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SOME REMARKS ON IMPLEMENTATION OF SYSTEM MANAGEMENT

Introduction

In the present dynamically changing environment of every organization there exists a constant necessity to follow the relations between an organization and its environment. It is so because does not exist one universal model of the organization efficiency as well as there is no single universal solution of particular problems occurring in the sphere of management. Each problem and each solution find themselves in the whole network of mutual bonds; if they are not noticed and analysed, the search for ways of improving the efficiency of our organizations becomes a pure fiction. The system conception of management has been designated for playing a significant role in this domain, since it opposes consideration of any substantial problems from the range of management or institutionally isolated parts of organizations separately from larger wholes and more general tasks. Thus, in the case of system approach we have to do with the analysis of problems and not individuals. The essence of the notion "system approach" itself is expressed in the sequence of the following statements defining the requirements of methodological correctness of the approach:

- we may speak about system approach when the performed analysis makes it possible to define the open nature of the system,

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that is to define the mechanism of inputs, the description of the mechanisms of transformations of inputs into products and, at last, the characterization of the products themselves,

- the enumeration of subsystems which make up the system together with the analysis of relations between these subsystems must be done of the system approach is using,

- while using system approach it is necessary to formulate goals for each of the analysed subsystems,

- system analysis must comprise the demarcation of the limits of the system and its subsystems and the characterization of the areas of the interface with other systems,

- the uncoding of rules of hierarchical structure of the system ought to take place within the framework of system analysis,

- formulation of the conditions of dynamic equilibrium of the described system is one of the conditions of the correctness of system approach,

- it is a characteristic feature of system approach that it formulates the criteria of the system improvement and renders the mechanisms of its development and/or survival,

- the description of basic mechanisms leading to changes of the system and of mechanisms leading to maintenance of its structure is an essential element in system approach,

- the analysis of the basic linkages occurring within the framework of the described system is an essential requirement of system approach.

As it follows from the enumeration of the features of system approach, the analysis of the relations between particular elements of the described system is possible only when the whole system we are interested in is characterized in some definite terms. Such characterization may be accomplished by means of the construction of a model of the system and next its analysis. In this context system management will denote the concentration on the control of processes through a change of relations between subsystems and streams on the basis of the accepted model of the organization.

In the theory of organization and management one meets a lot of various conceptions of model representation of organizations which are a derivative of the application of system approach

to the analysed problems. In my opinion, they are all modifications of five basical trends, that is:

Table 1

Basical approaches to management problems

Trend	Area of interests	Type of system
Human relations	social Man' committed to his working group	closed system - organization in a vacuum
Organizational psychology	a hierarchy of personal needs considering motivation system	open system - human personality is introduced into organization
Socio-technical systems	influence of technology and external expectations over organization forms	open system - connection between environment and organization components has been introduced into analysis
Structural functionalism	dynamic balance of the system making it possible to survive	open system - environment as a source of resources and of problems
Theory of decision-making	programming of behaviours	open system - environment limits rationality of the decision-making process

After J. S. Silverman, The Theory of Organization, 1976, p. 75.

Each of the presented trends of the approach to organization analysis is characterized by tendency to solve definite organizational problems. And so:

- the representatives of the trend "human relations" were mainly interested in the problem of achieving satisfaction in the group in order that the group realized goals set by the managers,

- the creators of the trend "organizational psychology" worked upon the problem of the employees' motivation by means of getting agreement between the requirements of personality and requirements of the system,

- the representatives of the trend "socio-technical systems" were interested in the effect of realization of fundamental tasks in relation to the assigned technology, requirements of the

members of the organization and feeds and problems coming from the environment,

- structural functionalists went in the direction of the analysis of nature of internal relations in the social system finding in this element a deciding factor which makes it possible to create the dynamic equilibrium of the organization,

- the representatives of the formalized trend of the theory of decisions and the theory of games concentrated on the question of the decision considered in terms of the relations to stability and development of the organization and the certainty, uncertainty and risk.

The common feature of all these considerations was and still is the question how to raise the efficiency and rationality of human activity within the framework of artificially generated structures and systems. On the basis of the so understood diagnostic sphere there appeared techniques and methods of management which, considering both their contents and source we may define by the name of system management techniques.

System Management Techniques and their Limitations

Multitude of system management techniques does not allow a comprehensive description in such a short article. Therefore I shall concentrate on a few model, typical techniques in order to sketch wider conditionings of possibilities of rationalization of management processes against their background. My subjective choice I have limited to: management by objective, management by organic structures, mathematical methods of decision making and coordination of actions, computerization of information-decisional processes, and organization design.

1. Management by goals. The creation of motivational prerequisites of coordination of managing activities in the organization was the task of management by objective. Thus the system of management by goals includes affecting the managers of all levels since they are regarded as a reflection of the structured hierarchy of the system. The specific philosophy of management by goals is expressed, among others, in terms of attaching the es-

stantial significance to cognitive motivation in organizational activity. The propagators of this technique turn the attention to the fact that it is necessary to realize distinctly the task which is to be accomplished and the result which must be achieved in order to manage other people's work efficiently. This clear understanding of the goal makes the basis of self-dependent search for the best ways to achieve it. The chances of taking up such search grow when the manager feels that he is trusted since he has been charged with the search for methods and means of action on his own. Hence it follows that having well selected managing staff and intending to remain in the current of the techniques of system management particular stress ought to be put on the determination of the goals of particular actions and/or parts of organization limiting interference into the way of realization of tasks and achievement of goals. Thus, as we can see, the idea itself is a specific limitation under our conditions. In our organizational culture at least three phenomena occur which efficiently block the possibility to implement the technique of management by goals. They should be numbered as follows:

- the phenomenon of management by lack of confidence,
- the phenomenon of negative competition,
- the phenomenon of autonomization of the control fact.

The first of the mentioned phenomena manifests itself in such a detailed formalization of the organizational behaviour that it leaves no space for any self-initiative. The majority of our actions meet the control of formal nature (the agreement with the regulation is the basis of the estimation) and, as a consequence, the appearance of the impulse of the lack of confidence. If I am controlled in this way and so often this means that I am not trusted. How can I trust the associates who do not trust me? Thinking in such terms is reflected in the whole of our social life in which system rule of rational confidence has been supplanted by the countersystem rule of the lack of confidence. An office does not trust a citizen, and vice versa; a manager does not trust a subordinate and a subordinate does not trust a manager. With the social mechanisms functioning in this way the system management technique by goals, unfortunate-

ly, cannot be implemented efficiently, which is a pity, because the experiments with its application demonstrate great efficiency of this proposal.

The second of the mentioned phenomena may be characterized with the following example: in the "fight" for success in the organization we do not prove that we are better than our environment but we prove that the environment is worse than we. As a consequence every action is surrounded by a whole lot of buffers which protect us against the attacks of others and, naturally, it becomes a sequence of apparent actions. This phenomenon is so contradictory to the spirit of system management whose basic feature is structural transparency, that it excludes by itself any possibility to implement the techniques which are connected with it.

In the third case one may face the phenomenon of control for control's sake. In other words, that which was to constitute the means of realization of the goal - more effective management, has become the goal in itself. This results in the mechanical linkage between the discovery of shortcomings with the application of sanctions. Therefore one may state that the autonomization of the control fact, observed in practice, leads to the loss of the system sense of the error analysis and then the question about the sense of control processes becomes doubtful.

2. Management by organic structures. The analysis of the contents of the system of management by goals indicates the great dynamics of changes of goals realized by particular teams in different periods. Such changes must result in the exchange of people between the organizational cells and sections, participation of the same people in different groups, subordination of the same people to different managers and so on. This means that the system of management by goals is difficult to square with the stiff hierarchical structure and synonymity of official subordinations. The organic system makes it possible to break these classic dependencies since there are no formalized information bonds in it, and the whole of the structure is rebuilt adaptationally according to a programme realized by the organization. Organic structures meet two fundamental barriers in practice, i.e.:

- management by the fetish of position and title,
- management by structural overformalization.

The first of the mentioned phenomena has its source in seeking prestige about the post one performs and not about the work one does. As a result the implementation of fluent structure strictly connected with the fluency of the fulfilled functions is very difficult under our organizational conditions. This state of affairs is still deepened by the system of wages which is usually constructed according to the rank of professional post and not to labour done.

The second, and no less important limitation, follows from the procedures of the appointment to a post and the dismissal from it, as well as from the procedures of confirmation of the organizational schemes. The two elements are so overformalized that the dynamic control within their framework is practically impossible.

As it follows from the dynamics of the changes of trends and contents flowing through information channels, computer systems for the purposes of management constitute a necessary condition of the implementation of any system management technique to the organization. I shall not speak in length about the contents of these systems here because bibliography dealing with it is rich enough. I should only like to turn the attention to a specific limitation in the process of computerization, i.e. organizational processes occurring against the background of this process. Computer science is the system management technique most popularly applied under our conditions and that is why we shall devote a little more attention to it.

3. Computerization of the management processes. We should begin with the statement that, in spite of twenty years tradition of the application of electronic computing technique in the process of management, it is difficult to find really successful implementations, i.e. the ones which would result in taking over, any of the basical intraorganizational functions by the edp system. As long as computer science was the question of fashion, the failures of all types could be ascribed to pioneer efforts. At present the pioneer period is behind us and the problems remain the same. The reasons are as follows:

- management by the lack of goal consciousness,
- management by the lack of effect,
- management by traditionalism,
- management by prestige and informal authority.

We shall analyse these elements one by one.

When observing organizational reality one should come to the conclusion that in the majority of institutions quite a specific style of management has formed which is based on autocratic-centralistic realization of the manager's functions. This refers to all levels of management although it is best felt at the middle level of each structure. This phenomenon consists in directive setting of the tasks for realization together with a detailed instructions concerning the way of the accomplishment of the set tasks. Thus, in the process of management we answer two questions (what? and how?), at the same time not answering the most important one, namely what for? This is, of course, the most general barrier, and in the process of computerization it leads to the realization of the edp systems whose real usability in the process of management is insignificant. In such a system the employee feels like an organizational automaton whose freedom of action is reduced to the choice between participating and not participating in a given organization. It follows from the fact that computer is the first tool in the history of mankind which does not serve any definite purpose. Its task is not to perform any definite activity but to produce information as such. It does not possess any explicit destination and the purposes it serves ought to be formulated every time by people who use it. This variety of purposes results from the fact that a material product with a definite structure ceased to be, and abstraction contained in a sequence of more or less significant symbols became the object of processing. At the same time the implementation of the edp system imposes a whole system of procedures on the employees; their fulfilment is sometimes very arduous, and, when there is no purpose consciousness, there is no rational explanation of them, either. In this situation supplementary goals appear at the executive level which are, as a rule, of negative nature. In the case of computerization the convictions that this pro-

cess will result in the reduction of employment and will intensify intraorganizational control are such deeply rooted negative goals. As a consequence this leads to actions against the innovation understood in this way and these actions are taken not exactly against the innovation in itself but against its supposed goals. Thus, in order to rationalize our organizations it is necessary to reverse the formula used so far: action-results-explanation of goal, into the formula: explanation of goal-action-estimation of result. Without this operation the reconstruction of the organizational culture in any social system becomes impossible.

The second barrier in the way of the improvement of the efficiency of our organizations is the management by the lack of effect at the level realizing a given task. In other words in our economic practice we observe the phenomenon of the occurrence of the effect (or perception of it) at least one level higher than it has been worked out. Hence such a control of subordinates that they would realize the effect of the manager's expectations at the same time underestimating the effect of their own activity. The system of estimations of the managing staff as well as multi-level and multi-center structure of management undoubtedly affected such formation of management procedures. Regardless of the source of this process we can state that it is a main obstacle in the realization of any innovation, and in the case of computerization almost an impassable barrier. This follows from the fact that in practice we do not use material effect (in the present complicated economic system it is simply impossible), but the information about this effect. This information is modelled so that every higher level could show either a direct effect or a definite contribution to the effect already achieved. The system of electronic data processing by means of explicit localization of the contribution and the effect at a definite level destroys this delicate network of information game. Therefore it presents a specific menace for all the intermediate levels in management. No wonder that in this situation the middle managing staff have the most negative attitude in the case of computer system. Thus a loop is created which is very difficult to break. On the one hand, we have to do with doubtless necessity to localize the

effect in its place of origin and here the edp system is to help, on the other - the new state of affairs does not suit the group with the greater influence over the realization of this system. A solution of this contradiction would undoubtedly facilitate activities in the field of computerization of our organizations and it would create the desired absorptiveness of innovations at all levels of our economic organizations.

The next barrier is the management by traditionalism. It turns out that the learning of people employed in modern organizations is the greatest danger for the latter. The experience they gain in this way stops serving them as the dynamic model of reality and becomes a routine copying of the once observed and remembered patterns of behaviour. In other words, if such an activity was efficient in a definite situation, the recurrence of the symptoms of the given situation makes us take up the once tested manner of acting. This attempt usually takes place without analysing whether it can be efficient under new conditions. There are many organizations which had huge losses only because in the management structure they could not get rid of the tradition which, though it had been profitable for some time, finally brought disaster. In the case of the edp systems, management by tradition manifests itself in the attempts to transfer organizational procedures tested in the past onto the computer and thus, the limitation of the contents of the system to elements which are insignificant from the point of view of management processes. Referring to tradition contains one more danger which consists in getting "entangled in one's own incantations". If we once decided that we do not need something, then, remaining in the sphere of management by tradition we shall be forced to defend this standpoint regardless of the reality surrounding us. In the organization design the acceptance of such a point of view leads to a specific nonsense spiral.

The last but not the least essential barrier is the management by prestige and informal power. This is manifested in a sequence of actions of informal nature. They occur even in the simple cases not requiring any special operations. This constant search for allies and lobby releases in the managing staff an inclination to find oneself in informal arrangements by which it

is possible to arrange everything, both official and private affairs. Computerization of the management processes clearly limits the scope of possible moves of an analysis which is not overformalized. The implementation of computer procedures puts the managing staff in the situation "they know more, they can do less", of course, from the point of view of the discussed technique. So the fight for informal power means the fight against any novelties that could destroy so long and precisely constructed network of informal bonds.

Recapitulation

Recent practices of traditional managing small dissipated units are still reflected both in theoretical conceptions in the range of organization and management and in popular in social consciousness ideas about the efficient functioning of economic organizations. We are not always fully aware that the conceptions and views which applied to small as compared with the modern enterprises cannot be applied in large socialindustrial systems. System approach to management is dynamic. This enables us to realize to what degree the supposition, that it is possible to suggest any constant "best" or even "proper" model of organization and management system controlling it, is unjustified. From the logic of system management probabilistic and not deterministic character follows of organizations of all types and particularly economic ones. It means that the functioning of such organizations cannot be faultless and that it is a harmful utopia to demand from people or from definite organization sections not to make mistakes. This unrealisable requirement disintegrates the organization, among others socially, since it paralyses human ingeniousness and initiative. The truth is that one must learn all this and introduce it into one's own system of ideas and opinions. Without it speaking about system management techniques will remain empty.

The barriers of system management I have presented are not the full collection, of course. However, it seems that under our conditions they do not decide about the application of the discus-

sed techniques only but simply about the standard of management. I should not like the reader to have the impression of full negativity of the presented material. I was rather concerned with naming the phenomena we must take into consideration during the raising of our system to a higher level of internal effectivity.

The sooner we realize these obstacles and the sooner we find an efficient remedy, the more dynamic the process of development of managing culture in our country will become. In the structure of management there are so many reserves hidden that utilization of even their part could eliminate a lot of social and economic tensions.

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PROBLEMY WDRAŻANIA METOD ZARZĄDZANIA SYSTEMOWEGO

W dzisiejszym, dynamicznie zmieniającym się otoczeniu każdej organizacji zachodzi konieczność stałego śledzenia relacji w jakich znajduje się ta organizacja w stosunku do otoczenia. Nie istnieje bowiem jeden uniwersalny model sprawności organizacji, jak też nie ma jednego uniwersalnego rozwiązania dla poszczególnych problemów, pojawiających się w sferze zarządzania. Każdy problem oraz każde rozwiązanie znajduje się w całej sieci wzajemnych powiązań, bez dostrzeżenia których poszukiwanie dróg podnoszenia sprawności naszych organizacji staje się czystą fikcją. Systemowa koncepcja zarządzania predystynowana była do odegrania znaczącej roli w tej mierze. Przeciwstawia się ona bowiem traktowaniu jakichkolwiek merytorycznych problemów w oderwaniu od większych całości i ogólniejszych zadań. W przypadku podejścia systemowego mamy więc do czynienia z analizą problemów a nie inwestycji, krytyką rozwiązań a nie ludzi.

Prezentowany artykuł jest poświęcony problemom wdrażania metod zarządzania systemowego w praktyce oraz ich ograniczeniom.