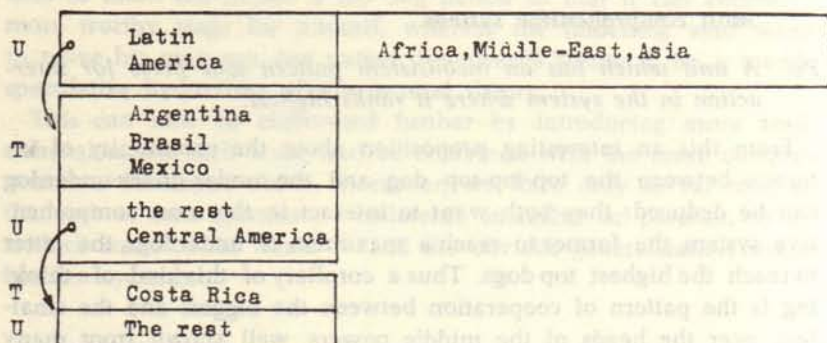
dence, and the rank-dependence is even more pronounced between the two structures. It should be noticed that this interaction-dependence is highly compatible with the doctrine of conflict-polarization: when there is conflict between two structures the tendency is to break off interaction, starting with underdog interaction so that interaction becomes the monopoly of the top dogs. Thus in the feudal interaction pattern between two feudal structures there is already built into the structure a readiness for conflict, the kind of «stripping for action» that an author in the theory of polarization writes about²³. This should be remembered in connection with diagram 1: it is actually a feudal system with five feudal subsystems, and although we assume concentration of interaction on the top, we do not assume in any sense that the interaction is always positive. There may also be conflicts and destructive behavior, and the theory is then that this will be between the top dogs more than between the underdogs (although the top dogs may let the underdogs do the fighting) from different structures. Since there is little interaction at the bottom, this means that the total structure is highly vulnerable to top dog conflicts: there is little or no underdog interaction that can cushion the effect of top dog struggle and keep the system interacting.

What will then happen if the underdogs of the two structures nevertheless start interacting and form an underdog organization? One probable consequence is that it will unite the top dogs to fight better for common top dog interests, for instance in efforts to preserve their status as big powers. The obvious individual level analogy can be taken from the theory of employer-employee relationships: it is not unreasonable to postulate that trade unions have made economic competition and conflict between employers less bitter and less pronounced since the «capitalists» have been forced into positions of cooperation to withstand better the pressures from united labor unions²⁴.

As an example of the third case above, we may cite the whole world if we look at it as in this diagram (see next page):

²³ See COLEMAN, J., *Community Conflict* (Glencoe: The Free Press, 1957).

²⁴ Lewis Coser discusses some aspects of this in *The Social Functions of Conflict* (Glencoe: The Free Press, 1956).

DIAGRAM 3. *The Chinese boxes' model of the world.*

The whole world has its top dogs (the big powers, the OECD countries, the «rich» countries, depending on what criterion is used) and its underdogs, with rank-concordance and interaction-independence. Thus, whereas there are 440 flights a week between North America and Europe, there are only six flights a week between Latin America and Africa. And this pattern reappears if one studies the Western Hemisphere as a subsystem, reappears again if one studies the Latin American system as a subsystem of the Western Hemisphere, and reappears again if one studies the Central American system as a subsystem of the Latin American system²⁵. Thus, to be an underdog in the latter (the case of Honduras) is to be the underdog in an underdog system in an underdog system in a feudal system which is a subsystem of the total world. On the one hand, this may be said to be a sad position, on the other hand it has the virtue of being consistent: here is a kind of equilibrium between levels.

For, obviously, one can now start again with the theory of rank disequilibrium, but this time apply it to systems and subsystems that relate to each other as Chinese boxes. If we assume that all units want to maximize their rank and want to interact with other units of maximum rank, then we get the following propositions:

P₁: *A unit which is consistently top dog will press for interaction that gives it widest influence, i.e. the most comprehensive system.*

²⁵ See Johan GALTUNG, Manuel MORA Y ARAUJO and Simon SCHWARTZMAN, «The Latin-American System of Nations: A Structural Analysis», PRIO 1965, mimeo.

- P₂: *A unit which is consistently an underdog will press for interaction that leads to contact with the highest top dog, i.e. the most comprehensive system.*
- P₃: *A unit which has an inconsistent pattern will press for interaction in the system where it ranks highest.*

From this an interesting proposition about the community of interests between the top-top-top dog and the under-under-underdog can be deduced: they both want to interact in the most comprehensive system, the former to reach a maximum of underdogs, the latter to reach the highest top dogs. Thus a corollary of this kind of thinking is the pattern of cooperation between the biggest and the smallest, over the heads of the middle powers, well known from many systems²⁶.

The whole system can now be complicated further if we no longer assume that the rankings are made according to the same criteria in the structures, whether they are collateral or inclusive, and if we introduce the second case with partial overlap. However, these themes will not be developed here.

But there is another development which is worth mentioning: the relation between systems of different types, one at the national level and the other one at the individual level. Imagine that there is only one rank-dimension in each: what would then be the relationship between, for instance, an underdog in a top dog nation and a top dog in an underdog nation? Both are in rank disequilibrium, so both will have an incentive to equilibrate. They are also rank-incongruent to each other, which means that they should have a particularly uneasy relationship (the poor white settler and the colored political leader), leading to aggressiveness or mutual isolation. Equilibration may take place in many ways: the top dog in the underdog country may migrate to a top dog country to obtain equilibrium (permanently, or as a diplomat or representative of some other kind); and the underdog in the top dog country may migrate to an underdog country and establish himself as a top dog over the natives (the colonizer, the lower-rank members of technical assistance or diplomatic missions,

²⁶ This is one possible explanation why the periphery so often conforms most to the centre, whereas opposition and «difficulties» come from the middle. But there are also other explanations; the periphery is marginal and has to prove its right to belong, and in the middle there is more accumulation of disequilibrium that may function as a structural source of aggression.

etc.). Then there is the more active underdog nation top dog who tries to make his nation a top dog nation so that it can become a more worthy stage for himself, whereas the underdog who wants to move his own top dog nation downwards seems to be a merely speculative by-product of the general theory.

This can now be elaborated further by introducing more rank-dimensions on each level, and be combined with the more complex structure developed above. Moreover, we have only so far touched the case of *two* systems — collateral, inclusive or parallel, to introduce some useful terms — and the obvious generalization would be to *n* systems.

7. Conclusion

We have presented a system for analysis of rank systems, with operationalization of the concepts of the system. Connected with the system is a set of propositions and a general dynamic theory of change, which is presented as a paradigm for the analysis of social systems, since all social systems will have to be rank systems, or tend towards rank systems. The whole theory is centered around such simple ideas as the mobility postulate, the equilibration postulate, and so on. It is claimed that this system has a considerable explicative power.

But its power is, of course, not unlimited. Many conflicts are not about rank but about other scarce values. Nevertheless, the system of analysis has its heuristic value in addition to its explicative and predictive values, and has already proved fruitful in empirical investigations.

CROSS-NATIONAL SOCIOLOGY / XI, 1970/1971

Steno Stenroos

RECHERCHES COMPARATIVES D'ORDRE INTERNATIONAL

CROSS-NATIONAL RESEARCH

Each New World Congress of Sociology opens up a new horizon of questions about the international status of the discipline. How much success have we had in breaking down the barriers of national, institutional, cooperation and cross-nationalizing research methods and research patterns? How much have we done to bridge the empirical divide and to explore the true world-wide science of society? How far have we come, anywhere, towards the development of a professional profession no longer dominated and controlled by national and particular ideological camps?

Questions along these lines have been raised at each of the World Congresses held under the auspices of the ICSA. At the 1965 Congress we were in our second year of existence and our failures and disunity were obvious and well known. But in greater detail, to discuss our failures, to spread our own and experience in cross-nationalizing research, to plan primary issues, and to work out a strategy for the development of a new professional identity, we have had to rely on the efforts of the Executive Committee of the ICSA and the efforts of the national sociologists of the international field.

A good deal of energy has been expended in the planning of the 1970 Congress, and during the winter months of 1970-1971.

1. See the report of the Executive Committee of the ICSA, 1970, *Journal of Cross-National Sociology*, 1, 1-4. The report is published by the Executive Committee of the ICSA, 1970, 1-4. The report is published by the Executive Committee of the ICSA, 1970, 1-4.

CROSS-NATIONAL SOCIOLOGY : AN INTRODUCTORY NOTE

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Each new World Congress of Sociology confronts us with a series of questions about the international status of the discipline : how much success have we had in breaking down the barriers of communication, cooperation and cross-recruitment between national «schools» and research networks ? how much has been done to broaden the empirical basis and to improve the analytical tools for a world-wide science of society ? how far have we moved, if at all anywhere, towards the development of an internationally recognized profession no longer decisively tied to one particular country and one particular ideological camp ?

Questions along these lines have been asked at each of the five World Congresses held under the auspices of UNESCO since 1950. At the Sixth Congress we want to take stock of our achievements and our failures and discuss the strategies and tactics of internationalization in greater detail. To this end, a series of over-all papers on issues and experiences in cross-national research will be presented in a plenary session and a wide variety of pinpointed reports will be discussed in a number of parallel sessions organized by the Research Committees of the ISA and by the European Co-ordination Centre of the International Social Science Council.

A great deal of energy and quite a few million dollars have been invested in the planning and execution of cross-national studies during the sixteen years since the First World Congress in Zürich¹.

¹ For a review of these developments see R.L. MERRITT and S. ROKKAN, (eds.), *Comparing Nations*, New Haven, Yale University Press, 1966. A series of bibliographies of comparative cross-national research have been planned by the International Committee on Social Sciences Documentation : the first of these, *Comparative Survey Analyses*, was prepared and circulated in mimeographed form in 1962 and has recently been expanded for regular publication. R.M. Marsh has prepared a trend report on «Comparative Sociology 1950-1963» for *Current Sociology*, Vol. XIV, 1966.

The history of these efforts has yet to be written: in these brief introductory notes I shall confine myself to a few reflections on the experiences made and suggest a broader perspective.

The current generation of sociologists has, at least in the nations of the West, been caught in cross-fire of two conflicting sets of demands: on the one hand they have felt impelled to concentrate their efforts of data-gathering and analysis in the many neglected fields of inquiry within their own nation; on the other hand they have felt increasingly aware of the limitations of single-site studies and increasingly convinced of the methodological rationale and the theoretical pay-off cross-community, cross-national and cross-cultural research. The market conditions for decisions in the one direction or in the other have varied enormously from region to region. In the United States the resources of funds and personnel have been large enough to allow a small but expanding phalanx of comparatists to concentrate their work on cross-national and cross-cultural studies. In Latin America the national resources have been meager and the decisive thrust toward the establishment of regular research services have come from abroad, through the organization of cross-national studies². In Europe there has been a continuous increase in the flow of funds for social science research but a marked concentration on distinctly national tasks. Europe offers a remarkable range of opportunities for detailed cross-national research: there is a wealth of data still to be tapped, there are broad bodies of national experts to draw on for advice, there is increasing interest among policy-makers in studies cutting across the national and regional units³. Curiously little has as yet been done to make use of these opportunities. Interestingly, some of the first initiatives came from American scholars and were backed by American funds. Europe-initiated and Europe-financed studies have so far been few and far between. The Research Committees of the International Sociological Association have prepared the ground for important regional initiatives but so far the plans for concerted action can be counted one or two hands. The Committee on Social Stratification and Social Mobility pioneered the organization of a series of cross-national replications and has offered a fruitful forum for methodological and

² For details see the report by GINO GERMANI on the ISSC Conference in Buenos Aires in 1964, *Soc. Sci. Info.*, 4(2), 1965, pp. 150-172.

³ See the recent OECD report *The Social Sciences and the Policies of Governments*, Paris, OECD, 1966, especially pp. 79-80.

substantive discussions⁴: the current three-country project *Metro-polit* is a direct outcome of discussions within the Committee. Europe is clearly ripe for a variety of cross-national initiatives: what has been lacking has been an organizational focus, a concrete institutional basis for concerted action. Alexander Szalai's spectacular success in getting research workers in a dozen countries interested in joining the cross-national time budget study must be understood against this background. The UNESCO decision to set up an European Co-ordination Centre at Vienna came just at the right moment: communications between sociologists in the East and the West had reached a point where co-operation on concrete tasks of empirical research were possible, and the regional organizations of the West had concentrated their efforts on purely economic studies and failed to offer a minimum of infrastructure for cross-national research in central fields of sociology.

The initial successes of the Vienna Centre hold an important lesson for the future: cross-national research requires an institutional framework, an organizational basis. Great plans and important pilot studies can result from haphazard encounters of enthusiasts but a cumulative tradition of cross-national research can only develop within a clear-cut organizational setting. The demographers and the economists have been able to build up broad international professions within the frameworks of large-scale intergovernmental organization: the UN, the Regional Commissions, the World Bank, the OECD and the EEC all offer continuous opportunities for experiences in the handling and evaluation of data masses from wide ranges of countries and help to develop genuine cross-national expertise.

There is no such firm basis for cross-national endeavours in the other social sciences: in anthropology, in sociology, in political science. There is some movement in the fields closest to demography and economics. It is interesting to observe that the two Research Committees under the International Association which have come closest to the development of a cumulative programme of cross-national studies are those focussed on the Family and on Mobility: both of them centering on variables close to the concerns of demographers

⁴ See especially S.M. MILLER, «Comparative social mobility», *Current Sociology*, 9, 1960, pp. 1-89; D.V. GLASS and R. KÖNIG (eds.), *Soziale Schichtung und soziale Mobilität*, Cologne, Westdeutscher Verlag, 1961; G. CARLSSON, D.V. GLASS and K. SVALASTOGA, (eds.), «Social Stratification and Mobility», *Acta Sociol.* 9(1-2), 1965, pp. 1-182.

and both relying heavily on data from enumerations or from surveys close to the model of the census.

In other fields of sociology it has proved much more difficult to develop continuous programmes: there have been no institutional frameworks for long-term commitments to cross-national inquiries and, still worse, hardly anything has been done to evaluate or to standardize the production of data across any two or more nations.

Take the case of political sociology. Enormous masses of data for analysis are produced in every nation every year: election statistics, polls and surveys, information on elite characteristics. But no international agency has seen any need to train any sizeable body of experts in the handling of such data: the data gathering and the analysis are almost invariably done *within* each nation and there is no organizational framework for continuous planning and promotion of research *across* nations.

In the face of these difficulties a number of strategies have been tried out, some with significant intellectual pay offs, but none of them as yet with assured cumulative effects.

I shall confine myself, largely for purposes of illustration, to three such strategies:

(1) the Tingsten-Duverger-Lasswell line, the collation and comparison of «process-produced» political statistics, be they electoral counts, organizational bookkeeping data or regularly assembled information on key personnel⁶;

(2) the Lipset line, the assembly, evaluation and analysis of raw data from independently conducted field operations, primarily from polls and surveys⁶;

(3) the Almond-Verba line, the design and execution of explicitly comparative sample surveys across a number of distinct national populations⁷.

Each of these lines of inquiry has produced worth while results but it has proved remarkably difficult to ensure cumulative continuity in the systematization of the evidence across countries. No one has yet

⁶ H. TINGSTEN, *Political Behaviour*, London, King, 1937, new. ed. Totowa, Bedminster 1964; M. DUVERGER, *Les partis politiques*, Paris, Colin, 1951; H.D. LASSWELL et al., *The Comparative Study of Elites*, Stanford, Stanford University Press, 1952.

⁶ S.M. LIPSET, *Political Man*, Garden City, Doubleday, 1960; R. ALFORD, *Party and Society*, Chicago, Rand Mc Nally, 1963.

⁷ G. ALMOND and S. VERBA, *The Civic Culture*, Princeton, Princeton Univ. Press, 1963, cf. review by S. ROKKAN, *Amer. Pol. Sci. Rev.*, 57(3), 1964, pp. 676-679.

tried to «do a Tingsten» for post war elections⁸. No one has as yet tried to assemble a comparative compendium of historical and statistical information on political parties to fill in the many lacunae in Duverger's work. Lasswell's and Lipset's efforts generated longer-term programmes of research but enormous masses of data on elite recruitment and mass politics are still waiting to be systematically collated, evaluated and analyzed in a comparative context. There has been a tendency to «skim the cream» off the most accessible batches of comparative data and to pass on to new tasks at the first signs of routinization. This would be unthinkable in economics and in demography: the professions are broad enough to encourage a division of labour between the theorists concerned to test out new models and new methods and the empiricists concerned to gain some measure of control over the onrushing masses of information. The current movement towards the development of computer archiving of data must be understood in this perspective: the data banks will have to be built up by hard-headed and down-to-earth empiricists but will leave the theorists a number of degrees freer to explore new hypotheses and new analytical notions⁹. However international in their coverage, however, the data banks cannot in themselves create the intellectual environments for effective advances in comparative research: there is no easy substitute for the intensive interaction of individual experts within organized networks of the type built up in economics and in demography. In fact the rush to feed computers with unevaluated data from a variety of different countries may produce a great deal of numerological nonsense: it will be essential to build in safeguards through close contacts with local informants and experts. Kingsley Davis has recently issued strong warnings against the «ready-data» schemes: there is the risk «of progressive diffusion of misinformation» and the danger of serious misinterpretation of analysis findings through ignorance of variations in the cultural, social and political contexts¹⁰. This, obviously, is not an

⁸ A first step in this direction: the publication of the first volume of the *International Guide to Electoral Statistics* (Paris, Mouton, 1966).

⁹ On the current archival ferment see R.L. MERRITT & S. ROKKAN (eds.), *Comparing Nations*, and S. ROKKAN (ed.), *Data Archives for the Social Sciences*, Paris, Mouton, 1966.

¹⁰ K. DAVIS «Problems and Solution in International Comparison for Social Science Purposes», paper for the International Conference on Comparative Social Research in Developing Countries, Buenos Aires, Sept. 1964, cf. the arguments for the archiving of cross-country data in B. RUSSETT et al., *World*

argument against the archiving of data but a plea for the development of broader cross-national analysis centres: it is not enough to make the data computer readable; they have to make empirical and analytical sense and they have to be evaluated in the light of thorough contextual knowledge. The strict evaluation procedures established for the data archive of the Inter-University Consortium at Ann Arbor, Michigan, suggest a model for operations in other countries: the object is not the accumulation of *any* *prima facie* comparable data but the organization of a systematic file of information likely to offer *clear analytical pay-offs*.

Data archives of this type seem destined to serve an important function in the planning of fresh *field operations*: archives of time series data for localities have already proved useful in the design of nation-wide sample surveys¹¹ and backlog data from earlier surveys are increasingly used in calculations of alternative strategies of further data-gathering¹².

Erwin Scheuch, in a recent paper¹³, reported that a Latin American social scientist had reacted to a plan for a survey by saying that it implied a «know-nothing» approach to the population under investigation, a studied posture of ignorance of social-structural facts already known. The sample survey inherited this studied ignorance from the full-suffrage election and the referendum: the early polls were deliberately modelled on these political institutions and even very sophisticated survey practitioners are still heavily influenced by this heritage. Under the old *régime censitaire* elections reflected the social structure of the national population: through the universalization of the suffrage and the introduction of secrecy, the act of voting was isolated from the social structure.

The poll and the survey start out from the same equalitarian postulates: every adult is given the same chance to express himself or

Handbook of Political and Social Indicators, New Haven, Yale University Press, 1964, and in H. ALKER Jr., «Research Possibilities Using Aggregate Political and Social Data», to appear in S. ROKKAN (ed.), *Comparative Research across Cultures and Nations*, Paris, Mouton, forthcoming.

¹¹ See S. ROKKAN and H. VALEN, «Archives for Statistical Studies of Within-Nation Differences», in R.L. MERRITT and S. ROKKAN, *Comparing Nations*.

¹² For a remarkable example of the use of past data in determining optimal strategies of new data gathering see Charles S. MAYER, *Interviewing Costs in Survey Research. A Computer Simulation Study*, Ann Arbor, University of Michigan Press, 1964.

¹³ E. SCHEUCH «Progress in the Cross-Cultural Use of Sample Surveys», to appear in S. ROKKAN (ed.), *Comparative Research across Cultures and Nations*.

education, of level of articulateness. This procedure is obviously justified in the study of elections: each adult has formally equal weight and has the same chance of influencing the fate of the Government. But what about studies of other areas of behaviour, processes of communication, attitudes to issues in the community, the spread of social, cultural and political innovations?

The argument generally heard for cross-sectional surveys in such areas is that one first has to establish the facts of the structure before herself, irrespective of position in the social hierarchy, of level of moving on to the pinpointed surveys of strategic sectors of the population. But there is still a tendency to stick to the old cross-sectional model even after large quantities of information has been established. This seems to me to be a *basic rationale for the development of archives of secondary analysis*: the more we know about the results of earlier studies the easier it will be to design new studies and particularly to decide on strategic groups requiring further study.

This is one point on which the procedure of the already classic Almond-Verba study might have been decisively improved. Such costly research enterprises should be preceded by detailed scrutiny of the data already at hand for each country. In some cases such scrutiny may of course still lead the researcher to decide on a cross-sectional approach in each country. It may well be that the Almond-Verba decision to carry out cross-sectional surveys in the United States, the United Kingdom, Germany and Italy, was based on such analyses of existent data but the decision to exclude the rural communities of Mexico was clearly based on quite different considerations of fieldwork conditions. It seems to me that it would have been better to limit *all* the samples to populations at the same level of urbanization. This would not only have increased the overall comparability of the five samples but also allowed much more detailed analysis for the same investment of research dollars. Obviously, to make such a decision it would have been essential to carry out detailed analysis of rural-urban differences in the existing bodies of survey data. With the development of data archives this type of preparatory analysis should become possible for more and more countries and in the future it ought to become a matter of standard practice to fit new efforts of data gathering into the broader corpus of cumulating evidence for each country.

There is an obvious danger, to quote Mattei Dogan, that data archives may degenerate into *cimetières de cartes perdues*, but it

seems to me very difficult to limit their size through priority rankings of topics of research. The best criteria are probably the range of variables covered in each study and the variety of analysis possibilities it allows: the more varied the possibilities the more useful will the archive be for future research workers planning fresh data-gathering enterprises.

But all such efforts only make sense within interlocking programmes of active co-operation among social scientists intimately familiar with conditions in the countries under study: «instant comparisons» through computer manipulations are bound to boomerang. The traditional exchanges of papers at international conferences may still help to bring together «opposite numbers» but the decisive confrontations must come *before* the papers: at the stage of data gathering, data evaluation and comparative analysis. The demographers and the economists have built up the infrastructure for such confrontations: the other social scientists are still groping for solutions. UNESCO and the International Social Science Council have seen the need for active exploration of new strategies in the advancement of cross-national comparisons and have tried to draw up a long-term programme to this end¹⁴. The Research Committees of the International Sociological Association have contributed significantly to the comparatist ferment since the early 'fifties': there is very reason to hope that they will devise schemes of co-operation and confrontation that will add decisively to the broader programme now under development.

¹⁴ See S. ROKEAN, «Trends and Possibilities in Comparative Social Science», *Soc. Sci. Info.*, 4(4), 1965, pp. 139-165.

«BASIC» DIMENSIONS IN THE COMPARATIVE STUDY OF SOCIAL STRUCTURES

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A crucial problem in all scientific work is how much to oversimplify reality. There is of course no over-all solution to this dilemma. The solutions vary from subject to subject and within the same subject from problem to problem. In studies of social structures the degree of simplification varies considerably in different kinds of studies. In descriptions of a single national social structure, and even in comparisons of the social structure of several countries, there is a tendency to search for unique features. Naturally, sociological descriptions of a social structure have to be ordered in accordance with some theoretical concepts, such as social institutions, social groups and demographic characteristics. Nevertheless, the theoretical concepts provide only a very broad frame of reference, and the descriptions aim at tracing qualitative and unique national attributes. Sociological descriptions of national social structures are, to paraphrase the title of a book by Gendell and Zetterberg¹, sociological almanacs organized around a few key concepts.

There does not seem to exist any single theory or even a general classification scheme which alone is sufficient for good descriptions of national social structures. In descriptive studies of social structures the researchers usually borrow elements from several different theories or theoretical approaches. Of course, in such descriptions it is important to develop some key themes in order to provide a readable account. Good descriptions of national social structures are often attained by combining a sociological and historical approach. The chronological principle of the historical approach provides a main thread where sociological theory fails to do so.

There are of course fruitful and promising sociological systematizations especially developed for studies of macro-properties and proces-

¹ MURRAY GENDELL and HANS L. ZETTERBERG (eds.), *A Sociological Almanac for the United States*, New York, 1961.

ses of total societies. One such systematization, a morphology based on evolutionary and functionalistic principles, is presented by Talcott Parsons in the joint volume *Theories of Society*². Another promising approach is developed by Bo Anderson and James D. Cockcroft in a study of Mexican politics. They start with a description of the goal-structure of the political system and proceed to describe the position and functions of specific institutions and groups in implementing the goals. By goals they mean aims that are consciously promoted by those in the polity who make major decisions. The analysis focuses on the political structure, but the same kind of analysis can be carried out on a broader basis, for example by starting from the goals promoted by decision-makers in all important institutional realms³. In any case, these kinds of sociological systematizations require an enumeration of all important institutions and groups and an analysis of their specific position and functions.

The methodology used in studying a great number of countries is of course different. Instead of searching for unique properties, comparisons of a large number of countries usually start by finding or isolating a small number of basic (or fundamental) dimensions on which the countries under study vary. Instead of enumerating specific institutions and/or groups and their functions, studies of comparative social structure will usually start with what can be labelled *state-descriptions*. The studies will show how different countries vary on dimensions, such as degree of mobilization, degree of differentiation in the division of labour, degree of modernization, etc. The values of these usually quantitative variables denote states or general conditions in the countries under study, without necessarily specifying the behaviour in particular institutions and groups. A comparative approach that uses a set of fundamental structural dimensions as a point of departure leads to generalizations of a higher order than descriptions of national social structures in terms of institutions and social groups. To be sure, the former approach leads to greater scientific economy but, on the other hand, it also leads to a greater degree of simplification than the latter. As the wiseacres say, one can not both have one's cake and eat it.

² Talcott PARSONS, *Differentiation and Variation in Social Structures, Introduction*; Talcott PARSONS, Edward SHILS, Kaspar D. NAEGELE and Jesse R. PITTS (eds.), *Theories of Society*, Vol. I, New York 1961, pp. 239-264.

³ Bo ANDERSON and James D. COCKCROFT, «Control and Cooptation in Mexican Politics», *Technical Report N° 16 from the Laboratory for Social Research, Stanford University*, 1965.

In this paper the aim is to discuss some problems related to the use of fundamental or basic structural dimensions in comparative research. The discussion applies not only to inter-country differences but also to analyses of intra-country variations, i.e. to studies in which regions or communities are used as units of observation.

Sets of Basic Dimensions as Causal Models

In striving to establish a set of basic structural dimensions one takes advantage of the fact that observed structural variables correlate among themselves. Thereby it becomes natural to try to explain the variation in a great number of observed variables by the variation in a few theoretical unmeasured variables. These theoretical variables are usually conceived as latent or underlying fundamental dimensions. The tendency to look for latent structural dimensions has been greatly facilitated by the rapid development of quantitative techniques and corresponding computer facilities. The most typical methods for finding basic dimensions are perhaps provided by factor analysis and other closely related models: in these it is considered that a small number of unmeasured variables can be substituted for a great number of observed variables.

Of course, the application of statistical multivariate techniques is not the only way to isolate basic structural dimensions. The traditional method is that of theoretical speculation and theory-building. Classical sociological typologies, such as Emile Durkheim's mechanical and organic solidarity and Ferdinand Tönnies' *Gemeinschaft und Gesellschaft* denote types of societies, but they are either defined by variables which can be specified and treated as continuous variables, or can as such be treated as continua. Durkheim's typology rests at least on two such variables, namely the degree of division of labour and the amount of pressure toward uniformity. Tönnies' typology as such can perhaps be interpreted as specifying a basic structural dimension, namely how *Gesellschaft*-like a society is. In any case, these typologies both provide a set of structural dimensions and enable state-descriptions of societies.

With the increase of reliable national statistical information, data-archives and international data exchange researchers often start international comparisons with such a great number of variables that adequate conceptualizations with traditional methods of sociological theory-building have become increasingly difficult. Therefore, many

researchers tend to rely almost entirely on quantitative multivariate analyses, of which factor analysis often seems as a convenient method when the number of variables is large. One of the first attempts to look for basic cross-national dimensions with the help of factor analysis was made by the psychometrician Raymond Cattell and his associates⁴. It seems reasonable to say that the set of factors Cattell extracts does not seem to be sociologically very interesting. It is not easy to say «what for» Cattell's elaborate analysis of 72 variables for 40 countries have been subjected to factor analysis.

It is apparent that in factor analysis the set of factors will vary when different observed variables are selected for analysis. When the observed variables are the same it is likely that the use of postulated unmeasured factors will mean that many plausible alternative models, both factor-analytical and others, will satisfy the observed data equally well⁵. It is also clear than even when a factor analysis leads to a simple, clear and meaningfully interpretable structure its usefulness, if used for explanations, will vary very much depending on what is to be explained. All this means that no set of fundamental and basic factors can be established once and for all by factor analysis. In fact, there is an almost infinite number of sets of basic structural dimensions of a society if the sole method of systematic conceptualization is provided by a statistical multivariate technique.

It seems that the question «what for» has been asked altogether too seldom in studies of both inter-country and intra-country variations aiming at extracting basic structural dimensions. It seems reasonable to state that basic structural dimensions should be selected on the basis of their theoretical relevance and usefulness for explanatory purposes. Any other rationale for speaking of basic structural dimensions is difficult to find, since, as has been shown, the mere mechanical application of multivariate techniques would lead to a very large number of sets of basic dimensions. The usefulness of a set of basic structural dimensions will depend on whether we can develop it into a causal model that contains propositions with the basic dimensions as independent, explanatory variables. By means

⁴ Raymond B. CATTELL, H. BREUL and H. Parker HARTMAN, An Attempt at More Refined Definition of the Cultural Dimensions of Syntality in Modern Nations, *American Sociological Review*, Vol. 17, N° 4, 1952, pp. 408-421.

⁵ H.M. BLALOCK, Jr., «Some Implications of Random Measurement Error for Causal Inferences», *The American Journal of Sociology*, Vol. LXXI, N° 1, 1965, pp. 43-44.

of such a causal model we can make certain predictions which can be translated into verifiable hypotheses. It is generally held, however, that only in experimental research we can make causal inferences. Cross-country research, and for that matter macro-analyses of intra-country variations, provide no opportunities for controlled experiments. However, in cross-national research we can make *causal interpretations* on the basis of experience, existing explanatory hypotheses and other available information. This means, among other things, that our causal models really are models; they can never be actually established. No more can we establish a set of basic dimensions as the best and one and only model of structural dimensions. What we can do is check predictions derived from the model against data, and in this way adjust, modify and elaborate the model.

Causal interpretations belong on the theoretical level. In testing hypotheses in cross-national research one actually deals with *co-variations*. Causal models apply to an ideal world; it is assumed that certain causes operate without disturbing influences from factors outside the model. On the other hand, when a causal model is formulated one usually also takes into account information not contained in the model. Causal interpretations are maintained only if they are compatible with propositions in other successful causal models. Because causal models never can be either established or directly rejected, one is inclined to formulate and uphold only such causal models as seem relevant for a whole group of theoretically interesting problems. There would be little use in trying to specify a set of basic structural dimensions unless they had theoretical relevance for many problems on which cross-national research focuses.

One may ask what it really means to make causal interpretations. At the very least, it means that the researcher does one thing. He tries to describe and pin down the intervening processes and mechanisms whereby a variable A affects another variable B. Only if he succeeds in making this description of the intervening processes understandable are we satisfied with his causal interpretation. In experimental research the experimenter is usually able to observe directly how and by what process A affects B. This is not generally the case in non-experimental research. Therefore, the researcher has to take great pains to specify the processes and mechanisms between different variables.

In factor analytical studies of social structures factor analysis can be used particularly in interpreting the intervening mechanisms. In fact, it often seems most fruitful to interpret the factors as describing

intervening mechanisms, particularly if factor analysis is used for serving also theoretical purposes⁶. There are, as Blalock has shown, strong limitations to the application of factor analysis as a causal model. Factor analysis presupposes causal models in which there are no causal links between the measured, observed variables. It is assumed that the observed variables are caused by the underlying basic dimensions or factors, making the intercorrelations between the measured variables completely spurious. These assumptions are often not warranted in the analysis of census data or in studies of societal attributes in cross-national studies. As Blalock points out, it is often reasonable to assume that some of the measured variables stand for causes influencing the variation in other measured variables⁷. However, it does not seem reasonable to use factor structures as completed causal models. When translating a causal model into mathematical language, more appropriate mathematical models than factor analysis can be found, such as regression equations. When the number of variables is large, factor analysis may be seen as a handy method for describing and finding intervening mechanisms and processes. Factor analysis provides help in formulating a causal model, not in the actual checking of it, and is probably most fruitfully used in the very first stages of an analysis.

A Simple Structural Model

In the following pages a very simple structural model or set of basic structural dimensions is presented. Its formulation has followed the procedure outlined in the preceding section. The aim was to explain a phenomenon in the Finnish society by using structural factors as independent variables. The focus was in intra-country variations but, as has been said earlier, methodological problems are very much similar in cross-national research. The units of observation were the Finnish communes, of which there are 548 in the country. Altogether 41 quantitative variables were submitted to correlation and factor analysis. Additional information was obtained

⁶ This point has been very well argued in Olavi Riihinen, *Teollisuuden yhteiskunnan alueellinen erilaistuminen*, Helsinki 1965, pp. 83-88. With an English summary: Regional Differentiation in Industrial Society.

⁷ Hubert M. BLALOCK, Jr., *Causal Inferences in Nonexperimental Research*, Chapel Hill, 1964, pp. 167-169.

from survey data. On the basis of the results and some earlier advanced hypotheses a simple causal model was developed. The factors extracted in the factor analyses were not used to constitute causes or independent variables in the model. The factor analytical patterns were used for obtaining ideas about intervening processes and mechanisms. When the model was formulated there was a systematic search for problems to which the model could possibly be applied. As the model relates to several important sociological problems of theoretical interest, the independent variables in the model have been regarded as a kind of basic structural dimension.

Concretely speaking, the point of departure was a study aimed at explaining geographical variations in lack of legitimacy of the political system of Finland or, in other words, variations in such political radicalism as means a questioning of the legitimacy of the social and political system. As an indicator of such radicalism the Communist vote in parliamentary elections was used. It should be said that the Communist vote as an indicator of radicalism or lack of legitimacy is much more questionable today than it was in the mid-1950-s, the time to which the data refers. However, this change in the meaning of the indicator of radicalism does not have any bearing on the following theoretical discussion.

Conventionally, Finnish radicalism has been divided into two types: industrial radicalism and backwoods radicalism. Therefore, it seemed fruitful to divide the communes into five groups, three of which stood for developed areas and two were composed of more backward communes in eastern and northern Finland. The factor analyses were done separately for each of the five areas. The factors obtained were not exactly the same for the five areas. However, the factors were not used as independent, explanatory variables but the interpretations of the factors were used in describing intervening variables. In the following, references to factor analyses as well as to Finnish society will be omitted. The study shows very clearly that variations in the Communist vote are associated with very different kinds of conditions in developed and in backward areas. Communist support in *developed areas* tends to be strong where (1) political traditions are strong; (2) economic change is comparatively slight and social conditions are stable; (3) migration is slight; and (4) the class structure is comparatively rigid and inequately is strongly perceived. In *backwards areas* Communist support tends to be strong where (1) traditional values, such as religion, have recently declined in importance; (2) economic change is rapid; (3) social insecurity,

measured by unemployment and low housing standards, prevails; and (4) migration is high⁸.

The results point to a theory or, as we prefer to say, to a causal model according to which strong pressures toward uniformity (strong traditions, economic stability, small migration and a rigid class structure) in developed areas tend to lead to strong radicalism, whereas radicalism in backward areas is conditioned by a weak pressure toward uniformity (decline of traditions, economic change, strong social insecurity and high in- and out-migration). Variations in the support of radicalism are in a way explained by two independent variables, one denoting the degree of pressure toward uniformity and the other the degree of division of labour in a society. The division of labour can be assumed to increase with increasing economic development. Speaking in terms of models, we may dichotomize the two variables, cross-tabulate them and obtain the following fourfold table :

		Degree of division of labour	
		Low	High
Pressure toward uniformity	Strong	1. Weak tendency toward legitimacy conflicts : society of mechanical solidarity	3. Strong tendency toward legitimacy conflicts : situation of coercion
	Weak	2. Strong tendency toward legitimacy conflicts : situation of alienation	4. Weak tendency toward legitimacy conflicts : society of organic solidarity

The fourfold table contains some hypotheses which can be operationalized and put to a test. The choice of basic structural variables can, however, be theoretically motivated in many ways. It is obvious that the fourfold table rather well corresponds to Durkheim's ideas about mechanical and organic solidarity. It seems also reasonable to define solidarity as the observe of legitimacy conflicts. Thereby one reaches a similarity with the definition of group cohe-

⁸ The main parts of the empirical study are presented in Erik ALLARDT, «Patterns of Class Conflict and Working Class Consciousness in Finnish Politics», E. ALLARDT & Y. LITTONEN (eds.), *Cleavages, Ideologies and Party systems*, Helsinki, 1964, pp. 97-131.

siveness in small group research. Group cohesiveness is usually defined by the attraction of the members to the group. The wish to stay or leave the group is often used as an indicator of this attraction. This is not a useful indicator in the study of solidarity in a whole society since a citizen cannot withdraw from the political system of the whole society, at least not in the same way as he can withdraw from a small group or an association. The attraction in a whole society can be measured through legitimacy, that is, the wishes of the citizen to change or uphold the rules of the game in the political system of a society.

Even if the model is very simple indeed, it explains some contradictory results. Within small-group research many studies have shown that group cohesiveness increases when the pressure toward uniformity increases. This is the main deduction in Festinger's well-known theory of social comparisons⁹. On the other hand, in political sociology many results point to the contrary. In industrial societies solidarity tends to increase and the likelihood for legitimacy conflicts tends to decrease when cross-pressure increases and the pressure toward uniformity, thus, becomes weaker¹⁰. A simple solution is suggested by the model. Small group researchers have studied undifferentiated groups, whereas political sociologists have investigated highly differentiated social systems. The study of small groups with a differentiated division of labour likewise suggests that group cohesiveness tends to increase when pressure toward uniformity decreases¹¹.

The choice of basic dimensions can be justified also in other ways. It is an old and, nowadays, also a rather trivial assumption that members of large social systems obtain satisfaction mainly by symbiosis, that is by *social exchange* of rewards, whereas the members of small groups obtain satisfaction mainly through consensus, that is through *similarity*. The tendency toward similarity and the tendency toward differentiation have conventionally been considered as the basic group processes¹². In analyses of human interaction one can

⁹ LEON FESTINGER, «A Theory of Social Comparison Processes», *Human Relations*, 7, 1954, pp. 117-140.

¹⁰ E.g. S.M. LIPSET, «Party Systems and the Representation of Social Groups», *The European Journal of Sociology*, Vol. 1, N° 1, 1960, pp. 1-38.

¹¹ HERMAN TURK, «Social Cohesion through Variant Values: Evidence from Medical Role Relations», *American Sociological Review*, Vol. 28, N° 1, pp. 28-37.

¹² KAARE SVALASTOGA, «Den lille gruppe» (the Small Group), *Sociologiske meddelelser*, 2. serie, Nr. 3-4, Copenhagen 1954-55, pp. 41-54.

spot two main approaches: *the study of influence*, and *the study of social exchange*, but in recent years there have been attempts to combine these two approaches within the same theories or models¹⁸. Therefore, in the comparative study of social structures it seems reasonable to combine these two approaches in such a way that the degree of division of labour corresponds to the patterns of exchange, and the degree of pressure toward uniformity to the patterns of influence. With the help of Homans' well-known hypotheses, by describing the intervening processes of exchange one can arrive at the hypotheses about the joint effects of the division of labour and the pressure toward uniformity on solidarity and legitimacy conflicts.

It is a truism to state that the two independent variables mentioned here are some kind of basic structural dimension. Nevertheless, in surprisingly few theories have there been attempts to combine the two dimensions in the same model. The model has indeed many ties to crucial sociological problems. As an example the theorizing around the reference group concept may be mentioned. As is well known, the reference group concept has mainly two denotations. On the one hand, a person's reference group is the group with which he identifies himself and from which he obtains his social norms. On the other hand, the term refers to a group by which a person compares himself when he evaluates his opinions and abilities. The two kinds of reference groups cannot be totally separated, because the group for identification and for comparison is often the same. In Festinger's theory of social comparisons it is assumed that the two kinds of reference groups coincide, since a person tries to be similar to those he is able to compare himself with. It is, however, apparent that the two kinds of groups do not always coincide, and that we need a specification of the conditions under which the groups for identification and the groups for comparisons tend to be the same, different, or are altogether absent.

A preliminary specification of these conditions may be obtained from the structural model presented here. It seems reasonable to say that the two kinds of reference groups coincide in mechanically and organically solidary societies, whereas this is not the case for the two other types mentioned in the fourfold table. In a society

¹⁸ Edmund DAHLSTRÖM, *Påverkan, utbyte och makt. En kritisk analys av några modeller och teorier om makt och interaktion* (Influence, Exchange and Power. A Critical Analysis of Some Models and Theories on Power and Interaction), *The Institute of Sociology at the University of Gothenburg*, March 1965.

with mechanical solidarity the satisfaction of individuals is obtained by similarity and adherence to social norms. Out-groups which a person could compare himself with are not available. As a result the group for identification and for comparison are the same.

In a society with a developed division of labor individual satisfaction is obtained through intensive social exchange. People will be satisfied if they are hindered as little as possible in exchanging rewards. They compare their rewards and costs with those with whom they are in exchange, and they tend to regard their exchange partners as norm-senders. The crucial tendency is to be able to take part in exchange, and it is therefore important to be considerate to the exchange partners. A prototype in this society is Riesman's other-directed individual.

In societies characterized by coercion (N°. 3 in the fourfold table) the individuals have resources for social exchange but are hindered in their participation by a strong pressure toward uniformity. The result is therefore relative deprivation. The outcome is often that the individuals in the society feel strong solidarity with those who are in the same position as they themselves, but they are aggressive towards other groups. The source of social norms is the member-group of the individual but his comparison group consists of other groups who gain more in the exchange processes than his own group does. The groups of identification and comparison tend to be different.

In societies characterized by alienation (N°. 2 in the fourfold table) we obtain a new situation. The division of labour is low, and the individuals have few opportunities for social exchange. At the same time the pressure toward uniformity is low, and the individuals have difficulties in predicting how they themselves and others will behave in different situations. They have neither social norms nor the wishes of exchange partners to rely on. The result is that both groups for identification and groups for comparison are lacking. Apparently a situation in which it is extremely difficult to find any kind of reference group prevails. This kind of situation is not always taken into consideration in theories on reference groups. It is not sufficient to have a theory with propositions about how people choose their reference groups but it is also important to specify at the same time the conditions under which no reference group is chosen.

The two basic dimensions have also some connections with very different kinds of theories and problems. It may be used to make some gross predictions about attitudes to social change and moder-

nization. This is possible because attitudes towards social change and modernization can be conceptually related to our main dependent variable, the legitimacy of the political or social system. Without really presenting the logical connections in full we may just list some hypotheses :

- 1) Individuals living under conditions of low division of labour and high pressure toward uniformity are apt to resist and be hostile to social change.
- 2) Individuals living in conditions of low division of labour and weak pressure toward uniformity are apt to be indifferent to social change. (If hostile reactions occur in these conditions, they will have the character of wish-fulfilment beliefs.)
- 3) Individuals living under conditions of high division of labour and strong pressure toward uniformity are apt to have favourable attitudes towards social change and hostile attitudes to those who resist social change.
- 4) Individuals living under conditions of high division of labour and low pressure toward uniformity are apt to have favourable attitudes towards both social change and the existing social system¹⁴.

These sketchy examples will have to suffice here to show that the division of labour and pressure toward uniformity really are fruitful structural variables. They are theoretical variables for which one can find a great number of indicators in empirical studies. On the theoretical level they can be combined into a causal model that is useful in making gross predictions about happenings in different societies or in different communities.

Some Final Remarks

Of course, it cannot be argued that the basic structural dimensions described here are the only important ones. It can only be said that in many ways they have proved to be fruitful in obtaining theoretically interesting results. In actual studies one has to introduce many additional variables. Two factors which almost immediately come into mind concerning cross-national research are variables measuring national income, and the degree of rigidity in the class structure. One may of course regard the measures of national income as indicators

¹⁴ Erik ALLARDT, «Reactions to Social and Political Change in a Developing Society», *International Journal of Comparative Sociology* (in print).

of the division of labour as there often is a strong correlation with national income variables and other indicators of the division of labour. The rigidity of class structure may be an indicator of the pressure toward uniformity as class barriers usually impose many restrictions on behaviour. Even if there is some truth in these speculations it is apparent that many kinds of additional structural variables are used in actual studies.

There are of course studies which give good ideas about the kind of indicators for the two theoretical variables here described. In Olavi Riihinen's study of regional differentiation in Finnish society by means of ecological factor analyses it is shown that many variables measuring the efficiency of the population group themselves around the same factor, which well may be interpreted as indicating the degree of division of labour. Such observed variables are, e.g., the proportion of the population in economically active age groups, the number of fully employed, the telephone density, etc. The degree of pressure toward uniformity would have indicators expressing different forms of rapid mobility, or instability. Such variables group themselves around a certain factor which well can be assumed to express the dimension of pressure toward uniformity, as strong mobility, if anything, eliminates very strict social control¹⁵.

The two structural dimensions of the division of labour and pressures toward uniformity describe states which characterize whole societies. Such state-descriptions are needed in almost all forms of cross-national comparisons of a great number of societies. Even in cross-national studies based on survey research state-descriptions of the societies under study are clearly needed. Survey-studies often make comparisons of individuals, but it may be said with some justification that the most fruitful sociological studies combine contextual variables with variables standing for individual reactions.

Finally, the two main themes of this paper may be clearly repeated. First, with the increase of statistical information and data-archives the wealth of available data makes it necessary to try to compress the wealth of information on numerous observed variables into sets of a few basic dimensions denoting properties of social structure. Secondly, these basic dimensions cannot be fruitfully formulated on the basis of statistical multivariate techniques alone. The formulation of basic dimensions will clearly lead to more fruitful results if one tries to combine the basic dimensions into causal

¹⁵ Olavi RIIHINEN, *op. cit.*, pp. 134-203.

models of theoretical relevance for many sociologically important problems. The actual model presented here has indeed been very simple. Its purpose has been to illustrate a kind of procedure in the search for basic or fundamental structural dimensions.

PROBLEMS IN THE COMPARATIVE ANALYSIS OF TOTAL SOCIETIES

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I

The comparative approach or «method» in sociology in a sense covers all sociology, as any sociological research is bound to «compare» some variables with others. But beyond this general — and therefore rather meaningless — connotation, the term «comparative» designates a rather special focus of sociological inquiry — that type of problem area which focuses on the investigation of the distribution of social phenomena in different societies or types thereof, or on the comparison of such «total» societies or of major institutional spheres — in terms of their development, persistence or changeability.

The major areas of research in sociology which have usually been designated as belonging to the sphere of comparative research have been :

A. Studies of similarities and of differences in patterns of socially significant behaviour in different social settings or societies — e.g., studies of voting patterns, of crime and delinquency in different societies or cultures.

B. Studies of the development of different types of personality or of motivational and attitudinal patterns in different societal and cultural settings. The most important here were the different studies of culture and personality and of national character.

C. Studies of different types of organizations, such as for instance bureaucratic organizations, labour units, political organizations in different societies.

D. Studies of major types of institutions in different societies. Such studies of comparative institutions could be subdivided into :

a. Analysis of universal institutional norms and settings existing in all societies — such as for instance studies of marriage, family or kinship systems or of political, economic or cultural settings and activities.

b. Analysis of types of cultural systems such as religious beliefs.

c. Analysis of universal groupings with specific types of societies — as for instance age-groups.

d. Analysis of social trends and processes of institutional development — such as urbanization, industrialization, or democratization.

e. Analysis of partial institutions such as specific customs (such as blood-brotherhood, rites de passage, joking relationships or folktales these last are, of course, very closely related to B.).

Last,

E. Analysis of «total societies». Usually such total societies have been compared according to the major types of the predominant institutions or cultural orientations within them.

In this paper we shall concentrate especially on the problem of the comparative analysis of «total» institutional frameworks and «total» societies.

II

The comparative approach or method does not — as has sometimes been claimed — properly designate a specific method in social research, but rather a series of special foci of problems focusing on or emphasizing such cross-societal or institutional aspects or macro-societal aspects of societies and social analysis (Shils 1948, 1961).

In principle therefore the methodological problems involved in these studies are not distinct from those of any other type of sociological (or behavioural) investigation. The choice of the topics for comparative study may, however, necessitate recourse to some specific types of data (such as historical and ethnographic or special psychological data) which in turn may pose some specific methodological problems.

Just as the comparative approach does not constitute a specific method, neither is it a specific «theory» or analytical tool. The state of comparative studies at any stage of sociological research tends usually to reflect the given stage of theoretical or analytical insights and sophistication, in both its strength and its weakness.

However, the very nature of comparative studies, especially their macro-societal perspective, may, as has been rightly pointed out (Bendix 1963), bring out some of the hidden assumptions of many of the more «provincial» or limited studies, may point out some of the weaknesses of their basic analytical assumptions and hence also necessitate their revision.

The central meeting point between analytical theory and metho-

dology in comparative studies — and especially in those studies dealing with institutional variables, and especially with comparison of «total» systems — is the selection of «problems» for comparison and the consequent attempt to construct «types» — types of «societies», institutions, organizations or of patterns of cultural orientations or artifacts.

Although the two — selection of problems and construction of types — may seem sometimes to be opposed to one another, the first being more flexible and concrete and the other more rigid and abstract, in fact they are very closely interconnected, almost identical.

The designation of any problem for comparative analysis — be it the conditions under which modern capitalism, modern bureaucracy or the «feudal» system, or the conditions under which specific types of behaviour develop — necessitates the construction of some «types» of the relevant institutional organizational spheres, or at least always implies such typology. This connection between «problem-setting» and «type-constructions» can be best seen in the various aspects of Weber's work, but can be also easily traced in other works referred to above.

But, needless to say, the construction of types implies in itself more general analytical orientations — although very often these may be hidden behind the very process of setting up typologies. But each type is constructed according to some variables which are assumed — explicitly or implicitly — to be the most important or significant from the point of view of the given analytical problem.

The variety of types and typologies that have been constructed in the history of social thought is very often changing according to the concrete interests of any given research. Yet some very general indications or criteria of such constructions of types — or, in other words, of the variables which seem to be of crucial importance in (especially macro-) societal analysis — can be discerned in the literature.

One is the construction of types of institutions and total systems according to the levels of «complexity» of any given institutional setting. In more recent analytic terms, this approach can be reformulated according to the extent of differentiation and «specialization» of different institutional spheres¹.

¹ Thus, for instance, a comparative analysis of political institutions may start with the classification of different types of political systems according to:

(1) The development to some extent of special political roles and organi-

The second basic approach to comparative typology takes as its point of departure not so much the extent of differentiation or specialization of different institutional spheres, but rather the different types of major value orientations around which the different institutions tend to become focused or integrated.

The third major focus of construction of types has been related to the major regulative mechanisms and frameworks through which institutional and organizational settings are integrated, functioning and changing.

These last two criteria or starting points for construction of types often tend to become fused — even if in different degrees — in many works.

Thus most of the «traditional» anthropological studies dealing with kinship attempt to specify the focal points of the jural and normative specifications of different kinship and descent organizations, be they matrilineal or patrilineal.

Similarly, the approach of Lévi-Strauss and Leach to comparative structural analysis does imply that different societies — and their concrete analysis has till now been mostly limited to primitive and caste societies — can be analyzed in terms of the combination between the different integrative or regulative principles which are inherent, according to their view, in the nature of the major institutional system, be it in the kinship, language, political or economic sphere (Lévi-Strauss 1955; 1958; Leach 1961).

Weber's numerous comparative analyses have placed great emphasis both on the types of integrative orientations and mechanisms that tend to develop in different institutional spheres at different stages of their development (Weber 1920, 1922, 1950).

In more recent times, perhaps the most important example of this type of comparative approach which combines all the three starting

zation; or, in other words, the development of a distinct political-institutional sphere.

(2) The development of a specific political group or ruling class.

(3) The degree of complexity of the political struggle and process, and the scope of political activity in the society. By this is meant, first, the areas of social life and the social groups which are affected by the activities of central political organs and are dependent on those activities for the maintenance of their own solidarity and organization; and, second, the extent of participation of these groups in political activities. Similar attempts at classification can, of course, be made with regard to all other institutional spheres (Eisenstadt 1963).

points can be found in Parsons' seminar paper on the different types of systems of stratification in modern societies. There, as is well known, he attempts to analyze the system of stratification of various (especially modern) societies in terms of their respective different value orientations and in terms of the institutional derivation of such orientations (Parsons 1953).

III

The construction of types for purposes of comparative analysis poses several methodological problems. First is the problem of the units of comparison within which the variables out of which types are being constructed can be meaningfully applied — whether these are «total societies», institutions, groups or cultural tracts — and of the range of time over which such units can be viewed as homogeneous.

Second is the problem of construction of indices through which some of the variables investigated can be compared — indices of cultural orientations, of societal complexity or of organizational structure.

Third is the problem of comparability both of the units of comparison and of the indices — i.e., the extent to which these abstractions are still useful when taken out of their concrete cultural settings.

A fourth basic problem common to most comparative studies — and especially those focusing on institutional or organizational variables — are problems of sampling. Here special importance attaches to the relatively small sample of units (societies) available for comparison and analysis and hence the extent to which it is possible or feasible to construct special intensive comparisons of single or very close uses which may perhaps approximate semi-experimental (albeit usually post-hoc) conditions.

IV

But the construction of «types» or problems for comparative analysis engenders not only methodological but also theoretical and analytical problems.

Such analytical problems tend to become crucially important in the designation of the substantive problems of comparative research,

i.e. in the attempts to «explain» varied types of institutions, organizations or patterns of behaviour in terms of some broader conditions.

In most comparative analyses such explanation aims — albeit in different degrees of articulation and explanation — to elucidate the conditions under which such varied societal types emerge, continue to exist and function, the extent of their variability within different cultural contexts, and the conditions under which they change.

By «conditions» is usually meant either some other (institutional or organizational) types or some more general social and/or psychological laws or forces.

Thus, for instance, the major approaches to construction of types which have been outlined above are closely connected with some major analytical aspects of processes of institutionalization. The criterion of differentiation or specialization indicates the extent and nature of the development of the «basic» characteristics of different institutional and cultural spheres, of the extent to which their respective positions become differentiated from one another and their resources released from mutual ascriptive bonds. The greater such differentiations, the more complex also various regulative and integrative problems in the societies and the greater the readiness of different groups or categories of people within the societies to invest some of these resources in different types of exchange — whether in exchange among different types of major institutional resources or in exchange for organizational and norm-setting leadership.

It is here, with regard to such basic analytic assumptions of choice of problems and construction of types for comparative research, that some of the most central problems of comparative research have arisen.

The basic problem in comparative studies is not whether it is possible to construct such types according to any relevant criteria, but whether it is at all worthwhile according to the extent to which such types with common characteristics can be discerned among various societies — something which may be, to no small extent, a matter of definition. The more important test of the worthwhileness of such analysis is first, whether such common features delineate characteristics which are important for the understanding of the working of these «types» — such special institutionalized or cultural systems, with boundary - maintenance and systematic problems of their own, which differ from those of other systems.

Second, such a test is greatly dependent on the degree to which it is possible to specify both the societal conditions common to different types of institutional systems as they develop and become crystallized and the conditions of their change and transformation.

V

The comparative analysis of total societies or institutional systems necessarily focuses on two major types of problems.

These are, first, the extent of independent variation of different institutional spheres when coalescing in the same society and, second, problems of conditions of transformation of societies. Let us start with the first problem.

On a concrete level, the major question here is whether, for instance, any special type of economic institution always goes together with a particular type of political-religious institution and vice versa, or whether there exists a great or perhaps limitless variability in the possibility of such correlations.

Although no attempt at full-scale comparison of such variability, even for any single broad type of society, has been attempted since the work of Hobhouse, Wheeler and Ginsberg (1915), the available evidence indicates that there does not exist a clear determination between different institutional and symbolic systems, but only certain mutual limitations.

Thus, for instance, a relatively great variety of political systems can coexist with a certain type of kinship economic organization. The unilineal descent groups can exist, it seems together with centralized primitive kingdoms or with patrimonial and conquest societies. Similarly, an economic system characterized by the prevalence of «barter», non-monetary markets can be found in centralized primitive monarchies and in certain patrimonial as well as feudal political systems.

On the other hand, this variety is not limitless. Thus it is very difficult to conceive of the coexistence of a unilineal descent group with a modern industrial setting or with a universalistic centralized, bureaucratic, political system. It is also difficult to envisage the coexistence of, let us say, a patrimonial political system with a high level of economic market order.

How then can both of these variabilities and limitations be explained, and what are their implications for institutional analysis?

The variability of each institutional system can be to some extent

explained by its specific orientation as manifest in the activities of the occupants of its most important positions, in its specific structural «core» problems and exigencies.

The mutual limitation of variability in the interrelationship between different institutional spheres which can exist in any society can be explained by the fact that each institutional sphere is dependent on others for various resources for its own effective functioning, that is, for the maintenance of its specific structural forms, activities and rates-norms of exchange.

While the general types of such resources (or «inputs» and «outputs») are necessarily the same in all societies, the specific types of resources of any *specific* institutional spheres vary greatly according to their specific characteristics and problems. Thus, for instance, although all political systems are necessarily influenced by external exigencies and pressures, the special sensitivity of the centralized bureaucratic empires (Eisenstadt 1963) to such exigencies and pressures and to international economic fluctuations was shown to be rooted, first, in the great emphasis of their rulers on military and expansionist goals and, second, in the dependence of these rulers on various resources, the availability of which was dependent on such international economic situations. The dangers of excessive taxation and inflation of these political systems were again rooted in the high expense of the implementation of the rulers' goals and in the great importance of various flexible resources for the implementation of these goals and for the general political position of the rulers of these empires.

Similarly, such resources can be provided by varied types of arrangements in other institutional spheres, but not by all such types. Thus, taking again the centralized empires, we see that their rulers were in need of both «traditional» and more complex, differentiated political support and were dependent on both. The rulers' «traditional» dependence on other parts of the social structure was manifest in their need to uphold their traditional legitimation and the traditional, «unconditional» political attitudes and identifications of many groups. On the other hand, however, the rulers' tendency towards political independence and autonomy made them dependent on types of resources which were not available through various ascriptive-traditional commitments and relations. The rulers were as has been shown above, in need of more flexible support and resources which were not embedded in traditional, ascriptive groups and were not committed for more or less fixed goals and which could be

used by them for the implementation of their varying political objectives.

The extent of the relative autonomy of each institutional sphere in relation to others probably does vary between different situations. It is probable that the symbolic sphere usually exhibits a larger extent of autonomy than others. But all these problems have yet to be investigated in greater detail.

However, while these considerations do indicate the importance of comparative analysis and the interrelation between it and more general analytical orientations, they also point out some of its difficulties and new analytical problems which become especially important when we want not only to deal with the extent of co-variability of total institutional spheres but also with their transformation.

Here there arises the problem of different types of conditions which facilitate, with a given range of possibilities, the transformation of any given system, the development of any specific institutional, organizational, cultural or behavioural type. Thus, if we take for instance Weber's classical analysis of the development of bureaucratic administration (Weber 1922) it can be seen that he distinguished between several different types of conditions.

Some of these conditions — such as the development of social differentiation — indicate the ways in which certain types of needs develop and become structured among certain groups and strata within the society. The specification of these conditions postulates that under certain societal conditions there may develop needs which cannot be satisfied through the existing (usually traditional) groups, organizations, and institutions and which, by inference, are willing and able to pay something for the satisfaction of these needs.

Other conditions — such as the existence, within society at large or within those sectors thereof, of mobile labour or of certain legal norms — specify types of resources and frameworks without which it would be impossible to maintain the types of organization which may help in the satisfaction of such varied needs.

Last, there can also be discerned another type of condition — namely, the extent to which there exist people — entrepreneurs — who are able and willing to invest some of their own resources (such as capital, time, initiative in the establishment and maintenance of organizations) for the satisfaction of varied needs and wants of other people. Most of the discussions about bureaucracy have assumed, first, that this type of entrepreneur will always emerge. However, even this cannot be taken for granted and we have to ask first, whether

and under what conditions they are likely to emerge at all; second, where such organizations are placed in the social structure; third, what different types of entrepreneurs of this kind, using different resources, will arise and how their different placing in the social structure will affect the characteristics of the groups they organize.

Thus in general it seems that the crucial problem is the presence or absence, in one or several institutional spheres, of an active group of special «entrepreneurs», or an élite able to offer solutions to the new range of problems. Among modern sociologists, Weber came closest to recognizing this problem when he stressed that the creation of new institutional structures depends heavily on the «push» given by various «charismatic» groups or personalities and that the routinization of charisma is critical for the crystallization and continuation of a new institutional structure. The development of such «charismatic» personalities or groups constitutes perhaps the closest social analogy to «mutation», and the degree of their ability to forge out a viable way may be an important factor in the process of survival, or «selection» of different social systems.

It seems to us that only through the juxtaposition of these various types of analytical tools, and especially of the «co-variability» of different institutional types, the different types of conditions of development and continuity of such types and the place of special entrepreneurial groups in the crystallization of institutional frameworks, can the comparative analysis of total society provide us with some insights into the conditions of transformability of social systems.

VII

In order to illustrate this approach, we would like to draw on some problems from the study of modernization, of the conditions which facilitate or impede the development of viable modern systems, and of the conditions which facilitate that type of social transformation which is most conducive to modernization.

The institutionalization of change, or the development and crystallization of new institutional settings, greatly depends on the internal transformation of the societies or groups within which it occurs. The capacity for such internal transformation is manifest in structural frameworks or cultural symbols that enable some groups to mobilize new forces and resources for the new institutional setting without necessarily destroying the existing structure. In modernizing societies, internal transformation is especially critical because mo-

modernization entails not only a relatively stable new structure but one capable of adapting to continuously changing conditions and problems.

Modernization is associated with some definite structural characteristics. Among these, the most important are a high level of structural differentiation, and of so-called «social mobilization», and a relatively large-scale, unified and centralized institutional framework. Beyond this basic core, the aforementioned structural diversity can develop. Much research which has attempted to explain the conditions under which a modern society develops and is capable of continuous growth has assumed that the more developed a society is according to any of those indices, i.e., the more developed is the level of its resources, the more growth-sustaining it is. However, by now we know that these conditions in themselves are not enough to ensure such continuous growth. These structural characteristics are not to be regarded as simple indices of successful modernization, and their development does not necessarily ensure the development and continuity of modernization. Rather they are necessary, but not sufficient, conditions for the development and continuity of a modern institutional structure sufficiently capable of dealing with continuously changing problems to ensure sustained growth (Eisenstadt 1964).

Among these conditions of special importance is the establishment of viable, flexible and yet effective symbolic and organizational centres, responsive to the continuous problems of modernization and able to regulate them, while at the same time a more flexible orientation with new goals and a commitment to the new centres and their needs is developed among the more active social groups. Most of the pre-industrial societies — with the exception of African and, to some extent, Latin American ones — began modernizing, or were pushed into it, with a relatively complex, differentiated, institutional structure. Within the great historical and imperial civilizations, for example, centralized and differentiated structures and organizations already existed, together with some *relative* autonomy of the basic institutional spheres — political, religious or ideological — and social organization and stratification.

Both the centralized frameworks and the relatively autonomous institutional spheres were crucial to the transformative capacities of these societies, for they facilitated the initial modernization and helped make the new modern centres and frameworks work efficiently. Different constellations of these characteristics, however, can greatly influence the general level of the transformative capacity as

well as the particular institutional forms that modernization may take in each case.

I would like to summarize here briefly a more extensive research which attempted, through an analysis of the great Asian civilizations, to explain some of the constellations that facilitate — or impede — modernization, focusing on three aspects of the relations among the various institutional spheres in pre-modern societies. The first of these aspects is the relation between the dominant value-system and political institutions; the second is the place of the political system in the stratification system; and the third is the degree of internal cohesion and social autonomy in the major social groups and strata within these societies (Eisenstadt 1965).

This analysis has shown that the internal transformation of the great Asian societies, then, has been greatly facilitated by autonomy of social, cultural and political institutions. In the cultural order, autonomy has facilitated the development of new symbols supporting and legitimizing central institution building, while autonomy in the sphere of social organization has facilitated the crystallization of viable new organizational nuclei without disrupting the whole pre-existing order, thus enabling the new order to rely, at least to some extent, on the forces of the old one. The relatively strong internal cohesion of broader social strata and of family groups, with some status autonomy and openness toward the centre, has helped to develop positive orientations to the new centres and willingness to provide the necessary support and resources.

The precise institutional contours of emerging modern systems, as we have seen, depend on the concrete structural location of autonomous institutional spheres.

Conversely, so far as such autonomy was absent, so far as the social, cultural, and political orders were intertwined or closely identified with one another, the development of viable modern structures has been greatly impeded. And where the broader social groups are closed, they are likely to undermine the new institutional centres by withholding resources or making intensive and unregulated demands on them. As the Chinese and Islamic examples show, the weak points in emerging new structures depend to some extent on the structural location of the mutually identified institutional spheres.

However, even with regard to these more differentiated and centralized Asian societies, structural flexibility was not in itself — as the Indian and Japanese cases indicate — enough to ensure the development and continuity of modern institutional frameworks.

Flexibility, or the autonomy of different institutional orders, created the conditions under which more active groups and élites could attempt to institute new principles of cultural direction and social integration. But the mere existence of structural flexibility neither ensured that such groups would appear nor indicated the type of integrative orientation they would develop.

Indeed, it is the extent to which such groups do develop that has been — especially in China, India, and some Islamic societies — perhaps the major problem facing these societies during their modernization. The root of the problem in these societies was that modernization was a matter of encounter with foreign forces, an encounter beset with the difficulties and ambivalences of colonial or semi-colonial relations. Modernization therefore required that, from the encounter with these foreign and often alien forces, the new élites should create a national identity. The internal reforming or transforming capacities of these societies may have been crucial to their adaptation to these external forces and to their success in building new institutional structures to cope with these problems. But the very nature of the modernization process in these societies was such that the sources and directions of the cultural transformation, and the potential creativity of different élite groups, were not necessarily given by the same factors that initiated their modern structural transformation.

The first modernization — that of Western Europe since the 18th century — permits a fuller analysis of the relative importance of structural flexibility and active cultural transformation in modernization, for here both processes were, from the very beginning, initiated mainly from within. European — especially Western Christian European — culture contains the strongest tradition of autonomous cultural, political, and social orders, and here the first and most continuous impetus to modernization did indeed develop. But even in Western and Central European countries, the course of early modernization was neither entirely continuous nor everywhere the same.

What requires explanation is the fact that a background more or less common to all Western and Central European societies gave birth to different institutional frameworks, with greatly varying capacities to sustain change.

One approach to this question is to reexamine Weber's famous Protestant Ethic thesis — a thesis which in a way stressed the importance of a special type of élite — the active Protestant groups — in helping with the modernization of European society.

Summing up again very briefly a more detailed analysis we may say that this élite had a very important — and yet differentiated — transformative effect on European society.

First it had in the first Protestant countries — England, Holland, Scandinavia — a very important transformative effect on the central symbolic political sphere, and the basic relations between the political and social spheres were transformed through the incorporation of Protestant values and symbols. This not only reinforced the existing autonomy of these spheres but created new bases of political obligations and more flexible political institutions.

Protestantism had a similar impact on the internal cohesion and autonomy of the more active social groups in these societies. Most of the Protestant groups developed a combination of two types of status orientation. First was their «openness» toward the wider social structure, rooted in «this-worldly» orientations which were not limited only to the economic sphere, but were gradually extended to demands for wider political participation and new, broader political frameworks and criteria. Second, their status orientations were characterized by a certain autonomy and self-sufficiency. Unlike countries or sectors with a more autocratic or aristocratic tradition, they were, from the point of view of the crystallization of their status symbols, virtually independent of the existing (i.e., monarchical or ecclesiastical) centres of political power.

But such orientations did not necessarily develop fully among all Protestant groups in all countries, though to some minimal extent they probably occurred in most of them. The full development and institutionalization of such orientations depended to no small degree on the flexibility or «openness» of the existing political and cultural centres, and that of broader groups and strata and their initial reaction to religious innovations.

The different Catholic countries, on the other hand, demonstrate the limitations of purely structural autonomy. The first impetus of many modern developments — economic, scientific, cultural or political — occurred in Catholic countries too. But the continuity of these developments was greatly impeded by the initial response to many of their more far-reaching consequences and especially to their convergence with Protestantism, which minimized, at least initially, the possibility of continuous development of modern institutions.

We see thus that through the juxtaposition of the analysis of structural aspects with those of processes of élite formation and creativity the transformative potential of any pre-modern society can be fully

evaluated, and this seems to have more general implications for the comparative analysis of total societies.

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MAKING COMPARATIVE RESEARCH CUMULATIVE

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Comparative sociology can be defined as the explicit and systematic comparison of social structural data from two or more societies. These data include aspects of patterned social interaction such as kinship, polity, economy, stratification, religion, etc. The societies compared may be primitive, historical or contemporary. Thus defined, comparative sociology is roughly co-terminous with not one but two existing disciplines: sociology and social anthropology.

I am concerned in this paper with what I regard as the central problem of comparative sociology. There is a great danger that, as our research interests proliferate, and as we pursue these interests in more and more societies, our empirical findings and particularistic theories will outrun more general theory. In this event, comparative sociology would fall into a state of intellectual or theoretical anarchy.

I am certainly not the first to raise this question of how we can make a growing body of comparative research cumulative with respect to social theory. In this paper I want to sketch several earlier and current efforts to order the findings of comparative research with regard to theory. I shall assume familiarity with the main outlines of the approaches of Radcliffe-Brown, the newer Structuralists, the Neo-evolutionists and Functionalist-evolutionists, and Lipset's values approach. For brevity of exposition I shall concentrate on what I consider the deficiencies of each of these attempts. This will oblige me, finally, to offer some proposals of my own for the theoretical ordering of comparative analysis.

RADCLIFFE-BROWN'S COMPARATIVE METHOD

This method reigned supreme, at least in a programmatic sense, among most British and some American social anthropologists from about 1930 to 1950. In recent years, comparativists have become more

and more aware of its limitations, of which the following are the most serious.

First, comparative analysis was equated with the making of typologies, the classification of types and sub-types of social structures. Today, not only do we question such specific types as Radcliffe-Brown's «Australian» type of social organization, but Leach has criticized the entire classificatory approach to comparative analysis as a kind of «butterfly collecting»¹. Moreover, the «findings» at which Radcliffe-Brown claimed to have arrived on the basis of the comparative (i.e., typological) method were all too often tautologically implied in his classificatory criteria to begin with. A second deficiency is that comparisons were usually concerned with synchronic rather than diachronic problems. Rarely, if ever, did Radcliffe-Brown link comparative analysis with the analysis of social change and evolution. Third, Radcliffe-Brown put excessive emphasis on ideal norms and patterns of interaction, to the neglect of actual norms and behavior.

In Radcliffe-Brown's attempt at explanation lay a fourth serious shortcoming. His «universal sociological laws» included such principles as the solidarity and unity of the lineage group, the solidarity of the sibling group, the social equivalence of brothers, the solidarity of intermittent generations, social sanctions, and the like. What is wrong with these «principles» as explanatory tools? For one thing, they depend too closely on a «solidarity psychology», an equilibrium model of society, and the notion of the functional unity of institutions. This aspect has been quite definitively exposed by Merton². These explanatory principles have only a partial value because they ignore social dysfunctions and conflict. There is also a second problem. Despite Radcliffe-Brown's emphasis that social anthropology was a «natural science»³, most of these explanatory principles as well as other elements in his analysis remained on the level of nominal scales. His concepts were structural unit concepts rather than genuine *variables*, ordinal or interval scales. One can cite such nominal scales as «the way in which relatives are classified and grouped», «the particular customs by which the behavior of relatives is regulated in their dealings with each other», etc. In short, rarely if ever did Rad-

¹ Edmund LEACH, «Rethinking Anthropology», in *Rethinking Anthropology*, London, University of London Press, 1963.

² Robert K. MERTON, *Social Theory and Social Structure*, Glencoe, Illinois, The Free Press, 1957, rev. ed., Ch. 1.

³ A.R. RADCLIFFE-BROWN, *A Natural Science of Society*, Glencoe, Ill., The Free Press, 1957.

cliffe-Brown attempt to explain elements of social structure in terms of varying values of variables such as *degree* of solidarity of the lineage or of the sibling group in the diverse societies being compared.

A fifth and final criticism of Radcliffe-Brown is that, despite his programmatic insistence on 'the comparative method', few of his students actually used the method in research. Instead of the kind of explicit cross-societal comparisons Radcliffe-Brown urged, the work of the British school became more and more that of «... impeccably detailed historical ethnographies of particular peoples»⁴. Leach rightly characterizes the work of the British Functionalists as having led to a theoretical *cul de sac*.

THE NEWER STRUCTURALIST METHOD OF COMPARATIVE ANALYSIS

Deriving from Durkheim and Mauss's *L'Année Sociologique* school and from modern structural linguistics, a new group of Structuralists has arisen. I refer to Lévi-Strauss, Leach, Needham and others⁵. This group finds both Radcliffe-Brown's Functionalism and Murdockian cross-cultural methods⁶ wanting, as solutions to the problem of making comparative analysis cumulative with regard to theory. Their essential criticism of the Murdock «HRAF» method is based on the view that «culture» or «society» refers to *a way of ordering and classifying experience*. Therefore, they argue, it is more important to know the *models* which underline this ordering of experience in different societies than to assemble and correlate some «total inventory» of cultural items for the cultures of the world. Secondly, the Structuralists assert that Murdockian comparisons are based on

⁴ LEACH, *op. cit.*

⁵ To cite only a few major studies: Claude LÉVI-STRAUSS, *Les structures élémentaires de la parenté*, Paris, Presses universitaires de France, 1949; *La pensée sauvage*, Paris, Plon, 1962; *Structural Anthropology*, New York, Basic Books, 1963; *Totemism*, Boston, Beacon Press, 1963; Edmund LEACH, *Political Systems of Highland Burma*, Cambridge, Harvard University Press, 1954; *Rethinking Anthropology*, *op. cit.*; Rodney NEEDHAM, *Structure and Sentiment*, Chicago, The University of Chicago Press, 1962; «Introduction» to E. DURKHEIM and M. MAUSS, *Primitive Classification*, Chicago, University of Chicago Press, 1963; David MAYBURY-LEWIS, «Prescriptive Marriage Systems», *Southwestern Journal of Anthropology*, 21 (1965), pp. 207-30.

⁶ George P. MURDOCK, *Social Structure*, New York., Macmillan, 1949; Frank W. MOORE, (ed.), *Readings in Cross-Cultural Methodology*, New Haven, HRAF Press, 1961.

inadequate analysis of the societies being compared, that the cross-cultural analysts are comparing things they do not understand.

By examining the Structuralists' thoroughgoing attack on Radcliffe-Brown, we may grasp the basic strengths of their own method of comparison. Radcliffe-Brown is taken to task for believing that «social structure» exists in the level of empirical reality, in the «conscious models» of social relations which men carry around in their minds. The referent of «social structure» for the Structuralists is, on the contrary, a system of order that lies behind empirical reality, an «unconscious model». The relation between empirical, conscious models and social structure as unconscious model has been stated both in terms of linguistic and mechanical analogies. The relationship is as the relationship between the everyday speech of a people and the syntactic rules which underlie the speech. Or, in the more elaborate mechanical analogy, Lévi-Strauss epitomizes Radcliffe-Brown's method as one which conceived of social structure as a jig-saw puzzle. The comparativist's task was completed when he had discovered how to fit the pieces together. To Lévi-Strauss, Leach and Needham, on the other hand,

«...if...the pieces were automatically cut in different shapes by a mechanical saw, the movements of which are regularly modified by a cam-shaft, the structure of the puzzle exists, not at the empirical level (since there are many ways of recognizing the pieces which fit together) : its key lies in the mathematical formula expressing the shape of the cams and their speed of rotation; something very remote from the puzzle as it appears to the player, although it 'explains' the puzzle in the one and only intelligible way»⁷.

In sum, for the Structuralists «the comparative method becomes, not the comparison of types of societies or institutions, but comparisons of logically deduced models; of logical relations freed of their cultural content rather than comparisons of empirical data»⁸.

Despite the greater theoretical sophistication of the Structuralists, I do not find their solution to the problem of comparative analysis wholly satisfactory as yet. Their ultimate explanatory principles are seen as fundamental epistemological structures of the human mind:

⁷ Claude LÉVI-STRAUSS, «On Manipulated Sociological Models», *Bijdragen tot de Taal-Land-en Volkenkunde*, 116 (1960), pp. 45-54 @ 52.

⁸ William DAVENPORT, «Social Organization», in Bernard J. SIEGEL (ed.), *Biennial Review of Anthropology*, Stanford, Stanford University Press, 1963, p. 216.

notions of duality, complementarity, opposition, reciprocity and the demands of the rule as rule. The difficulties with these explanatory principles are manifold. As basic properties of the human mind, they are taken as givens, not to be further analyzable, at least not by students of social structure. As properties of the human mind, they are *exogenous* to the social system, or social structure. By using these psychological-epistemological elements as the «explanation» of empirical social relations, the Structuralists would seem to have repudiated Durkheim's insistence upon explaining social facts in terms of other social facts⁹.

An even more serious problem is: in what precise sense do these properties of the human mind *explain* social facts? Structuralists like Needham state that the relationship is *not* one of causal or functional interdependence. Instead, the relationship comes closer to what Sorokin called «logico-meaningful»¹⁰. Thus, Needham approaches explanation first by dividing the social ideas of peoples according to such analytical constructs as 'social order' versus 'symbolic order'. Then it is argued that certain societies «exhibit common principles of order in both social and symbolic spheres, *no one sphere being the cause or model of the organization of the other*»¹¹. I find this position unsatisfactory. Whatever the philosophical status of notions of causality, working scientists do in fact come down to statements of causality, conditionality and functional interdependence. When models are used in non-experimental research, they can and should state relations of interdependence¹². Explanation in any other terms is simply not scientific explanation.

The following is one of the major cross-societal generalizations of the structuralists: In societies with prescriptive marriage rules, we find there is a tendency to think in terms of opposites with regard to social organization — inferior versus superior moiety, wife-takers versus wife-givers, etc. This oppositional tendency is further expressed in dualistic symbolic classifications, e.g., evil spirits versus gods. What is going on in these societies, according to the Structuralists, is «the analogical elaboration, in all spheres of social concern, of a *structural*

⁹ Emile DURKHEIM, *The Rules of Sociological Method*, Chicago, University of Chicago Press, 1938.

¹⁰ Pitirim A. SOROKIN, *Society, Culture and Personality: Their Structure and Dynamics*, New York, Cooper Square Publishers, 1962, pp. 145-49.

¹¹ NEEDHAM, «Introduction» to DURKHEIM and MAUSS, *op. cit.*

¹² Hubert M. BLALOCK, *Causal Inference in Nonexperimental Research*, Chapel Hill, University of North Carolina Press, 1964.

principle of complementary dualism; and this itself is one manifestation of the logical principle of opposition»¹³. We soon learn, however, that while this 'concordance' between social organization and symbolic classification is close in simple unilineal societies with prescriptive marriage, it is less close in other unilineal societies, and minimal in non-unilineal or cognatic societies¹⁴. I find this disconcerting because, as sociologists, we are interested in the very societies in which the asserted 'concordance' between symbolic forms and social organization is presumably weakest. Nor have the Structuralists yet demonstrated the explanatory power of their principles of duality, reciprocity, and the like in more complex, modern societies. In short, I am asking how far notions of fundamental thought processes will take us in analyzing the many societies outside the narrow range of simple societies with which the Structuralists have thus far worked.

There are other problems in the comparative method of the Structuralists. In different publications, Lévi-Strauss does not give the same formulations to some of the «fundamental structures of the human mind». Much of the analysis done by the Structuralists consists of *ex post facto* interpretations of their own and others' field data. The rules for inferring 'structure' from empirical social relations, and for explaining the latter by the former are unclear. The operations are more an art than a codified science. Needham, for example, speaks of the method of «imaginative apprehension by the investigator of native categories of classifying the world»¹⁵. It is, I think, because of this intuitional method that we find the Structuralists disagreeing among themselves over what the correct 'models' are for given societies¹⁶.

THE NEO-EVOLUTIONISTS AND FUNCTIONALIST-EVOLUTIONISTS

There are other responses to the Radcliffe-Brownian *cul de sac* than that proposed by the Structuralists. In the United States two

¹³ Rodney NEEDHAM, «A Structural Analysis of Aimol Society», *Bijdragen tot de Taal-Land-en Volkenkunde* (1960), pp. 81-108 @ 106.

¹⁴ *Ibid.*, p. 105.

¹⁵ NEEDHAM, «Introduction» to DURKHEIM and MAUSS, *op. cit.*

¹⁶ Thus, Leach and Maybury-Lewis both criticize Lévi-Strauss, and Livingstone has criticized Needham. LEACH, *Rethinking Anthropology*, *op. cit.*, pp. 76 ff. *et passim*; MAYBURY-LEWIS, «On the Analysis of Dual Organizations: A Methodological Critique», *Bijdragen tot de Taal-Land-en Volkenkunde*, 116 (1960), pp. 17-44; F.B. LIVINGSTONE, «A Further Analysis of Purum Social Structure», *American Anthropologist*, 61 (1959), pp. 1084-87.

movements have emerged which suggest promising methods for making comparative analysis cumulative with regard to theory. The common element in these movements is neo-evolutionary theory. Yet the movements appear to have developed relatively independently of each other. I refer, on the one hand, to the new anthropological evolutionists — White, Steward, Sahlins and Service¹⁷ — and on the other hand to the sociological functionalists — Parsons, Lévy, Eisenstadt and Bellah¹⁸. In their concern with the stages in the evolution of societies¹⁹, in their view of these stages as successive levels of socio-cultural integration, and in their concern with the actual mechanisms of evolutionary change, the anthropological evolutionists have great relevance for comparativists²⁰.

For the action-theoretic sociological Functionalists, evolution is a process of increasing differentiation of structure and increasing specialization of function. Evolution is the differentiation of political, economic, religious and stratificational sub-systems out of kinship, and the internal differentiation within each of these sub-systems, e.g., the differentiation, within the polity, of «administrative» roles from «policy» roles.

To some extent, the work of these two groups is complementary, the anthropologists dealing with evolution in the relatively simpler societies, while the sociologists focus more on relatively «advanced» evolutionary levels. In an interesting way, the recent work of Freeman and Winch, Carneiro and Tobias, and Young and Young²¹ in the application of Guttman scale analysis to societies provides an

¹⁷ Leslie A. WHITE, *The Evolution of Culture*, New York: McGraw-Hill, 1959, Julian STEWARD, *Theory of Culture Change*, Urbana: University of Illinois Press, 1955, Marshall SAHLINS, *Social Stratification in Polynesia*, Seattle: University of Washington Press, 1958, Elman R. SERVICE, *Primitive Social Organization, An Evolutionary Perspective*, New York, Random House, 1964.

¹⁸ Talcott PARSONS et al., (eds.), *Theories of Society*, New York, The Free Press of Glencoe, 1961, Vol. I, pp. 239-64; *Societies: Evolutionary and Comparative Perspectives*, New York, Prentice-Hall (forthcoming); Marion J. LEVY, Jr., *International Variations in Societies* (forthcoming); see also papers by PARSONS, BELLAH and EISENSTADT in *the American Sociological Review*, 29, June, 1964.

¹⁹ LÉVI-STRAUSS, 1949, *op. cit.*, also presents an evolutionary theory. But other Structuralists have attacked this aspect of his work and appear in general to be indifferent to evolutionary questions.

²⁰ Most relevant of all is perhaps Service, *op. cit.*

²¹ Linton C. FREEMAN and Robert F. WINCH, «Societal Complexity: An Empirical Test of a Typology of Societies», *American Journal of Sociology*, 62 (1957) pp. 461-66; Robert L. CARNEIRO and S. F. TOBIAS, «The Application of Scale Analysis to the Study of Cultural Evolution», *Transactions of the New*

empirical tool relevant to both groups of evolutionary theorists. It has been shown that numerous aspects of social structure can be scaled according to increasing complexity.

When a scalogram exhibits scalability, it performs double-duty with regard to ordering the findings of comparative studies. Consider a scalogram with societies along the horizontal axis and characteristics of these societies along the vertical axis. In the first place, the scalogram provides a basis for hypothesizing that the order in which the scale items (societal characteristics) are arranged, from bottom to top, is the *sequence* in which the societies developed them. For example, roles of «special religious practitioners» may have developed prior to those of full-time bureaucrats. In the second place, the *same* scale's arrangement of societies, from left to right, serves to indicate their relative degree of differentiation²².

My major criticism of the sociological evolutionists, Parsons and his students, is that their analyses pose enormous problems of an operational sort. It is difficult to see how some of their propositions can ever be validated. It is for this reason that I have singled out scale analysis. It is one fruitful technique by means of which the concepts of the anthropological and sociological evolutionists may be translated into testable items and sequences.

LIPSET AND COMPARATIVE VALUES ANALYSIS

Lipset's recent comparative work represents the application of the Parsonian «pattern-variables» to large-scale comparative analysis. In comparing the United States and the Soviet Union, for example, Lipset argues that they are similar in their emphasis on universalism, achievement and specificity. They differ in that the United States is more self-oriented, or less collectivity-oriented, than the Soviet Union. Lipset is content with abstract comparison of this sort only «if it serves to specify hypotheses about the differences in norms and behavior inherent in different value emphases»²³. Values are analyzed

York Academy of Sciences, 26 (Dec. 1963), pp. 196-207; Frank W. YOUNG and Ruth C. YOUNG, «The Sequence and Direction of Community Growth: A Cross-Cultural Generalization», *Rural Sociology*, 27 (Dec. 1962), pp. 374-86.

²² Robert L. CARNEIRO, «Scale Analysis as an Instrument for the Study of Cultural Evolution», *Southwestern Journal of Anthropology*, 18 (1962), pp. 149-69.

²³ Seymour M. LIPSET, «Elites, Education, and Entrepreneurship in Latin America» (unpublished manuscript, 1965, p. 10). See also «The Value Patterns of Democracy: A Case Study in Comparative Analysis», *American*

both as dependent and as independent variables. In the former case, current variations in values are said to be determined by factors in the history of the nations in question. In the latter case, where values are used as the independent variables, Lipset is not always very precise about the nature of the relationship between values and behavior. We find statements like «behavior 'reflects' values», or «values are 'manifested' in behavior». The real difficulty with «value explanations», of course, is their circularity. The analyst typically knows something to begin with about the behavior of the members of the societies being compared; he tends to infer «values» from this behavior, and then uses the «values» to «explain» the behavior.

Until this problem is clarified, «values» should be used as a descriptive or analytical concept, not as an explanatory variable. The pattern-variables and other techniques²⁴ for stating the value orientations of societies are powerful tools for concise description. However, since comparativists want not only to describe, but to explain and predict as well, it follows that we cannot rely primarily on «value» approaches like that of Lipset at this time.

REQUISITES OF ANY SCHEMA FOR COMPARATIVE ANALYSIS

Let me summarize my criticisms of earlier efforts to make comparative analysis cumulative with regard to theory. I do so now positively, rather than negatively, by stating the minimum requisites of any adequate schema for comparative analysis today.

- Breadth.* 1. Any schema for comparative analysis should encompass extensive world-wide comparisons, as well as more intensive comparisons within a culture-area.
- Variables.* 2. As rapidly as possible the schema should move away from the nominal and binary level of measurement of variables to the ordinal and interval levels of measurement.
3. The major variables of the schema should be able to incorporate change, dynamics and evolution.

Sociological Review, 28 (1963), pp. 515-21, and *The First New Nation*, New York Basic Books, 1963.

²⁴ See the studies analyzed in Robert M. MARSH, *Comparative Sociology: Toward The Codification of Cross-Societal Analysis*, ch. 7 N.Y.: Harcourt, Brace and World, (forthcoming).

4. Variables should refer to data on actual norms and behavior, as well as ideal norms.
- Propositions.*
5. Propositions in the schema should be operationalizable, testable, disconfirmable.
- Analysis and Explanation.*
6. Analysis and explanation of comparative data should be in terms of models, but models of causality and interdependence, not merely «logico-meaningful» models.
 7. Explanation should be in terms of social system (social structural) variables; only after these have been exhausted should explanation turn to psychological, epistemological, cultural or other «exogenous» variables. This is especially necessary when the dependent variables are social system variables, but it may also be worth following when they are personality or cultural system variables.
 8. Circular explanations in terms of «values» should be avoided.
 9. Comparison and explanation should be based on an adequate understanding of the relevant aspects of the societies being compared. In practice, this means consulting as many as possible of the existing ethnographic and monographic sources on the societies, rather than only one or two sources.
 - A. «Relevant» aspects means that the comparativist need not try to know «everything» about the societies he is comparing.
 - B. This requisite is the most formidable of all because we usually do not know in detail ahead of time *which* aspects of the societies are relevant to the propositions.

A CODIFICATION SCHEMA FOR COMPARATIVE ANALYSIS

Having stated my minimum requisites of any schema which would order comparative research, I shall now propose a codification schema which I think meets these requisites. The central question is: given our present state of knowledge, can we identify one, or a small number, of sociological variables in terms of which we can systema-

tically order societies and the findings of comparative research? I shall argue, following mainly Parsons and the evolutionary functionalists, that there are such variables, and that the most strategic one with which to begin is that of *degree of internal structural differentiation* at the societal level. Differentiation is defined as the multiplication of *one* structure of a society (e.g., a role, or collectivity) into *two or more* new structures, each structurally distinct and more specialized. The functionally specialized and differentiated structures make complementary contributions to the larger system. A society is differentiated to the extent that it has numerous specialized roles and specialized collectivities. Differentiation is reversible: societies may increase or decrease in it over time. Differentiation must be distinguished from *segmentation*, in which two or more structurally distinct units perform essentially the same function in the system, rather than complementary functions.

To use this variable, differentiation, in comparative research we must be able to measure it, and assign values or scores on degree of differentiation to as many societies as possible. Measurement in this area is still in its infancy. An ideal index of societal differentiation might be the number of different full-time occupational or craft specialties in the society, an index which Naroll has already used²⁵.

My Index of Societal Differentiation is constructed as follows. Murdock's World Ethnographic Sample²⁶ provides data for over 500 societies on two indicators of differentiation; namely, degree of social stratification and degree of political integration. I assigned numerical values to the categories of these two indicators. A society's Differentiation score²⁷ is the sum of its score on stratification and its

²⁵ Raoul NAROLL, «A Preliminary Index of Social Development», *American Anthropologist*, 57 (1956) 687-715. See also FREEMAN and WINCH, *op. cit.*, and CARNEIRO and TOBIAS, *op. cit.*

²⁶ George P. MURDOCK, «World Ethnographic Sample», *American Anthropologist*, 59 (1957), 664-687. The slightly revised version of this code, by MURDOCK in Moore, *op. cit.*, was used.

²⁷ Murdock's coding, and my scores are :

Degree of political integration		Score	Degree of Stratification		Score
O	Absence of any integration even at local level	0	O,A	Absence of stratification; or formal age grades only	0
A	Autonomous local communities	1	W	Wealth distinctions	1
M	Minimal states	2	H	Hereditary aristocracy	2
L	Little states	3	C	Complex stratification	3
S	States	4			

score on political integration. The range of scores varies from 0 (least differentiated societies, e.g., Andamanese) to 7 (more differentiated, e.g., Aztecs). Most modern national societies do not appear as such in Murdock's World Ethnographic Sample. Presumably, all modern national societies would be coded by Murdock as «States» and as having «complex stratification»: all nations would then receive a score of 7 on my Index of Differentiation. To distinguish among national societies, two further indicators of differentiation were used: (1) per cent of gainfully employed males in non-agricultural occupations, and (2) gross energy consumption in megawatt hours per capita²⁸. The justification for choosing these two is that in the literature on development they are highly correlated with most other standard indicators.

In order to combine these two indicators in a single Index of Differentiation score I converted the original units of measurement into standardized T-scores, a form of z-scores. The next step was to «fit together» the Index scores for the Murdock sample and those for the national societies. It was my judgment, subject to further research, that the least differentiated contemporary nations (those lowest in per cent non-agricultural and in energy consumption) should have Index of Differentiation scores immediately above the score of 7 given to the relatively more differentiated of the primitive societies, e.g., Ashanti, Aztec, and Inca. Thus, the raw scores on per cent non-agricultural labor force and energy consumption were converted into standard T-scores²⁹ in such a way that the range of Differentiation scores is from 8.6 (Portuguese Guinea) to 109.4 (U.S.A.).

Thus, I have ordered 467 societies from Murdock's sample and 114 modern national societies, a total of 581 societies, within one master Index of Societal Differentiation.

This task of measurement is only the first step in my codification

²⁸ For sources of data on these variables, and other details, see MARSH, *op. cit.*

²⁹ The adjusted formula for T-score was $T = 16 + 10 \frac{(X - \bar{X})}{s}$ where X = raw score and s = standard deviation. To illustrate the computations:

Society	% Non-Agricultural Workers	T Score	Energy Consumption	T Score	Index of Differentiation: T Scores
U.S.A.	92%	39.0	62.1 mgwt. hrs.	70.4	109.4
Cuba	53%	20.5	11.8 mgwt. hrs.	19.5	40.0

schema. The core of the schema consists of answers to three questions which are posed with regard to any given cross-societal study or analysis. (1) What is the *range* of societies compared, in terms of degree of differentiation, as measured in the Index?³⁰ (2) Do the «phenomena to be explained» — the dependent variable(s) or the relationships between dependent and independent variables in the comparative study being codified — vary among the societies compared? (3) If the «phenomena to be explained» do vary across the societies being compared, do they vary systematically with degree of differentiation, or independently of it?

Answers to these three questions logically generate the following four codification categories, according to which given comparative studies and analyses can be ordered.

<i>Codification Category</i>	<i>Societies compared are similar or dissimilar in degree of differentiation?</i>	<i>Phenomena to be explained vary among societies compared?</i>	<i>Phenomena to be explained vary with, or independently of, degree of differentiation?</i>
Replication	Similar	No	—
Universal Gen'lization	Dissimilar	No	—
Contingency Gen'lization	Dissimilar	Yes	Vary with differentiation
Specification	Similar or Dissimilar	Yes	Vary independently of differentiation

To state the same thing somewhat differently: the propositions tested in given comparative studies can be ordered with regard to the theory of social differentiation in such a way that all propositions will fall into one of four types:

FOUR TYPES OF PROPOSITIONS IN COMPARATIVE ANALYSIS

REPLICATION Societies compared are similar in degree of differentiation. Phenomena to be explained do not vary among societies.

³⁰ How dissimilar should the Index scores of two or more societies be for them to be judged to be «dissimilar» in degree of differentiation? This is a question to which a not altogether satisfactory answer can be given at

UNIVERSAL GENERALIZATION	Societies compared are dissimilar in degree of differentiation. Phenomena to be explained do not vary among societies.
CONTINGENCY GENERALIZATION	Societies compared are dissimilar in degree of differentiation. Phenomena to be explained vary among societies and with degree of differentiation.
SPECIFICATION	Sub-type (a): Societies compared are similar in degree of differentiation. Phenomena to be explained vary among societies and therefore vary independently of differentiation. Sub-type (b): Societies compared are dissimilar in degree of differentiation. Phenomena to be explained vary among societies, but vary independently of degree of differentiation.

The most crucial step in codifying a comparative study *begins* when one has shown that the «phenomena to be explained» correlate with degree of societal differentiation. One next tries to explain the correlation, i.e., one tries to show *what it is about differentiation* in the particular study or analysis that influences the phenomena to be explained. The following example, adapted from Reiss³¹, illustrates the procedure.

The hypothesis tested cross-societally is: recent rural migrants to urban communities will have less social participation in voluntary organizations than long-time residents. Suppose we found that when we divided the societies according to their Index of Differentiation scores, the relationship between duration of urban residence and participation was positive (as predicted) in the more highly differentiated societies, but that there was no relationship in less differentiated societies. We should, of course, regard this *new* finding as an example of *contingency generalization*: the relation between duration of urban residence and participation varies with degree of societal differentiation. To strengthen this conclusion we now try to demonstrate precisely how differentiation alters the original relationship. The explanation might be as follows: the more differentiated

present. One solution is to base this decision on the unit of one standard deviation from the mean: societies within one s.d. of each other are «similar», more than one s.d., dissimilar.

³¹ Albert J. REISS, Jr., «The Sociological Study of Communities», *Rural Sociology*, 24 (1959), pp. 118-30.

the society, the less do urban residents maintain close social bonds with people in rural areas. In less differentiated societies, new migrants from rural to urban areas bring with them, as it were, the closer social ties that continue to exist between urban and rural people. Immediately on arrival in the city, they are welcomed by and swept up into participation in voluntary associations. In the cities of more differentiated societies, particularistic enclaves are weaker; social relationships are more impersonal. The new migrant is more likely to experience social isolation at first. Only after prolonged urban residence does he begin to "find his niche".

Of 1,000 comparative studies published between 1950 and 1963, and uncovered in a search of the literature, I have thus far codified some 90 monographs and articles³². Among these 90 are comparative studies of kinship and marriage, polity and bureaucracy, social stratification and mobility, ecology and demography, and cultural patterns and value orientations. How are the propositions in these 90 studies distributed with respect to my four codification categories? This question is crucial, for the more propositions that fall into the category *specification* (the phenomena to be explained vary independently of degree of societal differentiation) the more the possible doubt cast on my initial claim that societal differentiation is the single most strategic variable for ordering comparative studies.

Of the 62 propositions in these studies which I was able to codify³³, two were classified as *replications*, six as *universal generalizations*, 21 as *contingency generalizations* and 33 as *specifications*. The first comment to be made is that these 66 propositions are in no sense a representative sample of all propositions in the comparative studies examined. The studies and propositions chosen for intensive codification reflect only my judgment as to their didactic value and significance in the recent development of comparative sociology. I suspect, for example, that a more representative sample of comparative studies would show a higher proportion of examples of *replication* for the simple reason that most comparative analyses deal with societies that are similar in degree of differentiation.

The number of propositions codified as contingency generalization — 21 — is more than would have occurred by chance, and in this

³² See MARSH, *op. cit.*

³³ Only 62 propositions could be extracted from the 90 studies for codification, because the same proposition was sometimes tested in a number of studies, and because some studies lacked propositions, or contained only ambiguous propositions.

sense societal differentiation is a significant variable for ordering comparative analysis. But is it significant enough, relative to other possible master-variables? I shall argue that it is, by suggesting that some of the 33 propositions I have codified as *specification* may properly not belong there, but instead in the *contingency generalization* category.

There are at least four reasons why a given proposition might appear to belong in the category of *specification*³⁴.

- (1) The phenomena to be explained only *appear* to vary independently of differentiation, as a result of:
 - (A) failure to correctly conceive of or operationalize the concept of differentiation
 - (B) failure to identify all the implications of the concept of differentiation
- (2) The phenomena to be explained only *appear* to vary among the societies compared, as a result of failures of experimental procedure, i.e. failure to satisfactorily replicate the original study in the other societies, due to such things as:
 - (A) differences in the way the concepts are operationalized
 - (B) sampling error
 - (C) failure to take into account subtleties of meaning when "translating" a study to other societies
 - (D) other forms of "experimental error"
- (3) The phenomena to be explained do in fact vary independently of differentiation, but can be explained in terms of some other variables of reasonable generality (i.e., not culture-historically unique to individual societies), drawn from the same body of theory, having no significant correlation with differentiation.
- (4) The phenomena to be explained do in fact vary independently of differentiation, and an alternative explanation is available, in terms of cultural or historical factors relatively unique to the societies in question.

Properly speaking, my category of *specification* refers only to alternative (4). Further research and analysis should examine the 33 *specification* propositions to determine whether some of them, for reasons (1), (2) or (3) just detailed, are misclassified as *specification*. At this time, I can only suggest some of the analytic steps that can be taken to handle this problem, and thereby refine my codification categories.

³⁴ These reasons were suggested by Lloyd Stires of Duke University, to whom I am indeed grateful.

To check (1-A,B) above, we should consider the implications of the concept of differentiation and how to better operationalize it. One step here would be to improve the indicators of societal differentiation by getting an actual count of the number of full-time occupational or craft specialties in each society. Another direction would be to measure the degree of differentiation in several sub-systems of societies, e.g., political, economic, religious, military, etc. Then, for each society we should have Index of Differentiation scores for each of its major sub-systems, as well as a societal level score. It will be interesting to see whether a societal score based on the addition (or some other arithmetic operation) of scores for the separate sub-systems will give the same relative ordering of societies as I now have on the basis of a single, total society, differentiation score.

The theoretical rationale of scoring sub-systems is, of course, that societies may be relatively more differentiated in some of their sub-systems than in others. This could have a great bearing on codification. Suppose, for example, ten societies which varied in societal differentiation were being compared with regard to certain religious belief variables. Now, the degree of differentiation in the religious sub-systems of these societies might be only slightly correlated with differentiation at the total societal-level. Society A, high in over-all differentiation, is low in religious differentiation, but "compensates" for this by being high in economic differentiation; society B, low in over-all differentiation, is relatively high in religious differentiation but low in economic; and so on. These variations could produce the (apparent) conclusion that the phenomena to be explained — religious beliefs — varied independently of societal differentiation. In fact, the religion beliefs might vary *with* religious sub-system differentiation, even though they did not vary with over-all societal differentiation. A rough procedure, therefore, might be as follows: if, in a comparative study, the phenomena to be explained are variables in sub-system A (e.g., religion), it should not be concluded that these variables vary independently of differentiation until one has run them against (1) over-all societal differentiation, (2) degree of differentiation in the particular sub-system A in which the phenomena to be explained occur, (3) degree of differentiation in other sub-systems B, C ... N (economy, polity, etc.) with which the phenomena may have interdependencies. There are many possibilities here, but this example will have to suffice.

To check for various forms of "experimental error" (2 above) as a reason for miscategorizing propositions as *specifications*, it would be

necessary to get estimates of sampling error, check and possibly re-test for differences in the way the concepts having to do with the phenomena to be explained had been operationalized, etc. There are limits to how much testing for «experimental error» one can do with already published comparative studies. But new comparative research can have pre-tests for comparability of meaning of instruments, etc. built into the design from the start³⁵.

With regard to (3) above, after one had reasonably exhausted differentiation and its ramifications as a variable, one should posit other general societal variables, uncorrelated with differentiation, which might account for variations in the phenomena to be explained. A major variable in both functionalist evolutionary theory and in Service's neo-evolutionism is *integration*. As new specialized social units appear in the process of structural differentiation, older forms of integration of the social order become obsolete. Unless new forms and bases of integration develop, continued differentiation may lead to disintegration. Durkheim, Service and others of course argue that differentiation *means* interdependence of units in the society, and that this in itself is a basis of integration («organic solidarity»). In addition to this form of integration, there are other emergent forms of integration: sodalities, law, political groupings, and ideology³⁶.

If the measurement of societal differentiation is in its infancy, the measurement and operationalization of integration as a variable is even more embryonic. It is clearly a major task of future research in comparative sociology.

CONCLUSION

The underlying plea of this paper is twofold. First, I have urged that we recognize the unity of sociology and social anthropology in a new and rapidly expanding field of *comparative sociology*. This field can be defined as the explicit and systematic comparison of social structural data from two or more primitive, historical or contemporary national societies. Second, to avoid a sprawling, anarchic empiricism in this field, I have insisted that the central task is to make comparative research and analysis cumulative with regard to

³⁵ MARSH, *op. cit.*, Part II, reviews a number of techniques for handling these problems in comparative research.

³⁶ See paper by Neil J. SMELSER, in AMITAI and Eva ETZIONI, (eds.), *Social Change: Sources, Patterns, Consequences*, New York; Basic Books, 1964.

social theory. I have reviewed several earlier attempts — by Radcliffe-Brown, the newer Structuralists, the Neo-evolutionists and the Functionalist-evolutionists, and Lipset. Having found each of these attempts wanting in some respects, I have advocated a somewhat different approach. This approach posits structural differentiation as a major variable for ordering comparative analysis, measures differentiation in a world sample of 581 societies by assigning Index of Differentiation scores, and then proceeds to codify given comparative studies in terms of a schema for assessing the theoretical status of propositions in these studies. The chief claim for the codification schema is that it provides a means whereby existing and future comparative studies can be made cumulative with regard to social theory.