

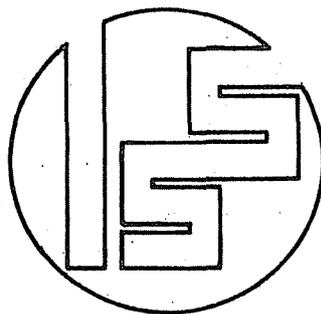
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OCCASIONAL PAPERS

Facts are not Facts

J.F. Glastra van Loon

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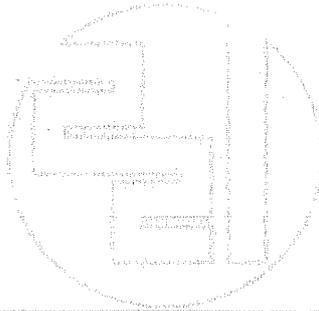
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FACT ARE NOT FACTS

J.F. Glastra van Loon

My point of departure in this article is a conception of science which on various points differs essentially from positivism. Firstly, I believe that every conception of science inherently implies a conception of man. Secondly, I do not regard the acquisition of knowledge as the mere receipt, registration and classification of data and the consequent determination of conformities, regularities, etc., in the empirical data thus processed. Thirdly, I do not accept the notion that a sharp dividing line exists between fact and norm. Having said this, I hasten to add that neither do I accept a natural law doctrine, rationalistic or otherwise. In my view, an essential characteristic of scientific practice is to test theses not only on their mutual compatibility or consistency but also on their empirical tenability. The question is, however, what is understood by experience and by testing?

This cannot be answered without an appeal to a particular conception of man. A natural law theory coincides in its quintessence with such a concept and explicitly brings it to the fore. Positivism not only denies having any concept of man as a point of departure but emphatically rejects the idea that science may be founded in any way on a concept of man. Concepts of man are relegated by the positivists to the realm of subjective fables; a sphere which man may furnish with the products of his will, his desires, and his imagination: this ability to develop philosophy and a concept of man should be sharply separated from the objective cognition of reality. Philosophies of man are designed by man and derive from his own activity; they are subjective and of no more significance than is given them by man, voluntarily or otherwise. Knowledge, on the other hand, is the consciousness, determined by reality, of what things actually are, objectively valid and valid for everyone, that is, of universal validity. That is the position taken by the positivists.

According to positivism, science is only incidentally concerned with individual empirical subjects of cognition. The latter may be indispensable and responsible for a historic state of science, but scientific validity is determined by a criterion which is independent of such empirical and historical subjects: science is truth about facts. Individuals participate in that truth, but they can be substituted and interchanged. Science cannot exist without people but it has its own validity, it is an established truth, independent of all those things that make man a particular individual: his empirical, cultural, historical make-up, his wishes and cravings, his activities, his particular viewpoints and opinions.

The implications of this conception of science have been farthest pursued by Immanuel Kant. Accepting the assumed factual existence of science (as valid knowledge), he queries the conditions for its feasibility. In my view this is tantamount to analysing the (tacitly accepted) assumptions regarding man on which this conception of science is based. In other words, how should we see man in relationship to reality if objectively and universally valid cognition of reality is to be possible?

Kant's analysis terminates in a specification of necessary conditions of knowledge. These he called Anschauungsformen of perception and 'linking categories of reason'.¹ These conditions of the possibility of science as valid knowledge are neither empirically recognisable nor factual in the sense and manner in which objects of knowledge exist and are recognisable. They are not characteristics of empirical subjects. If this were so, the validity of knowledge would vary according to the qualities and characteristics of men. Kant distinguishes the subject of valid knowledge and the empirical subject that can itself be an object of science and possess both true and false beliefs. Kant gives a somewhat ambiguous answer to the question of how the former, transcendental, and the empirical subject relate to each other. In my view, this is an insoluble aporia, arising from his own assumptions about knowledge and experience.

This is not the only basic problem that Kant's analysis brings to the fore. Equally important and insoluble is the question: what is the relationship between the object of knowledge and reality? If true knowledge can only be established when certain subjective conditions are fulfilled, this implies that no knowledge of reality in itself is possible - Kant talks about Ding an sich (noumenon). How, then, can we determine whether or not such a reality exists in itself? What can prevent the assumption that what we recognise as objective reality is nothing but a figment of our imagination (conceived by the Anschauungsformen and reason)?

Kant presupposes that there is a reality which is independent of man and not recognised as such by man, and that this reality provides man with material for his perceptions. This 'matter' is not known; epistemologically it is indeterminate: a 'chaos of perceptions'. Only insofar as it is determined through our modes of perception and judgement does it become an object of cognition. Thus, the existence and unknowability of reality are reconciled in a purely theoretical notion of man and his relationship to reality. Man is pictured as a being imprisoned in the magic circle of his cognitive power. This cognitive power is limited but unchanging and therefore infallible within certain constraints. Moreover, for indefinable reasons, it provides sufficient indicators for man's behaviour vis-à-vis reality.

No positivist will ever acknowledge or accept Kant as the interpreter of his philosophy and conception of man. Neither should I wish to contend that Kant's philosophy is valid in all particulars. This does not alter the fact, firstly, that his philosophy throws light on a number of problems inherent to the conception of science commonly shared by the positivists and Kant; and, secondly, that in a more generalised form, some of the principal theorems of Kant's philosophy are also those of the positivists. The differences are found in the outcomes and not in the points of departure.

First, there is the assumption that true knowledge is an established datum, universal, unchanging and inter-subjective. From this it follows that the cognitive subject, as partaking of true knowledge,

1. Verknüpfungsformen des Verstandes.

must be unchanging and identical in each individual. The positivist will not only refrain as much as possible from making statements about the nature of the cognitive subject but, conform to his dislike of such statements, he will also minimise the part played by the subject in the creation of knowledge. Kant maximised this part to the limits compatible with the assumption of independent reality. One step further in this direction would bring us to a subject which not only moulds the objects of his knowledge, but also creates them. The positivist preferably adopts the other extreme, namely, that of the subject as tabula rasa: a blank and passive receiver of impressions of reality, registered in accordance with the frequency of their occurrence in objective reality. However, this version does not answer the question: how can the subject derive general laws (i.e. also applicable to non-registered cases) from registered conformities, relative frequencies, etc. A great rift exists between these two kinds of knowledge, namely, that of observed cases and that of all observable cases with identical characteristics. In order to bridge this gap, the positivist also will have to bring in another particular assumption.

Kant sought for a basis on which to bridge the gap between the particular and the general by assuming uniform assimilation of the flow of perceptions by the subject (by virtue of the a priori established modes of perception and reason). The positivist seeks this basis in 'the uniformity of nature' i.e. in objective reality.

The positivist's concept of experience is no less a priori determined than is that of Kant. The subject, seen through the eyes of the positivist, is no less caught in this a priori circle than is the subject as conceived by Kant. In fact, as compared to the Kantian subject it is doubly confined by that a priori: not only as cognitive but also as active subject.

According to Kant, the validity of 'natural laws' is based on (the modes of perception and reason of) the subject and not on objective reality. This is also the reality of which the subject forms part as a physically active subject. It was to ensure man's freedom in the face of the fact of '(natural) science' that Kant lifted the foundation of natural laws out of objective reality and placed it in the human subject. The reconstructive masterpiece of his Copernican reversal was that he thus 'saved' human freedom as well as natural science.

The positivist rejects such speculative juggling as superfluous, misleading and the cause of various pseudoproblems. That by doing so the coherence between his own presuppositions eludes him, that his presuppositions even become lost in obscurity, does not seem to worry him. He puts natural laws where they belong — according to evidence, common sense of meaning? — namely, in nature. He welcomes the fact that in doing so, he reduces man to an object of those laws. The problem of human freedom can thus be dismissed as a pseudoproblem and ethical problems reduced to questions of human volition which, in turn, is an object of science (psychology).

The positivist thus seems to avoid metaphysical speculation, remaining as close as possible to 'experience'. However, the granting of the highest significance to experience does not eliminate the a priori from that experience. The only advantage is that the a priori has no place (explicitly acknowledged) in the concept of experience to which man appeals.

The distinction between experience and the conception of experience is of cardinal importance. Everyone has experience, without necessarily having any explicitly worded conception of what it is. However, to appeal to experience as determinative of the validity or non-validity of knowledge does in fact presuppose a certain conception of experience. The positivist sees this primarily as sensory perception conceived according to a certain, basically mechanistic, view: experience is the sensory reception of impressions or stimuli or perceptions from 'outside' which thus become 'contents' of consciousness.

'From outside' in this sense is extremely ambiguous. Primarily, it is a spatial location: external to the body. However, this does not tally because the body itself is an object of perception, by both afferent and proprioceptive senses. If we extend the first distinction, the body itself becomes 'external'. The question then is: external with regard to what? The central nervous system? But we can feel that nervous system. Even if its perceptions are qualitatively different from those of the senses, they are nevertheless perceptions. We are thus forced either to amplify the spatial distinction with an entirely different qualitative one, or to give another meaning to the border between 'external' and 'internal' which can then no longer be spatial. In its stead, we have the distinction between spatial reality and consciousness or, à la Descartes, between that which has spatial extension and that which has none: res extensa and res cogitans.

However, another method can be used to show that the spatial element in the positivist conception of experience is not tenable. Even if we confine ourselves to sensory experiences related to what is commonly called external reality, we are still faced with the problem that the finished product of the experience process as conceived by the positivist: knowledge or understanding, is not spatially to be located, let alone located 'within' one or more individuals. Undoubtedly, hearing, sight and smell, and thought, desire and feeling for that matter, have an anatomical-physiological component and as such a spatial element. However, that which thus can be observed as spatially locatable - and even then only under a series of special conditions - is not hearing, sight or thought, desire or feeling etc., but something with which they can be correlated in the observation. A condition that must be met if this correlation is to be observed is that not only must someone be available to register these spatially located processes, but that there be someone able to report that he sees, hears, thinks, wants something.

There is yet a third way by which it can be demonstrated that the positivist conception of experience has an a priori basis. According to positivism, experience is the sensory reception of simple sensations undistorted by interpretation, coordination or other subjective processes so that the same external sensation corresponds each time to the same external stimulus. However, no-one has yet succeeded in isolating or describing such elementary experience units, or in meeting them in his experience in any form whatsoever. That which is accepted as such, in laboratory experiments for instance, is actually as much limited by the experimental framework as every sensory component is limited by the context in which it is experienced. The pure, elementary experience datum is actually a pure construct, a concept with which nothing in experience corresponds - except that which man arbitrarily decides to consider as such. There need be no objection to this if it is consciously done within the framework of research. It is clear, however, that what the researcher decides is an elementary experience datum can

not be given the power of a touchstone for the validity of knowledge in general.

The positivist's experience concept is not derived from experience. It is a concept that rests on a priori suppositions regarding man and his relationship to reality. In fact, this experience concept implies a sharp division between cognitive subject and objective reality. 'Complete' reality is thought of as two separate spheres, one subjective and the other objective, which somehow meet 'in' the human being. The fact of being human, a microcosmic reflection of a macrocosmic reality, thus falls into two parts. The meeting of these two spheres occurs as an afferent-efferent process of understanding and as an efferent-afferent process of action. Knowledge emerges as an exact reproduction of objective reality in the subjective consciousness; action is the objective realisation of an inner volition. The will oriented towards the external world is attuned to information from that world, but cognition and action are two separate and distinct processes. Cognition is determined externally whereas action is determined internally. The cognitive subject is passive and receptive; the other active and productive. That which is determinant of understanding and that which is determinant of action can only be thought of as linked via channels running outside the subjective and objective spheres respectively. Facts are facts; and norms are norms.

This view runs up against various difficulties, both with regard to understanding and with regard to action. Not only is the transition from one sphere to the other baffling, but this line of thought does not clarify the relationships between individual subjects. In the positivist's concept of understanding, inter-subjectivity merges with the inter-changeability of empirical subjects: individual subjects are identical to each other qua cognitive subject (analogous to the way in which Kant explicitly formulated this in his doctrine of transcendentalism). Other constructs are used with regard to volition and action. Contrary to rationalism which postulates the identity of reason and reality and therefore of the subject and object spheres, positivism springs from an individualist and voluntaristic view of humanity. To the positivist, inner activity of the will is strictly individual; he sees individuality of the will as man's volitional freedom. The clear separation between the subject and object spheres must be seen as the (re-)constructive conceptual basis of that individual volitional freedom (compare earlier remarks about Kant's constructive anchorage of the will's autonomy).

In defining man's volitional freedom, positivism creates gigantic problems for the analysis and conception of inter-subjectivity as regards volition and action. In the positivist's view, a basis for the inter-subjectivity of will and action can be found only in the form of mutual agreement. Individuals can only cooperate in an activity by entering into agreements with each other. However, this construct founders on the fundamental presuppositions of the positivist's image of man and reality.

In the first place, mutual agreement demands that individuals should be able to communicate and to make the substance of their wills known to each other. In the framework of the positivist concept of man, this would mean that one individual must make an 'inner fact' outwardly observable to another who must recognise it as the expression of the former's will and interpret it according to the meaning inwardly attached to it by the other.

How this is to be done remains shrouded in mystery. To make my standpoint clear: I do not deny the possibility of understanding between individuals. What I contend is that positivism has constructed an image of man and his relationship to reality that leaves no room for such communication.

The second problem on which the positivist runs aground is that mutual agreement must be seen either as a mere fact - in which case it is difficult to see how individuals could be bound by it - or as normative and binding - in which case: to what does the pre-contractual norm that contracts must be observed owe its inter-subjective meaning and validity?

The positivist doctrine leaves these matters untouched. Even worse, any discussion of them is scorned as a product of subjective imagination. Yet the intrinsic contradictions in the positivist's conception of man still exist. This is not merely a logical imperfection of limited importance. Positivism in its entirety is made untenable, particularly on those points on which it claims to provide a guide and elucidation, i.e. with regard to the relationship between subjective knowledge and objective reality, and that between knowledge and action.

Whatever the cognitive status of a concept of man may be, without it man cannot define himself as a human being. It is the ability to communicate with his fellows that makes man a human being. Every man has a fellow. Being human means having a fellow being, that is to say, being able to communicate with another. However, this fellow-man who makes us into human beings is not presented to us ready-made. Each of us must acquire that fellow-man, and with him our humanity, by communicating with others. The quality of being human is a cultural product acquired together with other people; a historically variable mode of partnership.

Languages and symbols are not only means used by man to record his inner life and thoughts and to make them outwardly observable (although they may fulfil that function); they are much more the methods by which man realises himself as a human being together with others, and which he subsequently can also use as means to achieve certain goals. Dependent on this usage and on the goals which he defines with the aid of language and symbols, he further determines his quality of being human: as a person pursuing a certain objective, as a member of a particular community, as a man carrying out a particular profession, as an actor in a certain role. Being human is self-realisation as a person.

Not only inter-subjectivity but also human subjectivism is realised (in a certain way) during communication. Under 'subjectivity' I understand man's ability to view experience with detachment and to take up a stand from which it can be classified (perceived) in various ways. Subjectivity means the ability to handle things in more than one way, to be able to associate in various ways, to be able to react in different ways to a particular situation. For example, insofar as I am able to use a piece of wood or stone in different ways, I am a subject; insofar as I am not capable of doing so, for whatever reason, I am not. Looked at in this way, subjectivity is not absolute, something which either is or is not but it is something which is susceptible to both variations and gradations. Human role-playing is mirrored in the role-playing of things: a thing is not only experienced, it is experienced as something (as a piece of wood, a branch or a stick, a walking stick or a lever, etc.).

Observation is not the passive receipt of impressions, but the active involvement of an organism with its environment. That which is observed is not a meaningless series of impressions, but an egocentric perspectively-structured field from which action possibilities and infeasibilities can be derived. It has a certain meaning, a certain quality which is dependent upon the actions appointed to it (as a thing, as a path, or as a field etc.) by the observer. Observations are made discriminately, i.e. according to the observer's viewpoint and in view of certain behaviour.

A human being differs from an animal not only in anatomical and physiological characteristics, but in the variability of his behaviour, particularly in the ways in which man can attach meanings to the components of his field of perception. He has the power to detach himself from that which he perceives, to take his distance and subsequently to observe it in various ways. This ability is not separate and disconnected from perception (as reason is usually thought to be an independent 'mental' ability which masters and moulds the meaningless matter which it perceives). On the contrary, it is the ability to observe things in various ways, the ability to perceive them as different things and to give them different meanings dependent on the context in which they occur. This context may be a perceived context. It may also be a designed and constructed context: one in which perceived elements are indirectly related to each other by means of actions after being detached from the context in which they were perceived. This detachment or abstraction is in itself a mode of observation. That which is observed is thereby lifted out of the egocentrically constructed field of perception and is given a meaning that is determined independently of that field (as is the case with mathematical symbols).

However abstract the meaning of a symbol may be, it is nevertheless an element of perception. It is part of an egocentric perspectively-determined field of perception; it retains the meaning which it has as such, thus enabling us to handle it. This applies to a character, a word, an equation or any logical or mathematical operator (whether written or spoken), no less than to any other element of perception with regard to which we may determine our actions: they are figures on paper which we can see and write, or sounds which we can hear and pronounce. Apart from their significance as observed things, they have another meaning that is independent of the context in which they occur, but is determined by their manner of usage in relation to each other. This usage is determined by an action programme exclusively related to the way in which the symbols may be connected to and replaced by each other, and which ignores the relationship between the symbols and other elements of perception (whether visual or oral). The meaning of the symbols is established independently and therefore is not changed during the transition from visual or oral, from written to spoken signs, or (and this is more important) from use in one situation to the other, and from one user to the other - as long as the symbols are used according to the 'rules of the game'. An abstract field of possible actions is designed simultaneously with the programme of action.

Between this abstractive extremity and that of concrete egocentric perspectively-determined meanings, numerous degrees of disassociation from the observed situation and context are possible. A symbol which has been completely abstracted from the situation as far as its meaning is concerned, is and remains an element of that situation: we are able to work with it. But also we can understand it.

Each object with which we work has an egocentric perspective-determined meaning (informative value): a character, word or symbol no less than a pen or a glass of water. The manifestation of this object (size, shape, colour, contours etc.) vis-à-vis other objects simultaneously and/or consecutively observed (such as a plane, a sheet of paper, other sounds or shapes, a coat pocket, a table, cupboard, etc.) enables the observer to work with those objects (to write with the pen, to drink the water, etc.). The degree of egocentric determination of what is observed may vary. This can be illustrated by the following results of experiments carried out among people whose perceptive abilities had been disturbed to varying degrees as a result of more or less serious brain lesions. Some of these people could only perform the act of 'drinking out of a glass' when a glass filled with liquid was placed in front of them and when they were also thirsty. Others could do so when they were not thirsty but only when the glass was filled. Some could execute the action with an empty glass. Finally, a normal person can demonstrate the action of drinking without holding a glass in his hand. This is an example of a series of increasingly abstracted and detached observations and actions.

The higher the level of abstraction, the greater the possibility to design and execute actions independent of the observed situation. An artificial games area, determined not by observed but by decreed relationships, is as it were introduced into the perception field, for example a chess-board and chessmen. What happens in the games area is not completely dependent on the observed relationships but is primarily controlled by the rules of the game. The significance of the observed relationship is also principally determined by these rules - although board and pieces naturally retain their informative value without which they would be impossible to use. However, the size, weight etc. of the board and pieces are completely irrelevant to the players. It is even possible to play chess by moving people distinguished by suitable markings on a lawn that is correctly divided into squares. Similarly, the colour or size used to depict a spatial figure with which to demonstrate certain geometric theorems is quite immaterial. The essential thing in such cases is that the elements of the sign system should be dealt with in relation to each other and in accordance with set rules. In other words, the significance of these relationships depends exclusively upon the rules for the actions that cause them. The significance of the chess position is on the one hand that it was gained from a given starting point and according to given rules and, on the other hand, that from it other positions can be reached dependent on what the players do under the rules of the game. A position reached because of an earthquake or because one player moves out of turn does not belong to the possibilities of this game and therefore lacks any meaning.

As the meaning of symbols and actions becomes more abstract, i.e. determined less by observed relations and more by rules, it becomes less important by which subject these symbols are observed or used: the players become more and more interchangeable.

It is completely immaterial when, where or by whom a mathematical calculation is made or a logical proof is produced. The significance of either one is not dependent on the individuals performing it, or on the time and place in which it is performed. The executor might conceivably be a 'transcendental subject' in Kant's sense of the term.

The point is that the subjectivity that corresponds to logical and mathematical operations is not that of a predetermined subject with certain abilities which can only lead to the execution of certain operations. On the contrary, it is a conceptually constructed form of subjectivity based on logic and mathematics as systems of symbols governed by rules. A form of subjectivity, therefore, that can repeatedly be constituted by the actions of empirical individual subjects. The same applies mutatis mutandis to the subjectivity of other forms of knowledge.

Understanding and acting coincide in mathematics and logic. In these disciplines it is necessary to be able to work with given symbols according to given rules. In other words, to be able to perform certain operations and produce results, knowing that these results are the outcome of such operations. This also implies that such knowledge extends no further than the actions thus regulated: mathematics and logic do not relate to something (except themselves), neither do chess and draughts relate to anything outside the game. This kind of knowledge is completely detached from any insight or knowledge of reality except in as far as it is determined by the rules applicable to the symbols (chessmen, draughtsmen, and the respective boards).

In addition to this knowledge, abstracted from egocentric perspective-determined relationships, other forms of knowledge exist whose objects are observed relationships. These forms of knowledge are also based on the ability to work with experience elements. The essential factor is the intersubjectivity and the objectivity of these forms and the ways in which they are constituted. An indispensable factor is the use of symbols governed by rules, and also the introduction of a distinction between symbols and other experience elements. The word 'symbol' here has a very broad connotation, embracing mathematical symbols as well as words and signals, but also embracing anything used to determine an aspect or characteristic of experience elements: e.g. all measuring instruments.

Signals are a specific kind of symbols whose significance is connected with the egocentrically determined perspective of the situation in which they are observed and which consists of indications as to how to act in a given situation. A traffic light indicates how a driver should behave (e.g. whether to stop or to drive on); the umpire's whistle indicates that the game should begin or should be interrupted; the gong indicates that one should go to dinner, etc. Signals have an intersubjective meaning, not an objective one: they are indicators, but say nothing about what is happening.

A different matter is that conclusions about the other traffic (players etc.) may be drawn hic et nunc from such signals. However, this knowledge has no more content than the significance of the signal for others. The signal does not signify that conduct as an object of knowledge, but that a certain action needs to be performed by those to whom it is directed. We need only think of the no-parking signs to realise the difference between indicated behaviour and phenomenal object.

Words may also serve as signals, e.g. 'be careful', 'stop', 'silence'. They may also be used to describe phenomena as objects. They do so not by nature or of their own accord any more than they indicate certain actions by nature or of their own accord. Both kinds of meaning depend on the rules governing the sign usage. Because it is possible to observe experience elements in more than one 'naturally' determined way and to lift them out of their context,

it is possible to ascribe a meaning to them and to use them to signify phenomena as objects. Sounds and figures thus receive an 'additional value', additional that is to the informative value they already possess for actions.

Not only can symbols signify a phenomenon as object; it is also possible for phenomena observed in different situations and perspectives to be classified. With the aid of words such as 'red', 'horse' etc., an observed phenomenon may be turned into an object of knowledge. Moreover, with the aid of these words, the phenomena can be classified as belonging to different categories. The classification thus introduced is not one that was observed, but is a conceptual classification designed by means of symbols.

Observation forms the basis of meaning. However, meaning is not solely dependent upon observation. Phenomena may always be classified in various ways. Whatever the classification, it is not determined merely by observations but by a combination of observations and the use of symbols according to certain rules. The recognition of phenomena as being objectively determined presupposes their observation as well as the symbolic use of other experience elements: repeatedly as the same symbols with the same meanings.

How this is done does not concern us here. The point is that people do it - that is, they manage it to a certain degree. The crux of the matter is that the individuality of the subjects may also be abandoned to the degree that phenomena are determined by means of symbols in an intersubjectively unequivocal way. In other words, a general (transcendental) subject of knowledge is constituted.

Knowledge appears in different forms. It is not uniquely determined by one or more (innate) abilities of the genus humanum, but by the way in which man works with his environment. The simple everyday actions relative to and concerning the things around us constitute a form of knowledge. It is only on the basis of a clear and systematic division of experience elements into symbolized phenomena that intersubjectively-determined knowledge of any objective reality can be obtained. Intersubjectivity, i.e. a certain form and degree of interchangeability of individuals, and the objective determination of phenomena are always defined simultaneously and in complementarity to each other. There is no ready-made cognitive subject that passively receives impressions, on the one hand, and a ready-made self-determined objective reality which is somehow reproduced in human consciousness on the other. For as far as man has any knowledge at all, he relates actively to his environment. It is through planned ordering of that relationship with the aid of symbols (words, measuring instruments etc.) that man transcends the egocentric determination of observed relationships and his subjective dependency on them. It is this also which makes it possible for man to introduce intersubjective as well as objective determination into his relationship with his environment.

Neither given cognitive powers of man nor reality "in itself" determine where and how the division occurs between symbols and phenomena as objects. Neither do they determine which experience elements are incorporated as symbols in action or what elements will be related to them as objective phenomena. The division is determined partly historically (through earlier acquired knowledge) and partly traditionally (through already developed and current systems of symbols and concepts of man and his relation to reality), and partly through policy based on experience and suppositions

regarding the possibilities of acquiring new knowledge. In the latter case, value judgements help to decide what should or should not be aspired after as knowledge; it is a matter of determining relative preferences and how to allocate scarce resources. This does not mean that the objects of our knowledge are free creations of the human faculty of thought, but rather that (1) they are determined only with regard to certain human actions (not an sich) and (2) man can still design different ways by which to acquire knowledge.

The acquisition of knowledge is a process, an activity, a certain way of working with one's experience milieu. It is a process which is not by nature detached from other activities, but one that must be separated from them for the sake of intersubjectivity and objective determination. The way in which this process of acquiring knowledge is made autonomous is a matter of choice. Man is free in his choice, not in the sense that he can act arbitrarily or in the sense that alternatives present themselves ready-made. He is free in the sense that he can create his own possibilities of choice through his ability to create with the use of symbols untried ways of working with the reality of experience.

regarding the possibility of forming new knowledge in the future case, value judgments help to decide what should not be repeated after an experiment. It is a matter of determining relative efficiency and how to allocate scarce resources. This does not mean that the object of our knowledge are free creations of the human faculty of thought, but rather that they are determined only with regard to certain human needs. (1) and (2) are our own self-determined ways by which to acquire knowledge.

The organization of knowledge is a process, an activity, a relation. It is working with one's experience which is not by nature detached from other activities, but one that may be regarded from them for the sake of independence and objective determination. The way in which this process of acquiring knowledge is determined is a matter of choice and in the course of time, we may choose that we are not interested in the sense that alternative means themselves are ready-made. It is true in the sense that we can create our own world of choice through the ability to create with the use of specific limited ways of working with the results of experience.