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LUDVÍK TOŠENOVSKÝ

ON THE FUNCTIONS OF KNOWLEDGE IN PRACTICAL ACTIVITY

No little attention has been devoted in the work of Marxist gnoseologists to the functions of practice in knowledge, that is to the functional dependency opposite to that which we shall analyse in the present paper.

The function of practice as the outset and aim of knowledge, and even the function of practice as the criterion of its truth, are considered to be as it were external with regard to knowledge, the function of practice as the basis of unity of sensory opinion and conceptual thought is considered to be as it were an internal matter for knowledge. However there exist a number of further, fundamentally subsidiary functions of practice in knowledge, e. g. the function of a corrector, i. e. the task of stimulating adjustments of knowledge, or the function of being that wherein the significance of knowledge lies, etc. M. N. *Rutkevich* once summed up all these functions in his conception of practice as the basis of knowledge and assigned a separate place only to the function of practice as the criterion of truth.[1]

Marxist philosophers, too, analysing the functions of practice in knowledge, always simultaneously stress the importance of knowledge for practice, but, however, only in a declarative way and at completely general level. This emphasis never has been and never is accompanied by an even approximately similar effort to analyse the functions of knowledge in practical activity, as has been shown and is shown in the analysis of the functions of practice in knowledge. *Jürgen Habermas* also drew attention to this recently.[2] The present paper is intended to be the first attempt to fill this gap.

The first Chapter deals with the categories of practice and knowledge and attempts to characterize some of the relationships between them. (We also explain the sense in which we shall use the concept of function.) In the first part of Chapter Two we shall shortly analyse and characterize science as a productive force and simultaneously the possibilities of social theory becoming a material political force. In the second part we endeavour to trace on the level of general scientific observation, analyse concisely and characterize some of the functions of scientific knowledge in practical activity, particularly in production and in politics. In the third and shortest Chapter we shall merely indicate the nature of some functions of the other types of knowledge in practical activity. (Some of these are also evaluated in passing.)

Our analysis may form the requisite basis for our attempting, in the conclusion of the paper, to assess in a more synthetic manner the role played, under the current conditions of Czechoslovak socialist society, by knowledge, especially by scientific knowledge, in the most fundamental forms of practical activity.

1. Practice, knowledge, and function

The analysis of the functions of knowledge in practical activity must begin with an analysis of the concepts of practice, knowledge and function, since all these terms mentioned are used in countless and often considerably different senses. It will not be possible to be satisfied with a merely formal preliminary. It will not be possible, on the one hand, because practice and knowledge are too important concepts to be defined merely verbally (even by the form of an agreed definition), without running great danger of over-simplification, and, on the other hand, because our attempt at analysing them must necessarily form an inseparable part of the analysis of the functions of knowledge in practical activity itself. For our analysis of the concepts mentioned will not be merely a preparation for the reflections proper to the theme of this paper, but will simultaneously also form part of these reflections.

It is even desirable to go further, since it is not altogether possible to find and formulate a definition of such important and central philosophical concepts, as knowledge and practice, without a preliminary (at least in this case without a preliminary) statement of how the author of these pages conceives the object investigated by that philosophical discipline under which his deliberations in the present paper are included. We refer to dialectico-historical materialism and its three fundamental aspects: materialistic-dialectic ontology, gnoseology and logic; we consider it to form the core of the Marxist philosophical disciplines. In our further deliberations we shall take our departure from the point that the object of its investigation is the general, even the most general, so far as it is substantial, even the most substantial, and that always in relation to the individual and even to the uniquely individual, produced by the development of science and society.[3] In our opinion not even the conception of the object of philosophy as what is general (common) in the specialized sciences (as the philosophy of science), to quote the extreme scientifist viewpoint, nor the concept of its object as the problem of man and the world (as the science of *praxis* and the dialectic of subject and object), as the representatives of the anthropological or humanizing trend of contemporary Marxist philosophy[4] usually formulate their conception of the object of philosophy, are fundamentally in contradiction to our initial concept of the object of dialectico-historical materialism. For both can be subsumed under it, even although each of these concepts understandably stresses a different task of our philosophy, which is however in both cases an important and current one.

It is desirable to carry out the analysis of practice on more than one level, since the significance of the term really is polydimensional. The analysis of the category of practice on the level of the history of pre-Marxist and non-Marxist philosophy would on the one hand show that by practice has been traditionally understood and is understood all human action and doing, mainly from the viewpoint of its moral motivation, on the other hand it would most probably result in the ascertainment that human activity was dealt with frequently and with considerable success by classic German philosophy. The deliberations of some of the New Hegelians, whether they tended towards materialism or idealistic existentialism, fundamentally are based on the heritage of this philosophy and largely too on the work of the young Marx, which was also very considerably indebted to its fertilizing influence.[5] Apart from this line we encounter especially

the utilitarian conception of practice in pragmatism.[6] For our purposes, however, by far the most important level is the recent history of Marxist philosophy.

Probably due to the fact that Lenin considers practice mainly in connection with the solution of gnoseological problems, it became common among Marxists, especially in the years following World War II, to consider this category merely as a contrary concept to knowledge.[7] On the other hand, K. Kosík stressed rightly and with great elan that practice is an ontological category, i. e. a shaping of reality and a specific form of social existence, as it always was, too, with Karl Marx. Since K. Kosík has in mind the Marxist-ontological concept of practice, it follows that he is perfectly right to base his conclusions on the principle that "analysis of the way in which people experience this practice belongs to the philosophical analysis of practical activity". (We must understand that this includes the psychological activity involved).[8] However, this desirable emphasis on the ontological character of practice is at the same time one-sided, if the same author asserts that the practice of man "is not practical activity as distinguished from theorizing, but is a defining of human existence in the form of a shaping of reality".[9] Above all, then, it is a question of the fact that material practice, including its psychological aspects, is, after all, something different from psychology, consciousness, knowledge and thought (including their material, practical aspects). The materialistic character of our philosophy insists on the respecting of the differences between material, practical activity and psychological (mental) activity, even though it cannot be doubted that both kinds of activity are human activity.

Bound up with this is the question of the nature of this difference on the ontological level and on the gnoseological level. The one-sidedness of Kosík is expressed in the fact that his starting point is not that this difference also exists on the ontological level, even though only relatively and not strikingly, whereas on the gnoseological level it cannot fail to exist within the framework of every materialistic system as an absolute (in a dialectical philosophical system it is a question of a difference only dialectically absolute). Thus practice is not above all a definitive contrary concept to knowledge, because primarily it is an ontological category (a certain degree of contrariety is involved however even on the ontological level), but it is however secondarily — on the gnoseological level — also a contrary concept to knowledge (strikingly contrary even to the extent of being dialectically contradictory).[10]

A further dimension for which it is desirable to present a definition of practice, is the level of its basic and subsidiary types. We consider to be basic: (1) productive activity, (2) activity directed towards the transformation of material social relationships (in class society, political activity as a form of class warfare) and (3) experimental activity (experimental natural science activity and experimental social activity). All these types of activity to a greater or lesser degree are mutually involved with each other. Each of them at the same time is bound up with psychological activity, with the acquiring of knowledge and with thought, especially experimental activity and activity in new branches of production. This however does not entitle anyone to confuse for example material experimental activity with experimental knowledge (with definitely psychological activity, even although it is closely bound up with material experiment). Subsidiary types of practice can be distinguished according to profession, according to the means used in realizing material practical activities etc. The differentiation

qouted, between basic and subsidiary types, is of course not the only possible one; others are also customarily quoted.[11] In our opinion however it is the one which best answers not only to reality, but also to the need of intellectually concrete ontological and gnoseological reflections.

At the same time, however, it is desirable to consider practice from the aspect of its inner structure, its inner components. Every materially practical act always begins with a certain *subjective purpose*, plan or programme, worked out on the basis of knowledge of that area of reality, which in practice is to be transformed. The most important component of this is the *interference* with material reality with the *aim* of changing it; this interference is always in a certain way intentional, purposeful. The immediate *outcome* of every practical activity is its material results and their *significance* is either the attainment of these results (products and new material social relationships) or the appropriate task of these results in the field of knowledge (e. g. the experimental confirmation of a hypothesis).[12] These results, too, are always bound up with the particular form wherein they are experienced psychologically.

It follows indirectly from what has just been said, that we must distinguish practice as a process from practice as individual practical acts. Even more important, however, is the distinguishing of different types of practice according to the kinds of practically active subjects. Either it is a question of practice throughout the whole social field in the context of the historical development of the whole of humanity, or of the practice of social groups (races, social systems of states, nations, classes, social strata, working collectives, families). Further we must distinguish individual practical activity (in the course of the life of the individual as some kind of average of all isolated individuals, of men and women together or of men separately and of women separately) from the practical activity of a specific individual under his own specific conditions, e. g. conditions of health, economic conditions, etc. At the same time it is clear that we must always consider the practice of a specific individual with regard to the practice of human individuals on the average, the practice of different groups of people and of the whole of humanity. The practice of any kind of practically active subjects is naturally connected and therefore can be more accurately grasped only when taking into consideration the practice of the other kinds of practically active subjects.

Practice is thus the material activity of people (from that of a particular individual down to that of the whole of humanity), closely bound up with appropriate psychological activity. As a philosophical category it is a primarily ontologic category with important gnoseological aspects. It is of complicated structure; taken from various levels of significance its structure is almost exactly as complicated as is human reality itself from that of society down to that of the individual human being.

If we wished to begin the analysis of the category of knowledge, which is also of a polydimensional character, with an analysis on the level of the history of pre-Marxist, non-Marxist and Marxist philosophy, it would mean that we should have to give in the present paper a short history of the theory of knowledge. Since for lack of space this is impossible, we must content ourselves with analysing it on the remaining levels and only occasionally touching on certain historico-philosophical contexts.

From the viewpoint of the proposed outline of our further considerations it

is important to distinguish the main and the subsidiary types (kinds) of knowledge. First of all there is scientific knowledge, which is the discovery of new truths about the fundamental aspects of reality. The ascertainment of truths which are, to be sure, new, but only refer to the phenomenal aspects of reality, is a further basic type of knowledge, i. e. everyday knowledge (belonging to everyday life). I consider that the basic type of knowledge is also that acquiring of knowledge involved in the pedagogical process, even although this newly acquired knowledge is not new for mankind, but only for the pupils, students, etc.; basically it is a matter of mastering certain old-new truths about fundamentals and phenomena. These kinds of knowledge are really fundamental *types* of knowledge; this does not render impossible, but on the contrary assumes, that they are interconnected and proceed together.

What we term artistic apprehension may be considered to be a subsidiary type of knowledge (alongside the various combinations of the main types). The question of artistic apprehension was recently considered by some Marxist theoreticians to be the main problem of art and aesthetics. If today they totally deny the apprehensive function of art this may evidence their lack of principle. Of course we cannot fail to see that the function of knowing is not unconditionally one of the most important functions of all works of art, for the most part, or at least quite frequently it decidedly is not the consciously followed aim of the artist in his creative work.

The first component of every act of knowledge on the level of the inner structure of knowledge is the fixing or determination of the object of knowledge. The object of knowledge is sometimes determined, especially in the case of everyday knowledge, merely by the concentration of the attention of the apprehender on what is apprehended. The main component of knowledge then is represented by the process of active reflecting of the apprehended object in the consciousness of the apprehender. The active nature of this reflection cannot be seen only in the whole related set of functions of practice in knowledge, as is often done, but mainly in the fact that in spite of the generally receptive character, a highly spontaneous counter-process of active constitution of apprehensions is necessary. This is, it is true, in the last instance also determined by what is apprehended; nevertheless without inner psychological creative participation knowledge could never culminate in its third basic component, i. e. in its results in the form of apprehensions (single apprehensions or apprehensions more or less arranged in a system). A fault of most of the objectivistic (whether objectively idealistic or non-dialectically materialistic) noetic conceptions is the way in which they render absolute receptiveness in the process of knowledge. A fault of subjectively idealistic noetics is their rendering absolute the above-mentioned creative psychological activity, the moment of spontaneity in knowledge, leading to the conclusion that the apprehensive relationship between subject and object is altogether immanent in human consciousness (in the subject).[13]

On the gnoseological level, where the difference between the apprehended existing fact and the process of apprehension is most striking, apprehension is, then, also intentionally directed towards what exists (of which, as materialists, we presuppose that its only substance is matter), nevertheless it after all tends from the object to the subject (in contradiction to material practice, which basically tends from the subject to the object). The ontological aspects of knowing

do not then consist only in the fact that what we observe exists, nor only in the above-mentioned tendency towards what exists, but above all in the fact that knowledge itself is something which exists, that it is a property of the apprehending subjects.

Taking into account the individual kinds of apprehending subjects we may then distinguish kinds of knowledge (just as we distinguish the forms of practice according to the kinds of practically active subjects), and this will range from knowledge in the philogenetic aspect in the widest sense, that is from apprehensive activity throughout the course of human history in general, down to the ontogenetic aspect in the narrowest sense, i. e. in relation to the apprehensive activity of a specific individual in the course of his development. In order to understand the diference between the analytic-empiric line of Marxist gnoseology and its synthetic-rationalistic line it is then important to distinguish also between knowledge in the sense of individual aprehensions and systems of apprehensions on the one hand, and knowledge conceived as a process, as the process of apprehending, on the other hand. This can be observed too in the dimension of the truthfulness of knowledge. The first line conceives truth basically as a quality of the individual apprehensions (statements and composite statements), the second, which I consider to be the more gnoseologico-philosophical (for the first is considerably indebted to the dual system of values of formal logic), sees the basis of truth in the process of the endless drawing near of knowledge to the apprehended object. The first conceives untruth as a formal logical contradiction of truth, the second as a temporary departing of knowledge from the apprehended reality.[14]

It is possible to consider that the extent and amount of definitions presented by us both of the category of practice and the category of knowledge roughly correspond to the possibilities and requirements of this paper and to the current degree of development of philosophical considerations of these categories. It remains then to define more closely the concept of function. It is possible to consider that the functional relationships between practice and knowledge are the most important and most typical relationships between them, resulting from the character and structure of the two members of this relationship. It does not however mean that others do not exist. We have mentioned at least a few of them.

It is still necessary to return to one of them, namely the relation of inclusion between practice and knowledge. To include knowledge entirely as practice means that we fail to respect the gnoseological character of what is fundamentally a gnoseological category; this is an expression of the sheer ontologistic tendencies in our philosophy. (This does not in any sense mean that certain aspects of knowledge are not capable of being included under practice; a partial inclusive relationship between knowledge and practice undoubtedly exists.) We certainly should also object to the concept of an ontology which seeks to dispense with gnoseology, just as at one time we rejected the gnoseologistic tendency which sought to reduce the entire range of philosophical problems to the theory of knowledge. (At the present time no-one any longer atempts to include all practice in the category of knowledge, even although a few years ago it was still possible to encounter indications of such an attempt in this country.[15]) It would be self-deception on the part of the scientific-theoretical and technological-scientific front if the endeavour were made to show that the social significance of scientific knowledge will become clear only when all psychological (mental) activity including

knowledge (and scientific knowledge as well) is completely assigned to practice. The opposite is the truth. It is precisely the respecting of all that is specific in knowledge, especially in scientific knowledge, which is the prerequisite for any successful aplication of the functions of knowledge in practice, and, along with this, for the adequate acknowledgement of the social range of science not only in the world but also in fact.

By "functions" we mean in the present paper above all the individual tasks which knowledge is capable of carrying out in practice, and exceptionally we also mean its total task in practical activity. We shall examine, especially on the general level, the task of the individual fundamental types of knowledge in our productive, and simultaneously in our political practice. (We shall analyse them, then, only as the tasks of knowledge in the most fundamental types of practice (i. e. production) and, regarding the practice of transformations of material social relationship, only in the political form of the current class struggle, but not, however, in experimental practice, for this would require special considerations of the role of hypothesis, and of other questions, which would lead us far beyond the purpose of this paper. The tasks of individual types of knowledge in the remaining kinds and forms of practice will be touched on only incidentally.)

2. On the functions of scientific knowledge in practical activity

Those two well-known ideas of Marx, that science is directly a productive force and that theory becomes a material force as soon as it takes a hold of the masses, were in their own day, and still are, abbreviations which cover two important functions of scientific knowledge in productive and political practice. With regard to the current condition of science and to the contemporary state of social-science theory in contemporary socialist society (apart from the fact that even the most appropriate abbreviations are still only abbreviations), it is necessary to carry out a somewhat more detailed analysis of science and to prove that these functions (to fulfil the task of a direct productive force and to be a material force) are even today real functions of science. At the same time it will be necessary to demonstrate in what sense science is a productive force and under what conditions it becomes a material political force.

Perhaps we most often conceive science as one or the other secialist branches of science. The analytical theory of science, especially scientific (formal) logic and the methodology of science, examine basically the general qualities of the individual special science, as it were the model of specialist science.[16] Science however must be seen in a wider context, namely as all that is general and fundamental not only in the specialist sciences, but also in all those philosophical disciplines, which seek to be a science, although not a specialist but a philosophical science. (In some philosophical disciplines the artistic-essayist function of philosophy is more greatly stressed; the philosophical essey has always been and certainly will permanently remain an important genre of philosophical writing.) Science conceived in this way, if we leave aside the positivistic philosophical disciplines, is the subject of philosophical examination, especially of the synthetic and dialectical theory of science.[17] The way of thinking in Marxist philosophical sciences is dialectical; the theory of this thinking is dialectical logic. The methodology of science in the wider sense as expounded above is a philosophical,

materialist-dialectic, dialecticological methodology. The theory of the analytic, specialist scientific way of thinking is deliberately limited only to the examination of the analytic way of thinking, the analysis of the synthetic, dialectical way of thinking is always carried out with greater or less attention devoted to the analytical way of thinking, that is with reference to that way of thinking.

Science conceived in this wider sense is then primarily a process of discovery of new truths about the fundamental, that is to say, it is scientific apprehending. At the same time this fundamental appears in the philosophical sciences primarily in the dialectically infinite objects of philosophical deliberations (these objects are considered in their relationship to individual items), whereas in the special sciences the purpose is to grasp the fundamental in exactly defined fields of being, whether in nature, technology or society. It is characteristic of all sciences — specialized and philosophical — that they differ from each other by their specific object and by their specific methods. Within the frame of this conception of science it is however necessary to conceive in a different way a further characteristic of science, namely the fact that it is a system of apprehensions. The system of apprehensions of specialist science must be thoroughly consistent and in that sense a closed system; it is opened more or less for a single occasion during the application of the individual apprehensions in practice. The system of apprehensions of every Marxist philosophic science is permanently open in the sense that the aspect of actual practice as it were permanently inclines the line of typical philosophical considerations towards the existent. Consistency is possible and necessary only in the relatively closed fields of philosophical deliberations; in those philosophical deliberations which transcend these fields, that is, beyond them, the specific laws of dialectical logic hold good.[18] Science today is however also an institution, and primarily an institution which organizes scientific acquisition of knowledge. Larger or smaller groups of scientific workers are set up, along with a whole network of research institutes and laboratories, whose tasks are coordinated to a greater or less degree, etc.

The first two qualities of science, science as the discovery of new apprehensions and science as a system of apprehensions, are presented on the social-gnoseological level and concern those definitions of science which basically represent the aspects of social consciousness (naturally in its dialectical unity with the individual consciousness of the individual research workers). Simultaneously it is rather important, in various connections, that the superstructure of a socialist society includes within itself only those scientific apprehensions and those of their systems (including the appropriate scientific institutes which organize their discovery), which are politically determined from the class position and which cannot fail to have an ideological character. Here it is clear that science, conceived only as a discovering of new apprehensions or only as a system of apprehensions (whatever the ideological content of these apprehensions, or whether it has a non-striking or more striking ideological character), cannot be either a direct productive force, or a material political force.

It is only when science is conceived as apprehensions applied in production that it can fulfil in society the role of a direct productive force. It does this really effectively of course only where we have the application of the apprehensions of contemporary science, and not apprehensions which are out-of-date, outmoded by the further development of science. We can speak of the function of a direct productive force only in the sense that the apprehensions applied in

production act directly as a productive force, as an immediate factor in the expansion of production. In their actual application, however, apprehensions go through a very complicated process before they can be of use in practical production. Nor is it otherwise with the application of apprehensions in social science, whether they belong to special sciences or to the philosophical sciences; whether they are nonideological or ideological. Here the situation is all the more complex because in the present situation the masses can scarcely "have a command" of social theories, which are unusually difficult of comprehension, because they respect the complicated nature of social phenomena. And any new simplifications after the downfall of the old ones will find very few who will be bold enough to propagate them. Here, too, however, it holds good that it is necessary to pass from difficult general theories to practice through a whole chain of intermediary links, so that any practical political operation should be adequate to current social science theory, in its practical aspect comprehensible to the masses and capable of convincing them through its factual results of the correctness of the applied theoretical apprehensions. Only when these prerequisites are fulfilled can social science theory become an important material political force.

Only science as applied apprehensions in practice is a kind of materialized existing, only thus is it a component and significant factor in the development of social being. Only in so far as it participates as an institution also in the transforming of the organizational prerequisites for the success of the application referred to, is it as an institution a component of social being. In the realization of this application, however, a decisive and final role either in the positive or negative sense is played above all by the organizers of production and political practice themselves. Should all the links in the transfer from apprehensions to their application in practice have been worked out with the greatest of care, yet if the last links in this transfer are not made use of directly in mass production and everyday political practice including cultural-political practice, the expansion of science would necessarily be inadequately efficient for our society. The serious doubts of whether this already is the case are justified, even to a comparatively great extent, certainly to a greater extent than is permissible from the aspect of ensuring the prerequisites for the progressive development of production and of the whole of our society.

From the viewpoint of science itself, science conceived as applied apprehensions is secondary, but, however, from the viewpoint of the social range of science this feature is a primary one, is actually the most significant aspect of science. It is a sense a tragic moment for science, that it has never itself taken the decisions with regard to this most important of its aspect and even today cannot itself take decisions.

This is bound up with a further problem, namely with the question of science in the widest sense; science in its concrete completeness, and not, then, only from the aspect of gnoseology, ontology and dialectic and formal logic (not only as a discovering of apprehensions, as a system of apprehensions or statements, as an institution and as applied knowledge), but as a totally conceived social phenomenon, still has many other aspects. They are aspects, and at the same time social factors: social-historical, political, individual- and social-psychological, sociological, ethic, theoretical-controlling, etc. All these to a considerable extent determine the course of the inner process of development of science and in the

last instance decide whether and how science fulfils its function of a direct productive force and a material social force.

The analysis of these two functions of science in productive and political practice was not really possible only on the general scientific-apprehensive, gnoseological level. It is possible, however, to put the question, and to reply to it fairly fully, of what function scientific knowledge plays in production and in politics, and to have in mind only the function of scientific apprehension, only that of new truths about the essential. Further we shall analyse these functions in the order decided by the standpoint of the course of the individual components of practical acts, i. e. from the standpoint of the structure of practical activity.

In the first place it is in harmony with this aspect of the function of scientific knowledge to be a stimulus to the inception and development of practice. Concretely it means above all that new and significant scientific discoveries are the main cause or an important impulse towards the appearance or inception of entire new branches of productive activity. This was so in the past and continues to be so today. The discovery of atomic energy and apprehensions regarding the most economic construction of atomic power stations were and still are a continual factor stimulating the expansion of atomic power in various countries (including our own country).

The function of scientific knowledge as a stimulus to the inception and development of practice means further that new scientific truths inspire the use of new methods in political practice. The discovery of cybernetics, which has had and still has a far-reaching importance for science and for technology, plays a continually increasing significant role not only as the basis of the general theory of the control of society (and not only of the general political directing), but also as the real inspirer of the application of entirely new methods in individual practical-political operations. For this it is necessary, and will be increasingly so, to use programmed techniques, whose production in a sufficiently wide range is a further result of the stimulating effect of new scientific apprehensions. The science of law, too, should at the present time work out and insist on applying suggestions for measures which would really contribute to the profounder character of our socialist democracy. The general thesis, that the essential way of making this democracy more profound is to increase the political activity of the entire population, up to now often merely conceals the fact that the artificial prolongation of outworn forms of political work, forms which help to perpetuate artificially the antiquated system of law, leads to the very opposite, namely to the ever-increasing political passivity of our citizens, and even of members of the leading political party. If our legal science rids itself of the effect of the Prague positivistic traditions, and adopts the materialistically interpreted teachings traditional for the Brno Normal Law School, its new apprehensions may become an important inspiration for the whole process of intitiating measures which in sum could lead to the increased political activity of the citizens of the Czechoslovak Socialist Republic. And this without speaking of the new apprehensions of political science, a science which ought, and even already could, be set up in this country. Without this we cannot avoid political mistakes, since its place cannot be taken either by philosophizing or by sociological and still less by psychological reflection on different sides of our political life. In face of the non-existence of political science it is not possible to substitute talk of the scientific nature of politics instead of a really scientific politics based on political science.

If scientific knowledge fills the function of a stimulus to practice, then it does not mean that it is only a stimulus to the origin of new branches of production and an inspirer of new methods of political wark. It is also the case that scientific knowledge represents and should in all kinds of practical activity continually represent an active stimulus to the expansion of those already existing branches of production and to the rendering more profound of the methods of political work in use. Scientific knowledge should continually stimulate the expansion of all our practice.

Scientific knowledge continues to carry out the function in practice of a support in fixing the subjective purpose of practically active poeple. As we already know, every practical activity begins with the setting up of such a subjective purpose, with the construction of a plan of activity; a detailed plan of the technology of production is worked out, decisions are made about tasks, the strategic operational and tactical approach, the methods of carying out the decisions, etc. The quality of all the possible forms of this subjective purpose is directly proportionate to the quality of our knowledge both of the condition of what has to be changed by practical activity, and of the tendencies to development which it contains within itself. The greater our knowledge of the field of reality in question, the more scientific and of better quality are the plans for our activity.

The path leading from scientific knowledge to productive practice begins with the fundamental research, for the most part carried out with the application of the results or with the contribution of many auxiliary disciplines, and continues through applied research, and often also with the help of a large number of technological sciences; it proceeds by way of development in the factory, through prototype production down to mass production. In each of these sectors of this briefly-indicated path it is desirable to have the fullest, the most concrete intellectual and sensory information about that field of the existing in which in practice intervention is to be made. On the first two levels or sectors of this path we have basically an intervention of experimental character with the aim of increasing knowledge and rendering it more scientific, on the last two, especially in the course of mass production, the aim is to produce products of maximum quality. If the result attained does not correspond to this aim, the fault usually lies with inadequacies in the last two or possibly three sectors of the path in question.

The path from the scientific knowledge of social reality to political practice is much more complicated. It begins on the most general theoretical level, which basically has its starting point in methodology and the fundamental philosophical outlook (the philosophical disciplines — historical materialism, philosophical-anthropological problems, ethics, theoretical aesthetics, etc.). Further it continues by way of general sociological and other theories, by way of empiric sociology, social-psychological and other research, mass organizations and National Committees (Local Authorities) right down to the political practice itself. The quality of decisions taken is eminently dependent on the quality of the knowledge of the social reality in question. To a great extent the putting into practice of these decisions also depends on this, although sometimes decisions of a lower quality are put into practice more successfully than excellent decisions. and vice versa.[19] This however to a large extent is bound up with the further function of knowledge in practice.

This is the function of scientific knowledge of being the factor of orientation in the course of practical activity. The most fundamental component of

every practice is the intervention made into the reality, things, etc., which are to be changed and transformed. This intervention, after all, is carried out with the aim of changing reality for the benefit of man. (Man is understood as ranging from humanity as a whole to man as an individual.) These are changes which only on the whole, in their totality, are made for the benefit of mankind; of many sections of these changes this understandably cannot be asserted.

The main roles of this function of scientific knowledge in production lie in ensuring that mass production of products no longer answering to international parameters should not be endlessly continued, and that production should not be carried on by old and expensive technology. The choice of the optimal variant in the organization of production, the arrangement not only of the technology of production but also the superseding of defective properties of products and their provision with desirable qualities — all this can be ensured only by the organizer of production and the technologist, who continually gains a command of the most recent apprehensions in his branch, by the appropriate economist, by the theory of control of industrial and agricultural production, etc.

Constant orientation by means of scientific knowledge in the course of political campaigns, the use of scientific and other exact information, however it may be gained, in periods of the carrying out of decisions, means on the one hand to respect the actual state of things, and on the other hand to carry out swift amendments of inessential parts of decisions or planning regulations, whenever it is in the interest of the final aim intended by the decision. If all resolutions, schedules and regulations were treated in this way, undoubtedly less damage would result — and not only less material damage. Mainly it would mean that the criminal waste of the results of the inventive genius of this nation would come to an end, the waste of the new truths discovered by the best of our citizens. The most damaging deformations in human relationships would also be more successfully prevented.

The last function of scientific knowledge in practice, with which we are going to deal (only shortly, for we have written of related problems in more detail elsewhere),[20] is its function of interpreter of the results of practice, more accurately its function of being an important means of interpretation, in the course of evaluating the material results of any kind of practical activity. Only when we approach the results of practical activity armed with a sufficiently extensive sum of knowledge (specialist-scientific and philosophical), can we interpret these results as confirming or refuting the truth of the knowledge in question. Concretely in this way is confirmed or refuted the truth of that knowledge which in practice — the criterion of truthfulness — fulfilled or fulfils the function of a stimulus, a support or an orientating factor. (Sometimes in this way the truth is confirmed or refuted of only a few of the apprehensions used; in order to ascertain which, the process of evaluating the results of practical activity is employed.)

The material results of practice themselves alone are blind. If he who evaluates them, he who carries out their interpretation, does not have a sufficiently high quality command of the relevant scientific branch or branches, then for the standpoint of practice there may easily be substituted a pseudo-philosophical defence of practicism, half-heartedness and errors.

The four functions of scientific knowledge in practice are certainly not the only possible functions of this kind. From the functions analysed of science as

a productive force and from the function of social-science theory as a material political force, further functions of scientific knowledge in practical activity could be deduced. We may however consider that for the purpose of the present paper the separation of the individual functions from the entire role of scientific knowledge in practice, which we have here just carried out, will suffice. The brief mention of the relation of the function of interpreter to the outher functions must also suffice; otherwise it is not perhaps necessary in this paper to examine more closely the dialectic of the mutual relationship between them.

3. On the functions of other types of knowledge in practice

The other fundamental types of knowledge — besides scientific knowledge — consist of everyday knowledge (of ordinary life) and apprehending in the pedagogical process. What are the most important functions which these types of knowledge exert in practice?

If a person is to carry out successfully the innumerable detailed operations of productive and political activity, he must be capable of apprehending facts, he must be capable of noticing for the most part readily the various changes in all that is connected with production and with politics. This task of everyday knowledge could be considered as the function of being the ensurer of minor operations in production and in politics. This function of everyday knowledge has unusual significance for the smooth running of the economic process and of political campaigns. In fact the perfect application of all the possible functions of scientific knowledge in practice can be realized only with the help and participation of this funcion of everyday knowledge. Every function of scientific knowledge must sooner or later be transferred to it, must lead to it, if it is to be a function which really works.

From the standpoint of the preservation of the individual and of the whole of the human race, too, it is possible to isolate as a special task of everyday knowledge (closely bound up with the task of ensuring minor operations) the biological function of everyday knowledge in practice. The ascertainment of facts which are a threat to life leads to the practice of safety precautions against whatever may be dangerous. On the other hand the apprehending of realities which are favourable to man arouses activity which leads to the application of these facts in the interest of preserving and developing human life. This function after all in the first place also belongs to scientific knowledge. Of course in that case it is a function which is put into practice only by intermediaries (with the exception of those scientific disciplines whose apprehensions serve directly for the preservation of human health, the ensuring of a high standard of diet and its sufficient quantity, etc.). In the biological function of everyday knowledge in practice the instinct of selfpreservation acts directly, immediately, in the field of knowledge and practical activity.

There can be no doubt that it would be possible to discover the existence of a whole series of further functions of everyday knowledge in practice. They would however, basically be functions more or less subsidiary and deducible from the functions mentioned.

The functions of that knowledge in practice, which is the acquiring of apprehensions in the pedagogical process, are fundamentally two: the task of the

creator of the prerequisites for the carrying on of the functions of everyday knowledge in practice and the task of the preparer for the fulfilment of the functions of scientific knowledge in practical activity. These two functions are fundamentally identical with what is fundamental in the content of the ideas, that the role of the school is to prepare for life and for further study, along with the idea that further study prepares the necessary specialists, and with the idea that the most gifted students will become in future scientific workers. (In every mature society these will always be more and more necessary — still more so in socialist than in capitalist society, without regard to what may be the present state.)

We may meet with the objection that this type of knowledge, whose functions in practice we are just at the moment considering, is not really knowledge. It is not a question of the discovery of truths which would be new for humanity. In any case in everyday knowledge it frequently is not a case of knowing something which has never before been known to anyone. And similarly, too, in the pedagogical process the pupils and students apprehend a new truth, already long known to others (to the teachers and of course above all to their discoverers). There is no doubt that apprehending in the pedagogical process has its own laws, its own specific character. Precisely because of this specific character it must be considered to be a special type of knowledge, whose role in human society and especially in practical activity is always increasing. The increased level of education is from the standpoint of the needs of economic and political practice in socialist society a task which so far has not been sufficiently highly rated and therefore so far is not altogether satisfactorily fulfilled.

These reflections of ours have no intention of taking the place of the required detailed analysis of one or the other of the pedagogical sciences. We were merely concerned to state on the philosophical, ontologico-gnoseological level the existence of some functions of this specific kind of knowledge in practice and thus endeavour to demonstrate that this kind of knowledge is in fact a fundamental type of knowledge.

Nor do we wish to fill any of the gaps in the system of apprehensions in theoretical aesthetics, when we try now to draw attention to at least one of the functions of artistic knowledge in practical activity. Aesthetics also examines the apprehensive function of art, which for the artist is usually on the whole a subsidiary matter. From the standpoint of the consumers of works of art, especially those more intellectually inclined, it cannot however be an indifferent matter, that it is art which above all teaches us to know the rich inner life of the artist himself and through the intermediary of his experiences often too the mental (intellectual, emotional, volitional, etc.) and material life of other people. If such a consumer of such art is an organizer of production and political activity, then artistic knowledge cannot fail to carry out in practice the function of a preparer of these organizers for the fulfilment of their task (naturally along with other factors). For one of their foremost tasks is on the basis of a knowledge of people, their inner life and the relationships between them, to choose such forms of work which will not only ensure the formal fulfilment of tasks, but also contribute to a growing degree of happiness and contentment of man. In socialist society the happiness and contentment of practically every person should already be under consideration. It seems, however, that such consumers are so far rather rare in this country in the ranks of the organizers referred to.

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This paper is not so long as to require the addition of a conclusion to sum it up. Besides the resumé following may take the place of such a conclusion. We may therefore in place of conclusion add only a brief evaluatory reflection on how the analysed functions of knowledge are applied today in practical activity in the current conditions in Czechoslovakia.

In general we may state that the role of knowledge is potentially great (that it ought to be great — especially the role of scientific knowledge — is also emphasized officially), its real role, however, is much smaller than it should be. From the standpoint of the individual functions analysed, the current situation is very unsatisfactory. Science, to be sure, is in this country an immediate productive force, but to such a small extent that whether or not it really is so, is sometimes called in question. Social-science theories are not a material political force, because the direct circuits between "science" and the masses of the people, after the experiences of former years, are no longer in working order, and so far we have not succeeded in building up completely new intermediary links. Not that there is a lack of theory among our citizens, but for the most part these are not scientific theories, consisting as they do of scraps of the generalized experiences of individuals without the capacity of becoming a material political force.

The analysed functions of scientific knowledge in production and in political practice, which we purposely examined only in isolation, are not respected by us in our society to anything like the desirable extent. The consciousness is fairly widespread that the function of scientific knowledge as a support when working out the plan of practical activity should be made use of. However, in fact this is actually made use of to a much smaller extent. So, too, the function of scientific knowledge as the orientational factor in the course of practical activity is made use of only partially and certainly its function of stimulating new branches of production and new methods of political work is not sufficiently stressed. It is as if we suffered from the idea that ours is a small nation, and therefore we are waiting until the great nations introduce the new branches and the new methods. Perhaps the most satisfactory result is in connection with the use of the function of scientific knowledge as the interpreter of the material results of practice. It is not long since the result of our productive activity began to be evaluated by economic science. Until recently, however, the lack of scientific character of the interpretation of these results was one of the main causes of the current state of Czechoslovak economy. The results of political practice have not yet even begun to be evaluated scientifically.

Perhaps that task of the other types of knowledge in practical activity which is being carried out best is the biological function of everyday knowledge in practice, especially in the practice of isolated individuals. Nor are we so badly off as regards the function of the ensurer of minor operations. But, however, the low level of application of the function of scientific knowledge in practice — with regard to the close connection of the two types of knowledge — does not permit us to assume that everything is in order in this sector. The comparatively successful application of the functions of everyday knowledge in practice is merely a confirmation of the fact that our countrymen have not only keen minds but also skilful hands. At the same time it is probable that pragmatic utilitarianism in our specific conditions plays a larger part than we usually are willing to admit.

This in general by no means optimistic evalution may provoke the question of the responsibility shared by philosophical conceptions for the present state of affairs. Are not idealistic opinions a more effective philosophico-ideological means of mobilizing the effective application of all knowledge, but especially of scientific knowledge in practice than are our opinions? Is not the willingness to give a fundamentally positive answer to this question the cause of the fact that the "suspicion" of pseudo-materialism can be expressed with regard to some current Czechoslovak philosophers?[21]

It is not altogether possible to eliminate a positive answer to the second question. As far as the answer to the first question is concerned, that in our opinion must be less ambiguous. Idealistic theories can be and often are in the given sense more effective than those mechanistic-materialistic conceptions, which until recently were current in this country under the title of dialectical and historical materialism as a result of the deformation of its categories and the contortion of its meaning. From this paper, written from the position of dialectico-historical materialism, I think it follows, that the author takes his stand on an unambiguously negative answer to the first of the two questions.

NOTES

[1] cf. the title of the monograph by M. Rutkevich, *Praktika — osnova poznaniya i kriteriy istiny,* Moscow, 1952.

[2] Jürgen Habermas, *Gegen einen positivistisch halbierten Rationalismus.* Erwiderung eines Pamphlets, Kölner Zeitschrift für Soziologie u. Sozialpsychologie, 1964/4, p. 635, seq.

[3] cf. *Marxistická filosofie a speciální vědy* (Marxist Philosopsy and the Specialist Sciences), Filosofický časopis of the Czechoslovak Academy of Sciences, 1963/4, p. 493.

[4] So far as I know no-one has yet published the present analyticoscientist conception of the object of philosophy in the given form, although it is clear that in Czechoslovakia there are not a few authors who set out from this concept (L. Tondl and others). Further it is the initial conception for the formulation of the majority of the tasks of the State Plan in the framework of the complex task of the philosophical sciences in Czechoslovakia for the years 1966 to 1970. On the anthropological or humanizing conception of the object of philosophy cf. K. Kosík, *Dialektika konkrétního:* Studie o problematice člověka a světa (The Dialectic of the Concrete: a Study on the Problems of Man and the World), Prague, 1963 (1st edition), esp. p. 149—173, and L. Nový, *Filosofie v neklidné době* (Philosophy in a Troubled Time), Prague, 1965, esp. p. 49—98.

[5] On Vico's conception of activities see L. Tošenovský, *Příspěvky k základním otázkám teorie pravdy* (Contributions to Fundamental Questions of the Theory of Truth), Prague, 1962 (*infra* only Příspěvky...), p. 64—65 (where there is a reference to the important discoveries of J. Kudrna in this matter); further cf. on the question of the conception of practice in pre-Marxist and in non-Marxist philosophy especially the following: V. R. Beyer, *Der Begriff der Praxis bei Hegel,* DZfPh, 1958/5, p. 749—776, J. Kudrna, *O významu Hegelova pojetí činnosti pro základní problematiku jeho filosofie* (On the Significance of Hegel's Conception of Activity for the Fundamental Problems of his Philosophy), Fil. čas. of Czechoslovak Academy of Sciences, 1959/4, p. 495—521, M. Sobotka, *Člověk a práce v německé klasické filosofii* (Man and Work in German Classic Philosophy), Prague, 1964, K. Jaspers, *Von der Wahrheit,* Munich, 1947, esp. p. 311 and 342, seq., J. Habermas, *Theorie und Praxis,* Berlin, 1963 and M. Riedel, *Theorie und Praxis im Denken Hegels,* Stuttgart, 1965.

[6] On this question not a few chapters have been written in various Marxist studies of pragmatism. Perhaps the closest to the truth is that of Josef Linhart, *Americký pragmatismus* (American Pragmatism), Prague, 1949, p. 98—121.

[7] It is no mere chance that numerous works have been written which contain the category of practice and knowledge in their title, e. g. A. N. Iliadi, *Prakticheskaya priroda chelo-*

vecheskogo poznaniya, Moscow, 1962, and J. Janoušek, *Praxe a poznání* (Practice and Knowledge), Prague, 1963.

[8] cf. K. Kosík, *Dialektika konkrétního* (cf. n. 4), esp. p. 150—158, and M. Sobotka, *Člověk a práce v něm. klas. filosofii* (cf. n. 5), p. 142.

[9] K. Kosík, *Dialektika konkrétního* (cf. n. 4), p. 154. Cf. also the review of this book written by the present author, Journal of Philosophical Fac., Purkyně University, B 12, p. 75—76.

[10] On dialectically conceived contrariety and contradiction see L. Tošenovský, *O zákonech materialistické dialektiky jako logiky,* (On the Laws of Materialist Dialectic as Logic), Journal of the Philosophical Faculty, Purkyně University, G 8 (*infra* O zákonech...), p. 40 and 41.

[11] cf. the review of the book by Janoušek (cf. n. 7) by the present author in Filos. čas., Academy, 1964—5, esp. p. 790—791.

[12] cf. ibid., p. 791.

[13] cf. on this the review of the book by Ingeborg Wirth, *Realismus und Apriorismus in Nicolai Hartmanns Erkenntnistheorie,* Berlin, 1965; it will be found among the review in this number of the Journal.

[14] cf. *Příspěvky*... (cf. n. 5), esp. Chapter III and V, and the answer in defence of a sectional task of the State Plan published in the Journal, B 13.

[15] cf. *Příspěvky*... (cf. n. 5), p. 192—193, esp. n. 51.

[16] cf. e. g. Pavel Materna, *Operative Auffassung der Methode* (Ein Beitrag zur strukturellen Methodologie), Discussions of the Czechoslovak Academy, Prague, 1965, p. 114. The operative conception of method analysed by the author is the methodology of specialist sciences and basically also of philosophical positivism.

[17] A document for the sharp controversy between the positivistic and dialectical methodologists of research in social science is the polemic on questions of the logic of the social sciences which was opened in the Kölner Zeitschrift für Soziologie und Sozialpsychologie by K. R. Popper and T. W. Adorno. In the publication *Zeugnisse. Theodor W. Adorno zum 60. Geburtstag,* Frankfurt a/M., 1963, J. Habermas published the study *Analytische Wissenschaftstheorie und Dialektik. Ein Nachtrag zur Kontraverse zwischen Popper und Adorno.* H. Albert polemizes sharply with this study of Habermas in the article *Der Mythos der totalen Vernunft (Dialektische Ansprüche im Lichte undialektischer Kritik)* in the Kölner Zeitschr. f. Soz. u. Sozialps., 1964/2, p. 225, seq. In the same periodical Habermas gives an equally sharp and polemical answer in the article referred to in n. 2 above.

[18] cf. on this *O zákonech*... (cf. n. 10), p. 31—63.

[19] cf. L. Tošenovský, *O pravdivosti stranických usnesení,* (On the Truthfulness of Party Decisions), Přehled, (Review), 1963/5, esp. p. 56—59.

[20] cf. *O zákonech*... (cf. p. 10), p. 54—56.

[21] cf. Jiří Černý, *Československá filosofie od roku 1945 — z druhého břehu* (Czechoslovak Philosophy from 1945 — from the Further Shore), Filos. čas. of the Academy, 1964/5, p. 783 (a review of the book by N. Lobkowicz, Marxismus-Leninismus in der ČSR, Die tschechoslowakische Philosophie seit 1945, Dordredt, Holland, 1961).

Translated by Jessie Kocmanová

O FUNKCÍCH POZNÁNÍ V PRAKTICKÉ ČINNOSTI

Marxističtí gnoseologové dosud podrobněji analyzovali pouze funkce praxe v poznání, kdežto funkcím poznání v praxi věnují pranepatrnou pozornost. Většinou se spokojují jen obecným zdůrazňováním významu poznání pro praxi. Přitom tato funkční závislost je při nejmenším stejně bohatá, jako je dosud analyzovaná závislost opačná.

V rámci poněkud důslednějšího uvažování o vzájemných souvislostech mezi praxí a poznáním lze dojít k závěru, že praxe je materiální činnost lidí (od určitého jednotlivce až k celému lidskému rodu), spjatá těsně s příslušnou psychickou aktivitou. Jako filosofická kategorie je kategorií primárně ontologickou s důležitými aspekty gnoseologickými. Je bohatě pročleněna; její struktura z hlediska různých významových rovin je téměř stejně složitá jako sama lidská skutečnost. Rovněž poznání, které je primárně kategorií gnoseologickou s významnými aspekty ontologickými (je zaměřeno na jsoucno a je samo něčím jsoucím — vlastností poznávajícího subjektu), je z hlediska svých různých významových rovin bohatě

pročleněno a těsně spjato s praxí. Je třeba stejně rozhodně polemizovat s pojetím ontologie likvidujícím gnoseologii, resp. nepřiznávajícím jí postavení relativně samostatné disciplíny, jako jsme svého času odmítli gnoseologistické tendence, směřující k redukci veškeré filosofické problematiky na teorii poznání.

Věda ani jako objevování nových pravd ani jako systém poznatků, ba ani jako instituce organizující poznávací proces — není a ani nemůže být výrobní silou. Nejvýznamnější bezprostřední výrobní silou současné lidské společnosti může být a je pouze věda jako poznatky aplikované ve výrobě, popř. též jako instituce částečně napomáhající tuto aplikaci organizovat.

Také společensko-vědní poznání se může stát materiální silou jen v tom případě, využívá-li se ho v politické praxi.

Vědecké poznání plní v praktické činnosti především funkci s t i m u l u zrodu a rozvoje praxe (nových odvětví výroby, nových metod práce, nových akcí apod.). Dále plní vědecké poznání v praxi funkci o p o r y při vytyčování subjektivního záměru prakticky aktivních lidí, při vypracovávání plánů apod. V průběhu každé praktické činnosti je, popř. by mělo být, vědecké poznání o r i e n t á t o r e m napomáhajícím zajišťovat vysokou kvalitu praxe. Velmi významnou a většinou nedoceněnou funkcí vědeckého poznání je funkce i n t e r p r e t a c e, tj. prostředku při interpretaci, při vyhodnocování materiálních rezultátů jakékoli praktické činnosti.

Z funkcí ostatních typů poznání v praxi jsou to funkce každodenního poznání být zajišťovatelem drobných operací ve výrobě a v politice a biologická funkce téhož poznání. Funkcí toho poznání, které je osvojováním poznatků v pedagogickém procesu, je úkol tvůrce předpokladů pro plnění funkcí každodenního poznání v praxi a úkol připravovatele pro plnění všech funkcí vědeckého poznání v praktické činnosti.

Letmý pohled na využívání jednotlivých funkcí poznání v praxi v podmínkách současné československé společnosti vede k závěru, že zvlášť nedostatečně se využívá většiny funkcí vědeckého poznání. Věda nehraje u nás ve výrobě jako bezprostřední výrobní síla tu úlohu, kterou by mohla a měla hrát, a společenskovědní poznání se jen v nepatrné míře stává materiální společenskou silou.