INTRODUCTION TO EMPIRICAL SOCIOLOGY

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Concepts in sociological inquiry

Relationship of concept and object

Science is not concerned with some kind of absolute reality, but with the world as it is experienced. This world of experience is prestructured, more or less deliberately, by concepts. The scientist does not observe the object of his study directly or without any intervening mental processes whatever; he gives it names, and so some kind of order in terms of concepts. Observations may thus be made in a conscious, detached manner. This both releases him from immediate reflex reaction to environmental stimulus and at the same time gives him freedom to think about it. Since language – and thus concepts – are at the disposal of everyone, all this applies not merely to scientists but to everybody; but this conceptual mediation between subject and experienced object is an absolutely essential condition for the process of scientific knowledge.

A concept is a mental field of meaning denoted by a particular word or combination of words. A concept can never be identified with the phenomena to which its intellectual meaning refers. Hence, no assertion concerning reality can be deduced simply from a concept itself. Any attempt, for example, to deduce from the concepts 'group' or 'community' what a 'group' etc. *is*, reveals that in doing so we are, by implication, identifying concept and reality. Analysis of concepts can at best *clarify* what phenomena or circumstantial facts we are *referring to*, when we use the word in question. Nor do concepts describe the phenomena of reality in some quasi-photographic sense. Through our use of concepts we create order in the experiential world, but this order does not necessarily correspond to any objective structure of reality. The distinction between 'organic' and 'inorganic' in chemistry, and between 'body' and 'soul', are examples of conceptual schemes of order, whose inadequacy is now recognized, at least by scientists. That we must reject a simplistic idea of an exact equivalence in the relationship between concept and object is demonstrated by the fact that our perception of objects or situations is necessarily incomplete. This arises not only from man's perceptual limitations, but also from selective awareness, which governs our perception within the realm of what

is perceptible to us. Moreover, selectivity of perception and, correspondingly, of concepts in relation to reality is not fortuitous nor arbitrary, but broadly speaking is in the end actually determined by some interest. We perceive what seems to us important or significant in some respect or other; this is then introduced as essential into the intellectual meaning encompassed by a concept. While one may be able to see judgements, albeit tacit, concerning the relative importance of various aspects of the experiential world, as value judgements, concepts by reason of their selectivity are dependent by their very nature on values.

From this fundamental value-dependency we may distinguish specifically evaluative elements which many concepts contain alongside their descriptive elements. This is particularly true for concepts which refer to social phenomena. Obvious examples of these would be concepts such as 'murder' or 'hero', but it is also true of 'education', 'community', 'exile'. ('Sin', 'evil', 'ugly', etc., in contrast to these do not denote *evaluated phenomena*, but are symbols for the value-standards themselves.) Of course there are concepts too which contain either a weak evaluation or no recognizable evaluation at all (e.g. 'school-age').

The evaluation contained in a concept is thus entirely culturally dependent. In both application and intensity, it is historically variable; it can even be different for different groups in a single society, and this can be shown by the example of the concept 'revolution'.[1]

The evaluative elements of many concepts of social phenomena can lead the process of investigation astray if they remain unexamined. However, it does not follow from this that we are going on to establish the need for value-neutral scientific concepts. Value-neutral concepts are not necessarily prerequisites for valid research findings; on the contrary, the perceived value – or lack of value – of social phenomena can be important for the formulation of socially relevant research topics.

Function of concepts

If one wishes to formulate rather more precisely the meaning of concepts specifically for purposes of inquiry, one can begin in the first instance by distinguishing four general functions of concepts. Concepts can:

Organize observation (cognitive, or ordering function);
Evaluate what is perceived (evaluative, or value function);
Govern individual behaviour (pragmatic, or operational function);
Make communication possible (communicative, or communication function).

1. The semantic differential procedure described in Chapter 2 is a method of determining among other things the values implicit in a concept.

In the present context we do not need to go into the operational function of concepts. The value function of concepts is used, as we have already indicated, for deciding on the aims of sociological inquiry, formulating research problems, and weighting the conclusions to be drawn from research findings.

Let us now turn to the remaining two functions. In empirical sociology, concepts determine what is to be observed, i.e. isolated (ordering function): for example, the 'culture of a factory management style',[2] 'social mobility' etc. Later they allow us to communicate findings (communication function) and, if necessary, to check them by replicating the study.

For these functions to be fulfilled, the concepts must themselves fulfil three prerequisites. Firstly there must be general *agreement* and *consistency* concerning assignment of the precise and appropriate meanings to particular words, i.e. it must guard against the possibility of one investigator understanding 'groups' to mean only small gatherings of people formed *ad hoc* in parks and in the streets, while another understands only large organized collectivities such as a Government department or an industry. Closely connected with this, in the second place, is the need for precise definition, i.e. the area of meaning of concepts must be exactly determined. The more abstract the concepts are (or the less they refer to immediately visible, manifest, objects) the more difficult this will be. Hence there is, for example, a great difference of opinion about whether or not a 'we-feeling' or 'cooperative relationship' belongs to the area of meaning contained in 'group'.

Finally, concepts related to empirical inquiry must refer (albeit indirectly when we are working with indicators) to something experienced or observed. These three prerequisites can be summarily formulated in a single sentence: If concepts employed in empirical inquiry are to fulfil their ordering and communication functions, they must have a generally agreed and precisely defined empirical reference.

Meanings of concepts: units and characteristics

The rule we have just formulated applies to substantive concepts in sociology, i.e. to those concepts we use to denote observable data within the scope of sociology. (We shall not concern ourselves with strictly logical concepts.) Substantive concepts refer both to social units and to properties of these units. Social units which are possible objects of inquiry are:

Individuals considered as social beings;
Particular products of human action, both material and immaterial (e.g. ideas, value concepts, norms);

2. '*Betriebsklima*' – the title given to a series of German studies by von Friedeburg of different factories which suggested the existence of sub-cultures traditional in, or at least peculiar to, particular factories.

Social collectivities or groups, from small transient assemblies to large organized collectivities, including whole societies.

As a rule, social units interest the researcher not in their full complexity but only with respect to particular features or characteristics. A fully socialized person is not studied in his entirety, but rather in terms of his religious attitudes, class position or his occupational activity. Social groups too are not studied in their entirety, but rather in terms of, for example, the structure of communications, value system, or the extent to which they are organized according to a hierarchical form.

The second major category of concepts therefore refers to properties or attributes; the terms are used synonymously. Both categories of concepts are closely linked. Concepts which denote attitudes or characteristics are meaningful only if they refer to particular units. We do not study 'conformist' or 'integrated' characteristics, but rather the 'conformist behaviour of individuals' (individual attributes) or the 'integration of societies' (group attributes). Moreover, we extract the units we study from the universe of possible objects we could examine by defining them more closely in terms of particular attributes and thus forming particular categories: 'women', 'hospitals', 'industrial concerns' etc.

The major class of concepts denoting particular properties can be further subdivided. While what follows cannot be offered as a complete classification with sharply distinguishable categories, we can at least point towards a few distinctions. If we concentrate firstly on individual qualities, there are on the one hand characteristics which refer to *being* (age, sex, intelligence, satisfaction) or *activity* (e.g. working, emigrating, travelling). Further, there are relational attributes which designate an individual through the relationships he has with certain other individuals, as employer, friend or spouse etc. If one is thinking more in terms of processes certain designations of action belong to this class, such as 'to obey someone', 'to marry someone'. If an individual is definitely characterized by his belonging to a particular group (not an abstract category of attributes) we then talk of *contextual attributes*. Examples of this are characterizing a person as 'Frenchman', 'landowner', 'trade union member' or 'student at the Free University of Berlin'.

Among group attributes we can discern analogous distinctions, but there is an additional difference of some importance. There are, first, group attributes, or characteristics which can be deduced from statements about the individual group members, and, secondly, those which cannot. In the first case we talk of *aggregative* (or *analytic*) characteristics, as, for example, the average age of a class of schoolchildren, the proportion of manual workers among the employees of a business, or of direct

participation among the members of a union. The power structure of a company, the degree of bureaucratization in an organization or the aims of a pressure group, by contrast, cannot be deduced from the attributes of the respective group members, by marking points on a single scale at any one time; in this case we talk of *global* (or *integral*) attributes.

Scaling

The expression 'scale' intimates that concepts denoting attributes are not to be seen as static points, but refer to dimensions. With any such qualitative scale, the particular object of inquiry occupies only one point at any given moment. This means that one can imagine it located at a particular point on the scale. Therefore 'young' or 'twenty-eight years old' are points on the scale 'age'; 'conformist' a point on the scale 'attitude with respect to norms'. Correspondingly 'positive factory culture'[3] and 'low degree of conflict' are points on scales which refer to group features.

In sociology we quite often limit ourselves to classifying the units under examination simply according to the presence or absence of a particular feature. For example, 'Car owner or not?', 'Whether people vote or not', etc. The question arises whether one can talk meaningfully here about *scales*. Looked at more closely, the attribute in question, whether present or not, itself definitely reveals a scale (e.g. 'Ownership of *what* make of car?', 'Vote for *which* party?'), in which certain intervals and points have simply been omitted. What is more, by defining the attribute at a higher level of abstraction, we can frequently take even negative cases as being meaningfully precise points. To continue with the example of voting, we could call this characteristic 'voting behaviour', in which case not voting can be understood as a possible mode of behaviour in the voting situation. Scales of attributes with at least two points are also termed *variables*.

Quantitative and qualitative concepts

Lastly, we must draw attention to the difference between quantitative and qualitative characteristics. In the case of the former, the single point is a *size*, *degree* or *quantity* (twenty-five years old, *strong* performance motivation, *high* degree of integration). In the case of the latter, it describes *kind*: *democratic* form of government, *manual* occupation, *female* sex, etc. As we will show in more detail (Chapter 2), qualitative characteristics can nevertheless be quantified. A qualitative circumstance, like an attitude, can be reduced to the degree of positive or negative feeling towards its object. Occupations can be ordered quantitatively according to their prestige. Quite often a qualitative characteristic, if we break it down

3. See footnote 2.

analytically into separate subdivisions, can be represented as multi-dimensionally quantitative. The apparently purely qualitative characteristic, occupation, could be broken down, for example, into the following quantitative dimensions: degree of dependence or autonomy, amount of training required, proportion of manual as opposed to mental effort. The distinction between quantitative and qualitative characteristics is therefore both provisional and inexact.

Individual and general concepts: historical concepts and social universalities

Like every form of study which seeks to generalize, sociology itself uses concepts to which, on occasion, more than one concrete situation can be attributed. These *general concepts* can refer both to social units (classes of object) *and* to attributes. They can be further differentiated according to their degree of generality. Thus, for example, the degree of generality of the concepts 'worker' or 'community' is greater than that of the concepts 'skilled worker' or 'village', which are only subclasses of the former concepts.

Concepts which by contrast refer to individual cases, exactly defined in time and space, we call individual concepts. The city of Hamburg, Caesar or the Nazi party are individual cases of historical entities, and the terms for these (frequently proper names) are *individual concepts*. General concepts, potentially at least, always refer to a plurality of cases. Nevertheless, they need not be entirely indefinable in time and space. The general concept 'Roman Emperor' for example can be completely located in time and in space, i.e., there were times when and places where a Roman Emperor did not exist. It is impossible at any point in time to predict the number of particular cases falling under a single general concept.

Having said this, it would appear that individual concepts are historical, while, as their open-ended generality increases, concepts become increasingly timeless. This is true only if we make certain qualifications. In the first place, not *all* concepts of open-ended generality (extensible range of reference) automatically become increasingly divorced from time. The concepts 'gold – precious metal – metal', which are differentiated by their degree of generality, are all equally timeless. If we take by way of comparison the progression 'trade union leader – organization leader – leader', we see that these increasingly generalized concepts become less and less historically dependent. As they increase in generalization, certain historical limitations disappear. 'Chiefs' exist even in societies that know no organization, and organizations exist in societies where 'the trade union' does not exist as a particular type of organization.

It depends entirely on the particular circumstances under consideration whether greater generality in the meaning or application also implies

lesser historical specificity. In any case there is no simple dichotomy between concepts which have some historical reference and those which are not time-bound, merely a difference of degree.

Universal sociological concepts of an a-historical kind – or historical 'constants' or 'universals' as they are sometimes called – are exceedingly rare, as one might easily suppose. The concepts of 'party', 'organization', 'church', and probably 'social class', 'family', 'community' and 'role' as well, are in any case not universally valid throughout history. Whether 'domination' is an historical constant is debatable. Clearly, sociological concepts with universal validity throughout history are so fundamentally involved in social phenomena themselves that the subject-matter of sociology – society and social interaction – would itself be inconceivable without them. As examples one could instance concepts like 'interaction', 'exchange', 'sanction' and, presumably, 'group', 'norm' and 'conflict'.

Definition of concepts

Types of definition

A definition is the statement of meaning contained in a concept, or the full description of the content of meaning conveyed by a given word. The indistinctly conceived meaning given to the word in the first place is termed the *definiendum*; the full description of the elements of the meaning is the *definiens*. The concepts used in the *definiens* sometimes need definition themselves, giving rise to 'definition chains'.

There are many words in common usage which we clearly regard as 'concepts' and which we understand and can use without involving any serious misunderstanding, but for which we would be hard pressed to give a precise definition. This is partly due to the way in which concepts in everyday language are learnt. We rarely learn them by explicit definition but rather by deduction from context or by the association of a word with the object that is designated by that word by other people. Yet it is precisely this everyday language, with its undefined concepts, which is the principal source of concepts in sociology. In order to carry out research with these concepts, to construct testable hypotheses and communicate results, it is often necessary to render them precise through explicit definition. That this requirement is rarely met in no way alters its importance. An explicit definition may only be dispensed with for everyday concepts which are used in a generally unambiguous sense. Definitions are also necessary if neologisms – coinages of novel concepts – are introduced or concepts from foreign languages or from other specialized studies are adopted.

Where concepts from everyday speech, from foreign languages and from other specialisms are to be defined for the purposes of research, one may resort to a process of separating out and specifying different meanings.

This serves to formulate the current meaning in explicit terms and to define it precisely. Redundant elements of the common usage meaning can now be excluded and new ones added. For a sociological definition of 'community', for example, one may disregard the idea of an administrative unit, which is included among its common meanings. On the other hand, the notion of a degree of social integration of groups of people who are neighbours in a spatial sense, which is not necessarily included in the normal meaning of 'community', may be added as an element of the definition.

If one is not working from a concept which is already available and whose meaning is simply specified by the definition, but is seeking a term for a theoretical construct for which there is no existing word, then the process of definition is the reverse of that outlined above. A precise formulation of that which requires definition (the *definiens*) is worked out, and a corresponding expression is then applied. Thus a new word may be formed, though genuine neologisms occur relatively rarely in sociology. More frequently new abstractions are formulated which use a word or combination of words already familiar in another context, as, for example, with the concepts social personality, status, primary group or role-set. Where a general concept already exists in relation to which the new concept is a sub-category, then we may use the classical process of definition of stating the closest general term and specific attributes. The concepts of primary and secondary groups, for example, came into existence in this way.

Real and nominal definitions

Independently of the way in which they come into being, we can distinguish between two kinds of definition: *real* and *nominal*.

A *real definition* is a statement about what we consider to be the important characteristics of the reality we want to define. Thus real definitions are actually assertions about the nature of a phenomenon. As such they are supposed to have empirical validity. Insofar as our conceptions of reality may prove erroneous, real definitions can, therefore, be false. In all such definitions it is assumed that the concept to be defined, along with its meaningful reference to some object, already exists, i.e. the notion to be defined has a significance of its own, independent of the terms in which it is expressed. A typical real definition would be: a political party (i.e. that object known by us which we term 'political party') is an organization with a democratic internal structure which seeks to participate in government by taking part in election campaigns. As soon as we find that some of the organizations which we call political parties do not, for example, have a democratic internal structure, then this becomes false as a real definition and we must try to find attributes for the definition which *all* organizations that we call political parties do actually possess.

The content of meaning of a current but undefined concept is usually extremely complex and often cannot even be clearly outlined. Only a part of this content of meaning is eventually included in the explicit real definition, as can easily be seen in the above example of the concept 'political party'. Thus the concept *means* more than its definition expressly states and the definition is incomplete or partial. It may be expanded by adding further attributes and supplemented as a result of further research into the underlying reality.

What is taken from the complex content of meaning and included in the explicit real definition of a concept depends, among other things, on the context in which the concept is to be used. It is thus quite possible to define the same concept in various different ways, provided that all of the elements of the various definitions form part of the complex unabridged content of meaning of the concept. This can easily be clarified by comparing how the concept 'political party' can be meaningfully defined in a legal, political, historical or sociological context.

In contrast to the real definition, a *nominal definition* fixes the meaning which is thereafter to attach to a particular expression or indistinct notion, i.e. it states which word will be used to refer to an object having the attributes mentioned in our full description. Thus the nominal definition of 'political party' could run: any democratically structured organization which seeks to participate in government by taking part in election campaigns *shall be called* a political party. In this a linguistic convention is established and no substantial assertion is made. Hence a nominal definition cannot be false, but, at worst, it can be useless. If we find, for example, that a particular object which we want to call a party does not have a democratic internal structure, then it does not follow that the definition is false, but we cannot apply the concept 'political party' to it. That which is to be defined in a nominal definition has no meaning of any kind independent of its full description, i.e. is completely subsumed under its meaning, so that logically a nominal definition cannot be incomplete.

The two kinds of definition involve certain advantages and disadvantages depending on the circumstances of their use. Quite generally one could say that nominal definitions are used above all to make general statements the validity of which is not time-dependent, while real definitions are increasingly appropriate the more a statement is historically descriptive.

For research, nominal definitions have the particular advantage of greater precision in specifying the objects of that research. For example, if we decide to term people with a high measured social status 'social leaders', then it is always quite clear what falls under this heading. With a real definition, on the other hand, it would always be open to dispute whether this definition of 'social leader' was really correct, i.e. whether all people

with high measured social status actually are social leaders, or whether the concept should be applied to certain individuals without such status. Bound up with the advantage of precision, however, is a disadvantage. Precisely because a nominal definition does not need to fulfil any criterion of truth, we are allowed a freedom of definition which may include purely arbitrary choice, if we in fact give a meaning to a concept which is independent of its explicit definition. We need to find a definition, based on our prior understanding of what social leaders 'really' are, which is capable of encompassing this. Thus we conclude that real society exhibits recognizable structures against which some nominal definitions seem inappropriate or arbitrary.

A definition stabilizes a concept against the inadvertent changes of meaning which can easily occur in everyday speech. This can, however, be a disadvantage as semantic changes representing actual changes in the defined object or in our knowledge of it are prevented. If it is continually questioned whether a definition correctly describes its object, as with real definitions, then such changes would less easily escape us than with nominal definitions which cannot, *a priori*, be 'false'.

Up till now we have attempted to work out the distinction between real and nominal definitions. In fact, however, they often cannot be clearly distinguished from each other. For a nominal definition one frequently tries to formulate the full description so that it could serve as a correct real definition, and one frequently has some prior understanding of that which is to be defined, even when a nominal definition has been chosen through the need for precision. It is immaterial whether one consequently says that an implicit real definition lies behind such a nominal definition, or that the real definition is made nominal. What is important is the observation that concepts in sociology which are *strictly* nominally defined, in that what is to be defined actually has no meaning of its own independently of the terms in which it is described, are relatively rare. They are to be found most often in newly formed specialized expressions. However, if the new concept represents a relatively directly observable phenomenon, then it will often acquire in the course of time a meaning independent of its initially nominal prescribed expression, e.g. status, innovation, socialization. On the other hand, very abstract new concepts more easily remain nominally defined for a longer period, e.g. Parsons' 'pattern variables'.

The material discussed in this chapter up till now cannot, unfortunately, be summarized in a few simple rules about the formation of concepts and definitions. In each case one should first consider whether the concepts central to a research project are so unanimously used that an explicit definition is unnecessary. If a definition is provided for a concept used then one should be clear about its intended relationship to a specific time or