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ENVIRONMENTAL REQUIREMENTS AND THE DEMOCRATIZATION OF INDUSTRIAL ORGANIZATIONS

1. INTRODUCTION

The purpose of this contribution is to discuss some aspects of the relationship between democratization of industrial organizations and the functional requirements confronting such organizations. »Discuss« does not mean analysis in depth; in a short presentation like this we can not achieve much more than state some points and will, furthermore, have to use concepts which are in themselves problematic and in need of clarification. One of these terms is democratization with reference to industrial organizations; we will have to take this concept in the rather general meaning in which it is used in everyday language. First, though, I will in a few words state the reasons for my interest in the topic:

Industrial organizations can be democratized according to different models:

— The first possibility is through binding decisions from central political authorities, e.g. in laws giving the employees representatives on boards of directors.
— A rather different approach is to rely on the functional requirements confronting industrial organizations. This means accepting the rather widespread idea that the environment of organizations is becoming increasingly more dynamic, which again calls for more democratic internal structures if the organizations are to survive and grow.
— A third possibility is to use change agents who are neutral in relation to the parties involved, in the sense that they come from outside and establish a collaborative relationship to both managers and workers. Such agents must have a certain level of support in order to achieve their purpose.

Without really having had the opportunity to study the cultural settings of these models, it seems to me as if the first model has its strongest support in parts of Continental and Eastern Europe; the second in the United States and parts of Western Europe, while the third has emerged primarily in Northern Europe. The third model is of course of much less importance than the other two in the sense that up to now there has not been more than a modest amount of actual change programs of this type launched. The one which in

all probability is the largest, has taken place in Norway with the Work Research Institutes in the role of change agent. There is, though, a certain amount of diffusion of the ideas upon which the program is built, on the international scene.

What form and content democratization is actually given, will be influenced by what model is used. It seems as if the first model — democratization through central political decision — easily leads to much weight being placed upon the formal structure of the industrial organizations; to the establishment of different sorts of bodies with representatives from the interested parties etc. There are, of course, a lot of explanations for this: one of them seems to be that national political authorities have a tendency to use the same model for the democratization of enterprises as they perceive feasible for the democratization of society. Democratization of society is — at least up to now — strongly linked to the establishment of formal bodies and representative systems, elections etc.

The second model leads to much more weight being placed on the concrete and often informal aspects of industrial organizations and links the problem of democratization strongly to problems having to do with usefulness or utility.

The third model — democratization through change agents coming from outside — might have less of »typical« general aspects, but will be heavily influenced by what sort of change agent is used. If they are social scientists, a series of the problems characterising the social sciences might easily come to influence the democratization proces, like for example what sort of role social scientists find it possible to take on without offending the ethical or political norms of their colleagues.

The point, though, is not to discuss the advantages or disadvantages of these models and what sort of democratization process they lead to, but rather some aspects of the relationship between them. In actual fact, democratization of industrial organizations is dependent upon all three models being at work in interplay with each other.

In the early sixties, a program for the democratization of work organizations in general, was launched in Norway. Social scientists were to play an active role as change agents, supported by the Central Trade union Organization in Norway (LO) and the Employers' Confederation. Initially, these two organizations also gave financial support to the program; later all expenses were taken over by the State. As this program — where the Norwegian researchers collaborated with The Tavistock Institute in London — has come to be relatively well known, I will not go into detail concerning the ideas that the program has tried to implement. (Those interested can be referred to Thorsrud & Emery (1970) for a brief introduction; a more general report in English covering the first series of field experiments is long overdue, but supposed to be on its way).

The following reflections have experiences from this program as their point of departure, and reflect the fact that it has been difficult to get a democratization program of a sufficient strenght and weight on the move, to be able to achieve to changes of political relevance. For this it is not sufficient to run series of reasonably successful demonstration experiments, rather one has to solve the problem of diffusion to a large number of organizations.

Here, our point of departure will be that even though the program is based on one of the three models mentioned above, it is to a large extent dependent upon the political legal development as well as the development of the functional requirements of relevance to Norwegian enterprises. A successful »campaign« seems to be dependent upon an overall strategy where all models are operative, but where the different concrete steps are linked to each other, e.g. development of representative systems to the development of such organizational structures on the »in-between« levels of the organizations as seem to be necessary if representation on board level and the like is to be given the necessary support.

2. THE EMERGENCE OF ENVIRONMENTAL DYNAMISM AND NEW FORMS OF INDUSTRIAL ORGANIZATION

The relation between organizations and their environment is a major topic in modern organization theory. This field of problems has a number of aspects of which only one, albeit the most important one, is to be taken up for consideration here.

The points of departure are the following two hypotheses:

— The environments of industrial organizations are becoming increasingly more complex and dynamic.

— Bureaucratic organizations cannot survive in dynamic environments, but must and will be replaced by other forms, which are more democratic.

The hypotheses are stated in a very broad and unqualified form, some nuances will be called for if they are to be treated in detail.

These two hypotheses play a dominant role within contemporary organization theory. From the impressive list of theoreticians who in some way or other have contributed to the two hypotheses, the following names can be taken: Burns & Stalker (1961); Merton (1965); Crozier (1964); Thompson (1967); Emery & Trist (1969); Tannenbaum & Davis (1969); Lawrence & Lorsch (1967). It should be added, though, that of these two hypotheses the last one is explored to a much greater extent than the first one. It has been suggested that the introduction of »the creative organization« as an important theoretical issue has given the researchers a welcome opportunity to discuss what we believe to be ourselves and our own organizations. However this may be, the literature on the conditions for creativity is already impressive, and still growing fast (a review of the theoretical situation as it stood in the middle of the sixties can be found in Steiner (1965). We cannot explore this vast field neither in width nor in breadth; the discussion will be limited to some aspects.

The basic point is the characteristics of organizations with the ability to learn and create, as compared to traditional organizational forms. Due to the amount of different opinions put forth, this point is not easily stated in a few words. It seems, however, as if the following sums up the basic aspect:

Traditionally, organizations employ some form of external control in relation to most of its members:

Figure 1.
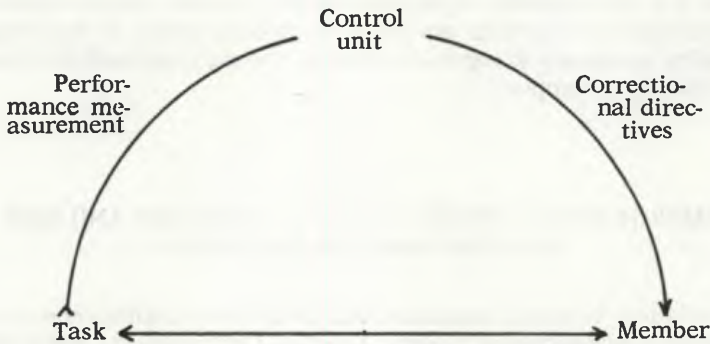
Every organizational member is to perform some task. There is, then, a relationship between the member and his task. Upon this relationship there is built a superstructure in the form of a control mechanism. Some sort of measurement is made of how the member performs his task and the results of this measurement are evaulated and acted upon by a control unit, which issues correctional directives in some form or other to the extent that performance is not up to standards.

This is, of course, an abstract description; the concrete structuring of control mechanisms can be done in different ways.

A structure enabling the members of the organization to reach a high level of flexibility and creativity, calls for a relationship between the member and his task which can be illustrated like this:

Figure 2.

Task ──────────→ Member

This, of course, is an ideal type description; the point is that the interaction between the member and his task is to be the basic mechanism for behavioural control and not an external superstructure.

This is thought to be a situation closer to democratic ideas than the one where the individual is under a relatively high level of external control. For such a form to really work, a series of questions concerning coordination and motivation have to be solved; aspects we need not go into here as it is just these things which are treated in depht in much of the current organization theory.

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The points hitherto stated can be summed up like this:

Increase in environmental dynamics	→	Need to increase the capacity for learning and adaptation	→	The control systems of organizations must (and will) be changed; away from external controls of the traditional type and towards a model based on autonomous, task governed individual and groups

The problem emerging is to what extent this hypothesis holds.

The hypothesis can hold true in relation to the problem of democratization in two different ways:
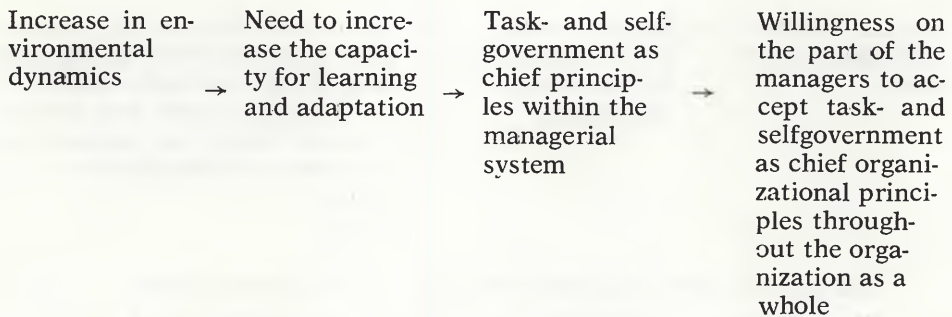
— One possibility is that the change in organizational structure
— encompasses the organization as a whole.
— The other possibility is that though the direct impact of the functional requirements may be limited to the management system of the enterprises the change occuring in managerial roles can make for »voluntary« changes in the way the managers behave towards their subordinates.

Among those who have taken up the question of functional requirements and organizational structure for analysis and study, there are not many who have gone into the problems on the shop floor level. One is primarily preoccupied with the managerial system. There are strong reasons for believing that even though a wave of de-bureaucratization might be under its way, it is and will be limited to the managerial system. Especially within the production departments of industrial enterprises, the old »mechanistic« structures will in all probability live on. Not so few have stated this point, albeit in somewhat different words and from different perspectives. Two examples are Drucker (1970) and Woodward (1965). Now, the de-bureaucratization wave to sweep over the world of industrial enterprises is in itself somewhat doubtful; there are those who are becoming more and more skeptical towards the belief in such a general change process. We will, though, skip this point here.

If more market changes take place in the managerial system without in any way encompassing the workers,we will be onto a dangerous development in relation to the problem of industrial democracy. The gap between the managerial system and the employees will actually grow wider while we take still more steps towards meritocracy. Such a development will not contribute to overall democracy, and will in all probability lead to increase in tension on the political level.

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The second version of the hypothesis can be expressed like this:

Increase in environmental dynamics	→	Need to increase the capacity for learning and adaptation	→	Task- and self-government as chief principles within the managerial system	→	Willingness on the part of the managers to accept task- and selfgovernment as chief organizational principles throughout the organization as a whole

This is actually the most »realistic« version of the hypothesis about internal democratization as a result of environmental developments.

Now, what about the validity of this hypothesis? We can, of course, not decide upon this issue here; a lot of investigations will actually be needed. It is reasonable to believe that a development in a democratic direction will sometimes occur, but it is also reasonable to believe that other types of developments might occur; we will look somewhat closer at the latter possibility:

One important aspect of »organismic« and related managerial structures is the need for **personal involvement** on the part of the manager. Managerial roles are characterised by most of the personality and capacities of the individual being **organisationally relevant.** The manager is no longer supposed to involve himself in the organization to only a limited extent exchanging some clearly defined work for a clearly defined payment, his involvement is to be much broader. His whole personality is encompassed by the organization, with repercussions for the manager's relationship to his family, his way of spending leisure time, selection of living site etc. This is clearly a change from the contractul relationships between the manager and the organization characterising the ideal bureaucracy. The manager is still linked to the organization through a contract, but this contract no longer defines his organizational role. His actual contributions to the organization and how these contributions are made, is settled through other mechanisms.

From this demand for involvement upon the manager, different conclusions can be drawn concerning his behaviour as manager; at this point we can distinguish an »optimistic« and a »pessimistic« school:

According to the optimistic school, the demand for broader involvement is basically an advantage to the manager. He can play out more of his personality in the job and he can satisfy a wide range of different needs. This, again, will make the manager approach »the mental health« ideal of man. He can still, of course, choose to play out his potential power in different ways, but it seems tot be generally believed that a manager of this type can most easily come to terms with other organizational systems. He will not accumulate »power for its own sake« and can easily become the bearer of democratic viewpoints also when organizational matters are concerned. There seems to be a rather strong link between this type of manager and the democratic leader as he emerges in human relations theory.

Mills (1951), in his theory of »the personality market«, presents a different picture. He starts out with Marx' idea of labour or capacity for work as a commodity; something wich can be bought and sold in a market. Under such contractual relationships as implied in ideal bureaucracy, the individual has to sell some clearly specified work; the broadening of the organizationally relevant characteristics of the manager has forced him to sell his social personality. Mills, whose study is about 20 years old, saw this tendency most clearly in relation to sales personnel. Selling can no longer be done simply by putting the products into an impersonal market of free competition; the uniformity of different producers' products and the other factors lead to the introduction of new sales techniques where the »personal« element plays an increasingly important part. The car must be backed by the happy, confident smile of the salesman. This forces the salesman to take on a set of characteristics in his social personality relevant for the promotion of the product. These characteristics, however, will only incidentally correspond to the charactestics of his »real« personality. The salesman will experience this split, and become his own onlooker. The same might hold for his counterpart in concrete dealings and a relationship emerges which can be illustrated in the following way:

Figure 3.
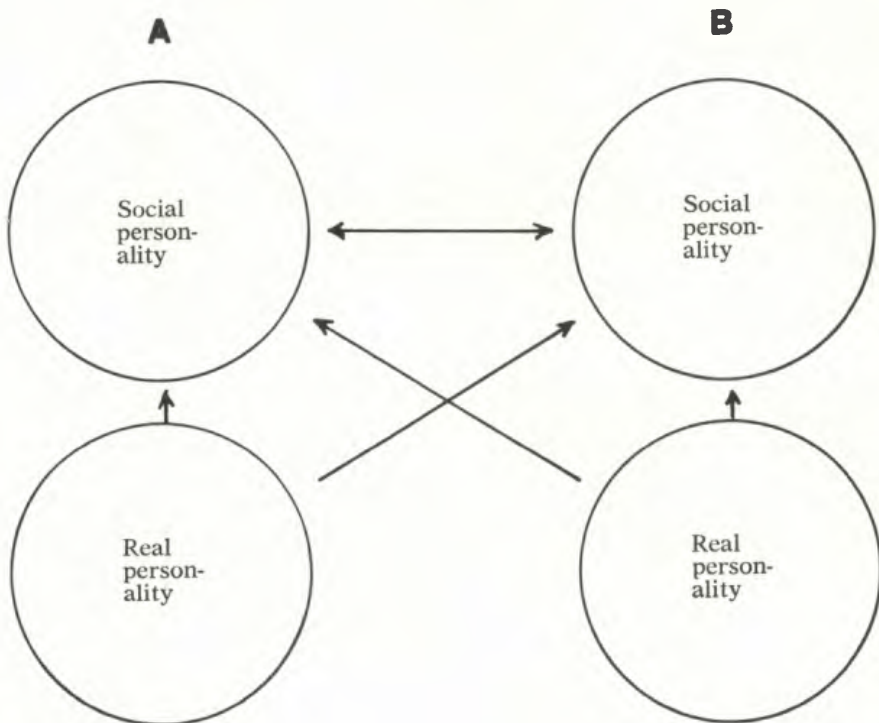
There is an interaction between A and B's social personalites, with A and B as spectators looking at themselves and the other. Both are aware of playing an artificial game, but the rules of the game are usually not broken.

Mill's ideas about the salesman's situation can easily be generalised to cover managers in general.

From this point one can move in different directions. The following line of reasoning is fairly plausible:

The split between the organizationally relevant and the real personality, means that the broad demands put upon the manager are not experienced as possibilities for self-development and self-fulfillment, but rather just as **demands.** Utilizing the exchange model introduced in general form by Barnard (1938) and tested by Homans (1961) the manager will feel that he is called upon to make heavy investments in the organization and will experience a need for counterbalancing returns (cfr. Gouldner's theory of a norm of reciprocity as basic to transactions (Gouldner 1960). The question now is what sort of return will the manager aim for? Monetary outcome is one possibility, but only one. Power is another, and for many purposes a more general one than money:

The split between the real and social personality creates a situation of self-alienation, and a situation of alienation from the organization. The alienated manager will experience the organization and its other members in the way usually described by the term **reification:** as things, objects, something to use, rather than as a social »home« with fellow human beings. If this is the case, a tendency towards power maximization can emerge as a result.

To conclude, then, we have two general points of view which can be summarized as follows:

1)

Demands upon the manager for the involvement of his whole personality	$\rightarrow$	Satisfaction of a wide range of personal needs	$\rightarrow$	The manager approaches the mental health ideal of man	$\rightarrow$	The healthy manager approaches the democratic manager

2)

Demands upon the manager for the involvement of a whole personality	$\rightarrow$	The necessity of creating a social personality conforming to the philosophy and structure of the organization	$\rightarrow$	A split between the real and the social personality; the individual becomes alienated from his managerial role and from the organization	$\rightarrow$	The manager experiences the situation as one where he is called upon to make heavy contributions, and will seek returns from the organization; among these power might be important.

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The two theories are, of course, presented only in an extremely sketchy way. There are some rather long steps in the reasoning and a need for further analysis on most points. The idea is not, however, to spell out two complete theories, but rather to state a problem. How a theoretical framework for further study of the problem should be constructed, is a relatively open question where empirical possibilities and limitations must be taken into account. We are still at the point where we are trying to conceptualize experience.

The next problem —and maybe the most critical one — refers to how a powerseeking manager will actually behave, including what sort organizational structure he will try to generate. Here we are onto a really problematic field, and a field where I have a sneaking suspicion that a number of external change agents in organizations have been outsmarted now and then.
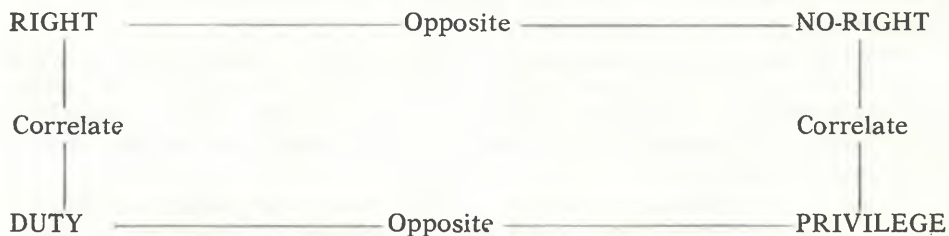
We take as a formal point of departure that both managers and workers exist in a bureaucracy. Bureaucracy is here taken in the rather broad sense in which the concept is usually taken within the social sciences; to mean organizations where behaviour is controlled by a network of rules specifying how to act under different circumstances. Bureaucracy constitutes a certain type of normative relationship.

In legal thinking, a fundamental distinction between different types of normative relationships was made more than 50 years ago when Hohfeld (1913, 1917) introduced his famous classification. Hohfelds scheme, which has been rather much discussed and commented upon also in Schandinavian philosophy of law (see for example Moritz 1960) might be of limited usefulness for the handling of problems within legal dogmatism. In my opinion, however, the scheme is of paramount importance within the sphere of sociology of law:
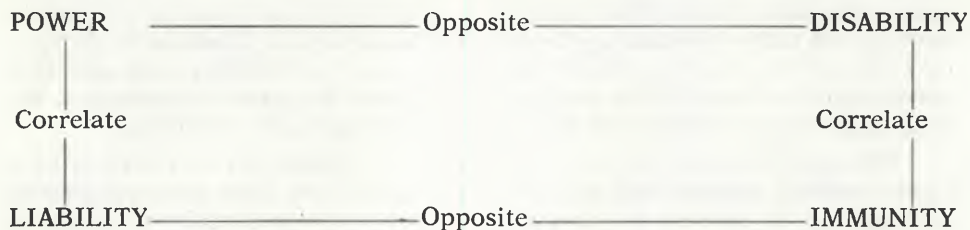
Hohfeld's point of departure is that such terms as rights and duties have no unambiguos content; actually they refer to different types of situations. It is therefore necessary to distinguish between types of normative relationships. This distinction is made through the introduction of eight terms standing in certain logical relations to each other. These relationships are of two kinds: correlates and opposites. The terms and the relationships between them are as follows:

Figure 4.

I)

RIGHT ——————— Opposite ——————— NO-RIGHT

Correlate   Correlate

DUTY ——————— Opposite ——————— PRIVILEGE

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II)

POWER ——————————— Opposite ———————————— DISABILITY

| | | |

Correlate   Correlate

| | | |

LIABILITY ————————————— Opposite ——————————— IMMUNITY

Cluster I) of terms means that insofar as somebody has a right, somebody must have a correlating duty. The term right has, however, not only a correlate but also an opposite which is no-right. Insofar as A does not have any rights in relation to B, B is in a privileged position in relation to A. Privilege, again, is the opposite of duty. The second set of terms is to be interpreted in the same way.

The basic difference between cluster I) and cluster II) can be expressed by the term **degree of structuring.** A right-duty relationship between A and B is typically highly structured in the sense that it is clearly defined what B has to do to live up to his duty or duties; what sanctions A can use against him and under what conditions etc. A situation where B owes A a defined amount of money payble on a given date is of this kind. As against this, a power — liability relationship typically is less structured; A has the possibility of doing different things and therefore of choosing between different acts. He can choose to do this, but he can also choose to do that, in both instances B has to accept and respond to A's acts. Within the field which Hohfeld had in mind — such traditional areas of private law as the law of contracts — a power — liability relationship can be exemplified by the situation existing between a person and somebody who is given power of attorney to act for him within rather broad limits, the one who has given somebody else the possibilities of acting on his behalf often cannot know in advance what deals will be imposed on him.

It can be noted that Hohfeld uses the term power in a way differing from Weber. Weber (1947) defines power as the ability to enforce one's own will upon others despite resistance. A right — duty relationship between A and B enables A to enforce his will upon B in spite of B's resistance. Hohfeld links power to B's possibilities for predicting what A will do and thereby to such important phenomena as degree of structuring and security/ /insecurity. Weber's definition might be more consistent with everyday usage of the term power, while Hohfelds definition in many respects might be the sociologically more interesting one.

We take as a point of departure a power — liability relationship between A and B, where A is the bearer of power. A can be a manager, or the managerial system of an enterprise, according to the legal basis of industrial organizations the managers have »the right to manage« in relation to the employee system: B.

Now, it is important to keep in mind that »the right to manage« includes as a very important aspect **the possibilities of choosing between**

different acts. We introduce the assumption that **one of the considerations entering the picture when A decides what behaviour to choose, is how to maintain his power over B.** From these points of departure, it follows that delimitation of the behavioural forms available to A is the same as a (partial) loss of power. We introduce, furthermore, the assumption that **B is interested in reducing A's power over him, which means that B will try to delimit the behavioural forms available to A.**

Utilizing the conceptual framework of information theory,[1] A's total behaviour in relation to B can be seen as information directed at B. Now, if A's behaviour is completely predictable by B, A can still exert power over B according to e.g. Weber's definition of power and according to everyday usage of the term. The essential feature of a power — liability relationship in the Hohfeldian sense is, however, no longer present. The situation has become structured: B knows in advance what A will do. That this means a reduction in power for A, also corresponds to common usage of power and common experience: if it is possible for everybody to deduce in advance where and when e.g. the police will do their traffic controls, one would say that the power of the police over the driving public was reduced. If A, on the other hand, acts in such a way that his behaviour is completely unpredictable, he also loses his power because B can no longer interpret and understand behaviour of A. A's behaviour can no longer function as clues for B. In terms of information theory, what B receives is nothing but noise. **For A, then, to maintain his power position in relation to B. it is necessary to seek an optimum somewhere between being completely predicable and completely unpredictable.**

Formally, the idea can be illustrated as in figure 5.

Figure 5.

Level of A's
control over
B

Completely   Completely
predictable   random
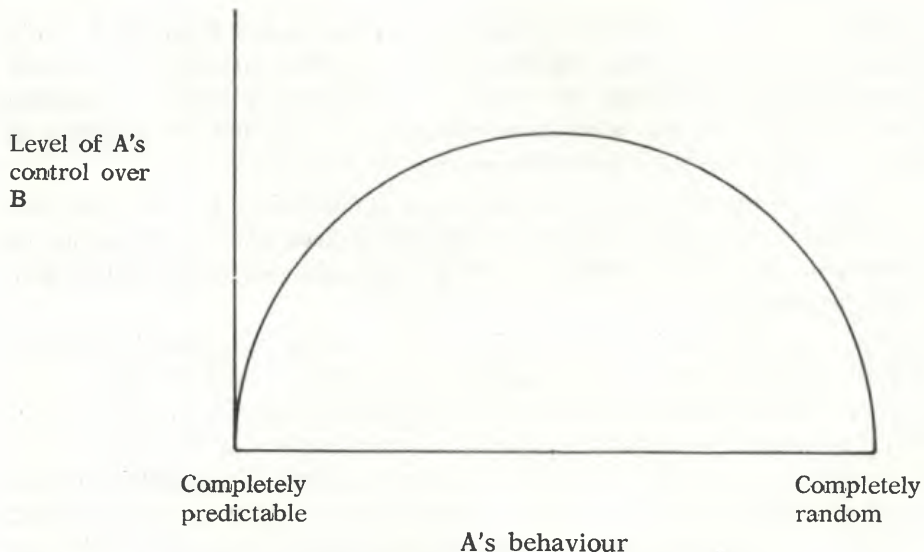
A's behaviour

[1] Suggested by my colleague Philip G. Herbst

In looking at the predictability of B's behaviour when seen from the point of view of A, the following holds:

Figure 6.

Level of A's control over B

Completely predictable

Completely random

B's behaviour
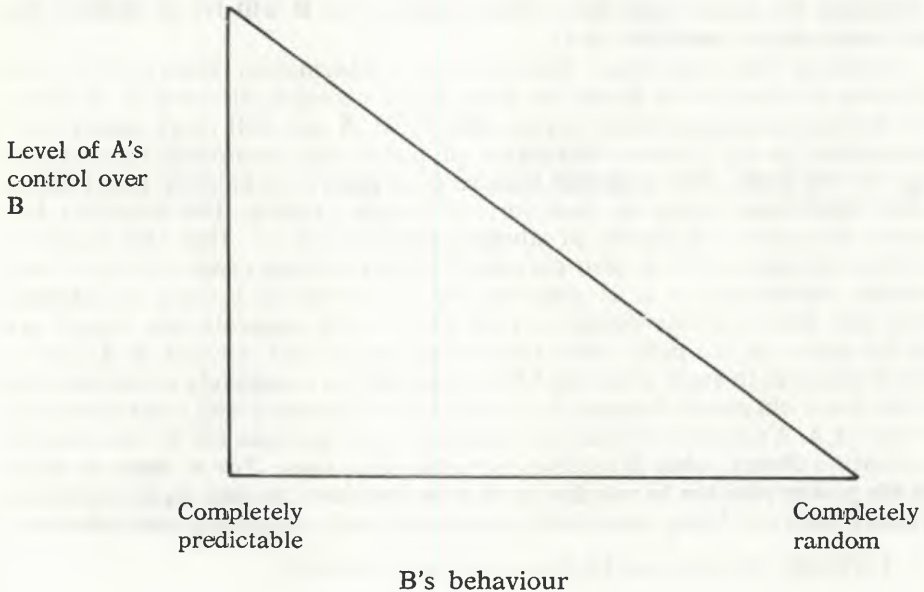
We can, then, state the following:

Given a power — liability relationship between A and B which A wants to maintain, he will on the one hand have to behave in such a way that B's possibilities of predicting his acts is kept somewhere between complete and zero, while he on the other hand will have to structure B's situation in such a way as to make B's behaviour maximally predictable.

If we shift the focus to B, and assume as stated before that he is interested in reducing A's power over him, **B will try to keep his own behaviour as unpredictable as possible while he will try to make A's behaviour as predictable as possible.**

Now, the introduction of behaviour norms in the relationship between A and B makes behaviour predictable, in fact: this is usually held forth as the primary social function of norms. It is of importance to note that a norm defining a right-duty relationship binds not only the bearer of the duty but also the bearer of the right. The extension and content of his right is defined through the definition of the other's duty; it goes as far as the duty but no further. The points of view developed above lead to the hypothesis that **a bearer of power will not strive for a maximum of organizational behaviour**

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norms, but for an optimum somewhere between maximum and zero. This optimum will be determined by two considerations; on the one hand to make the liable party's behaviour as predictable as possible while on the other hand keeping one's own behaviour somewhere between being completely predictable and random. **The bearer of liability will, however, strive for a maximization of rights and duties and a corresponding minimization of the »open« power — liability field.** Applied to the relationship between the managerial and the employee system of enterprises, this reasoning leads one to except that the employees will strive for a maximum of bureaucratization while the managerial system will strive for bureaucratization only up to a certain level. Seen from the point of view of the employee system, a bureaucratized organization is, as a point of departure, to be preferred to a non-bureaucratized organization.

This way of reasoning is actually a parallel to the rule of law idea as expressed in legal and political thinking about the organization of the state. The rule of law is generally considered one of the most important means to **protect** the individual against the bearers of power. The rule of law means that the legal position of the individual shall be defined in official norms and preferably in the form of rights and duties. When this is done, **predictability** is achieved. The individual can know in advance the consequences of different possible acts on his part. The bearers of power are forced to state in advance how they will react upon such and such acts by their subordinates. They can, for example, not punish a person for acts they might dislike or even find a threat to their position, unless the type of act was forbidden in a norm put into force before the act was done.

3. A FIRST AND LIMITED EMPIRICAL TEST

Further development and testing of the points of view stated above, are necessary. The ideas need a certain amount of further investigation and operationalization before more thorough research can be done. We wanted, though, to make some preliminary investigations, albeit on a very modest scale, and will report upon one such effort.

The study refers to two groups of middle managers; one consisting of 20 persons, the other of 26. The group of 20 comes from the Norwegian subsidiary of a multinational group which is relatively strongly influenced by ideas generating a need for broad personal involvement in the managerial roles; the 26 are a cross-section from about 20 Norwegian firms, most of the firms relatively small according to international standards and characterised by a relatively conventional management philosophy. The first group is called the In-group (In for International); the other the Na-group (for National).

The question of differences in managerial philosophy and roles was investigated as such, an aspect we will not go into here.

In the following we present some questions and answers referring to degree of structuring.

Is it made sufficiently clear to you — in rules, definitions of your po-sition or the like —- what you are responsible for / what your duties are?

TABLE 1.

	In	Na
Yes	17	23
No	3	3

No difference between In and Na

Is it made sufficiently clear to you — in rules, definition of your position or the like — what authority you are given / what rights you have?

TABLE 2.

	In	Na
Yes	18	23
No	2	3

No difference between the groups

Are you informed sufficiently early and completely about decisions made at higher levels in the company?

TABLE 3.

	In	Na
Yes	10	20
No	10	5
No opinion.	0	1

$X^2 = 4.49$, $p < 0.05$; the managers of the In-groups experience the information from above as relatively bad; the difference between the groups is significant.

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Do you find the criteria used for deciding upon promotion to higher positions in the company sufficiently clear?

TABLE 4.

	In	Na
Yes	6	12
No	11	9
No opinion	3	3
NA	0	2

$X^2 = 1.79$, $0.20 > p \gtrsim 0.10$; tendency in the direction of the promotion criteria being less clear for the managers in the In-group.

The answers to these four questions show a tendency in the expected direction; the managers of the In-group are confronted with a less structured situation than those of the Na-group. According to the theory developed above, when confronted with a relatively unstructured situation, organization members will try to bureaucratize upwards to attain better protection, while they at the same time will be relatively anti-bureaucratic downwards to be able to transfer the burden to lower levels.

As an indicator of the tendency to keep the situation fluid downwards, the following question was used:

Are you in favour of ordering your relationship to these under your authority through working out a more comprehensive set of rules or directives specifying your and your subordinates rights and duties?

TABLE 5.

	In	Na
Yes	2	10
No	14	15
No opinion	3	1
NA	1	0

$X^2 = 3.55$, $0.10 > p > 0.05$; the managers of the In-group are less willing than those of the Na-group to use rules downwards; the difference is not significant but constitues a fairly strong tendency.

To test the interest in bureaucratization upwards, the promotion problem was utilised. The value system of industrial society, and especially of the leading parts of this society: the industrial enterprises, being as it is, the question of promotion is an extremely important one and keeping the promotion criteria fluid a highly efficient power instrument:

Do you think that the company ought to have an official »career plan« for its managers, that is: a specification of under what conditions concerning service time, service type, training etc. one can normally expect to be promoted?

TABLE 6.

	In	Na
Yes	15	7
No	5	17
No opinion	0	2

$X^2 = 9.16$, $p < 0.01$; the difference is highly significant, the managers of the In-group are strongly in favour of career plans as opposed to the Na-group.

These first and preliminary results of course do not prove very much, and for this reason I do not find it worth while to comment in detail upon the tables. They suggest, though, together with our experience, that the views developed above might give an insight to important aspects of organisations of special relevance to change programs.

4. CONCLUSIONS

What conclusions are to be drawn?

First, let me repeat that the framework is developed to explain some actual experiences of change programs in industry. The framework is relatively sketchy, and the relevant experiences rather unsystematic. Even though a lot of further work will have to be done, some points can be made:

— First, we cannot take for granted that the possible emergence of more dynamism in the environment of industrial organization, will lead to the emergence of task- and self-management as chief organizational principles. It is possible to argue a reasonably

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strong case in favour of the opposite taking place, at least if one's focus of interest is the relationship between the managerial and the employee system.

— Second, change programs un-freeze existing organizational structures — if they are »successful«, that is. One of the consequence is that an »open field« is established, where it is possible for those being in the right positions to pursue their own interests. One such interest might be accumulation of power. The problem becomes most acute if one looks upon »de-bureaucratization« as a goal in itself and not only something which has to be done as a step towards a new structure. The change agent will often experience that members of the managerial system give strong support to a de-bureaucratization programme; this, then, is the time when the change agent should really be on the alert.

— One should be careful in breaking up systems of behavioural rules, and avoid being seized by some sort of »de-bureaucratization« -happiness. When working with organizations as wholes — that is: all levels — the change of the general normative system calls for very difficult and complicated strategies.

— That most important consequence to be drawn, is that there is a need to guarantee rule of law in industrial organizations. At the general level it might even be so that the problem is too little bureaucracy, rather than too much, with the consequence that more bureaucratization might be a necessary step towards industrial democracy. One cannot easily imagine genuinely democratic relationships emerging between people unless some basic aspects concerning safety and security, concerning the right to express one's opinion without running the risk of sanctions etc., are taken care of. This brings us back to the different models for democratization and the relationship between concrete change programs and general law.

— In my opinion it seems necessary to try to develop a law for industrial organizations taking care of the series of problems falling in between on the hand the company law which actually regulates only the bodies at the top of the pyramid and on the other hand labour law which is mostly an extension of the general law of contracts. To use a German concept, enterprises need a law about »Verwaltung«, not just a law on the level of »Verfassung«. In lawmaking concerning democratization of industrial organisations, one can say that too much effort has gone into the problem of the »Verfassung«, and too little into the problem of »Verwaltung«. We shall not pursue the point further here, a series of new aspects would have to be drawn in if we were to do so, and this would lead us beyond the reasonable limits of a single article. Let me mention, though, that part of a framework for attacking the problem, is already drawn up by Selznick (1969).

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INTERDEPENDENCE AND HIERARCHY IN ORGANIZATIONS

ABSTRACT

The large size of organizations appears to promote structural differentiation and to stem the expansion of the administrative apparatus, but a differentiated structure tends to lead to the expansion of the administrative apparatus, so that the indirect effect of size mediated by the differentiation accompanying it counteracts its direct effect on administration. These conclusions are based on six sets of quantitative data on government bureaus, private firms, universities and colleges, and hospitals. Two basic theoretical hypotheses can explain the findings. First, differentiation of functions among interdependent subgroupings transforms a work organization's employees, who have little in common, into a coherent social enterprise and, in addition, has instrumental advantages for operations that make management interested in furthering such differentiation. Second, the initial investments in administrative time and effort required for organizing operations reduce the proportion of administrative manhours needed as the volume of operations increases. A refinement of the last principle is that a large volume of homogeneous task produces administrative savings, whereas the heterogeneity of tasks has the opposite effect. In conclusion the theory is put into deductive form.

INTERDEPENDENCE AND HIERARCHY IN ORGANIZATIONS

The two objectives of this paper are to present empirical finding from a large number of organizations of several different types and to suggest a theory to explain these findings. A previous publication advanced a theory of differentiation in organizations based on data from employment security agencies and their local branches (Blau, 1970). But findings from one type of organization, even if based on quantitative data, cannot sustain a theory presumably applicable to work organizations in general. Hence the earlier analysis is replicated here with data from several very different types of organizations. Then some theoretical principles to explain the empirical findings are suggested. Whereas the previous formulation concentrated on organizing the empirically supported propositions into a deductive system, the new one focuses on underlying theoretical principles that can account for the observed regularities.

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Concern is primarily with three characteristics of work organizations, that is, organizations with employees responsible for accomplishing work: their size, their internal differentiation, and their administrative apparatus. Six sets of quantitative data collected in five studies of five different types of organizations are analyzed. It is impossible to discuss in detail the research procedures of these five large projects carried out over the last six years, which were concerned with many factors besides the three here considered.[1] A brief indication of procedures must suffice.

Procedures. (1) Data on the 53 employment security agencies in this country (one in every state and one each in Puerto Rico, the Virgin Islands, and the District of Columbia) were obtained by three research assistants in personal visite to these agencies from informants and records. All the data under consideration, in the other studies as well as this one, consist of objective information derived from personnel records and detailed organizational charts constructed specifically for the research during the interview, which were checked against one another. (2) Data on the local branches of these agencies — 1,201 of them when the smallest and simplest are excluded — were collected during the same visits from information available at the headquarters. To assure that the measures of branch characteristics are independent of those of corresponding agency characteristics, the latter are based on the structure and the administrative personnel at the agency headquarters, excluding branches. (3) Data on the 416 government finance departments of nearly all larger American cities, counties, and states were gathered in two different ways. N.O.R.C. interviewers visited the 256 larger and more complex ones, and self-administered mail questionnaires were returned by the rest.

In addition to these government agencies, research has been conducted on three other kinds of organizations. (4) Data on 124 department stores were obtained in visits by N.O.R.C. interviewers. These firms constitute two thirds of the largest department stores west of the Mississippi and north of the Mason-Dixon line. Economic considerations led to the geographical restriction, and refusals are largely responsible for the fact that not all large northeastern department stores are included. (5) Data on 115 universities and colleges were collected in personal visits by research assistants. A weighting formula was applied to the analysis of this stratified sample, in which larger and higherquality institutions are over-represented, to make the results representative of the universe of the more than one thousand four-year liberal arts institutions in the country. (6) Data on the 1,279 American teaching hospitals (the superior hospitals, specifically, all that have some residents, most of which have no direct university affiliation) were made available by the American Hospital Association, for which I am grateful. Although these data, secured for administrative purposes, furnish only crude indications of the organizational characteristics of interest, the large number of cases makes it tempting to use them nevertheless.

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Size is conceptualized as the scope of an organization and its responsibilities; the measure is its number of employees (except in academic institutions, where it is number of faculty members). Methodological, theoretical, and empirical considerations dictated the choice of this measure of organizational size. Whereas the number of employees can be compared among different types, this is not the case for other measures of scope, such as sales in stores and beds in hospitals. Besides theoretical concern is with the way people — not assets or products — are organized and the resulting structure of subgroupings of employees. Finally, there is a close empirical association between an organization's volume of responsibilities and its number of employees. The correlation between the number of insured unemployed in a state, whose needs the employment security agency is responsible to serve, and the agency's number of employees is .98; that between total sales and employees in a department store, is .95; that between number of students and number of faculty in an institution of higher learning is .94.[2] As a matter of fact, an organization's personnel is quite highly correlated even with such indirect indications of its scope of operations as the population in a government finance department's jurisdiction (.62) and a hospital's total assets (.59).[3]

Organizations are differentiated in several dimensions, and the degree of differentiation in each is measured by the number of subunits. The number of hierarchical levels represents vertical differentiation. The number of major divisions under top management and of sections per division are two indicators of horizontal differentiation among subgroups with different functions.[4] The subdivision of work into occupational specialties is reflected by the number of official job titles or positions in government agencies and by the number of different departments in academic institutions and department stores. Two of the five types are geographically differentiated into branches, but since the branches of employment security agencies are analyzed separately, only those of department stores are treated as an independent measure of differentiation. The information from teaching hospitals furnishes merely a single crude index of structural differentiation, the number of different types of residencies, which is indicative of the number of the major, but not of all, medical divisions in the hospitals.

The basic measure of administrative apparatus is the proportion of managerial personnel, including managers and supervisors on all levels. Inasmuch as academic and medical work is not supervised by managers in the way work in government bureaus and business concerns is, somewhat different, though conceptually analogous, variables are used for universities and colleges and for hospitals, namely, the ratio of administrators (not including clerical personnel) to faculty, and the proportion of nurses in administration, respectively. Two supplementary indicators of the ratio of administrative manpower to operating personnel are the proportion of employees in staff rather than line positions (only available for employment security agencies) and the average span of control of first-line supervisors (available for three types).

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[2] If both variables are logarithmically transformed ($\log_{10}$). Without transformation their correlation is .84.

[3] No indication of the volume of operations of the local branches of employment security agencies is available. Community size does not provide a valid indirect measure of their work load, because there is more than one branch office in most larger cities.

[4] Data on sections per division have been obtained only for employment security agencies and for department stores, since different sections in small organizations often are work groups performing essentially the same responsibilities. The average number of employees in these agencies (1,195) and stores (1,867) is substantially higher than average in the four other types.

Regression analysis is used to discern direct and indirect effects of one condition in organizations on another.[5] A regression coefficient must exceed twice its standard error when other relevant factors are held constant to be considered indicative of an effect. The assumption of causal order is: size — differentiation — administration. The nature of an organization's responsibilities is roughly controlled, since each type is analyzed separately.

Effects of Size. The larger an organization the more differentiated it is along various lines. Whether we look at hierarchical levels, functional divisions, sections within them, occupational specialties, or geographical branches, organizations become differentiated into a larger number of them with increasing size, and this is the case for very different kinds of organizations. The findings from employment security agencies and their local branches are replicated, with minor variations, not only in other government bureaus and in private firms but also in universities and colleges and in teaching hospitals, as Table 1 indicates. Most of the correlations are high, and nearly all increase further when size is logarithmically transformed (using $\log_{10}$). On the average, size (log) accounts for more than two fifths of the variation in hierarchical levels, nearly two fifths of the variation in functional divisions, and more than half of the variation in occupational specialization.

Increasing organizational size promotes differentiation, but it does so at a declining rate. The scatter diagrams reveal that the regression lines of size (untransformed) on the various measures of differentiation for all six sets of data have declining positive slopes. As size increases, the number of subunits into which an organization becomes differentiated in several dimensions increase at first very rapidly and then more and more gradually. It is impossible to present this score of scatter diagrams here.[6] However, some indication of this curvature of the regression lines is provided by the fact that the logarithmic transformation of size raises its correlation with measures of differentiation (in 16 of 19 instances), as Table 1 shows. Some of the curves are shallow, so that logarithmic transformation of size produces a curve in the opposite direction (an accelerating positive slope) and improves the correlation little, and in three cases the curve in the opposite direction is so pronounced that the correlation decreases slightly.[7] Thus, the addition of one hundred employees stimulates much differentiation in organizations with less than one thousand employees but only little in those with several thousand. While increasing size has a pronounced impact on differentiation along various lines in work organizations regardless of type, the marginal influence of a given increment in size declines with increasing size.

Contrary to the stereotype of the proliferation of bureaucratic machinery in large organizations, the administrative apparatus is proportionately smaller in large than in small organizations. Different though government bureaus and retail businesses are from universities and hospitals, the proportion of personnel responsible for administering the organization declines in all of them with increasing size, as the negative correlations in Table 2

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[5] The regression coefficients for employment security agencies reported are somewhat higher than those in Blau and Schoenherr (1971), because a different computer program has been used to derive the former (SPSS).

[6] A number of them are shown in Blau and Schoenherr (1971).

[7] The scatter diagram for one of these three cases is presented **ibid.**, p. 333. It shows that the regression curve (of size on occupational specialities in finance departments) has a declining slope, even though logarithmic transformation of size reduces the correlation.

indicate. The span of control of supervisors is, correspondingly, wider in large than in small organizations. The correlations between size (log) and average number of subordination per first-line supervisor are .66 for the 1,201 branches of employment security agencies, .51 for the 416 finance departments, and .34 for the 124 department stores. Despite the more complex structure of larger organizations produced by differentiation, they apparently can be administered with proportionately less manpower than small ones.

Organizations exhibit an economy of scale in administration. But this economy of scale declines with increasing organizational size. The savings in managerial and other administrative personnel that the large size of organizations seems to make possible diminish with their increasing size. Table 2 shows that logarithmic transformation of size increases its correlations with the measures of administration in all types of organization for which data are available. This implies that the regression line of size on administration has a declining negative slope, and the scatter diagrams confirm this inference. With increasing organizational size, the proportion of administrative personnel decreases sharply at first but less and less thereafter. The large size of organizations appears to reduce both the proportion of administrative personnel needed and the savings in administrative personnel that further increases in size permit. Thus the negative marginal influence of a given increment in organizational size on administration, just as its positive marginal influence on differentiation, declines with increasing size.

Effects of Differentiation. Although size and differentiation tend to vary together in work organizations, they have opposite implications for their administrative apparatus. Whereas large size reduces the proportion of administrative personnel, pronounced structural differentiation expands it. Interestingly enough, the division of labor among individual roles (number of occupational specialities) has no such effect,[8] only differentiation that produces a structure of interdependent subgroups does. Specifically what enlarges the administrative apparatus are the number of levels into which the hierarchy is differentiated, the number of divisions and that of sections per division among which functions are subdivided, and the number of geographical branches. But this effect is only evident when organizational size is controlled, because size produces spurious negative associations between measures of structural differentiation and administrative apparatus, which conceal the positive direct nexus between them. Table 3 presents six separate regression analyses which disect the effects of size and differentiation on administration.

The negative standardized regression coefficients in the first row of Table 3 reveal that large size as such, independent of differentiation, effects considerable more savings in administrative personnel than the zero-order correlations (in Table 2) indicate.[9] This is the case in all types of organizations examined, notwithstanding their diverse nature, though the strength of the direct relation-

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[8] The regression coefficients of number of occupational specialities, with size controlled, on the per cent of the personnel in administration are insignificantly small in all types (not available for hospitals). The zero-order correlations are negative and spurious, owing to the influence of size.

[9] In department stores, managerial personnel in Table 3 excludes buyers, who are part-time managers, while the figure in Table 2 includes buyers, making the two figures not comparable. The comparable figure — the zero order correlation for store size (log) and managers excluding buyers — is .15. If buyers were included in the regression analysis presented in Table 3, insignificantly small regression coefficients for levels (.10) and divisions (.07) would be observed. Thus the effect of structural differentiation in department stores increases primarily the number of »pure« managers who are not also buyers, whereas the administrative economies of large-scale operations are only evident if these part-time managers, the buyers, are included in the measure and largely result from a reduction in the proportion of these part-time managers. (The zero-order correlation between size (log) and per cent buyers in the store is —.79.)

ship between size and administration varies among types (which is in part an artifact of the difference in the measures of differentiation that are controlled). But the large size of organizations is accompanied by differentiation in their structure, as we have seen, and this differentiation enlarges the administrative apparatus, as the positive regression coefficients in rows 2—5 of Table show.[10] Hence, the indirect effect of large organizational size, mediated by the greater differentiation in the structure it generates, expands the administrative apparatus, counteracting its direct effect of reducing it. Row 6 presents these indirect effects of size (r — b*). The pattern of influences can be represented in a simple path diagram:[11]
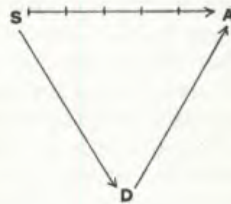
These findings raise a methodological question, however. The indicators of differentiation, particularly number of hierarchical levels, necessarily increase the number of managers in organizations of a given size. Are the observed relationships between differentiation and proportion of administrative personnel merely the result of this mathematical connection? To answer this question, regression analyses are carried out substituting a measure of the ratio of administrative to operating personnel that is mathematically independent of the differentiation measure, namely, the average span of control of first-line supervisors, data on which are available for three types. The same independent variables are, of course, expected to have the opposite effects on this ratio of operating personnel to lowest-level managers from those they have on the proportion of managers. Table 4 confirms this expectation in two of three cases.[12] Large size increases, and differentiation decreases, the number of subordinates per first-line supervisor in the branches of employment security agencies and in finance departments but not in department stores, possibly because buyers there are often part-time supervisors.[13] The same pattern is observable in department stores if the span of control of middle managers

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[10] In universities and colleges, the regression coefficients for levels and division fail to exceed twice their standard error, probably because the measure of size is confined to faculty while students and other employees also effect administrative loads and structural differentiation. If number of students (log) is substituted for number of faculty (log) as the measure of size, all three standardized regression coefficients are greater than twice their standard error; they are —.75 (size), .26 (levels), and .30 (divisions).

[11] The actual path diagram for each of the six sets of data can be completed with the information provided in Tables 3 and 1. Table 3 supplies the path coefficients between A and S (row 1) and those between several measures of D and S (rows 2-5). Table 1 supplies the path coefficients between these measures of D and S (rows 2. 4. 5, and 10).

[12] Regression analysis using the alternative measure for administrative apparatus in employment security agencies, per cent staff, yields another replication of the findings in Table 3. While this measure is not confounded with number of levels, it is probably affected by number of divisions and sections per division, because some of these subunits are staff units. Interestingly, however, the standardized regression coefficient for levels (.41) is greater than twice standard error, whereas those for divisions (.28) and sections per division (.22) are not; the one for size (log) is —1.20.

[13] Branches are not used as independent variables in department stores, because the mean span of control in the main store only is the dependent variable. (Using them alters results little.) The somewhat different findings in department stores may have several reasons; the existence of many part-time managers (the buyers); the lesser reliability of the data from this project: distinctive patterns in profit-making enterprises ,of which these stores are the only representatives in the research program so far. No detailed interpretation of the distinctive features of department stores is offered in this paper concerned with the similarities in different types of organizations.

instead of that of first-line supervisors is considered (column 4). Initial results are sufficiently corroborated to place some confidence in the conclusion that the relationships reflect empirical forces and not the confounding of empirical measures.

In organizations established to further academic pursuits or medical treatment as well as those explicitly designed for the efficient performance of work, large size produces very great savings in administrative manpower, other conditions being equal. But other conditions are not the same in large and in small organizations. The large size of organizations is accompanied by greater differentiation in their structure, which in turn leads to the expansion of administrative manpower. The complex structure of large organizations thereby counteracts the economy of scale in administration, without completely eliminating it. It appears as if increasing organizational size gave rise to dialectical forces having opposite effects, and decomposition in regression analysis can reveal these conflicting influences. Processes seem to arise with the increasing size of organizations that lessen needs for administrative personnel, and so do processes that generate a complex structure and consequently magnify needs for administrative personnel.

The empirical findings pose a number of questions which a theory of organizations should answer. Why do large organizations have a so much more differentiated structure than small ones? Why have large organizations, despite their greater complexity, and contrary to the bureaucratic stereotype, a relatively smaller administrative apparatus than small ones? Whereas economies of scale are a well-known phenomenon, and economic theory accounts for them, the economies in administrative manpower realized in large organizations must be explained by sociological, not by economic, principles. Why a differentiated complex structure increases the proportion of administrative personnel in an organization is a question that hardly needs to be asked, since a plausible answer readily comes to mind. But can this positive effect of differentiation on administration and the negative effect of size on it be explained by the same theoretical principle? Finally, what accounts for the decline in the influence of size on both differentiation and administration with increasing size?

FUNCTIONAL DIFFERENTIATION

In work organizations, the terms »functional differentiation« and »functional interdependence« have quite specific meanings. There is no implicit assumption of mythical forces that create an equilibrium among diverse institutions and assure that each makes positive contributions to the others. Functional differentiation in organizations refers simply to the fact that a common enterprise has become differentiated into subunits with distinct responsibilities or functions, for example, that an automobile factory consists of a division manufacturing motors, a chassis division, a body division, and a sales division. The functions of these divisions are, of course, interdependent, and so are all functions or specialized duties that result from the subdivision of a given job, such as that for which a work organization is responsible.

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Interdependence. For large numbers of persons to be integrated in a common enterprise requires either that they share distinctive values or interests that unite them or that they perform complementary functions that make them interdependent. Reference is to Durkheim's (1933) famous distinction between mechanical and organic solidarity, except that these concepts are applied, not to types of societies, but to associations within a society. The radical ideology creates the bond of solidarity among the members of a revolutionary movement. Common economic interests unify workers in a labor union. Distinctive beliefs about morality and supernatural powers make a religious sect a highly cohesive body, and as the strength of religious convictions wanes, so does the social integration in the church.

The employees of an organization have no such distinctive common values or interests. To be sure, they have in common the basic cultural values and an interest in earning a living, but both of these they share with the employees of other organizations in the society. Besides, the members of most work organizations, except very small ones, do not share the more specific value orientations individuals have, such as those reflecting their ethnic subculture, religious affiliation, and political allegiance. Even when such orientations are common to all or most employees of a work organization, they are not a distinctive bond, because they are shared with many other people. Occupational interests similarly tend not to be the same for all employees of an organization, and whether or not they are, many others outside share these interests. But are not the goals of an organization those of its members, furnishing a bond of common solidarity? Not in the case of work organizations. People join social movements or clubs because they are identified with their goals. But they do not work for General Motors because they are interested in raising its profits; or for a city finance department because they are interested in the fiscal welfare of the town; or for Columbia University because they are interested in **its** ability to advance knowledge and transmit it to students. Employees join organizations and make contributions to their goals because they are interested in receiving financial rewards, utilizing occupational skills, and, particularly in the case of some occupations, raising their professional reputation. The goals of the organization are not goals of its employees, at least not initially, though secondary identification with them and with the organization itself often tends to develop in the course of working for it.

What transforms an aggregate of individuals who happen to have the same employer into an **integrated collective body is their functional interdependence produced by the subdivision of work in the organization.** The employees of an organization perform complementary roles, that is, duties that have no instrumental significance unless complemented by other duties, such as those of buyer of dresses in a department store, which requires complementation by the work of salesladies. The subdivisions of the work entailed by pursuing the organization's goals among subunits with different functions necessarily makes these subunits (for example, the division collecting unemployment taxes and that paying unemployment benefits), and hence their employees, instrumentally interdependent. The degree of interdependence in work organizations varies. At one extreme, illustrated by the assembly line, the work of one individual or group cannot be perfomed until that of another is. At the other, extreme, illustrated by different sales departments, the work of one subunit can proceed regardless of that in others, but the instrumental

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significance of the various functions makes them interdependent. Thus the furniture department would cease to exist if the inefficiency of many other departments makes the store bankrupt; heart surgery can be performed whether or not orthopedic surgery is, but both are required in a general hospital, just as instruction in both natural sciences and humanities is needed in a college. Extensive differentiation of an organization's responsibilities intesifies the degree of interdependence among the functions of subunits and makes the performance of at least some directly contingent on that of others.

In sum, the employees of a work organization are engaged in common enterprise, which requires that they become an integrated social unit, but they do not have strong feelings of common solidarity, like those permeating the members of religious or political sects, for they lack the profound values shared only by the ingroup that create such firm bonds of solidarity and unite individuals in a cohesive group. The subdivision of work in organizations, however, has the result that its employees perform complementary roles and belong to subunits with complementary functions, and their consequent instrumental interdependence fuses employees into a distinctive coherent social organism. The interrelations among subgroupings that have become differentiated in a larger collectivity delineate its social structure. The differentiation of functions in an organization, developing for instrumental reasons, shapes its social structure and converts its employees from a collection of individuals with no distinctive common values or interests into a unified social entity.

Process of Integration. The process of social integration of individuals in a large collectivity always involves direct social contacts in small subgroups. The kinship system of simple societies illustrates this. It is an institution that divides the society into small subunits which are interconnected in several ways. The intimate and frequent social interaction in small families makes it possible for individuals to be socialized, to acquire the common language and cultural values, to receive emotional support, and thereby to attain social integration. These social processes make individuals integrated members not only of small families but also of larger clans and the entire society, because families are linked together in the kinship system and transmit to children the cultural and subcultural values of the larger collectivities of which they are part. Another illustration of this principle is Tocqueville's (1945) thesis that the integration of people into the political life of a large democracy depends on widespread participation in many voluntary associations, which are relatively small and serve as mediaries between individual citizens and the state. There is no direct way individuals can relate themselves to a society or any other large collectivity. Their social integration requires subunits small enough for regular personal contacts among members.

The differentiation of instrumental functions along various lines has implications for social integration in work organizations analogous to those of the kinship system in simple societies, because it too creates small interlocking subunits in which stable social relations can develop. Examples are work groups, managers on the same level, fellow specialists discussing common problems though they are assigned to different divisions, or the employees in a small branch office who associate daily with one another regardless of occupational specialty. The recurrent social interaction among

colleagues in these small groups socializes newcomers to informal as well as official procedures, furnishes continuing advice on problems of the job and social support, and consequently fosters integration in the immediate work group, and in the organization as well. The interlocking of these groupings implies that employees belong to several of them — one composed of colleagues in the same specialty, another of those located in the same section, and yet another of supervisors on the same level. Since these interdependent interlocking subgroups form a tight web as constituent elements of the organization's structure, employees who become integrated in subgroups are thereby enmeshed in the larger social structure and become integral members of the organization.

The larger an organization is, the more differentiation is required to produce the small subunits in which regular personal contacts further social integration. But an explanation of the increasing differentiation with increasing organization size in these terms is subject to the criticism, often made of functional interpretations, that the existence of a social pattern is accounted for by the beneficial consequences it has for the social system, as if a benign »unseen hand« governed human existence. In work organizations, however, there are good reasons to expect social patterns to develop because they have advantageous consequences for operations. Organizations have a management that is responsible for effective operations, rewarded for discharging this responsibility successfully, and empowered to implement its interest in efficient operations. But this statement raises two issues that must be confronted, one referring to the significance of managerial decisions for the patterns observable in organizations, and the other pertaining to management's interest in encouraging social integration of employees. The first question is whether managerial motives and decisions must be analyzed to account for conditions in organizations. It appears that this is not necessary in inquiries concerned with patterns prevailing generally in organizations, only in those concerned with idiosyncratic deviations from them or conditions in particular organizations. Given the assumption that managers are interested in effective operations, prevalent organizational characteristics can be explained by the influences of antecedent conditions in organizations (or their environment) without reference to managerial preferences or decisions,[14] because the constraints of these social conditions greatly restrict the options of managers acting in accordance with the assumption.

The second question is whether management's interest in operations makes it interested in the social integration of employees. This can by no means be taken for granted, inasmuch as the social cohesion of work groups, which may strengthen the informal enforcement of output restrictions, is not consistently associated with superior performance (see, for example, Seashore, 1954: 63—80). To be sure, management has an interest in the integration of employees in the work organization, which depends on their integration in its subgroups, but it is doubtful that managers are aware of differentiation's significance for this integration, even if the conjecture that it has such significance is correct. However, the differentiation of functions also makes instrumental contributions to operations, of which management is unlikely to remain unaware, and which furnish incentives for managerial decisions that promote differentiation.

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[14] Following Durkheim's (1938: 110) principle: »The determining cause of a social fact should be sought among the social facts preceding it and not among the states of individual consciousness.«

Specialization. A large volume of work requires a large number of persons to accomplish it. For many people to collaborate on common endeavors, their work must be organized. Organizing work involves subdividing it into component parts. Even a single individual organizes his work by dividing it into parts and doing one at a time. The more complex the job, the more important it is to divide it into more homogeneous tasks that can be performed separately, because homogeneous tasks are easier than heterogeneous ones. If the volume of work is too large for an individual and requires a group, it can be subdivided among group members. Only in the most primitive collaboration of individuals, exemplified by log rolling, does every one perform the same tasks. Work in a group is typicaly subdivided, and different individuals perform different tasks, which makes the job of each more homogeneous and thus simplifies it. The subdivison of work in social space therefore complements its subdivison by time periods in most cases of collaboration in a group.

If a still larger volume of work requires many persons to accomplish it and not merely a small group, it can be divided among subgroups, enabling entire subgroups to concentrate on relatively homogeneous tasks. Whereas work in small groups tends to become organized, subdivided, and coordinated in the course of direct social interaction without formalized procedures, explicit formal procedures are necessary to organize and coordinate the work of a collectivity too large for every member to have direct contacts with all others. A work organization is simply an explicit system for organizing the work of many persons in a common enterprise. A sheer increase in the volume of work, by determining whether its accomplishment requires only one person or a small group or a large collectivity, alters the principle in terms of which the work is organized (by subdivision in time, among individuals, or among subgroups).

Organizations accomplish jobs of staggering complexity as well as magnitude, jobs far too complex for an individual or any number of individuals who are not organized, because the subdivision of work facilities that of every individual and that of every subunit by making their tasks more homogeneous. This may be illustrated by the division of labor among specialized roles of individuals. In its absence, every employee would have to perform all the tasks involved in the discharge of the organization's responsibilities and would have to have all the requisite skills. For instance, all patient care in hospitals would have to be provided by G.P.'s. The division of labor segregates tasks into homogeneous groups ranging usually from quite routine to very difficult ones. Less training suffices for the comparatively routine jobs. In the example of hospitals, nurses relieve physicians of some duties and much patient care can be performed by aides. At the same time, greater specilized training can be required for the various difficult jobs, as exemplified by the substitution of surgeons and internists and other specialists for G.P.'s in hospitals. The division of labor consequently has a double advantage. It makes it possible to fill many positions with less trained personnel, which facilitates recruitment and achieves economies, and to fill the most difficult jobs with more highly trained experts, which improves the quality of performance. By reducing the range and enhancing the homogeneity of the tasks in any given position, the division of labor

promotes specialized expertise as well as routinization.[15] The brain surgeon's job encompasses, strictly speaking, a narrower range of more homogeneous duties than the G.P.'s, but this very fact enables the former successfully to perform tasks the latter cannot undertake.

In short, the division of labor enables an organization to perform more complex work better and with less skilled personnel. It is a mechanism that translates quantitative changes into qualitative ones. A purely quantitative increase in the volume of work, without any initial changes in the nature of responsibilities, increases the number of persons engaged in the work and the division of labor among them, and it thereby gives rise to the performance of jobs that were not originally undertaken and could not have been, that is, to a change in the nature of the work.

Work is subdivided in organizations not only among positions occupied by individuals but also among organizational subunits comprising numerous employees. There are the major divisions under top management with different functions, the sections within them with varying responsibilities, and possibly specialized subunits within them (though the smallest subunits often do not differ in responsibilities). Sometimes organizations have geographical branches, and these also may have diverse functions. The subdivision of work among individual roles and that among organizational functions are partly overlapping (most lawyers are in the legal division and all key-punch operators in the data-processing section) and partly intersecting (there are secretaries in both units). The subdivision of work among organizational segments is the organizational form of the division of labor, and it makes important instrumental contributions to operations. An entire group can concentrate on **more homogeneous tasks** and gain experiences and expertise in carrying them out. Consultation among colleagues engaged in similar work, which supplies advice when needed and social recognition for good advice, probably improves performance. The manager of a unit with relatively homogeneous tasks can have expert knowledge of most or all of them.

Another dimension of differentiation in work organizations is that between operations and administration. Operations involve the production of goods or the provision of services that is the organization's basic responsibility, be it furnishing services to the unemloyed, retail selling, or treating the sick. Administration entails organizing the work of others and maintaining the organization, broadly conceived, including recruitment, guidance, coordination, and management. The subdivision of work in administration has the same advantages as that in operations. It has the result that administrative jobs become more homogeneous, permiting some to be performed by less skilled personnel and others to be filled by specialized experts in various administrative responsibilities, including that of management. Before extending the analysis of administration, the principles of differentiation advanced should be concisely formulated.

The differentiation of instrumental functions in work organizations makes important contributions to effective operations. These exert compelling constraints on management, given its interest in effective operations, to make

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[15] A question of utmost practical importance, which extends beyond the scope of this paper, is under which conditions the division of labor promotes primarily routinization or specialized expertness. It may be assumed that improvements in technology and increases in the level of education (the greater efficiency produced by the former providing the resources for the latter) will shift the balance toward expertness (notwithstanding the apparent exception of the assembly line, which is a rather primitive form of mechanization).

the administrative decisions required for the development of differentiation. But the degree of feasible differentiation in an organization is limited by its size, particularly in as much as differentiation occurs in several intersecting dimensions. An organization must be large for operating responsibilities to be much subdivided, because administrative personnel constitutes only a fraction of all employees. Large size is a necessary condition for extensive differentiation, but not a sufficient one, and differentiation's instrumental contributions create the pressures that promote it to the degree size permits, if the increasing size of work organizations not only makes the social integration of employees dependent on extensive differentiation but also provides the opportunities for improving operations through progressive differentiation of functions, which gives management incetives to promote such differentiation, it follows that increasing organizational size is accompanied by increasing differentiation. Thus the theory can explain the first set of empirical findings. This does not prove the theory, of course.

ADMINISTRATIVE HIERARCHY

Work organizations have been briefly defined as explicit systems for organizing the work of many persons in a common enterprise. But they are specifically hierarchical control systems for doing so. An administrative hierarchy through which control over operations is exercised is a fundamental trait of organizations, as Weber (1946: 197) has emphasized. Whether hierarchical control is a necessary prerequisite for organizing work on a large scale is a moot question. Management has the responsibility for organizing and directing the work of the other employees, has the authority that enables it to do so, and has command over resources on which employees depend to back up its authority. Although there is interdependence among subunits in organizations, it is asymmetrical. Functionally, every subunit is dependent on others, including management, which could not administer operations without employees to perform them. Existentially, however, the dependence of lower ranks on higher ones is unilateral, inasmuch as superiors have authority and sanctioning power over subordinates.

Economy of Scale in Administration. The large size of an organization expands management's power, both internally, by increasing the scope of its authority, and externally, by increasing the influence of the organization in the community and thereby management's. Many employees also enlarge the volume of administrative work. The principles suggested for operations can also be applied to administration. A large volume of work requires a large number of persons to perform it, in administration as elsewhere. For large numbers to work together on administering an organization, their administrative work must be organized, and organizing work entails subdividing it.

The subdivision of administrative work takes two forms. First, administrative duties that do not depend on managerial authority are separated from the rest, such as recruitemnt and bookkeeping (which are the boss's responsibilities in a small organization). These staff functions are in turn subdivided among positions and organizational subunits, exemplified by personnel divisi-

ons, training sections, finance or comptroller offices, and typing pools. The slogan that staff advises but does not command expresses that these functions are divested of official authority, though staff experts often have much influence in organizations. Second, administrative responsibilities for management and supervision are differentiated into hierarhical levels, which vary in scope of authority and hence in the nature of major duties, ranging from responsibilities for assisting with and checking on operations to those for long-range planning, fundamental policy, and the organization's viability and success. Lower managerial levels are under the authority of higher ones, and official authority is ultimately rooted entirely in the hands of top management, which has command over resources, and which delegates authority to other managers. Subunits with different functions tend to have managers who are themselves functional spesialists in some degree. Hierarchical differentiation crosscuts the subdicision of work in operations and that within the staff. Whereas management is merely one of many functions in purely instrumental terms, its authority distinguishes it fundamentally from the rest. The differentiation of managerial levels obscures the fundamental distinction between management and other employees without making it any less important.

In contrast to its absolute amount, the proportionate amount of administrative work decreases with increases in the volume of operations and the number of employees to be organized. The reason is that organizing work entails initial investments largely independent of the volume of work to be carried out. The time and effort spent in setting up a computer program differs little whether one tabulation is made or several hundreds. Once a procedure for processing unemployment insurance checks has been designed, possibly after extensive investigation of alternatives, it can be used to issue any number of checks. The work involved in deciding which styles of dresses have most sales appeal hardly depends on the number of dresses to be bought for a store and offered for sale. The effort devoted to future planning for a factory is not primarily contingent on its volume of output. To design a new procedure is a time-consuming task, whether it is applicable to the work of few employees or that of many.[16]

In short, the investment of administrative time required for organizing operations is not proportionate to their volume, increasing far less than the volume of operations increases. To be sure, not all administrative duties involve such time investments. Personnel interviews with 100 job applicants take twice the time needed for interviews with 50, and closely supervising and reviewing the work of subordinate requires substantially more time if there are eight than if there are six. But even such administrative efforts permit savings with increasing size, which makes more efficient utilization of administrative personnel possible. A personnel officer may not be fully occupied in a small organization. Fewer employees with identical than with different duties can be supervised by one person. This makes it necessary for small organizations, which have only very few employees in some job categories (for instance, keypunch operator or telephone operator), to assign fewer subordinates to supervisors than can large organizations.

The principle that the time involved in organizing the work of others is independent of limited differences in the amount of work being organized,

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[16] The time management spends in external relations — negotiating with suppliers, unions, or the I. R. S. — is also affected relatively little by the organization's size, but the focus here is on internal administrative responsibilities.

though not of extreme differences, can explain the economy of scale in administration. If the volume of administrative work increases less than proportionately as the volume of operations increases; and if the volume of work governs the number of persons needed to accomplish it, in administration as well as in operations; it follows that the number of persons in administration increases less than that in operations; and hence that the proportion of administrative personnel decreases as the total number of employees increases, which is what the data show. The great power of top management of large organizations is an extreme instance of the same principle. A small handful of persons commanding large resources and empowered to formulate basic policies and to make the basic organizing decisions is able to direct the work of hundreds of thousands of employees and to exercise tremendous influence in the society.[17]

Significance of Heterogeneity. The complex structure of interdependent parts resulting from differentiation creates problems of coordination and communication in work organizations. The horizontal differentiation of functions among subunits produces especially problems of coordination, because interdependent responsibilities must be integrated, and the vertical differentiation of authority intensifies primarily problems of communication, because differences in authority impede the free flow of communication. The administrative attention these problems of coordination and communication demand furnish a plausible reason for the empirical finding that more differentiated organizations employ more administrative personnel than less differentiated ones of the same size.

The question arises whether the influence of structural differentiation on administration cannot be explained by a priciple consistent with that advanced to explain the influence of organizational size on administration. This principle — that the administrative effort of organizing work increases much less than in proportion to increases in the volume of work — makes an implicit assumption, namely, that the work being organized is fairly homogeneous. For the same organizing procedures cannot be applied to entirely different responsibilities. Quite different problems are involved in organizing the collection of unemployment taxes from employers, the disbursement of unemployment benefits to those entitled to them, and the provision of employment services. The same incentive system may not be suitable for clerical and professional workers. Different faculty recruitment policies may be successful in the natural sciences and in the humanities. The same procedure cannot be used to organize the manufacture of products and their sale.

A minimum of homogeneity characterizes work organizations. Department stores only sell retail merchandise, they do not collect taxes, instruct students, or treat the sick. What is more important, the larger an organization, the larger are its subunits with relatively homogeneous responsibilities.[18] The large segments with fairly homogeneous responsibilities in large work organizations are what reduces the proportion of administrative personnel in them, because the same procedures can be used to administer a large volume of responsibilities that are homogeneous. But if homogeneity lessens needed

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[17] The earlier statement that the structural constraints of conditions in the organization greatly restrict the options of managers referred to its decisions pertaining to the way work is organized and does not imply that management lacks power in determining basic policies and courses of action.
[18] This is the case despite the greater number of subunits in larger organizations. The positive correlations between total organizational size and average size of subunits are discussed below and are presented in Table 5.

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administrative effort, heterogeneity must expand it. Since structural differentiation increases the heterogeneity of responsibilities among an organization's subunits — its managerial levels as well as its functional divisions and sections — it therefore is expected to enlarge its administrative personnel, which is what the data indicate.

There is a paradox implicit here. Organizing the work of many employees requires proportionately less administrative personnel, but organizing work involves subdividing it among subunits with different responsibilities, which increases requirements for administrative personnel. This would make it appear as if the administrative process of organizing work diminishes its own future efficiency. This paradoxical conclusion contains an element of truth, though it oversimplifies matters.

Large size gives a work organization two instrumental advantages: a reduction in the proportion of personnel needed for administration, and an opportunity for extensive subdivision of work of all kinds which facilitates operations. The subdivision of work that develops in large organizations produces simultaneously greater homogeneity **within** subunits and greater heterogeneity **among** them. According to the theory, the former is expected to decrease and the latter to increase the administrative apparatus. Can the prediction of such opposite effects of one factor on another be empirically tested? It can, provided one is willing to make certain assumptions. Organizational size, with number of different subunits in several dimensions controlled, is assumed to represent within-unit homogeneity (as well as larger mean size of subunits, as we shall see), and number of subunits, with size controlled, is assumed to represent among-unit heterogeneity. Given these assumptions, the empirical findings in Tables 3 and 4 conform to the prediction implied by the theory.

Dialectical processes seem to develop in work organizations with increasing size, which effect their administration in opposite ways. The progressive differentiation of functions accompanying increasing size, which makes it possible for many employees to be organized and integrated in the common enterprise, increases both the homogeneity within and the heterogeneity among subunits. Since the administrative effort expended in organizing work depends on its heterogeneity, large organizational size, by promoting differentiation and thus homogeneity in one respect and heterogeneity in another, has opposite effects on administration, one mediated by the greater homogeneity within larger subunits, and the other by the heterogeneity among subunits. Thus processes of differentiation can be considered dialectical forces through which increasing organizational size, which generates these processes, reduces the administrative apparatus proportionately, on the one hand, and expands it, on the other. The process of administration, in as much as it involves organizing work by differentiating responsibilities, does indeed create new administrative problems in the course of solving others, as the paradox implies, because differentiation engenders dialectical forces. The differentiation of functions in work organizations must be kept within bounds lest the administrative problems it creates outweight the instrumental advantages it produces.

Feedback. The administrative problems to which functional differentiation among subunits gives rise seem to have feedback effects that modify the influence of size on differentiation and on administration. One

can think of these problems, from which feedback processes engendered by the heterogeneity among organizational subunits are inferred, in economic terms — the cost of large administrative overhead — or in sociological ones — the difficulty of coordinating many diverse subgroups. The reaction to administrative problems may be either resistance to the conditions that create them or adjustment to these conditions. Both apparently occur, perhaps in different organizations, perhaps in the same ones at different times or in different parts.

If administrative problems produced by differentiation along various lines in work organizations evoke resistance against further differentiation, the pressure of increasing size promoting differentiation must overcome increasing counterpressure from this resistance, similar to the growing counterpressure the force of a piston in a cylinder compressing a gas must overcome. Given the principle that the effect of increasing organizational size on differentiation arouses increasing resistance, it follows that the influence of a unit increment in size (say 500 employees) on differentiation declines as size, and with it differentiation, increase. This is what the data show, for all measures of differentiation, in all types of organization under examination. A further implication is deducible. If the number of subunits (the measure of differentiation in any dimension) increases less rapidly than the total number of employees (size), the average size of subunits (the ratio of total size to their number) must increase with increasing size. The data reveal very high positive correlations between total size and average subunit size for all cases that are computed (see Table 5). These associations, though not their strength, are a mathematically inevitable result of the declining slope of the regression lines of size on number of subunits.

Instead of resisting differentiation, because it creates administrative problems, it can be adjusted to in organizations by enlarging the administrative apparatus. Since increasing organizational size effects reductions in the proportionate size of the administrative apparatus, such adjustments to the progressive differentiation it fosters must increasingly counteract these reductions. This implies that the effect of a given increment in size on the administrative apparatus, decreasing its proportionate size, declines as size increases, and with it differentiation, which is the pattern empirically observed. Thus the declining marginal influence of organizational size on both differentiation and administration can be interpreted in terms of feedback processes assumed to result from administrative problems differentiation causes.

Resistance to differentiation in organizations, which has been inferred to explain the diminishing influence of size on differentiation, can also help explain the economy of scale in administration, the decrease in the proportion of administrative personnel with increasing size. For the strong associations between total size and mean subunit size are attributable to this resistance. The greater the size of subunits among which responsibilities are divided, the larger are the segments of employees with relatively homogeneous duties. Inasmuch as homogeneity lessens the need for administrative personnel, according to the theory, the larger subunits with comparatively homogeneous duties resulting from the resistance that keeps the differentiation in large organizations within limits can be considered to be responsible

for the proportionately smaller administrative apparatus in large than in small organizations.[19]

CONCLUSIONS

The major propositions of the theory advanced are summarized in deductive form. In doing so, explications and refinements of the theoretical propositions are ignored, and so are definitions and purely tautological statements. (For example, not included are such self-evident propositions as, »if **a** is virtually constant and **b** increases substantially, **a**/(**a**+**b**) must decrease.«) Nine theoretical assumptions or axioms (which are numbered) are used to deduce seven theorems or empirical propositions (designated by numbers preceded by a T). One additional empirically supported theorem is introduced for the derivations (T—0).

> T—0. The larger volume of work, the larger is the number of persons needed to perform it.

1. If a common enterprise, including a work organization, depends on the social integration of its members.
2. And if social integration of employees in a work organization, who do not share distinctive basic values or interests, requires the interdependence among heterogeneous small subunits of them.
3. And if management is interested and capable of furthering effective operations.
4. And if effective operations are promoted by the homogeneity of tasks within subunits.
5. And if more homogeneity within subunits, more heterogeneity and interdependence among them, and their reduced size are all results of the progressive differentiation of functions.
6. And if the degree of differentiation is limited by the organization's size (or number of employees, many being a necessary though not sufficient condition for much differentiation).

> T—1. It follows that increasing organizational size promotes differentiation.

7. If the administrative investments involved in organizing work are largely independent of the amount of similar work being organized, so that the volume of administrative work, of which these investments are a part, increases less than proportionately as the volume of operations increases.

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[19] Problems of multicollinearity (note the very high correlations in Table 5) make it meaningless to perform regression analyses of size on both measures of mean size and of number of subunits, which would provide a direct test of the theoretical assumption. All zero-order correlations between mean subunit size and the index of administrative apparatus are negative, but this is simply the result of the correlation of both variables with total size.

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T—0. And if the number of employees needed depends on the volume of work (in administration as well as in operations).

        T—2. It follows that increasing size reduces the proportion of personnel in administration.

T—0. If the number of employees needed depends on the volume of work.
8.   And if the volume of administrative work depends on the heterogeneity of responsibilities (for example, the heterogeneity among subunits, other things being equal).
5.   And if heterogeneity among interdependent subunits (as well as other conditions) result from differentiation.

        T—3. It follows that differentiation, independent of other conditions, expands the proportion of personnel in administration.

T—0. If the number of employees needed depends on the volume of work.
8.   And if the volume of administrative work depends on the heterogeneity of responsibilities (and hence inversely on their homogeneity).
5.   And if both homogeneity within and heterogeneity among interdependent subunits result from differentiation.
T—1. And if the degree of differentiation depends on organizational size.

        T—4. It follows that increasing organizational size influences the proportion of administrative personnel in opposite ways: effecting reductions in it, mediated by the greater homogeneity within (larger)[20] subunits; and effecting expansions of it, mediated by the greater heterogeneity among more subunits.

9.   If differentiation creates administrative problems that arouse resistance and require adjustment to it.
T—1. And if increasing size promotes differentiation.

        T—5. It follows that the influence of increasing size on differentiation must overcome increasing resistance and hence declines.

9.   If differentiation creates administrative problems that arouse resistance and require adjustment to it.
T—3. And if (adjustment to) differentiation expands administrative personnel.
T—1. And if increasing size promotes differentiation.
T—2. And if increasing size reduces the proportion of personnel in administration.

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[20] The larger size of subunits in larger organizations is for the time being assumed in the deductive formulation, since it has not yet been made part of it, but this theorem will be formally derived, and empirical evidence in support of it has been presented (Table 5).

T—6. It follows that the influence of increasing size on reductions in administrative personnel is more and more counteracted by the expansion of such personnel in the increasingly differentiated structure, and hence declines.

T—5. If the number of relatively homogeneous subunits — the indicator of differentiation in a given dimension — increases at a declining rate with increasing size.

T—7. It follows that the mean size of these comparatively homogeneous subunits increases as the size of the organization does (which has been previously assumed, and which is a basic reason for the economy of scale in administration).

TABLE 1.
Zero-order correlations between size and measures of differentiation

	ES[a]	LB[b]	FD[c]	DS[d]	U&C[e]	TH[f]
Levels						
Size	.60	.68	.55	.51	.37	
Log Size	.72	.69	.66	.66	.51	
Divisions[g]						
Size	.38	.61	.50	.28	.80	.52
Log Size	.54	.67	.73	.33	.82	.50
Sec./Div.						
Size	.16			.43		
Log Size	.43			.62		
Occup. Spec.[h]						
Size	.78	.51	.81	.60	.83	
Log Size	.82	.62	.80	.66	.79	
Branches						
Size	.94			.55		
Log Size[i]				.62		

[a.] Employment Security agencies (N = 53).
[b.] Local Branches of ES agencies (N = 1,201).
[c.] Finance Departments (N = 1,201).
[d.] Department Stores (N = 124).
[e.] Universities and Colleges (N = 115).
[f.] Teaching Hospitals (N = 1,279).
[g.] In U&C, schools and colleges;
in TH, types of residencies.
[h.] In DS and U&C, departments;
otherwise, job titles.
[i.] Not available for ES.

TABLE 2.

Zero-order correlations between size and measures of administrative apparatus

	ES	LB	FD	DS	U&C	TH
% Managers[a]						
Size[b]	—.42	—.46		—.24	—.17	—.30
Log Size	—.45	—.64	—.28	—.53	—.28	—.48
% Staff						
Size	—.44					
Log Size	—.60					

[a.] Administration-faculty ratio in U&C; % admin. nurses in TH.

[b.] Not available for FD.

TABLE 3.

Regression analysis of proportion of administrative personnel[a] on size and differentiation

	ES	LB	FD	DS	U&C	TH
Size (Log)	— 1.13	— 1.47	— 1.29	—.46	—.55	—.54
Levels	.47	.61	.94	.32	.25[e]	
Divisions[b]	.36	.62	.53	.21	.12[e]	.13
Sec./Div.[c]	.33					
Branches				.53		
Ind. Effect of Size[d]	.68	.83	1.01	.61	.27	.06

[a.] Per cent managerial personnel, except: (1) excluding buyers in DS, who are included in DS in Table 2 (see fn. 9); (2) administration-faculty ratio in U&C; (3) per cent admin. nurses in TH.

[b.] In U&C, schools and colleges; in TH, types of residencies.

[c.] Excluded from regression analysis in DS, since it has no appreciable effect (b* = .05).

[d.] The figures in this row are not part of the regression equation but provided for supplementary information; they are the difference between the r and the b* of size (log).

[e.] Not twice its standard error.

TABLE 4.

Regression analysis of average span of control of supervisors on size and differentiation

	LB	FD	DS	DS[a]
Size (Log)	1.31	1.08	.44	.50
Levels	—.49	—.25	—.18[d]	—.35
Divisions[b]	—.46	—.55	.06[d]	—.26
Ind. Effect of Size[c]	—.65	—.57	—.10	—.32

[a]. Mean span of control of managers who supervise buyers .
[b]. In U&C, schools and colleges; in TH, types of residencies.
[c]. These figures are not part of the regression equation (see Table 3, fn. d).
[d]. Not twice its standard error.

TABLE 5.

Zero-order correlations between total size and mean size of certain subunits

	ES	LB	FD	DS	U&C	TH[a]
Divisions	.96	.76	.87	.76	.32	
Sections	.95			.51		
Levels[b]	.99	.98	.96	.98	.99	
Occup. Spec.[c]	.94	.85	.42	.84	.77	
Branches	.65			.74		

[a]. Not ávailable.
[b]. The number of personnel per level has no concrete meaning.
[c]. In DS and U&C, departments; otherwise, job titles.

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PARTICIPATION AND INTERORGANIZATIONAL RELATIONSHIPS: SOME SUGGESTIONS AND TENTATIVE FINDINGS

This paper is an attempt to bring together two issues which have interested organizational sociologists for some time. Both worker participation and interorganizational relationships have been the subject of intensive investigation in recent years. There have been few attempts to link these concepts and it is to this that the present paper is addressed.

Before turning to an examination of these concepts and attempting to show how they can be linked, it is important to note that both concepts, while seemingly almost at opposite »ends« of the organization, are actually part of the same general trend in organizational theory. The trend is **away** from the closed, rationalistic view of organizations. There are any number of influential works which have called our attention toward a model of organizations which allows important inputs from both within and outside the organization and away from a static, single-goal oriented model (Thompson, 1967; Katz and Kahn, 1966; Woodward, 1965).

Worker participation, as a concept, has an ideological overtone which, in my mind, has somewhat obscured its importance for organizational theory and practice. The ideology can be political in the sense that there is a belief that workers ought to have more control over their lives and their work. The ideology can also be discipline-based, since in the United States it is the psychologists who are its most ardent advocates. Here the ideology is that the work environment should be one in which the individual is allowed and encouraged to grow to his full potential. This ideological overtone is not important when worker participation is treated as a variable influencing or being influenced by something else. This is the position to be taken in this paper.

The concept of interorganizational relationships has a somewhat different history. The interest in interorganizational relationships is part of the more general concern with the impact of the environment on the organization. The seminal papers on interorganizational relationships (Evan, 1966; Levine and White, 1961; Litwak and Hylton, 1962; Warren, 1967) have all viewed a focal organization as being affected by the organizations with which it has contact. It is obviously a two way relationship in that the ongoing relationships affects the organizations involved and the relationship itself.

There are compelling scientific reasons to examine the relationships between these two phenomena. Since both have come to the forefront of organizational analysis because of their demonstrated importance, it is now time and we have the opportunity to see how these phenomena are related.

At the same time there are broader issues which are of interest here. In our own research, which I will describe shortly, we are concerned with organizational performance, or effectiveness. The general question of effectiveness must be added to two additional questions. The first of these is effectiveness on what? It is clear to me that organizations pursue multiple goals, so that operation that might lead to high performance on one goal may not lead to such performance levels on another goal. We will have data on this issue at a later point in time and only a few comments will be made here in this regard. The second question in regard to performance is performance for whom? This is similar to the question raised by Blau and Scott (1962), **cui bono,** but with a different twist. We are not concerned with the prime beneficiaries as they were, but rather we are concerned with the impact on different groups by the actual operations of the organizations. In our case, the organizations serve or at least deal with clients. We thus must also view effectiveness from the standpoint of the client as well as from the organization itself. It is not difficult to hypothesize that what might be very effective for the organization on one of its tasks, might have the opposite effect as seen by the clients. That is, an organization could view itself and be viewed by other organizations as doing a good job on one of its tasks, but the clients could view the operations in a totally different way.

THE PRESENT RESEARCH

In order to make the discussion which follows more meaningful, it would be wise to describe the research from which the findings and interpretations presented here are taken. The organizations involved are quite different from those which I imagine most of the other perticipants here will be discussing, but are not so unique that it will be impossible to generalize. Several years ago, John Clark, who is a criminologist, and I began discussing interorganizational relationships with the focus on organizations designed to deal with problem youth. These youth could be called delinquent, pre-delinquent, »acting out« or whatever, but their behavior in some way or other has brought them to the attention of some organization concerned with problem youth. After a series of false starts, the research began and we faced the task of identifying the major organizations in one Midwestern, U.S. city, which are central to the network or set of organizations concerned with problem youth. Following essentially a sociometric technique, we were able to identify the following organizations as the major ones which deal with such problem youth:

> Juvenile Police
> Juvenile Court
> Welfare Department (2 divisions)
> Schools (2 divisions)
> Juvenile Detention Center
> YMCA Detached Worker Program
> Juvenile Probation Department
> Mental Health Center

We then focused our attention on these organizations, using systematic observations, interviews, official records, and questionnaires in our subsequent data collection. At the present time we are expanding the study to include eleven additional cities of comparable size in the United States. This will provide us with a sufficient number of organizations for our analysis. The data which I will report here comes only from one city.

MEASUREMENT AND OTHER METHODOLOGICAL PROBLEMS

The concerns represented in the present paper are only part of the larger project. At the outset of the research we had interorganizational relationships as a focus. We also believed that the conditions within the organizations involved would be important for these interorganizational relationships and, more importantly for the total project, for organizational performance. We began to examine the organizational literature to pin down those concepts which appeared to be most central for our concerns. The distribution of power within the organizations was an immediately important issue. We decided to include the Tannenbaum (1968) control question, because of its demonstrated sensitivity and widespread use. We also included a modified version of the Hall (1963) bureaucracy scales, which include a scale on the hierarchy of authority or the degree to which authority is centralized. These two measures are strongly correlated and we will use the Tannenbaum measure as our indicator. In the study we thus do not have a direct measure of worker participation. Instead we are using the indicator of the distribution of power as the basis for the comments made here.

We faced a minor problem with the Tannenbaum instrument. The organizations in our study varied in terms of the numbers of levels in the hierarchy. Some had only two levels, while the others ranged up to four levels. In order to hold this factor as constant as possible, we developed four scores from the Tannenbaum measure. The first is simply the average score reported for the lowest level in the organization; the second is the difference between the lowest level and the next highest level, the third is the difference between the mean of all higher levels and score on the lowest level, and the fourth is the difference between the lowest and the highest levels. In the organizations with only two levels, of course, the last three scores will be the same.

The measurement of interorganizational phenomena was more difficult, since there are not available measures. There is hardly adequate conceptualization in this area. We decided to proceed on the basis of the general social processes which appeared to be important, such as conflict and coordination, and then add in some additional questions regarding some of the ideas in the literature, such as the extent of formalization of relations, or the kinds of things exchanged between organizations. With this in mind, the professional personnel were asked the following questions:

1. How **often** are contacts made between your agency and each of the following ones?
2. How are **most** of the contacts made?

3. What are the **reasons** for the contacts?

4. What are the **bases** of the contacts with each agency?

5. Are the appropriate **personnel** of the other organizations generally available when members of your organization need them?

6. How **important** are the contacts with each of these organizations to the work of your own organization?

7. How **well** are the activities of your organization and **each** of the other organizations **coordinated?**

8. To what extent do **disagreements or disputes** characterize the relations between your organization and each of the others?

9. What are the **bases** of the disagreements between your organization and each of the others?

10. How well are any differences between your organization and the others **worked out?**

11. In **what ways** are these differences between your organization and each of the others handled?

12. How **compatible** is your organization's operating philosophy with that of each of the other organizations?

RESULTS

The data from this study have presented several problems. The first is the unit of analysis. We prefer to use the organization as the unit of analysis, representing it by a score and then looking at such things as organizational performance, organizational coordination, and so forth. The small N we have at present makes this difficult, but this is a problem that will be overcome over time. A more difficult issue emerges when we attempt to characterize the nature of the interactions among the organizations. Each of the 8 organizations has interactions with the 7 others. The data come from the membership of the organizations. After looking at the possibility of taking the average score of the coordination, for example, between welfare and probation, we decided that this sort of average would be too misleading and would disguise more information than it would illuminate. We resolved this problem by taking each organization's average perception of its interaction with each of the 7 other organizations and treating this as an interaction score. This gives a total of 56 (8x7) interaction scores.

This system has proven very useful in examining the relationships among the interorganizational variables. A major problem arises when we try to relate organizational phenomena to these interorganizational scores. We do not have the ideal resolution here. In table 1 (below) we related the score on the distribution of power (participation) and the amount of power of the lowest level (based on the average score for the organization) to interorganizational interaction scores. Since there are seven interaction scores for each organization and only one power score (repeated seven times) the correlation coefficients reported are probably raised, but we have not yet come up with a satisfactory resolution to the problem.

TABLE 1.

Correlation Coefficients of Two Measures of Worker Participation and Interorganizational Relationship Patterns (N = 56)

	Difference Between Lowest and Highest Level	Amount of Power at Lowest Level
Frequency of Contact	.37*	.08
% Person to Person Contact	.16	.05
% of Contact Designed to Correlate efforts, plan, settle differences	0.4	—.45*
% of Contact **not** on a Formal Basis	—.34*	—.10
Personnel Availability (in other agency)	—.13	—.15
Importance of Contacts	.05	—.13
Coordination Between Agencies (Reverse Scored)	.08	—.30
Conflict Between Agencies	—.18	.12
% of Conflict based on Handling of Specific Cases	—.06	—.07
% of Conflict based on Different Operating Philosophies	.06	.00
Degree of Success of Conflict Resolution (Reverse Scored)	.21	—.37*
% of Conflict Resolved by Discussions by Individuals	.21	—.40*
Degree of Compatibility of Operating Philosophies between Agencies	.10	—.12
Perception of Other Agency's Performance	.07	—.27
Quality of Communication Between Agencies (Reverse Scored)	—.14	—.19
Perception of Competence of Personnel in Other Agencies	.17	—.22

Note: The use of (Reverse Scored) means that, for example in the case of conflict resolution the greater the differences in power between the levels, the poorer the resolution and the greater the power of the lowest level the better the resolution

    * = .01 level of significance

    The alternative method is to take the scores from individuals, as is done in Table 2. This is not satisfactory from the standpoint of characterizing organizations, but the other problem is alleviated. As will be seen, the results of these two approaches are not too disimilar.

Turning now to our actual results, an examination of Table 1 reveals that our hypotheses are basically confirmed. Interaction is more frequent when there is a greater power difference between lowest and highest levels, but the content of the interactions is not closely associated with frequency. As a side issue, it is interesting to note that data not shown here indicate that higher frequency of interaction is not necessarily associated with more coordination and less conflict. This is contrary to most findings in regard to interpersonal relationships, indicating that interorganizational phenomena must not be approached from the same assumptions as those underlying the study of interpersonal relations.

The participation of lower level personnel appears not to be in the areas of planning, coordinating, and settling differences. Lower participants from different organizations apparently deal with each other in the day to day operations of the organization, referring clients, sharing information, and so on. This is reflected in the fact that the contacts are less formalized when there is a greater difference in power in the organizations. The lower participants interact, apparently, in a slightly more formal and routinized fashion.

Despite the fact that the contacts among the lower level workers appear to be more formalized, the findings shown in Table 1 indicate that the more the participation at the lower levels, the **greater** the coordination and the **less** the conflict between the agencies (Table 1 represents the data as originally scored, which makes it a little difficult to interpret). Similarly, conflict resolution is **more** successful, when the lower participants have more power. At the same time, discussions by individuals is not the conflict resolution mechanism. It may be that another response alternative, not shown here, of formal or informal committees operates when the lower participants are involved in the conflict resolution process. The rest of the findings shown in Table 1 are not too startling. The more participation by the lower the level, the poorer the perception of the other organization's performance. We cannot say whether this is a more or less accurate description, since we have not yet analyzed our other performance data. It is interesting to note that the quality of communication is negatively and weakly associated with both the degree of difference between the power of the levels and the extent of participation by the lower participants, meaning here that communication is better with a greater difference and more power at the bottom.

Table 2 presents the data tabulated from the individual responses. It is presented agency-by-agency for those agencies of sufficient size to represent a fair statistical test. Only selected variables are used here, and only the extent of power of the lowest level serves as the basis for the correlations. The data show the nature of the relations between each agency and all of the other agencies. In general the patterns shown in Table 2 are similar to those already discussed for Table 1. It will be noted that there are some agency by agency variations. These differences will be important to us as we try to explain variations in the performance of each agency on its tasks, but here our attention will be focused on the overall patterns. Particularly striking are the strong relationships shown between the participation of lower participants and the resolution of conflict and the quality of communications. In both cases, the more power of the lower participants, the **better** the resolution and communications.

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TABLE 2.

Correlation Coefficients of Amount of Power of Lowest Level and Selected Interorganizational Relationship Patterns (Individual Scores)

WELFARE DIVISION 1
(N = varies with specific question; * = .01 level of significance)

	Court	Mental Health	Proba-tion	Deten-tion	Police	Schools	YMCA
Frequency	.11	.00	.16	.08	—.03	—.15	—.34
Coordination (Reverse Scored)	—.15	.06	.00	—.05	—.14	.02	—.35
Conflict	—.06	—.07	—.08	—.10	—.09	.13	.40
Conflict Resolution (Reverse Scored)	—.25	—.15	—.12	—.24	—.39*	—.17	—.51
Performance	—.10	.09	—.02	0.4	—.09	.00	—.26
Communications	—.19	.02	—.01	—.13	—.14	—.24	—.49*
Competence	—.01	.03	.18	.08	—.07	.05	—.25

WELFARE DIVISION 2
(N = varies with specific question; * = 0.1 level of significance)

	Court	Mental Health	Proba-tion	Deten-tion	Police	Schools	YMCA
Frequency	.06	.00	.06	.03	—.06	.05	—.09
Coordination (Reverse Scored)	—.12	—.07	—.15	—.19	—.32*	—.21	—.22
Conflict	.07	.10	.03	—.09	.15	.00	.22
Conflict Resolution (Reverse Scored)	—.41*	—.36*	—.35*	—.44*	—.34	—.25	—.10
Performance	—.22	—.26	—.16	—.11	—.20	—.27	—.23
Communication	—.21	—.31*	—.26	—.20	—.27	—.13	—.15
Competence	—.15	—.23	—.12	.08	—.08	—.05	—.18

POLICE
(N — varies with specific question; * = .01 level of significance)

	Court	Welfare	Mental Health	Proba-tion	Deten-tion	Schools	YMCA
Frequency	—.21	.00	—.26	—.12	—.16	—.23	—.10
Coordination (Reverse Scored)	—.19	—.08	—.07	—.18	.01	.23	—.13
Conflict	.06	.11	.16	.18	—.08	—.01	.02
Conflict Resolution (Reverse Scored)	.02	—.30	—.46	.15	.10	.10	—.26
Performance	—.24	.05	—.06	—.10	—.14	—.03	.04
Communications	—.29	—.52*	—.42	—.29	—.10	.09	—.31
Competence	—.01	—.26	—.39	.01	.05	.07	.00

(N — varies with specific question; * = .01 level of significance)

	Court	Welfare	Mental Health	Deten- tion	Police	Schools	YMCA
Frequency	.08	.18	.37	.08	.30	—.09	.12
Coordination (Reverse Scored)	.12	.10	.26	.15	.01	.38	.00
Conflict	.02	.11	—.52*	.13	.22	.11	.00
Conflict Resolution (Reverse Scored)	—.01	—.27	—.09	—.30	—.27	.40	—.27
Performance	—.14	—.01	.19	—.08	—.34	.11	—.05
Communications	—.49*	—.35	—.45	—.48*	—.40	—.21	—.34
Competence	—.09	—.03	—.06	—.37	—.23	.14	—.19

Rather obviously, these data are incomplete. If our interest is in these interorgnizational processes, a multi-variate analysis is called for in order to determine which other factors are also important in their explanation. This will be done within the next few months. Also, we are not certain of the direction of the relationships being described. Certainly the presence of differing forms of interorganizational relationships has an impact on the participating organizations, and thus on the power relationships and degree of participation therein. For the purposes of this discussion, however, we will focus on the contribution of lower level participation for interorganizational relationships.

DISCUSSION

The most general finding from this research is that the quality of interorganizational relationships is higher — less conflict, more coordination, better communication, better conflict resolution — when there is greater participation by the lower participants. The explanation for this appears to be at two levels. The first level is the interpersonal and involves the fact that participation by lower level personnel in the organization undoubtedly means that they are also in contact with other organizations. In the organizations of the sort with which we are dealing here, it is common for the workers to deal directly with other organizations, if they are given the opportunity and encouragement to do so. Apparently, the fact that the people in other agencies are able to get to know one another is useful in improving the quality of interorganizational interactions. Our interviewing and observational data support this kind of idea. One agency head, for example, noted that the relations of his agency with another one were much improved when there was direct interaction at the worker level by having a worker present in the other organization.

The second level of explanation is organizational. Lower level participation and smaller differences between top and bottom mean that power is delegated or decentralized and that decisions can be made and actions taken

without going back through the hierarchy of the organization. Assuming that the personnel involved are at least minimally competent, this should improve the quality of interorganizational interactions, since problems will be resolved sooner and by the people most directly involved.

We would expect that the patterns reported here will contribute to organizational performance in particular ways. Almost all of the organizations studied have as one of their tasks that of interacting with other organizations. It would appear from this evidence that increasing the power of the lower participants would contribute to performance here. It must be noted, however, that this is not meant to imply that this would be the case on all tasks. It may be that such increased participation might work against the performance on other tasks. Also, we cannot say a thing, for the moment, about the impact of worker participation on the client. It may be good or bad.

IMPLICATIONS

This has been an attempt to link to previously unconnected concepts in organizational literature. The data, which have only been partially analyzed, the basic hypothesis that the greater the participation of lower level workers and the smaller the power differences between top and bottom of the organization, the better the quality of interorganizational interactions. Where interorganizational interactions are important, the implications are clear. More people must become boundary personnel if the quality of the interactions is to increase. The other factors which contribute to different patterns of interorganizational relationships are just now being identified. The present paper must be viewed as a first step in looking at the relationships between the participation and interorganizational concepts.

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TWO CONCEPTIONS OF DEMOCRATIZATION IN ORGANIZATIONS

The dual character of the title of our conference is probably not due to some accidental whim on the part of those who took the initiative for this gathering, but presumably reflects two styles of thinking about ways and means to enhance the opportunities for human beings to control the conditions under which they work, learn, live, play, and strive for ideals. The very term »participation« apparently refers to something — some activity, process, or system of decisionmaking — **in** which designated participants can »take part«, but which they cannot, will not, or should not take (over) as a whole. »Self-management«, to the contrary, denotes a »something« which is, can be, or ought to be wholly under the control of the participants themselves.

One naturally wonders to what extent participation and self-management can be viewed at as genotypically related or as completely separate ideals, procedures, or processes. To settle this question, it will be necessary to examine more precisely the nature of the phenomena under scrutiny. Whether or not they are basically conceived of as independent, participation and self-management could (also) phenotypically be related to one another, to a greater or lesser degree, positively or negatively, as functionally interdependent or as one succeeding the other in the course of time.

Of course, such an effort at conceptual clarification as the present one involves a measure of arbitrariness, since the outcome depends very much on one's bearings. Therefore, let me state briefly that I will look at this problem from a social-scientific angle. Although convinced that value-neutrality, particularly in analyses of a topic as controversial as this one, is an unattainable ideal, I am equally convinced of the societal use of detachment and of a theoretical frame of reference which can be of some validity for fruitful research and for a better understanding of some of the practical concerns and societal problems at stake.*

THE STRUCTURAL AND THE FUNCTIONAL VIEW OF DEMOCRATIZATION

Some years ago, a journalist in one of our Dutch dailies reported a statement by a well-known politician to the effect that »participation does not form an aim in and by itself. It is a means for an apparatus to function more

adequately«, and he himself commented: »Indeed: democratization ... is a matter of efficiency, not of ideological necessity« (Heldring 1969).

Anyone familiar with developments and issues in large-scale organizations during recent decades will recognize this view — which I shall call from here the »functional« conception of democratization — as widely prevalent among those who advocate shop-floor participation by employees in industry, the introduction of patient councils in mental hospitals, encouragement of initiative by students in educational, by soldiers in military, and by rank-and-file members in all kinds of political, religious, and cultural associations.

The functional argument is in all likelihood most often used by managers and administrators or by those who expect or aspire to be in leading positions, and relies heavily on prospects of benefits to one's organization from increasing the influence of lower-level members or personnel on any or all of a variety of decisions or policies.

The contrary view — which I shall label the »structural« conception of democratization — is usually cast in terms not of organizational efficiency or effectiveness, but in terms of power equalization (the reduction of systematic and enduring differences in power between various categories of members or employees in an organization) as an »ideological necessity«. The most vociferous exponents of this view at present are, of course, the activist students who have insisted that government of the people, by the people, for the people, has perished from the earth — or never existed for long anywhere — and ought to be (re)instated here and now. In the most succinct form I have heard so far, this view was once expressed to me by a student who said: »My ideal is that you have as little power as I have!« For a somewhat more sophisticated wording of this conception, we can take, for example, the first three principles outlined in the manifesto of the **Enragés de Caen**
»— To take collective responsibility for one's own affairs, that is, self-government.
— To destroy all heirarchies which merely serve to paralyze the initiative of groups and individuals.
— To make all those in whom any authority is vested, permanently responsible to the people«. (Cohn-Bendit and Cohn-Bendit 1969 : 90).

Similar ideas upholding democracy as a way of life worthwhile in itself or as valuable with an eye to the quality of life it engenders for the individuals concerned, are encountered not only among students, intellectuals, and artists who identify with the New Left, but also among a growing number of European trade unionists and, in more implicit form, among many skilled workers, technicians, teachers, social workers, etc. belonging to the younger generation.

In spoken or written debates in everyday life, most advocates of the structural orientation toward democratization will naturally not go to such lengths as the **Enragés de Caen** and demand self-government without regard to the organizational or general societal costs involved. Likewise, most champions of the functional view will not be completely oblivious to the notion of democracy as valuable in itself. Consequently, these two views of democratization can shade off into one another and also be held simultaneously as equally important considerations. Nevertheless, I want to maintain that many people definitely do give priority to either »functional« or to »structural« considerations, and that it therefore makes sense to differentiate analytically between these two views of democratization.

It is not only in the practice of modern Western organizations but also in the theories of social scientists who have studied and thought about organizational processes, that one encounters a differentiation of meanings attached to the concept of democratization, a differentiation corresponding roughly to the distinction I have just made between the structural and the functional views.

The literature of behavioral science subsumed under the headings of 'human relations' and 'revisionist' schools (Bennis 1959) abounds with statements suggestive of the functional approach to democratization. For example, Slater and Bennis (1964) argue that »democracy is inevitable... because it is the only system which can successfully cope with the changing demands of contemporary civilization, in business as well as in government«. They add (p. 51): »We will argue that democracy has been so widely embraced, not because of some vague yearning for human rights, but because under certain conditions it is a more »efficient« form of social organization. (Our concept of efficiency includes the ability to survive and prosper.)« Furthermore, they emphasize: »We are not necessarily endorsing democracy as such« (p. 52).

In this literature the term democratization is generally used in a rather general sense, meaning any increase in the influence of subordinate employees on their work, their working conditions, etc., and/or any increase in recognition by their superiors of the worth of their (potential) initiatives.[1]

However — whether due to »some vague yearning for human rights« or for some other reason — certain authors use the term democracy in a more restricted sense. For instance, according to Katz and Kahn (1966 : 45): »The essential difference between a democratic and an authoritarian system is not whether executive officers order or consult with those below them but whether the power to legislate on policy is vested in the membership or in the top echelons.« These authors specify their model of a democratic organization in terms of three criteria — the separation of legislative from executive power, the locus of the veto, and the selection of officers in the hands of the membership — and state that these criteria »reflect the principle of government by the active and expressed consent of the governed« (Katz and Kahn 1966 : 213).

Similarly divergent views of democracy also play a role in political science. To take one example Mrs. Pateman, in her critical account of the work of Berelson, Dahl, Eckstein, Sartori and other followers of Schumpeter's views on democracy as a »method«, concludes that these authors have resigned themselves to the parliamentary democratic system as it functions today, particularly in Anglo-Saxon countries, and have abandoned hope of a realization of the »classical« ideal of democracy as maximum participation by all the people in decisions about their own affairs (Pateman 1970 : 15—16).

[1] As Pateman (1970 : 71) has observed, the terms democracy and participation are often used interchangeably. In this context she refers to a definition by French, Israel and Aas (1960 : 3), which is often adopted in its original or in a modified form by various authors, and which says that participation refers to »a process in which two or more parties influence each other in making plans, policies or decisions«. Most authors who see democratization as effective participation with potentially functional consequences for the organization (and also for the members of that organization, to the extent that they have a stake in a well-functioning organization, in the form of material and immaterial gains), refer to an influence-gain on the part of lower-level participants and **not** to a shift in the influence-distribution across hierarchical levels.

An exception to the rule is Strauss, who defines »power equalization« as »a reduction in the power and status differential between supervisors and subordinates« (Strauss 1963 : 41) and then goes on to state (p. 60) that »participation, however defined, is well accepted as a form of power equalization«. Strauss' observation is quite wrong, in my opinion, probably due to the fact that he does not take into account the possibility that an increase in influence on the part of subordinates can be accompanied by an increase in the influence exterted by their supervisors.

Again, I have the impression that Berelson and the others judge — rather positively — the practice of democracy in the West primarily in terms of its **functions** for the political system and for society at large (among other things its stability, flexibility, potential for conflict regulation in a pluriform society). But Mrs. Pateman evaluates — rather negatively — the actual structure and functioning of Western democratic institutions in the light of the ideal **structure** of a truly participatory society (see Pateman 1970: especially Chs. I and VI).

To round off this section, let me briefly note that in all likelihood one can find examples of such differences in views on the value of grass-roots democracy in organizational settings not only in the Western, but also in the Socialist world. The »structural« preference for power equalization comes to the fore in critical writings directed against social-democratic and likewise against state-socialist conceptions (of Lenin, for example) by the so called left-communists in Russia after the Revolution (see e.g. Ertl 1968: 42—49; Anweiler, 1958-a: Ch. V), by the German theoreticians of the »pure« **Räte-system** (von Oertzen, 1963: Ch. 4) and by the Dutch school of **Rätekommunisten** (Mandell 1971: 295—301). Anton Pannekoek, one of the most articulate exponents of this latter point of view, later delineated his vision of a »workers' democracy« in terms of a complete fusion — even at the level of shop-floor rule — between legislative and executive control in the hands of workers concerned and a system of representative councils with no authority or powers to enforce a policy against the wishes of their constituents (Aartsz 1971: 35—41; 132—142).

Of course, a variety of anarcho-syndicalistic and communistic theories contain comparable conceptions of a society democratically structured from the base. Most noteworthy both in this context and from the point of view of theories that are presently being tried out in practice is undoubtedly the Yugoslav conception of selfmanagement. It is interesting that, according to various authors (e.g. Adizes 1971: 221—223; Broekmeyer 1969: 15—23; Kavčič, Rus and Tannenbaum 1971: 74; Meister 1970: 363—365), the Yugoslavs have founded their broad-scale thrust toward realizing self-management not only on »structural« but also on »functional« grounds.

The »functional« view favoring democratization at the grass roots level is, as far as I can gather, less prevalent in the East than in the West. It goes without saying that a negatively toned »functional« conception of democratization looms large in both the capitalist and in the socialist worlds among many managers, administrators, politicians, and scientists. One seldom encounters opponents of democratization who base their arguments on their esteem for autocracy, unity of command, élite rule and similar principles. A case against democratization is usually made by first paying some lip service to democratic ideals in order to clear the ground for a detailed **exposé** of all the economic, administrative, and political disadvantages of such democratic endeavors.

The foregoing survey of prevalent conceptions of democratization is, of course, rather sketchy and really ought to be more extensive, refined, and systematic. However, for the exploratory aims of this paper the present inventarization must suffice. We will turn now to the question of the similarities — if any — and the differences between these two views.

DEMOCRATIZATION AS OBJECTIVE AND AS RESULT

Democratization can be defined as »a process by which the originally less powerful members of a collective entity obtain more power over the management of that entity«.[2] This minimum definition is, of course, quite comprehensive, since it covers a mild form of »de- autocratization« (such as occurred, for instance, when the Czar granted some rather nominal powers to the **Doema)** as well as a form of »excess democratization« (such as occurs in a self-managed factory when the director loses his very last miniscule remnant of executive authority).

Those who advocate democratization for the sake of its supposed effectiveness or efficiency, would probably be less hesitant to accept this definition than would proponents of a democracy founded on principles. Nevertheless, irrespective of the appropriateness of the term for such a process, few adherents to the »structural« view will deny that democratization also involves at least a rather sizeable »power-raise« for those members of the entity in question who at the outset could exert little or no power to modify the forms and goals of their activities.

This means that whenever a process of increase of power for formerly less powerful members in, say, a work group is operating, it will be hard to infer from the nature of the process itself whether it represents structural or functional democratization. Whether a process can be characterized, in terms of the two conceptions I have outlined, as »structural« or »functional« (or as both at the same time), can only be settled by examining the **intentions** of those who propagate or initiate the process or by investigating the **consequences.**

One finds not only in practical and ideological debates about these matters but, alas, also in many scientific discussions of the subject, that both defendants and critics of various forms of democratization outdo one another — although for opposite reasons! — in blurring the distinction between objectives and results. Thus, human relations authors are sometimes just as likely as are radical critics of shop-floor participation, to take the **intentions** of the advocates of these changes as constitutive evidence of the effects of more considerate forms of leadership, groups consultation, and the like on productivity, morale, etc. In actual fact, of course, a program of organizational change might have no functional significance whatsoever, while a process of increased participation could tend toward the structural effect of power equalization.

In similar fashion, efforts in a factory deliberately undertaken to further self-management, might produce no structural effects but result in improvement or deterioration of workers' motivation and thereby undermine or contribute to the viability of their organization.

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[2] I prefer to use the term »power« rather than »influence« in this definition, because »power« usually implies the exertion of influence by one party on one or more other parties in **accordance with the objectives of that (first) party.** Compare e. g. Weber's (1947 : 28) famous definition »**Macht bedeutet jede Chance, innerhalb einer sozialen Beziehung den eigenen Willen auch gegen Widerstreben durchzusetzen, gleichviel worauf diese Chance beruht«.**

In other words, to use the term power rather than »influence« in a definition of democratization makes the definition somewhat more precise, because in this way one excludes all kinds of unwitting and unintended influence-exertions on the part of those who acquire more influence. For a similar distinction between »influence« and »power«, see Heller (1971 : 26).

Finally, as I have argued before (Lammers 1967 : 203, n. 8), power in this sense is very similar to the notion of »control« as used by Tannenbaum (1963) and others.

All this amounts to the old wisdom that »One can do the right thing for the wrong reason and the wrong thing for the right reason«. It should be added that people can also do (1) nothing and (2) both the right **and** the wrong things for either the right or the wrong reasons.

Therefore, we should apply Merton's famous advice to look for the »unanticipated consequences of purposive social action« (Merton 1936)and for »latent« as distinct from »manifest« functions (Merton 1957: Ch. I).

Taking for a moment the somewhat simplified view that those who set in motion a process of democratization can do so on the basis of either structural or functional considerations,[3] one can expect the results to be: (1) only structural effects, (2) only functional effects, (3) structural and functional effects, (4) no effects whatsoever. As indicated in scheme A, this yields eight types of democratization.

Scheme A
Types of Democratization

effects:	objectives:	
	structural	functional
— only structural	a	b
— only functional	c	d
— structural and functional	e	f
— no structural and functional effects	g	h

We can now try to characterize the two conceptions of democratization I have outlined, clarify some of the confusion occurring in current debates about democratization issues, and analyze the relationships between various kinds of democratization.

The distinction between structural and functional views of democratization can be cast in terms of Weber's well-known two forms of rationality, **Wertrationalität** and **Zweckrationalität** (Weber 1947: 12—13). A rationality of values is typical of the »structural« view, in which democratization is seen as a movement toward an ideal; a rationality of ends comes to the fore in the »functional« view, in which democratization is seen as the »technical« application of potential means toward specified ends. In other words, completely different forms of rationality and thus of reasoning and of criteria are involved in these two views, so that advocates — or opponents for that matter! — of a »structural« conception are at a loss in debates with adherents of the »functional« view and **vice versa.** When supporters of these two conceptions try to communicate, one of them might be talking about type **a** democratization (see scheme A) as a point of reference, while the other might have type **d** in mind. At worst, they are not even aware of the fact that they are talking about quite different things; at best, they are aware, but try in vain to convince each other that type **a** (or **d)** is the »real«, »authentic« type of democratization. Likewise, in discussions between someone »for« and someone »against«, it happens quite often that a »structurally« oriented champion of democratization will attack a particular provision or experiment on the grouds

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[3] Of course, as indicated already (p. 6) with reference to the Yugoslav case, democratization might be undertaken with **both** structural and functional objectives in mind. One can, therefore, extend scheme A and add four more types.

that it does not fulfil the requirements of type **a** democratization, only to find himself in cordial (although non-sensical) agreement with a skeptic of »functional« inclinations who also denounces the same state of affairs, because it does not fit type **d**.

These examples indicate that a social-scientific approach helps to establish a somewhat detached frame of reference that enables one to clarify prevalent confusions in practical, ideological, and scientific debates on these issues. It might also be of some use in that it shows which kinds of process tend to be neglected. One could hypothesize, for instance, that due to ideological preferences types **a** and **d** receive the most attention. Types **b** and **c** might rate second in public attention. Confirmed believers in the »structural« conception probably wish to demonstrate that measures with »functional« intentions have negative structural effects (**b**), while their counterparts with a »functional« viewpoint are perhaps fond of showing that structurally intended measures have »only« yielded functional fruits or have »naturally« resulted in functionally disastrous consequences (**c**). Cynics of all sorts will probably see to it that types **g** and **h** are and will forever be focussed upon as the most likely outcome of any efforts at democratization. The least popular might be the »mixed« types **e** and **f**, which do not furnish outspoken opponents or proponents of either conception with really good ammunition. Nevertheless, these types might very well prove to be of considerable practical as well as theoretical interest, as will be argued in due course!

Turning now to the potentialities of this conceptual scheme for social-scientific theory and research, the first question we come to is: can one define structural and functional democratization not only as styles of thinking, but also as observable processes? It is feasible but, in my opinion, not very advisable to characterize processes of power gains for initially rather powerless members of a social system on the basis of the objectives of the initiators involved. The problem is, naturally, that there might be quite different parties with varying objectives who take part in the design and /or the introduction and/ or the legitimation of the introduction and/ or the maintenance of the democratization process once it is introduced. Furthermore, there might be the habitual discrepancy between the officially professed and the actually pursued aims (see e.g. Etzioni 1964: 6—7). All this implies that it might prove a rather complicated procedure to determine unequivocally the »structural« and /or »functional« character of a democratization process by following this road. Particularly from a research point of view it could therefore be more productive to focus on the results of their collective action rather than on the objectives of the actors involved.[4]

To conclude this section I would submit that no matter how one defines democratization, a meaningful analysis should in general take into account both the objectives and the results. Nevertheless, not only for scientific but also for practical purposes, I think a one-sided focus on the objectives is more misleading than a one-sided focus on the results attained. One final comment as regards the categorization of results indicated in scheme A. This

[4] Consequently, taking as a minimal core definition of democratization the one given above, structural democratization might be defined as: **democratization tending toward power equalization.** In a similar way functional democratization can then be defined as: **democratization contributing toward the efficiency and/or effectiveness of the entity in question.**

One might call this the »objective« approach. The »subjective« approach would entail a definition of this kind: democratization is structural when the actors involved aim at power equalization, functional when the actors involved aim at increased efficiency or effectiveness.

is admittedly a rather crude way of subdividing the results of a democratization process. Usually, one will also want to look for the **direction** (positive or negative functions; reduction or increase of power differences), the **size** (of the functional or dysfunctional consequences; of the reduction or increase of power differences) and the **kind** of results (consequences for what parts or aspects of the system? power de-equalization in what spheres of decision--making?).

RELATIONSHIPS BETWEEN STRUCTURAL AND FUNCTIONAL DEMOCRATIZATION IN ORGANIZATIONS

Since by definition democratization implies a power gain for the less powerful members of an organization, one might wonder whether functional democratization does not by definition also always include structural democratization. However, thanks to the work of Likert, Tannenbaum, and other investigators of Michigan's Institute for Social Research, we are aware of the fact that an increase in power for the less powerful does not always mean a decrease for power for the more powerful (see e.g. Tannenbaum 1968).

In other words, the relationship between democratization and power equalization in organizations is indeterminate. The net effect on power equalization of a »power raise« for the less powerful members of a collective entity can be positive, zero, or negative, all depending on other conditions. Therefore, it appears sensible to analyse »the« relationship between structural and functional democratization in organizations as a set of contingent relationships between democratization, its antecedent determinants, and its structural and functional consequences (see scheme B).

In the context of this paper I will not try to present a fullfledged theory consisting of a detailed system of propositions about these relationships based on the available empirical evidence. I will instead select one or two propositions about each of the five relationships mentioned in scheme B.

Scheme **B**

Democratization, Determinants and Consequences

introduction of formal provisions for democratization $\xrightarrow{1}$ increase in participation $\xrightarrow{2}$ democratization $\Big\langle$ $\nearrow^{3}$ power equalization $5\downarrow$ $\searrow_{4}$ promotion of efficiency and / or effectiveness
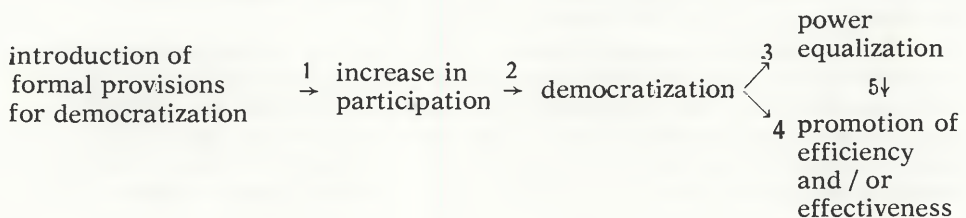
Mulder (1971) has put forward the hypothesis that under the condition of relatively large differences in expert power between members of a system, an increase in participation will increase the power differences between

members. Now, it might prove profitable to distinguish between the introduction of democratic **forms** (instituting certain organs, procedures, rules, etc.), democratization-**attempts** (by means of participation or in the form of militant action on the part of less powerful members to acquire more power) and the actual process of **democratization** (in the sense of a power-gain for the less powerful, as defined on p. 61.). The instituting of formal provisions (e.g. for joint consultation in industry, for student co-determination in the universities) only provides institutional opportunities for initially less powerful members (workers, students) which they need not use in attempts at making democracy work. Finally, when they do make such attempts, there is no guarantee that they will succeed in gaining more power.

Consequently, Mulder's hypothesis pertains to relationship (2) or to (3) in scheme B and can mean two quite different things:

— **Under the conditions of relatively large differences in expert power between members of a system, an increase in participation will usually not lead to democratization** (that is: a power increase for the less powerful), **but rather to a power gain for the more powerful members of that system (2a).**

— **When relatively large differences in expert power prevail between members of a system, democratization will have a negative effect on power equalization (because the power gain of the more powerful will exceed the power gain of the less powerful members of that system) (3a).**
I suspect that most of the findings referred to by Mulder — deriving from both field investigations and laboratory experiments — pertains to hypothesis (2a), not to hypothesis (3a). At least, his experiments — as he himself has remarked (see Mulder and Wilke 1970: 444) — did not allow for an increase in expert power for the powerful and thus cannot be taken as evidence in relation to hypothesis (3a). In any case on the face of it, it does not appear very likely that this last hypothesis is valid.

Mulder also formulates a proposition concerning relationship 1. He suggests (Mulder 1971: 35) that motivation to participate is required for increased participation, and points to various data indicating that such motivation is often absent. A similar line of reasoning is to be found in the work of other authors (e.g. Clark 1972: 32—35, in his criticism of the so called human resources approach). In terms of our scheme this train of thought can be reformulated as follows: **formal provisions for democratization will lead to participation only if the less powerful members of the system in question are sufficiently motivated to participate, (1a).**

However plausible this proposition may look, it has to do with a controversial issue. Pateman (1970: 82), for instance, also concludes that most of the available evidence indicates that workers are not much interested in utilizing opportunities for codetermination at higher levels of decision-making in industry, but suggests that this could be due to their lack of opportunities to participate at shop floor level decision-making. A similar suggestion, but formulated positively, has been made by van Beinum and de Bel (1968: 14) and Emery and Thorsrud (1969: 30), who see shop-floor participation as a

precondition for effective participation in policy-making at the plant level. On the basis of this point of view, one could propose with respect to relationship 1, as an alternative to hypothesis 1a: **formal provisions for democratization will lead to participation only if the less powerful members of the system in question participate in other settings as well (1b).**

This more general formulation leaves open the question of what kind of participative experience is most likely to be most effective as a training for organizational participation and also what kind of intervening variables are involved. As regards the latter point, it is perhaps best to assume that there is no oneway causal influence on participation by motivation, but rather that participation, the acquisition of certain skills (in communication and decision--making), and motivation all constitute interdependent processes.

Under what conditions does democratization lead to power equalization (relationship 3 in scheme B)? Since by definition democratization implies a power gain for lower-level participants, in an organization power equalization can only occur to some extent if higher-level participants are not able to expand their power to the same extent as their subordinates do. In other words, democratization can lead to power equalization only when an organization's chances to expand its total amount of power are rather limited.

The total amount of power can, in my view, best be represented as the »discretion« of an organization, its amount of »self-determination«. This means that the more »grip« organizational decision-makers have on their own system —on its resources in particular and on their environments in general — the better the chances for higher-level decision-makers to experience a power gain themselves (in the form of a better internal and external grip on their organization) in connection with a power gain of their subordinates. However — as the studies of Tannenbaum and others indicate (Tannenbaum 1968) — there is a considerable correlation between the total amount of power of an organization and its effectiveness and/or efficiency. This correlation is understandable on the basis of the foregoing reasoning, since »external grip« corresponds with effectiveness, and »internal grip« with efficiency.

This argument leads to two hypotheses that indicate a rather appalling dilemma, since:

> — **democratization can only promote power equalization when the organization does not stand much chance to improve its efficiency and/or effectiveness by improving its human organization (3b), and**

> — **the less the chance for power equalization to occur, the better the chance for a democratization process to yield positive results for the efficiency and/or effectiveness of an organization (4a).**

So the dilemma is that we cannot have our pie and eat it too, in the sense that, at least in the short run, democratization generally cannot yield functional benefits and at the same time reduce power differences between various hierarchical echelons. This would imply that structural democratization has the best chances in more or less stagnant organizations, and that functional democratization can proceed when no simultaneous efforts at structural democratization are made (or when made, fail).

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What are some of the economic, technical, and political circumstances that permit increases in external »grip«, and what are the earmarks of the state of the organizational system, that permit increases in internal »grip« of organizational decision-makers? Thanks to the work of Burns and Stalker (1961), Lawrence and Lorsch (1967), the P.E.P. (1965), and others, we know that in an expanding market economy, industrial organizations have relatively favorable opportunities to grow if technological inventions occur and can be utilized at a rapid rate.

Whether or not enterprises will be able to make use of such external opportunities, depends on the way they are organized. Systems of management that are not too bureaucratically organized and that make frequent use of 'horizontal' forms of consultations and decision-making, encourage initiatives from below, and process facts and figures in a more or less scientific manner, are in a rather favorable position to avail themselves of such opportunities. Although, as far as I know, not much research has been done on this point, I suspect that such rather open, dynamic systems of management have more potential for generating power and are therefore more prone to develop forms of functional democratization than are rather closed, static systems of management.

Proposition 3b — that power equalization in organizations can only take place under rather non-elastic conditions of the relevant environmental and organizational factors — implies that efforts at structural democratization will usually meet with such fierce opposition from both internal and external powers-that-be, that on the whole nothing short of revolution can bring about such a change. Historical evidence supports this conclusion, for the only examples of fundamental dehierarchization of existing organizations[5] are found in times of revolution. Examples of efforts at self-government of their plants by workers — and also to some extent by soldiers and sailors in military units — occurred in Russia, Germany, Hungary, and Italy after the First World War (see e.g. Anweiler 1958-a, von Oertzen 1963; Mandel 1971; Chs. II and III), in Spain during the civil war (see e.g. Chomsky 1969: 62—105; Souchy: Ch. V; Mandel 1971: 335—346; Leval 1971), and, incidentally after World War Two in some East European countries (Anweiler: 1958b, 1958c) as well as in Bolivia, Algeria, and France (see e.g. Mandel 1971: Ch. V). Such efforts at power equalization almost always involve a seizure of power by the ruled. Then, severe struggles follow between on the one hand the newly formed plant committee or workers council, and on the other hand the indispensable technical, commercial, and managerial functionaries (for day-to-day direction of the plant) and with governmental or party agencies (for control of general policy-making). More often than not, these stories end with the final defeat of the revolution. Again, Yugoslavia after World War Two might form an exception to a general rule, although the available evidence does not unequivocally demonstrate that power equalization between various hierarchical levels in industrial organizations has been effectuated as a result of the democratiza-

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[5] Of course, organization newly erected along democratic lines (producer cooperatives, utopian communities etc.) do not involve de-hierarchization (there being no hierarchy at the outset) and can come into being more peacefully. In that case no pre-existing legal rules, property rights, or power and status privileges are violated. Moreover, the powers-that-be in society at large can easily defend themselves against such a threat to the social order by ignoring or ridiculing such experiments.

tion process which undoubtedly took place[6]. In other words, in terms of proposition 3b, the chances for Yugoslav industry to improve efficiency and effectiveness by improving on the human organization might have been so good that the gains in external and internal »grip« of higher level decision-makers (which includes the workers council![7]) might to some extent have kept pace with the power gains of lower-level participants.

Earlier in this paper I hinted at the interest of types **e** and **f** in scheme A, which represent the concurrence of structural and functional effects of democratization processes. From all that has been said so far, it follows that one will rather seldom find a combination of positive structural and positive functional effects due to the same democratization process in organizational contexts. In principle, however, a combination of positive structural and negative functional consequences or of positive functional and negative structural effects might very well emerge in the wake of democratization. Such a concurrence of de-hierarchization and lowered efficiency/effectiveness on the one hand, and hierarchization and improved efficiency and effectiveness on the other, would mean that relationship 5 (see scheme B) is negative. Are there reasons to propose such an hypothesis?

It is probable that a severe reduction of power differences does indeed, at least at the outset, curb an organization's productivity, due to the conflicts and initial chaos ensuing from such a **coup d' organisation** by lower-level participants. But in terms of **survival** an egalitarian organization might well be effective in a revolutionary situation (Naschold 1969: 26—28). Moreover, it is a moot point whether in the long run such a form of power equalization necessarily implies definite constraints on the promotion of efficiency and/or effectiveness of an organization. The answer to this question hinges on the viability of a drastically egalitarian organization. Sufficient evidence from historical sources, let alone from current sophisticated social research, is not available, for the simple, sad reason that — as already said — the revolutionary efforts to try out such experiments with structurally democratized organizations are almost invariably crushed.

On theoretical grounds, Naschold (1969: 26—28) has rather convincingly defended the position that on the long run an organization of the type found in revolutionary efforts at industrial self-government by workers does not stand much chance of survival in modern societies. The characteristics of such a **Rätesystem** — i.e. no clearcut division of labor between legislative and

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[6] At least in terms of the »control graph«, the slope of the line of influence found in Yugoslav enterprises does not deviate too markedly from what is usually found in Western enterprises (see Rus 1970; Kavčič, Rus and Tannenbaum 1971). Likewise, Kamušič (1970), after his survey of the reward — and authority structure of Yugoslav enterprises, concludes that »the pluralistic model of selfmanaged enterprises and the pluralistic system of selfmanaging relations generally does not differ essentially from capitalist model of enterprises and from the modern type of mixed capitalist economic system« (p. 112).
[7] The fact that the council does appear to be actually perceived as one of the most important decision-making bodies in Yugoslav enterprises is quite significant and too often overlooked. I would like to submit that this is an indication that perhaps Yugoslavia has a more democratic system of (representative) government on the macro-level of society than many Western nations do. Although at any one point in time there are just as large power differences between hierarchical levels in formal organizations in Yugoslavia as in the West, the fact that all Yugoslavs have access to such high-level power positions and that in the course of time in their work and other organizations many lower-lever participations do indeed occupy such positions, is quite important. It could very well mean that as a class, Yugoslav blue- and white-collar workers on the whole have more societal power than Western workers as a class. When most people in a society circulate frequently enough between lower (executive) posts and higher (legislative) level organizational positions, there is a »classless society« in the sense that society in no longer differentiated into strata of people who during their lifetime belong to the category of the ruled, while others permanently occupy the postition of a ruling élite. On this notion of a »classless society due to mobility«, see Dahrendorf (1957 : 182ff.) and Von Oertzen (1963 : 331ff.). For some data as to the rather considerable amount of circulation in works-councils and even in managerial positions, see Roggemann 1970 : 114—117.

executive functions, maximal participation of all workers in decision-making, etc. — are, according to Naschold, well suited to the general requirement for survival in a revolutionary situation but completely inadequate in normal times, primarily because of a general principle (Ashby's Law of Requisite Variety) that in a highly complex, differentiated environment a viable organization must show a corresponding degree of differentiation and complexity in its own structure.

Therefore, the main question becomes: is it possible to have highly complex and functionally specified organizations which none the less do not show a more or less fixed pattern of power differences between the various categories of their members? Naschold (1969: 56—94) has outlined a model of intra-organizational democratization which, in my view, allows for quite a bit of functional democratization but does not eleminate structural power differences. I fear that the main obstacle to any attempt to reconcile complexity with democracy is formed by the endless variety of opportunities for differentiations of power and status that any division of labor always offers. It would not surprise me if, in the future, a model of organizational democracy that does achieve the elimination of lasting power differences between categories of personnel and nonetheless shows sufficient differentiation to cope with a complex environment, were to be invented and put into action. In any case, the search for such a model should continue by all means. However, in the present state of our knowledge and given the present state of our society (East and West!) we are forced to conclude that drastic efforts at achieving an egalitarian organization in simplified form will in all probability reduce effectiveness and/or efficiency of the organization.

Perhaps even more problematic than the viability of egalitarian organizations, is the coordination of a system of such organizations on the level of the society as a whole. The failure of selfgovernment by workerscouncils in Russia in the period of 1917—1921 is probably also due to the lack of »self-coordination« by self-managing enterprises (see Ertl 1968: 33—56; Anweiler 1958-a: Ch. 5).

For the time being, therefore, let me formulate the following proposition with respect to relationship 5: **power equalization tends towards simplification of structure and thus hinders organizational efficiency and/or effectiveness (5a).** It is dubious whether one can reverse this proposition. The thesis that in general the promotion of efficiency and/or effectiveness — particularly when resulting from democratization — increases organizational differentiation and fortifies power differences, is dear to the heart of many radical critics of present-day society. In crude form this idea is often presented as a popularized version of what Marcuse called 'repressive tolerance', and is couched in terms of a sinister conspiracy on the part of managers who manipulate the workers by human-relations tricks and other forms of mock democracy, so as to enslave them more subtly but therefore more firmly to the system. In more sophisticated form this idea has been propagated by Touraine, who sees **participation dépendente** (in my terminology democratization with functional effects only; presumably type **d** in scheme A) as the most authentic and thus worst form of alienation of lower-level participants in modern organizations (Touraine 1969: 14 ff.).

Given the correlation between total amount of power and efficiency//effectiveness measures, negative consequences of promotion of efficiency/

/effectiveness for power equalization would imply that there is a general, negative relationship between the total amount and the distribution of control in organizations. However, there is usually **no** correlation between these two aspects of the power structure of an organization (Tannenbaum 1968: 83, 159). Therefore, empirical evidence does not support the proposition that promotion of efficiency and/or effectiveness would generally tighten up the hierarchical nature of organizations. This tallies with theoretical considerations. The mechanism of functional democratization consists of increased 'vertical' and 'horizontal' coordination of efforts directed towards some joint goals and interests on the part of higher-level **and** lower-level participants. Higher- and lower-level participants jointly generate more power over their organization in relation to its environment, and there is no reason why under such circumstances one party engaged in a joint enterprise of this kind would necessarily always gain more than the other party.

A final word of caution must be added. In the form in which I have put them, the propositions are admittedly crude. For one thing, as already indicated, they usually pertain to the short-term effects of democratization, and they apply to organizations. This means that long-term effects of democratization, especially when analysed at a macro-societal level, would have to be viewed theoretically in a modified or even in a completely different conceptual framework.

DILEMMAS OF PARTICIPATION AND SELF-MANAGEMENT

The conclusion that participation and self-management cannot be maximized simultaneously, but only optimized, appears to be inescapable (propositions 3b and 4a). The optimal solution, would appear to be an alternation of efforts at power equalization and efforts to increase functional democratization. This solution, of course, again confronts us with another dilemma, because serious attempts to reduce power differences in existing organizations might reduce the level of effectiveness and/or efficiency (proposition 5a). I think we should to some extent be willing to pay a price for experiments along the lines of structural democratization, not only because of the values involved but also because of the dilemma of the alternative solution: forgetting about »structural« and concentrating on »functional« democratization only.

Various authors (f.e. Touraine 1969: 8—31) have pointed to the societal impact of the growth and dominance of modern organizations. If functional democratization usually involves an increase in external power for an organization, this could mean that what we gain in intra-organizational power as participants, we might loose in our roles as parts of the various »publics« that become more and more power-less, at the mercy of flexible, but uncontrollable organizations. This dangerous prospect is a valid one only when, in any particular society, the »cake of power« is a fixed entity. Whether or not the total amount of societal power can expand, depends perhaps on the degree to which we can succeed in achieving some sort of machinery at the level of society as a whole with respect to the macroscopic design and planning of the societal network of organizations and of their interrelations.

It goes without saying that at the moment — even in countries where such machinery exists — it is hard to visualize ways and means to plan and design our organizational infra-structure with an eye to determining the priorities of such incomparable matters as the welfare of the populace (which is also a result of large scale organization) on the one hand, and the value of realizing what Mannheim (1940: 44—49) called »the principle of fundamental democratization«, on the other hand. However since we have developed the organizational machinery to go to the moon, why could we not design and plan for a more democratic and at the same time relatively prosperous society?

Given the difficulties mentioned as regards the structural democratization of existing organisations, it would then be worthwhile to include »planning for freedom« (Mannheim 1940: Part V) also in the sense that techniques be developed for the »mercy killing« of old and societally overdominant organizations and for the estabilisment of new, experimental organizations, structured in more egalitarian forms.

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HIERARCHY, ALIENATION AND ORGANIZATIONAL EFFECTIVENESS: AN EXPERIMENTAL PERSPECTIVE ON INDUSTRIAL DEMOCRACY

Organizational hierarchy is regarded as an indispensable principle not by executives but also by researchers in the field of organization theory. To most managers, whether in capitalist or socialist countries, the principle of hierarchical structure commends itself as a rational mechanism for insuring the coordination of diverse functions, the implementation of policies, and the achievement of organizational objective. A cogent case for the managerial perspective on hierarchy was recently made by Sir Bernard Miller, the chairman of the John Lewis partnership, a successful profitsharing company in England:

> *It is a fact of life that only a tiny minority of people are able enough to manage large-scale affairs and strong minded enough to take decisions that subordinate short-term and sectional interests to the long-term needs of the whole. If the business is to succeed and to continue, the power to settle policy and to take executive decisions at the highest level must be concentrated in the hands of a few people: it cannot be widely shared in industry any more than it can in our political government. (Miller, 1968: 17).*

As regards social-science researches on organizations, Weber's model of a monocratic bureaucracy with its hierarchical structure of offices has had a profound impact on their theorizing as well as research. In addition, Michels' compelling formulation of the »iron law of oligarchy« in organizations, ostensibly concerned with promoting democracy, seems to have won wide acceptance among sociologists (Edelstein, 1967: 19). If the »iron law of oligarchy« holds in organizations devoted to advancing democracy, isn't it true, **a fortiori,** in organizations concerned with the mundane objective of making a product or rendering a service?

Evidently, executives as well as social scientists assume that hierarchy is a stubborn fact of organizational life and that it is functionally necessary for attaining organizational goals. Otherwise put, they tend to conceive of organizational hierarchy as either a **constant** or as an **imperative,** rather than as a **variable** or as a **constraint.**

In a paper presented at the Fourth World Congress of Sociology in Stresa in 1959, I concluded that

> *The explicit or implicit acceptance of an »iron law of hierarchy« is premature in view of the dearth of evidence on the structure of organizations. In the absence of systematic inquiry, many critical questions remain unanswered, such as whether the advance of industrialism inevitably leads to an increase in organizational hierarchy, or whether there are counter-forces at work tending to reduce the degree of hierarchy. The significance of this question obviously transcends national boundaries. (Evan, 1963: 477).*

In the intervening years, there has been a burgeoning of research in various countries on organizational structure and behavior. However, with comparatively few exceptions, such as some of the work of Tannenbaum and his colleagues (Smith and Tannenbaum, 1963), Morse and Reimer (1956), and the Bavelas-type experiments on communication nets (Bavelas, 1950; Leavitt, 1951; Shaw, 1954; and Guetzkow and Simon, 1955), there has not been any direct, systematic, let alone cumulative, tests of the proposition that there is a positive relationship between the degree of organizational hierarchy and the degree of organizational effectiveness.

Two kindred organizational principles, having almost the canonized status of organizational hierarchy, are the so-called »size-effect« (Ingham, 1968) and the »technological imperative« (Hickson, Pugh and Pheysey, 1969: 371, 388), both of which have been the object of an appreciable amount of research in recent years (Blau, 1970 and 1972; Rushing, 1967; Pondy, 1969; Meyer, 1972; Woodward, 1965). As organizations increase in size, do they become more or less hierarchical? Obviously, the answer depends on how hierarchy is defined and measured. As organizational technology increases in complexity, do organizations become more or less hierarchical? Again the answer depends on how organizational technology is defined. Underlying these questions is the hypothesis that size and technological complexity are both positively related to organizational hierarchy. The answers to these questions and a test of the proposition that organizational hierarchy is positively related to organizational effectiveness would clearly have significant implications for organization theory as well as organization design, and, more specifically, for the theories and practices of industrial democracy. Before considering some old and new dilemmas of industrial democracy from the vantage point of organizational hierarchy, I shall recapitulate the conceptualization and operationalization of organizational hierarchy which I developed in the earlier paper (Evan, 1963).

Organizational hierarchy involves at least three modes of unequal allocation of resources: 1) inequality of skills and knowledge; 2) inequality of rewards; and 3) inequality of authority. The heterogeneity of tasks performed in an organization presupposes the availability of personnel possessing the requisite skills and knowledge. Since types of skills and bodies of knowledge vary greatly--one deceptively simple measure of skill differentiation is the length of time required in relatively formal training to perform a task--there

is a tendency for occupational differentiation in an organization and in society at large to be viewed in a rank order of prestige and social worth. »In the limiting case, an organization has a set of specialized tasks all equivalent in degree of skill or a single homogeneous task performed by all personnel. This type of division of labor would represent a zero degree of hierarchical differentiation of skills« (Evan, 1963:469). The actual distribution of skills among the employees of an organization may take various shapes; for example, a normal curve, a negatively or positively skewed distribution, a multimodal curve, a U-curve, etc. (Evan, 1963:469).

The second dimension of inequality, the hierarchy of rewards, has received more attention than the hierarchy of skills. If we ignore the variety of non-monetary rewards associated with employment, such as vacations, health insurance, pensions, and various perquisites, the wages and salaries received by employees can be readily measured. Ideally, Lorenz curves can be drawn showing the relationship between the relative size of an occupational category and its share of the total earnings in an organization, thus providing a precise measure of the degree of hierarchy of rewards (Evan, 1963:469; Whisler **et al.,** 1967). In the absence of data on the distribution of earnings of all employees in an organization, or for a sample of organizations, two simple ratios crudely measure the degree of inequality of rewards: the ratio of maximum-minimum earnings in an organization, e.g., the salary of the president or general manager compared to the average wage of workers in the lowest-skill category; and the earning ratios of adjacent organizational statuses, such as foreman /worker and supervisor/ foreman (Evan, 1963:469, 470).

The third dimension of inequality, the hierarchy of authority, is more complex and multifaceted than the first two. It consists of a body of institutionalized rights and privileges of a legislative, executive and adjudicative nature associated with various statuses of an organization. Six indicators of the hierarchy of authority are considered: 1) span of control; 2) Melman's ratio of administrative to production personnel, which takes the entire organization as a unit of analysis instead of a sub-unit, as in the case of the span of control; 3) number of echelons in the administrative structure; 4) Jacques' time-span of discretion; 5) degree of centralization of decision-making; and 6) degree of limitation on the rights of management to make adjudicative decisions as reflected in the number of echelons for which procedural due process has been institutionalized (Evan, 1963:470-73).

Thus, the concept of organizational hierarchy, as I used it in the earlier paper, is three-dimensional in nature. Each of the three dimensions of hierarchy is by definition a linear function of hierarchy. In the decade since the original article was published the field of information technology has emerged and a multitude of applications of this technology has been made in various types of organizations, manufacturing, service, etc. An extensive body of information concerning the operations of an organization, as regards its technical as well as its administrative functions (Evan, 1968), is now potentially available with the help of computer technology. Access to the body of organizational information can, on the one hand, be severely restricted to one or more levels of management or, on the other hand, be made available to all employees of an organization, managerial as well as rank-and-file. In the former case it could be used for the purpose of centralizing the decision-

-making processes, whereas in the latter case it could serve as a decentralizing mechanism. How many authority echelons in an organization or what proportion of employees in all occupational categories of an organization have access to the principal administrative and technical bodies of information, would provide a measure of the degree of hierarchy in the distribution of organizational information which we now conceive as the fourth dimension of organizational hierarchy.

AN ALTERNATIVE HYPOTHESIS

With the aid of our four-dimensional concept of hierarchy, it is now possible to formulate an alternative hypothesis as to the consequences of organizational hierarchy. Instead of the prevailing and largely untested hypothesis that hierarchical structure is positively related to organizational effectiveness, I would entertain the counter hypothesis, viz., that it is negatively related to organizational effectiveness. The rationale for this hypothesis is as follows: in all likelihood, there is a tendency for the pattern of hierarchical differentiation in an organization to be consistent across the four dimensions, i.e., »hierarchical consistency« in organizational profiles tends to occur just as individuals tend to exhibit »status consistency« with respect to the social stratification system of a society (Evan, 1963:474). This is not to deny, of course, that some organizations will have hierarchically inconsistent profiles, just as some individuals have status-inconsistent profiles. In the event of »hierarchical consistency«, it is reasonable to hypothesize that employees that are uniformly low on the continua of skill, rewards, authority and information distribution will experience work alienation, in particular, a sense of powerlessness and self-estrangement from their work role (Seeman, 1959; Blauner, 1964). As the degree of work alienation increases, commitment to the organization and the collective goals decreases, as reflected in the rates of absenteeism, turnover, accidents, work errors, etc. Cumulatively, work alienation and the concomitant decline in organizational commitment can, in turn, be expected to have dysfunctional consequences for organizational effectiveness.

The alternative hypothesis being advanced is not **ad hoc** in nature; rather it is linked to a set of hypotheses interrelating hierarchy, work alienation, organizational commitment, and organizational effectiveness. In particular, the set of hypotheses, given the usual **ceteris paribus** condition, is as follows:

1. Organizational hierarchy is positively related to work alienation.

2. Work alienation is negatively related to organizational commitment.

3. Organizational hierarchy is negatively related to organizational commitment.

4. Organizational commitment is positively related to organizational effectiveness.

5. Work alienation is negatively related to organizational effectiveness.

6. Organizational hierarchy is negatively related to organizational effectiveness.

Diagrammatically, the hypothesized relationships are shown in Figure 1. Is there any evidence from empirical research for the plausibility of these hypotheses? Relevant empirical findings, such as they are, are sparse and inconsistent. Several studies will be cited to illustrate the level of support for some of the hypothesized relationships.

Figure 1
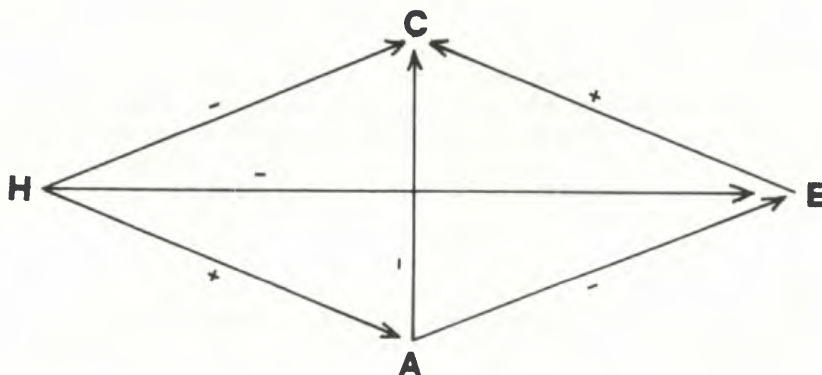
Hypothesized Relationships Among Hierarchy (H), Work Alienation (A), Organizational Commitment (C) and Organizational Effectiveness (E).

Morse and Reimer, in a field experiment with clerical workers in an industrial organization in which they manipulated the degree of centralization of decision-making, found that productivity increased to a greater extent in the »hierarchically-controlled program« as compared with the »autonomy program« (Morse and Reimer, 1956). On the other hand, Van Gils, in a field experiment with several clerical centers of the Netherlands Post Office Cheques and Payment Service, in which he modified the design of the job as well as the social organization of work, found that productivity increased appreciably (Van Gils, 1969:94-95). Experimental changes increased the level of skill and authority of employees and, in effect, simultaneously decreased work alienation by »increasing the variety of the work« and by »promoting knowledge of interconnected aspects of the work« (Van Gils, 1969:86). Leavitt and others who have conducted laboratory experiments on communication networks have found that highly centralized networks have a higher level of productivity than those with a low degree of centralization (Leavitt. 1951; Guetzkow and Simon, 1955; Shaw, 1954; Cohen, 1962). Smith and Tannenbaum, on the other hand, in their comparative study of perceived influence on decision--making in several different types of organizations, using the controlgraph technique, observed in some of their voluntary associations that the lower degree of hierarchical differentiation with respect to influence on decision--making, the higher the organizational effectiveness (Smith and Tannenbaum, 1968). Similarly, Melman in a comparison of six privately-owned hierarchical firms with six Kibbutz, non-hierarchical firms in Israel found that the latter were significantly higher in effectiveness (Melman, 1970).

Of the various studies of work alienation that have been conducted in the past decade in the United States, two have yielded a relationship between hierarchy of authority and work alienation. In a study of professionals in 16 social-welfare organizations, Aiken and Hage found that work alienation was higher in those organizations in which there is a high degree of centralization in decision-making (Aiken and Hage, 1966:502-506). Likewise, Miller, in a study of scientists and engineers in a large aerospace company, observed that employees working for »directive« supervisors had a higher degree of work alienation than those working for »participatory« or laissezfaire supervisors (Miller, 1967:762-64).

It is indeed noteworthy that in none of the empirical studies using the concept of organizational hierarchy were all four dimensions of hierarchy employed. And in virtually all of the studies only the hierarchy of authority is the focus of attention. Curiously enough, this is also the case with the various theories and programs of industrial democracy.

ORGANIZATIONAL HIERARCHY AND INDUSTRIAL DEMOCRACY

Whatever the terminology, whether worker participation, joint consultation, works' councils, workers' councils, workers' control, or workers' self-management, there appears to be a primary concern with modifying the hierarchy of authority. And the principal mechanism employed-whether in Britain, the Netherlands, West Germany, Norway, Yugoslavia, or elsewhere — has been a representational system of participation involving the election of workers to one or more policy-making bodies of the entire enterprise or a sub-unit thereof (Lammers, 1967:209-216).

In the expanding literature on »industrial democracy,« there appears to be an increasing realization that prevailing concepts as to the mechanisms for achieving disalienation are not effective. The abolition of private property by means of nationalization of industry or by state ownership in socialist countries has not in itself eliminated the various forms of work alienation, viz., powerlessness, self-estrangement, normlessness, meaninglessness, and isolation (Fischer, 1967:38-45). Nor has a variety of schemes for representational participation on the part of workers contributed to disalienation.

In the Netherlands, Mulder observes that managers on works' councils dominate the proceedings, not only in the frequency of their participation, but also in the frequency with which their proposals are accepted (Mulder, 1971:33). In Norway, Emery and Thorsrud find that the representation of workers on boards of directors of companies did not contribute noticeably to the goals of democratization (Emery and Thorsrud, 1969:24-25). On the question of the effectiveness of the representation system, they note, tellingly, that:

> (a) There is little evidence of active communication and feedback between the workers and their representative. This, in itself, makes suspect the effectiveness of representation, particularly since

the representatives are not responsible, over long periods, to party or program.
(b) Nine out of the twelve representatives interviewed make some reference to having to take a board or company view of some matters, particularly production (Emery and Thorsrud, 1969:24-25).

In Poland, Kolaja, in a case study of a workers' council in a textile factory in 1957, concluded that »it did not function well« (Kolaja, 1960:134).

The workers did not identify themselves with the plant and its major function as did the management people (P. 116). The fact that the factory was state property, i.e., the property of all, did not abolish the differentiation between the managerial group, on the one hand, and the labor group, on the other. Workers still felt that »they« were trying to take advantage of them, depriving them of part of their deserved earnings. Therefore, it is legitimate to conclude that if the means of production become collective property, this does not necessarily result in an individual person's identification with the plant. The ownership by »all« is too diffuse to constitute a stimulus to develop individual ownership identification with the common property (Kolaja, 1960:135).

In Yugoslavia, the findings of several studies point in a similar direction. Unskilled workers tend to be under-represented on workers' councils (Kolaja, 1966:16-17); the frequency of participation of managers on the workers' councils is significantly higher than that of workers, particularly as regards the number of suggestions that are accepted (Kolaja, 1966:20-21; Obradović, French, Rodgers, 1970:470). Under the circumstances, the findings by Županov and Tannenbaum (1968), in their control-graph study in Yugoslavia, that the workers should have more control than they do, and managers less control, seems quite understandable. And in another control-graph study in four Yugoslav industrial organizations, Kavčič, Rus, and Tannenbaum concluded that:

... the possible social-psychological effects of indirect or representational participation are limited. Many of the daily events for workers, including the frustrating aspects of technology and bureaucratic administration, are not very much changed by the fact that some members of the organization participate in monthly council meetings. Workers may be too far removed from the actual deliberations of the council to develop the sense of involvement that participation in such deliberations might engender. The workers' daily routine and relationships with supervisors and co-workers continue unchanged, even though the council makes decisions that affect organizational policy (Kavčič, Rus, Tannenbaum, 1971:84).

But by far the most surprising finding to emerge from a study of workers' councils in Yugoslavia is that by Obradović. He notes that:

... participants in self-management are more alienated than non-participants. Possibly for these workers the direct experience with self-management has been so frustrating that their sense of alienation has become even greater. (Obradović, 1970:165).

SHOP-FLOOR DEMOCRACY

Several rather important inferences can be drawn from the recent research on industrial democracy. First, representational participation fails to represent the needs and aspirations of the worker constituents, moreover, in light of Michels' thesis of the »iron law of oligarchy« we would expect a process of progressive estrangement to occur between workers and their representatives on workers' councils (Van Gorkum, 1969:19), possibly due to a tendency for worker representatives to internalize the perspectives of the managers on the council (Emery and Thorsrud, 1969:25). Second, since managers participating in workers' councils, on the whole, have more technical knowledge pertaining to managerial decisions than workers, there is a tendency for the power of managers to increase rather than decrease as a result of the functioning of workers' councils (Mulder, 1971: 34; Mulder and Wilke, 1970: 446). All of which leads one researcher in the Netherlands to conclude that the works' council is an »hierarchical form of participation in management. Real democracy within the firm requires different ways.« (Drenth, 1969: 39). Third, several researchers have also concluded that if there are to be any important advances in democratizing the workplace, it will not be via indirect forms of participation through a representational system at a strategic policy level of the firm, but rather via a direct form of participation at the operating level, viz., at the »work-site« or the »shop-floor« (Mulder, 1971: 34; Van Gils, 1969: 96-97; and Emery and Thorsrud, 1969: 86).

> *Insofar as industrial democracy means more than extended negotiations and consultations, there is a need for the transfer of some real managerial power to the employees. It is difficult indeed to see how this sharing can be started at the top, at board level. If democratic participation is to become a reality, it seems inevitable that it must be started at a level where a large proportion of employees are* **both able and willing to participate.**« *(Emery and Thorsrud, 1969:86).*

One of the most intriguing examples of shop-floor democracy is Melman's description of the gang system in the Standard Motor Company in Britain. Groups of workers, some very small and some very large (as large as 3,000), autonomously organized their tasks and supervised themselves, sharing in the group bonus as a result of increased productivity (Melman, 1958: 12, 14, 34-36). A vivid account of the gang system has recently been published by Rayton, a worker himself in an aircraft factory in Coventry. This perceptive document by an »observant participant«, rather than by a »participant observer,« of the workings of the gang system merits an extended quotation:

We worked out between us how many men we would want and the boss agreed. We elected a ganger, and a deputy ganger to take charge on night shifts. We sorted out men, openly, to do the work they were best fitted for. We made mistakes, but they were immediately corrected. We reckoned up the various prices of jobs and proved theoretically, that we could increase our earnings. We had all the benches and other contraptions moved to suit our way of working. Some of the firm's officials objected that we were »infringing their rights« and the management proper insisted that **they** *would appoint the ganger. We said, »No! He would then be a boss and we are not having a boos. He is* **our** *man responsible to us, and we, individually and collectively will be responsible for all the work done by the gang!« It wasn't put quite so explicitly as I have just written, but that was what was meant, and the managers being good chaps (we knew them personally) accepted it. This, insisting on ourselves appointing the ganger, turned out to be the key to success. The »contract« (unwritten, as is the Common Law kind of contract) was not between the firm and the ganger, but between the firm and the gang as an entity. In our case »Gang No. 3«. Gangers could come and go, but Gang 3 went on. We knew of course that in a serious situation the management could abolish Gang 3 — but why should they? They wanted us. Wanted the work. We had endless discussions the first few weeks. We kept watch on the ganger to see that »our money« was being properly »banked« with the wages office. The ganger kept watch on us to see that each of us was earning his keep and a bit over. We watcher each other. And then, eventually, finding that everything was working out well we gave up worrying and concentrated on work.*

The position was that the ganger kept track of work and money and left discipline and other details to us. He was just one member of a democratic team. He saw to it that the gang was supplied with tools, materials, and information derived from design office memos and blueprints. Clever men helped others decipher difficult drawings, not so clever men were content to do the drudge work. **No** *distinction was made on degrees of skill — that was a waste of time. Divisive. All this was tacitly understood. Management also tacitly understood, and no written rules were made. Consequently there were no »orthodoxies«, everything being left as fluid as possible. In this way all kinds of initiatives came from the shop floor, and these, added to brilliant design, planning and organization pushed the firm into the lead in aircraft production. Every week men joined us and were accepted at once as equals. Only the ganger and his deputy worried about money; the rest were free to concentrate on their work which was a great relief to men previously tormented by individual piecework. But it still was piecework, still gave men the urge to earn more, and earn it by brains and skill rather than by being driven. Decisions were made at gang meetings (in meal breaks) and the ganger was obliged, as in Parliament, to answer questions. He could also, in return, publicly castigate men who were at fault. Naturally he was*

the best man on the gang for all this, which was why the men picked him. Men working together almost always »sense« the man they want as leader. And they could also sack him, at a gang meeting. (Rayton, 1972:8-9)

By developing the gang system, the workers in the Coventry aircraft factory succeeded in modifying their hierarchical profile on all four dimensions. By »having all the benches and other contraptions moved to suit our way of working,« the workers re-designed their job and, in the process, reduced skill and knowledge differentials. By means of a group piecework administered by the ganger, the workers increased their earnings, and, simultaneously, reduced reward differentials in the factory. Authority differentials were also reduced by virtue of the fact that workers elected their own foreman called the »ganger«, who »kept track of work and money and left discipline and other details to us ... Decisions were made at gang meetings (in meal breaks) and the ganger was obliged, as in Parliament, to answer questions.« The workers also had the right to fire their ganger at a gang meeting. Finally, the gang system also had the effect of reducing differentials in organizational information. The ganger »saw to it that the gang was supplied with tools, materials and information derived from design office memos and blueprints.« And the workers, in turn, ascertained at gang meetings whether the money »was being properly 'banked' with the wages office.«

The phenomena of »shop-floor democracy« have stimulated interest not only in England but also in the Netherlands, Norway, Sweden and elsewhere (Van Gils, 1969; Emery and Thorsrud, 1969). Field experiments and action research programs, guided by the socio-technical system framework (Emery and Trist, 1960; Trist, 1970; Davis and Trist, 1972) and kindred open systems models (McWhinney and Elden, 1972), are under way in various countries. It is reasonable to expect that some of these studies will yield increasing evidence pertaining to our hypothesized relationships — a negative relationship between hierarchy and organizational effectiveness and a positive relationship between hierarchy and work alienation. Such research promises to re-direct theory and research on industrial democracy. Whether it will contribute to our understanding of the problems of transforming hierarchical organizations in the direction of non-hierarchical and voluntary modes of organization remains to be seen (Evan, 1963[b]).

Direct participation at the »shop-floor« level, as a strategy for counteracting worker alienation and increasing organizational effectiveness, poses the problem of generalizing the pattern to all categories of employees at all levels of an organization. One approach to this unsolved problem is to conceptualize direct participation as involving a process of **de-stratification** with respect to all four dimensions of hierarchy.

THE DE-STRATIFICATION-RATIONALIZATION HYPOTHESIS

By organizational de-stratification, I mean redesigning jobs in order to decrease knowledge and skill differentials, re-designing systems of compensation to decrease reward differentials, re-designing decision-making in order

to decrease authority differentials, and re-designing the distribution of organizational information in order to decrease information differentials among different categories of employees. However, if an effort in the direction of de-stratification in the service of disalienation is to succeed, it must reckon with the imperious, environmental demands for organizational effectiveness imposed on any firm, whether in a market economy, a planned economy, or a social-ownership society. This means that the secular trend for the »rationalization« of industrial enterprises has to be taken into account. The process of rationalization may, however, be incompatible with the process of destratification, thus posing a dilemma as to how to increase the level of both processes in an organization — de-stratification as well as rationalization — in order to realize the twin values simultaneously of decreasing work alienation and increasing organizational effectiveness.

An analysis of some facts of rationalization may suggest a possible solution to the dilemma of increasing rationalization as well as increasing de-stratification, thus avoiding a trade-off situation. Two dimensions of rationalization may be considered: technological progress and an increase in the use of control mechanisms to insure predictable and efficient task performance. In developing or employing new technology, jobs can, in principle, be designed so as to »upgrade« rather than »downgrade« the occupational skills and knowledge required to perform the various tasks in an organization. By choosing to upgrade skill levels, occupational differentials can be reduced, thereby justifying a reduction in reward, authority and organizational information differentials. As for control mechanisms to insure predictable and efficient task performance, there is always choice between personal vs. impersonal control mechanisms. The use of impersonal control mechanisms via the formalization of rules and the standardization of procedures (Rushing, 1966[a], 1966[b]) reduces the potential for arbitrary and capricious exercise of authority by superiors, particularly if there are adequate due-process safeguards for all employees in an organization (Evan, 1963[a] : 472—473).

In short, these considerations suggest a de-stratification-rationalization hypothesis: as the positive slope of the relationship between these clusters of variables increases, organizational effectiveness increase and work alienation decreases. Admittedly, organization theory and organization practice, whether or not guided by research on industrial democracy, do not yet throw much light on how to achieve the underlying values of organizational de-stratification and organizational rationalization.

NEED FOR AN EXPERIMENTAL PERSPECTIVE

By way of a conclusion, several predictions of a theoretical and research nature may be in order. Organizations undergoing the joint transformation processes of de-stratification and rationalization would not necessarily enjoy consensus as regards goal formation and decision making. Instead of the common conception of a unity of interests in the firm, on the part of many organizational researchers in capitalist as well as socialist countries, a diversity of interests is a theoretically more defensible premise. Occupational differentiation within the firm unavoidably gives rise to different perceptions of

organizational reality and, in turn, results in heterogeneous interests emerging and affecting or seeking to affect the decision-making processes. If the firm is to become progressively de-stratified and rationalized, the diversity of interests requires articulation. To overcome »pluralistic ignorance« (Katz and Kahn, 1966: 53—54) and the fear of opposition to organizational policies, the formation of organized coalitions accompanied by the institutionalization of dissent are necessary (Lipset, Trow and Coleman, 1956: 13—16, 413—418). The firm, as a social system, thus becomes polycentric and polyarchical in nature (Tannenbaum, 1968: 32, 53—54). To resolve the inevitable conflicts among the various coalitions, internal and external to the firm, requires a process of bargaining (Cyert and March, 1963), assuming that an autocratic mode of decision-making is incompatible with the model of an industrial enterprise seeking to become more egalitarian as well as more effective.

Significant progress in research on industrial democracy will probably require comparative cross-cultural research to test propositions interrelating hierarchy, alienation, and organizational effectiveness. It will also require a systematic effort to conduct organizational experiments, whether in the laboratory or in the field (Evan, 1971), on the consequences of varying degrees of hierarchy for alienation and organizational effectiveness. To undertake field experiments which test the relative efficacy of alternative strategies for democratizing the workplace presupposes an appreciation of what Campbell calls an »ideology of experimentation.«

> *We must be able to advocate without that excess of commitment that blinds us to reality testing ... Administrators must advocate the importance of the problem rather than the importance of the answer. They must advocate experimental sequences of reforms, rather than one certain cure-all, advocating Reform A with Alternative B available to try next should an honest evaluation of A prove it worthless or harmful. (Campbell, 1969)*

Although Campbell's prescription to administrators seems highly persuasive, the fact that few administrators in any present or past society have behaved in accordance with the »ideology of experimentation« suggests that there are vested interests impeding the implementation of this principle. This predicament has led Campbell to speculate on the methodological problems and characteristics of an »experimenting society.«

> *The experimenting society will be one which will vigorously try out proposed solutions to recurrent problems, which will make hard-headed and multi-dimensional evaluations of the outcomes, and which will move on to try other alternatives when evaluation shows one reform to have been ineffective or harmful. We do not have such a society today. While all societies are engaged in trying out innovative reforms, none is yet organized to adequately evaluate the outcomes. Programs are instead continued or discontinued on inadequate or other grounds. This is due in part to the inertia of social organizations, in part to political predicaments which oppose evaluation, and in part to the fact that the methodology of evaluation is still inadequate. (Campbell, forthcoming in 1973)*

Since organizations are sub-systems of a larger society, a prerequisite for fully implementing an experimental strategy with respect to industrial democracy, may very well be the transformation of the environing society in accordance with a model of an »experimental society.«

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WORKER PARTICIPATION AND INFLUENCE IN INDUSTRIAL PLANTS OF FIVE COUNTRIES

The rise of ideological and political demands for increased participation in decision making by members in hierarchical organization gives a particular significance to empirical research on workers' participation in decision making in industrial plants. One of the major difficulties for such a research is the great differences between systems of workers' participation in decision making. Is there a common denominator among the normative theories of participative management developed mainly by American social scientists (Argyris 1964; Bennis 1966; Likert 1961; McGregor 1960,) the West European system of workers' representation in management, the Yugoslav system of self management based on worker councils, and the Israeli kibbutz system based on direct democracy?

The social context of these theoretical systems and their practical experiences are very different and so are their immediate goals. One of the major goals of American theories of management is the maximization of effectiveness in terms of economic efficiency, performance and human adjustment. The West European systems, particularly that in West Germany, were created mainly as a reaction to the political and social conditions of these countries after World War II. The Yugoslav experience has its political roots in the struggle for independence, but was inspired mainly by socialist ideology and its humanitarian goals of abolition of exploitation, of personal authority, and the attempt to eliminate alienation. The demands for worker control and self management which gained a new importance in the West European labor movement after the events of May 1968 in France and Fall 1969 in Italy also have a socialist ideological base. The kibbutz system aims to realize the values of equality and democracy within collective communities that cover all areas of life. In the Yugoslav and kibbutz approach, workers' participation in decision making is tied to the abolition of private property. Behavioral Science theories of participative management, however, ignore this aspect. While worker representation in management as practiced in West Europe is being carried out maily in nationalized industries it is also being carried out in some industries that are privately owned.

In this article we report results concerning workers' participation in decision making and its effects in industrial plants in five countries. Two of the systems, the Yugoslav and kibbutz, have highly participative formal stru-

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ctures. Plants in the other countries — Italy, Austria, and the United States — have no formal mechanism of workers' participation in management but some degree of workers' participation in decision making may occur depending on style of leadership, or on the existence in some cases, of formal devices of worker representation. We assume that the management of American plants is more influenced by theories of participative management than is management in Italy and Austria.

Participation on decision making implies mutual influence by groups in an organization resulting in joint, binding commitments. Workers' participation in decision making in industrial organizations therefore implies that workers as a group — or in sub-groups (e.g., by departments or work-groups) — take part in this process of mutual influence. There may be differences among systems, however, in the areas of decision making in which workers participate. In some cases participation may be confined to matters related to the immediate work situation and to the framework of the work-group or the department, while in others it may center around general issues of plant policies. These types of participation are not mutually exclusive, however.

While we expect that the possibility for workers to participate formally as a group through representation in the process of mutual influence will actually enhance their influence, we do not exclude the possibility that in certain situations no real influence will occur, since workers' attempts to exercise influence may be overruled by other more powerful groups. In some cases manipulative techniques may be used by management to create a feeling of participation without real increase in workers' influence.

The hypothesis that workers' participation in decision making results in the actual exercise of influence by workers raises the question of the relationship between the influence of workers and the influence of other groups in the plant. One possible argument against participative management for example, is that an increase in influence by workers may cause a corresponding decrease in influence by managers, which, of course, is not an agreeable prospect for most managers. Some theorists, however, argue that participation need not lead to a decrease in managerial influence and that an increased amount of interaction connected with the processes of mutual influence can result in an increased amount of total influence in the system (Likert 1961, 1967; Tannenbaum 1956). This thesis is supported by research reported by Lammers (1967), Mulder (1971), Seashore & Bowers (1971) and Tannenbaum **et al**. (1968). In most of the cases studied participation was associated with relatively high levels of total control (influence), while only in certain cases was it accompanied by a relatively equalitarian distribution of power in the organization.

While a number of studies suggest that participation may be related to the total amount of control, the findings give no clear answer to **how** participation enhances influence in an organization. Assuming for the moment the existence of only two major groups in industrial organizations — workers and managerial personnel — the positive relationship between participation and total amount of control may occur through (1) an increase in worker influence accompanied by a decrease in management influence which, however, is less than the increase in the influence of workers, (2) an increase in workers' influence accompanied by no change in the amount of managerial

influence, and (3) an increase in workers' influence accompanied by an increase in management's influence.

The possible contribution of participation to the influence exercised by management can be explained in several ways:

(1) Participation may have a direct impact on managerial influence through an enhanced flow of communication between hierarchical levels. Improved information may improve the quality of managers' decisions and it may increase in this way the managers' influence in the organization.

(2) Managerial influence may also be enhanced indirectly as a result of the increased influence of workers in the participative system. This effect on managerial influence may be due to (a) the favorable attitude of workers toward management and the trust by workers in the motives and actions of management (such attitudes and trust create conditions for the implementation of management influence), and (b) a rise in workers' sense of responsibility in and identification with the organization (such responsibility and identification provide an important basis of control which Mary Parker Follett refers to as the »law of the situation« [Metcalf & Urwick (Eds.) 1940]).

A qualification might be added to the hypothesis connecting the influence of workers and that of managers. Where strong antagonism exists between workers and management, workers' influence is not likely to contribute to the influence of managers. The influence of workers is more likely under these circumstances to be used in a power struggle and such influence may then be used to restrict the influence of management. But where workers and managers share, or feel they share, some common interest and where conditions of readiness for cooperation exist, influence by workers may contribute to the attainment of organizational goals and to the influence of management. Although the assumption of common interest applies more readily to some plants (like the kibbutz) than to others (like the Italian) we assume that it applies on the average to the plants in this study and that the hypothesis connecting worker participation and influence therefore applies on the whole.

Several hypotheses can be stated on the basis of the preceeding discussion.

Hypothesis I. The degree of workers' participation in decision making in industrial organizations is related positively to the amount of total influence (control) in these organizations. This hypothesis assumes that the amount of influence in an organization is not fixed and workers' participation in influence may enhance the influence of the other groups.

Hypothesis Ia. The degree of workers' participation in decision making is related positively to the amount of influence of workers as a group.

Hypothesis Ib. The degree of workers' participation in decision making is related positively to the amount of managers' influence in an organization.

The following hypotheses concern the mediating factors between participation and managerial influence.

Hypothesis II. The frequency of communication between subordinates and superiors functions as a mediating factor (intervening variable) between

the degree of workers' participation in decision making and management's influence.

Hypothesis III. The amount of workers' influence functions as an intervening variable between the degree of workers' participation in decision making and the amount of managerial influence.

Two arguments were offered concerning how workers' influence may enhance management's influence: (a) a rise in workers' influence may improve the organizational climate by contributing to a feeling of trust by members in management; (b) a rise in workers' influence may enhance members' sense of responsibility in the organization. Both effects—trust and responsibility—may enhance management's responsibility. Hypothesis IV will test (a).

Hypothesis IV. Trust in management functions as an intervening variable between workers' influence and managerial influence.

Hypothesis V. will test assumption (b) and has two parts.

Hypothesis Va. Sense of responsibility in the organization functions as an intervening variable between workers' influence and management's influence.

Hypothesis Vb. The personal influence of each worker functions as an intervening variable between workers' influence as a group and a worker's commitment to the organization.

RESEARCH DESIGN

Ten plants confined to five industries—plastics, furniture, food processing, metal works, and foundries—were selected in each country. Plants were divided equally between small (35—100 persons) and large (164—1,496 persons) within each industry except in kibbutzim where all plants are small. We shall therefore deal with two categories of plants, small and large. The average small plant ranges from 51 in Austria to 84 in Italy and Yugoslavia. The average large plant varies from 545 in Yugoslavia to 629 in Italy.[1]

Thirty five persons, including persons at each hierarchical level were selected according to standardized procedures in each plant making a total sample of 350 persons per country. Questionnaires were personally administered to each of the respondents, although a small percentage of the sampled persons refused to participate in the project or failed to answer some of the questions.

RESULTS

We shall first consider relationships between measures of participativeness and of influence. These measures are based on the responses of members in each plant to the following questions:

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[1] The design specified five large plants in each place exclusive of kibbutzim. In fact we were able to obtain one additional large foundry in Austria and the United States and these additional plants enter into the following analyses. The number of large plants is therefore 22.

Workers' Participation in Decision Making (Likert 1961).

  1. *Do workers participate in making important decision related to their work?*
     [1. Not at all...

        4. They jointly decide about all important things concerning their work]

  2. *Do workers participate in making important decision related to general plant problems?*
     [1. Not at all...

        4. They jointly decide about all general plant problems]

Each of these questions was answered on a four point scale, and an average response within each plant of the two questions is taken as the measure of workers' participation in decision making as perceived by members.

Influence.

How much influence do the following groups or persons actually have on what happens in this plant? (Circle one number on each line across)

	Very little influence	Little influence	Some influence	Quite a lot of influence	A very great deal of influence
(a) Plant manager and his executive board	1	2	3	4	5
(b) All other managerial and supervisory personnel	1	2	3	4	5
(c) The workers as a group	1	2	3	4	5

The measure of total control in each plant as perceived by members is based on an average of the responses to the above components by all of the respondents in each plant and the control exercised by managers is based on an average of the responses to parts a + b.

The plants of the respective countries differ significantly in participation and influence according to the above measures. Among the small plants the kibbutz ranks first on the measure of workers' participation in decision making, followed by the Yugoslav, American, Austrian an Italian in that order. The same order is found among the large plants except that kibbutz plants are not included. The plants of the respective countries also differ in total amount of influence. Among the small plants, the American rank first followed by the Yugoslav, kibbutz, Austrian, and Italian. The order is

the same among the large plants except that the kibbutz are not included. There is thus some rough, although by no means perfect, correspondence between workers' participation in decision making and total amount of influence as reported by members when the data are aggregated by country.

Table 1 shows correlations between the measures relevant to Hypothesis I. These correlations are based on the plant as the unit of analysis, averages for each plant serving as the measures for the plant. The correlations reflect differences among plants within countries as well as between since the plants of all countries are placed into a single matrix. In general the direction of relationship within countries corresponds to that between but the number of plants per country is too small to permit comparisons of the relationships among countries.

The correlations are shown separately for small plants and large in order to maintain some degree of comparability. The column headed »All countries« is a simple average of the correlations among the small and large plants. Correlations that we estimate to be statistically significant at the .05 level of confidence are indicated by asterisks.[2]

TABLE 1

Correlation between Workers' Participation in Decision Making and the Influence of Groups in the Plant as Reported by Members

	Small	Large	All
Participation and:			
Workers' influence	.74*	.51*	.62*
Managers' influence	.20	.38	.29
Total amount of influence	.51*	.85*	.68*

*p $<$ .05 (see footnote 2)

Plants that are reported to be highly participative are likely also to be characterized by a high total amount of influence, according to their members. The enhanced influence of workers in the participative plants may also be accompanied by increased influence by managers, although the positive correlation between participativeness and the influence of managers is not high and it is not statistically significant according to our criterion. The major contribution to the enhanced influence in the participative compared to the non-participative plants appears to result from the greater influence of workers in the former plants compared to the latter. Some contribution to the enhanced influence may also come from managers, but this appears to be a smaller contribution than that of the workers and the result is that the parti-

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[2] The nature of the sample does not permit a precise statistical evaluation of these correlations since we do not have a simple random sample of plants, which is the basis for conventional tests of significance. We assume that, because of the »clustered sample«, the true degrees of freedom are lower than those based on the number of sampled plants under conditions of a simple probability sample. To compensate in some degree for the clustering by country we assume that the effective number of cases is somewhere between the average number of plants per country and the total number of plants entering into a correlation and we have selected the number half way between these extremes. Since all of the hypotheses are directional, one-tailed tests are employed. On the basis of the above assumptions we calculate that correlations of .39, .44. and .31 are statistically significant at the .05 level of confidence among the small, large, and total sample of plants respectively. These standards, however, are very approximate.

cipative plants are somewhat more »power equalized« than the non-partici-
pative. This power equalization, however, does not mean a reduction in the
control exercised by managers; managers on the average, hold their own. They
may not actually exercise more influence in the participative plants compared
to the less participative but they are certainly not, on the average, less influ-
ential in the former compared to the latter.

Hypotheses II and III refer to two possible explanations for the effect
of workers' participation in decision making on managerial influence:

(a)   the frequency of communication between subordinates and superiors;
(b)   the amount of workers' influence. An intervening variable should cor-
relate more highly with the independent variable and the dependent variable
than the latter variables correlate with each other. We therefore consider
three relationships, that between (1) the independent and the dependent va-
riable, (2) the independent and the intervening variable, and (3) the inter-
vening and the dependent variable. Table 2 shows these relationships in which
communication was measured through the questions:

> (a). *How frequently do you speak to* [*your immediate subordinate*]
> *about work matters?*

> (b). *How frequently do you speak to* [*your superior*]
> *about work matters?*

Answers were checked on a five point scale.

TABLE 2

**Correlation between Participation, Communication and
Managers' Influence as Reported by Members**

	Plants		
	Small	Large	All
Participation and Managers' Influence	.20	.38	.29
Participation and Communication	.34*	.46*	.40*
Communication and Managers' Influence	.41*	.37	.39*

*p < .05 (see footnote 2)

Communication between superiors and subordinates tends to be high
where participation of workers in decision making is high. Communication
seems also to be related to the influence of managers, according to our mea-
sures. Communication might, therefore, serve as a link between the parti-
cipation of workers and the influence of managers.

Table 3 shows the correlations in which workers' influence is considered
as an intervening variable.

TABLE 3

Correlations between Participation and Influence of Workers and Managers as Reported by Members

	Plants		
	Small	Large	All
Participation and Managers' Influence	.20	.38	.29
Participation and Workers' Influence	.74*	.51*	.67*
Workers' Influence and Managers' Influence	.48*	.35	.41*

*p < .05 (see footnote 2)

Influential workers are not inconsistent with influential managers, according to the reports of members. On the contrary, the influence of managers appears high where the influence of workers is high. It is possible therefore that the influence of workers may help to explain why managers in the relatively participative plants have as much (if not more) influence as (than) managers in the non-participative plants.

Table 4 presents data relevant to the hypothesis that trust in management serves as an intervening variable between the influence of workers and that of managers. Trust in management was measured through the following questions:

> 1. *Do you think the responsible people here have a real interest in the welfare of those who work here?*
>
> 2. *Do the responsible people in this plant improve working conditions only when forced to?*
>
> 3. *When a worker in this plant makes a complaint about something is it taken care of?*

Each of the above questions was answered on a five point scale and the following, taken from Likert (1961), was added to the above as part of an overall index of trust.

> 4. *What do workers communicate to their superiors?*

Answers were checked on the following scale (from 1 to 4):

> 1. *they communicate all information accurately;*
> 2. *they communicate mainly what their superiors like to hear;*
> 3. *they communicate only what their superiors like to hear;*
> 4. *they distort all information.*

TABLE 4

Correlations between Trust and the Influence of Managers and of Workers as Reported by Members

	Plants		
	Small	Large	All
Workers' Influence and Managers' Influence	.48*	.35	.41*
Workers' Influence and Trust in Managers	.66*	.31	.48*
Trust in Management and Managers' Influence	.81*	.80*	.80*

*p < .05 (see footnote 2).

The very substantial correlations between trust in management and the influence of managers are consistent with the notion that trust by members may be an important basis upon which managers build influence.

Table 5 presents data relevant to the hypothesis that members' sense of responsibility contributes to the influence of managers and that such responsibility intervenes between workers' influence and that of managers. Responsibility was measured through the following question:

> To what extent do you feel really responsible for the success of (your own work group...? your department...?
> the whole plant...?)

Answers were checked on a five point scale.

TABLE 5

Correlations between Sense of Responsibility and the Influence of Workers and Managers as Reported by Members

	Plants		
	Small	Large	All
Workers' Influence and Managers' Influence	.48*	.35	.41*
Workers' Influence and Responsibility	.61*	.37	.49*
Responsibility and Managers' Influence	.50*	.68*	.59*

*p <.05 (see footnote 2)

These correlations are reasonably consistent with the notion that the influence of workers contributes to a sense of responsibility and that this responsibility increases the sensitivity and amenability of workers to the influence attempts of managers.

Table 6 shows correlations relevant to the hypothesis that the personal influence of members serves as an intervening variable that might explain the relationship between the influence of workers as a group and the sense of responsibility felt by members. Personal influence was measured through the question, »*How much influence do ... [you, personally] actually have on what goes on in this plant?*«

TABLE 6

**Correlations between Sense of Responsibility and
the Influence of Workers and Managers**

	Plants		
	Small	Large	All
Workers' Influence and Responsibility	.61*	.37	.49*
Workers' Influence and Personal Influence	.82*	.45*	.63*
Personal Influence and Sense of Responsibility	.72*	.82*	.77*

*p $<$.05 (see footnote 2)

The very substantial correlations between the personal influence which members feel in these plants and their sense of responsibility adds credence to the notion that personal influence enters into the chain that helps explain how the influence of workers as a group may enhance the influence of managers.

SUMMARY

Figure 1 shows graphically the correlations among the variables which are part of the argument that workers' participation may enhance (or ar least need not reduce) the influence of managers. Participation in decision making by workers has a direct bearing on the influence of workers as a group, which has implications in turn for the personal influence, trust, and responsibility felt by workers. Where workers trust management and where they feel a sense of responsibility in the plant they are likely to be responsive to the influence attempts of managers and managers are therefore likely to be influential under these conditions. Plants where workers' participate in decisions tend therefore to be characterized by a relatively high level of control, according to members. The enhanced influence of workers under these conditions does not have the effect of reducing the influence of managers since the trust and responsibility felt by members provide a basis for sustaining the influence of managers if not of increasing it.

Figure 1: Correlations between workers' participation in decision making and reactions of members that are related to the influence of managers (Small Plants).
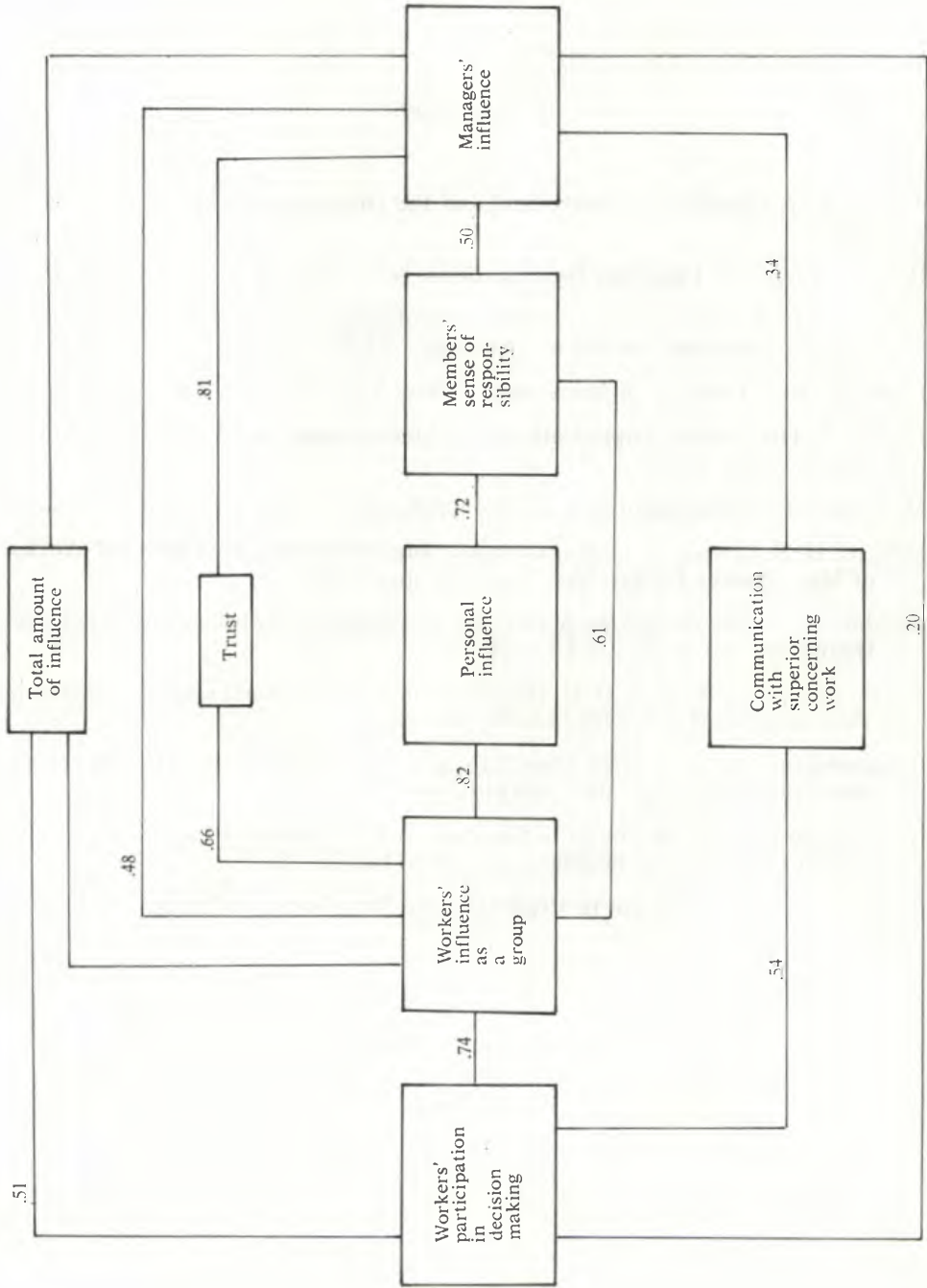
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SELF-MANAGEMENT IN KIBBUTZ-INDUSTRY:
ORGANIZATIONAL PATTERNS AND PSYCHOLOGICAL EFFECTS

A. THE SOCIAL SYSTEM OF THE KIBBUTZ AND
THE PROCESS OF INDUSTRIALIZATION

Worker participation in decision-making is a central feature of the ideology and the formal authority structure of kibbutz industry.

Both can be understood as a part of the broader framework of the kibbutz social system.

The kibbutzim are rural communal settlements varying in size from 40 to 50 members in newly founded ones to larger and older ones with as many as 1000 members. The kibbutz economy is divided into several authonomous branches. Most of the brancehs are agricultural but recently a growing number of kibbutzim have added to their economy one or two industrial plants, such as the ten plants included in our research.

There are no individual household accounts and no wages in the kibbutz. The main meals are eaten in the communal dining room. Members' needs are provided for by communal institutions on an equalitarian basis. All communal income goes into the common treasury. Each member gets only a small annual cash allowance for personal expenses.

Each kibbutz is governed by a general assembly which is convened weekly as well as by various committees. Each economic branch is headed by an elected branch manager. According to the principle of rotation in managerial functions a new branch manager should be elected every 2 do 3 years. An economic coordinator is responsible for the coordination among different branches and for the implementation of the overall production and investment plans.

The number of industrial plants in kibbutzim grew between 1960 and 1970 from 108 to 170. The pace of industrialization of the kibbutz is rapid even relative to the general pace of industrialization in Israel. The kibbutz contribution to total Israel industrial output grew from 3.1% in 1955 to 6.2% in 1966.

Kibbutz industry is concentrated mainly in a limited number of branches. Of the 157 industrial plants in kibbutzim in 1968, 117 were in four industries: 43 metal-works, 23 plastics, 29 food, 18 furniture and wood.

Two social factors made this fast pace of industrialization possible:

        a. the peculiar characteristics of kibbutz manpower;

        b. the managerial abilities of many kibbutz members.

a. The educational and cultural level of kibbutz members is relatively high, Most kibbutz founders and all those born there have acquired secondary education. The kibbutz movement set up a vast network of adult education and vocational training institutions. Kibbutz members entering industry from previous agricultural work usually have a technical background because of the high tecnological and agrotechnical level of kibbutz agriculture.

b. The democratic principles of the kibbutz create a relatively wide distribution of managerial skills. Every year about 50% of kibbutz members take part, on the basis of rotation in committees and various functions of the organizational structure and thereby acquire managerial experience and ability in various social realms.

The education for performance of various social and managerial functions is integrated into the general system of kibbutz education. Hence managerial skills are not only the possessions of a few but are widely shared by a high proportion of the members.

A major limitation to industrialization is related to the size of the industrial plants. The limited number of members of a kibbutz community prevents the development of large industrial plants. This limitation is bolstered by the prohibition against the employment of hired workers which originates from the socialist ideology of the kibbutz society.

As a result of these limitations most of the kibbutz plants are rather small. In 1968 72% of the plants employed less than 50 workers. Only 18 plants out of 157 employed more than 100 workers.

The organizational structure of kibbutz industrial plants has been determined both by the egalitarian and democratic principles of kibbutz ideology and by the functional requirements of industrial organization.

As in other areas of kibbutz life, the organizational structure of the industrial plants was not the result of a theoretical preconceived model or blueprint. This structure has been shaped by the general principles of kibbutz ideology, by experience in other work branches, and by the counselling by production engineers who provided practical guidance. Only in a later stage was an organizational model formalized by one of the four kibbutz federations. This model can be seen as a crystallized expression of the patterns which emerged in most of the kibbutz plants and as an ideal model.

B. IDEAL ORGANIZATIONAL PATTERNS

As stated in this model workers' participation in decision making at the plant level is both direct through the worker assembly and indirect through the election of the different committees and of the management board by the plant workers. The ideal patterns recommended the establishment of different committees such as for professional and technical problems and for marketing. Other committees which exist in plants are the appointment com-

mittee for plant offices and the training committee nominating the plant workers to be sent to different vocational training courses. The management board typically has 3 components:

1. The central office holders in the plant, such as the plant manager, the production manager, etc.
2. The central office holders in the kibbutz, such as the economic coordinator and the treasurer.
3. Workers' representatives, like the plant office holders, are elected by the plant worker assembly while the kibbutz office holders are elected by the kibbutz general assembly. Some decisions such as election of the plant manager and approval of the investment plan, are usually taken by the general assembly of the kibbutz where the plant workers participate along with all other kibbutz members. Only technical and professional matters are definitely decided upon by the management board. In almost all other matters the role of the management board and of the different committees in the decision making process is according to the normative model — the preparation of proposals as input to decision making sessions of the worker assembly or the kibbutz general assembly.

In contrast to the rather high degree of formalization and institutionalization of participation in decision making on the plant level, there are no formal rules regarding the patterns of participation in decision making on the department or work group level.

The assumption was probably that because of the relatively small size of the departments and groups, participation would take place on a spontaneous and informal basis, as a result of the general participative and egalitarian character of relations among kibbutz members.

The role of the different plant and kibbutz institutions in the stages of the decision-making process in different areas are shown in Table 1.

TABLE 1

The Role of Plant and Kibbutz Institutions in the Decision-Making Process on Different Topics as Stated by the Ideal Organizational Patterns

The Institution The Topic	Plant Committees	Plant Management Board	Worker Assembly	Kibbutz Committees	The General Assembly of the Kibbutz
Production plants	—	Suggestion	Decision	Discussion	Approval
Investment and development plans	—	Suggestion	Decision	Discussion	Approval
Work arrangements	—	Suggestion	Decision	—	—
Technical and professional problems	Discussion	Decision	Information	—	—
Choice of candidates training	Decision	Suggestion	Decision	Discussion	Approval
Election of management team	—	Discussion	Discussion	Suggestion	Decision
Election of other offices	Suggestion		Decision	—	—

As shown by Table 1 some issues are discussed both by plant committees and by kibbutz committees. The usual procedure is that the plant committees establish the different needs of the plant such as for investments or for training of plant workers. The worker assembly reaches tentative decisions that are again discussed by the kibbutz committees in the general framework of the kibbutz investment plan or training plan, and finally approved by the kibbutz general assembly. The pattern of the election of the plant manager is different. The different candidates for this office are discussed by the committee of the kibbutz dealing with appointments to all kibbutz offices and this committee nominates one candidate. After discussion of this nomination in the plant the final appointment is made by the kibbutz assembly. All the other plant office-holders are elected by the worker assembly. The reason for the exeption with respect to the plant manager is that he is not necessarily selected from among the plant workers as are the other plant office holders.

The nonconventional features of the organizational structure of kibbutz plants are not confined to the decision making process. The hierarchical division of authority among office holders seems quite conventional. But a series of deviations from the conventional bureaucratic model of industrial management can be observed. Office holders from the first line supervisor to the production manager are elected by plant workers and not appointed by management. The election to offices is based not only on professional abilities, but also on broader personal qualities. The staffing of managerial positions is based on a system of rotation. The time period for holding the different offices varies according to the normative model from 2 to 3 years for the supervisor to 4 to 5 years for the plant manager. Also in this area some deviations were discovered by research, but many plants conform to ideal patterns.

Contrary to the strict formal definition of the rights and duties related to offices and to the impersonal rules which characterize the bureaucratic model, the definition of offices in kibbutz plants is quite flexible and depends often on the personality of office holders. Most office holders and especially first line supervisors take part in production work and only a part of time is dedicated to supervision and other managerial functions. The social relations among the kibbutz members who fulfil different functions in the plant are not limited to the work hours spent in the plant but are a part of the more general network of social relations in the kibbutz. The participation of workers in decision making in kibbutz plants can then be seen not only as a result of ideological principles and of organizational decisions but as a part of a broader philosophy and style of life.

C. THE EXISTING ORGANIZATIONAL PATTERNS

An attempt to measure the degree of implementation of the ideal patterns was made in 1969 in the framework of a larger research project that dealt with the social and organizational problems of kibbutz industry.

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A sample of ten kibbutz plants in four industrial branches — metal, plastic, furniture and food canning — was studied by survey research methods. These plants were chosen as a sample of kibbutz industry to be included in an international comparative study, but they do not comprise a representative sample.

These ten plants are among the largest kibbutz plants that do not employ salaried workers. The number of the workers in these plants varies between 50 and 80. Relative to Israel industry in general they can be considered as technologically advanced and economically successful.

The degree of implementation of the ideal patterns on the plant level was measured by checking the effectiveness of the worker assembly in the different plants. The worker assembly is the expression of the workers' direct participation in decision making. This is the major distinctive feature of the kibbutz system of participation vis-a-vis other system of indirect participation by workers' representation in management.

The effectiveness of worker assembly was measured by:
   a. the frequency of assembly meetings
   b. the influence of the assembly in different areas of decision making.
a. In three plants the assembly met every week. In one plant there were no worker assemblies. In 6 other plants the worker assembly met less than once a month. (Additional data from a later survey on 24 other plants has shown that in 11 plants the assembly met once a month or more, in 10 plants it met less frequently, and in 3 plants there were no meetings at all. In the normative model a frequency of once a month was stated.)
b. The degree of influence of the assembly on the different topics of decision making was measured by separate questions for each topic. The topics were:
   1. the yearly production plan
   2. the yearly investment and development plan
   3. work arrangements
   4. technical and professionl problems
   5. choice of candidates for vocational training
   6. election of management board
   7. election of committees

The respondents were asked how the assembly dealt with each topic.
The categories of the answers varied on a 5 point scale:
   1) the assembly does not deal at all with this topic;
   5) the assembly takes the final decision on it.

The intermediate categories were:
   2) getting information;
   3) approval of decisions;
   4) discussions and recommendation.

An index of general influence in the decision making process was computed on the basis of these questions and a correlation coefficient of .79

(p .001) was found between the frequence of assembly meetings and this index. The 3 plants where the assembly meets every week were also the highest on this index.

To complete the picture, we present the following table:

TABLE 2

Patterns of Worker Assembly Influence in Decision-Making on Different Topics

The Patterns	A	B	C	D	E
The topic					
Committee Election	+	+	+	+	+
Management Election	+	+	+	+	
Work Arrangement	+	+	+		
Choice of Candidates for Training	+	+			
Investment Plan	+	+			
Production Plan	+				
No. of plants	1	2	2	3	2

The combination of the different patterns forms a sort of a Guttman scale. The plus sign (+) was assigned to plants where the majority of respondents said that the worker assembly had the amount of influence stated by the normative model. For example: according to the ideal patterns, the assembly is supposed to make the final decision on the topic of work arrangements but not on the topic of investment plan which has to be approved by kibbutz institutions. For a plant to be marked + on the topic work arrangement it was necessary that the score 5 was the most frequent while for the topic investment plan the parallel score was 4. Table 2 shows that a kind of order of importance seems to exist between the different topics. In five plants the assembly conforms to the ideal patterns only in the area of election. Its influence in other areas in these plants is less than that stated by the ideal patterns. Two other plants conform to the model also on the topics of work arrangements, two more on the topics of choice of members for training and of investment plan and only one accords the ideal patterns on all the topics.

The three latter plants are those with the most frequent meetings. The ordering of the different topics seems meaningful. A conventional explanation for the fact that only in a minority of plants the assembly has much influence on economic matters may be that generally workers are less competent and less involved in these matters than in the topic work arrangements which touch them directly and personally. But contrary to this assumption stands the finding that in the three plants where the assembly has most influence on economic topics the assemblies are also the most frequent

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We know that between the workers of the different plants there are no basic differences in demographic characteristics such as education, age, sex, etc., which may explain why in these three plants workers should be more interested and involved in economic matters than in the other plants. It seems therefore reasonable to assume that the higher influence of the assembly on economic decision in these plants is a result of higher degree of conformity to the ideal patterns by the management, which is responsible for the frequency and content of assemblies. The finding that in the other seven plants the desired frequency of the worker assembly is significantly higher than the actual frequency also shows that workers are generally interested in participation.

A strong correlation was also found between the general index of assembly influence on decision making and an index formed from two Likert type questions dealing with the perceived degree of participation in general plant matters and in work related matters ($r = .91$, p .001).

PARTICIPATION AND DISTRIBUTION OF INFLUENCE

The major purpose of member's participation in decision making is a more equal distribution of influence in the plant mitigating the inequal distribution of influence that results from the existence of an organizational hierarchy.

In the kibbutz the attempt of power-equalization is not directed against the management which is composed of kibbutz members and elected by the kibbutz or plant-general assembly. How then does a more participative plant differ from a less participative one in the distribution of influence among the different functional groups in the plant? Does more influence for workers predict less for management or may it predict a rise in total influence? We distinguished between three different groups:

A. The management board
B. Supervisors and other persons with managerial roles
C. The workers as a group

The following graphs present the distribution of perceived influence among these three groups in three different types of plants. The three different types of plants present different degree of worker-assembly influence as shown in Table 2.

The three plants with patterns A and B are defined as highly participative, the five plants with patterns C and D as medium participative and the two plants with pattern E as low participative. In addition to the actual distribution of influence we present in this figure also the ideal distribution of influence in the different types of plants based on the responses to the question: *In your opinion, how much influence* **should** *the following groups or persons have on what happens in this plant?*

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Figure 1. The distribution of influence in three types of plants.

High participation   Medium participation   Low participation

Influence

5 very great deal

4 quite a lot

3 some

2 little

1 very little

M O W   M O W   M O W

M Managerial Board
O Other managerial or supervisory personel
W Workers as a group

————— actual influence
- - - - ideal influence
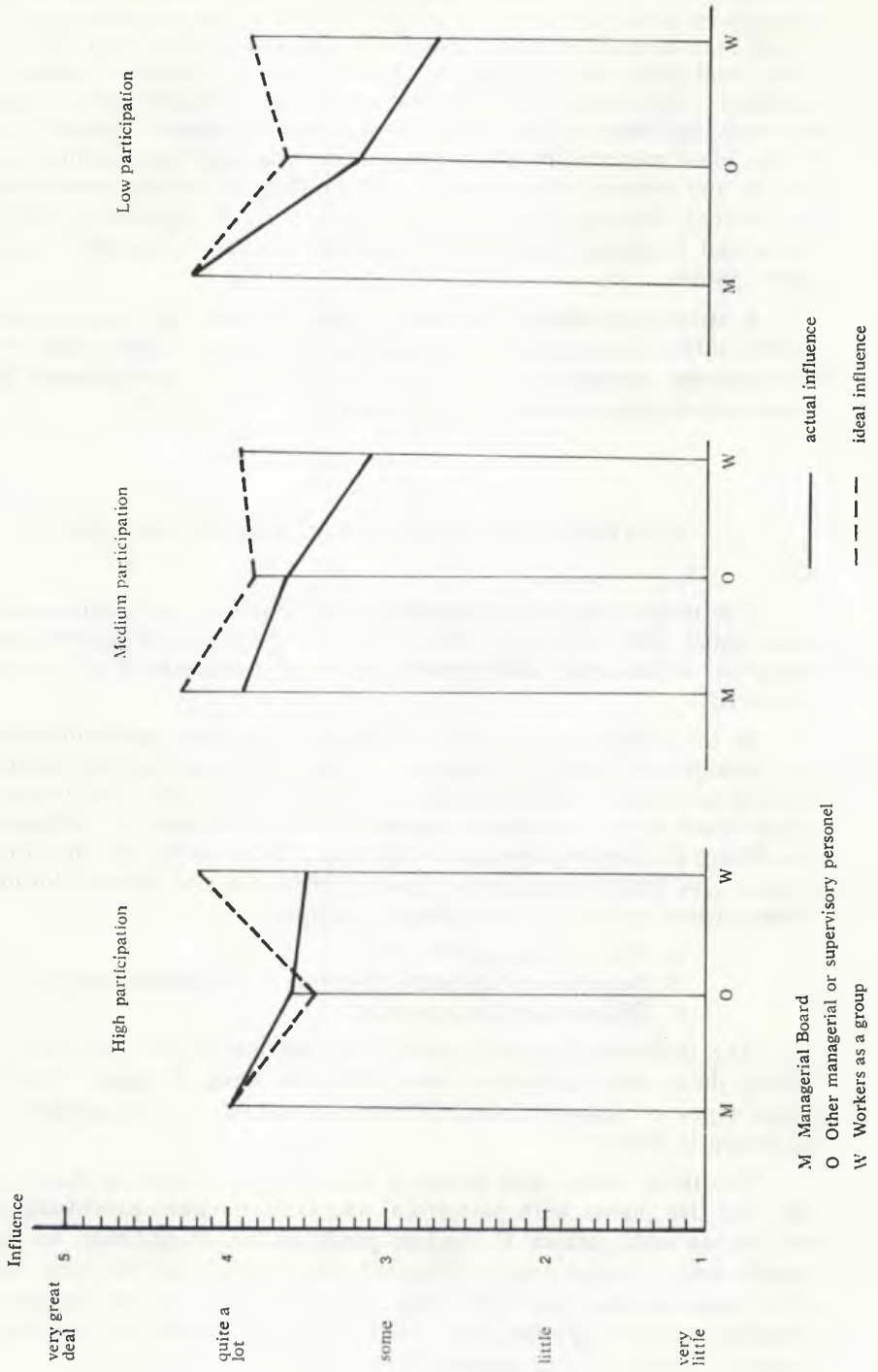
The graphs showing the actual distribution of influence in the three types offers us the opportunity to analyze the relationship between participation and two theoretical concepts:

a. the total influence
b. the slope of the curve presenting the degree of equality in the distribution of influence.

The plants high in participation present the highest amount of total influence and the most equalitarian distribution. The three types differ mainly in the amount of member influence, the differences in the influence of the other groups being much smaller. In the plants with low participation the influence of the board of management is significatively higher than in the two other types, while the influence of the group of supervisors is relatively lower. The most important finding is that higher perticipation is related both to a more equaliterian distribution and to a higher amount of total influence. Previous research in the relationship between these variables sometimes showed different results.

A study of four Yugoslav industrial plants found a positive relation between the degree of participation (measured by the effectiveness of the worker-councils) and total influence. But in the more participative plants the distribution of influence was less equaliterian (the slope steeper) than in the less participative ones (B. Kavčič, V. Rus and A. Tannenbaum, 1971). Similar findings were reported by Tannenbaum also from American studies (Tannenbaum, 1968, p.181).

Our findings are different and show that even in an overall participative system such as the kibbutz, based on principles of direct democracy, the degree of participation of members in the decision-making process at the work-place has a direct impact both on the distribution of influence and on the overall amount of influence in the organization. The differences among types of plants in the distribution of »ideal« influence are less sharp than for »actual« influence. In two types of plants (with high and low participation) the ideal amount of influence for the board of managers is identical with the actual.

The amount of ideal influence for members is in all the types much larger than the actual. Even in the most participative plants the members want much more influence than they have, showing that the desire for more influence is not saturated. G. Strauss (1963) mentioned the possibility that a certain degree of participation will arouse the desire of workers for more participation, as one of the disfunctions of participative management.

In the framework of the direct democracy in the kibbutz a growing demand of members for participation in decision-making can be seen on the contrary as functional for the system.

The relationship between participation and total influence on one hand and the gap in influence between management and members was measured also by correlation methods (the score for each plant being the average score of respondents).

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The results are:

1. participation and total influence r = .70 p < .05

2. participation and size of influence gap: r = .77 p < .01

The positive relationship between participation and total influence raises the question, by which ways does the effectiveness of worker's assembly, which was our measure of participation, contribute to the increase in influence of the other groups in the plants, such as board of management, supervisors, etc. Theoretically a rise in total influence could result from a rise in member's influence alone — without any change in the influence of the other groups. But the graphs in Figure 1 show also differences in the influence of the other groups so that our question is meaningful.

A THEORETICAL MODEL

We explored the intervening variables on the bases of the model developed by C. Lammers (1967) in which we introduced several modifications. As in C. Lammers model we will distinguish also between two levels of participation. The plant — level and the work group level. But while in the cases studied by Lammers, the participation on the plant level was indirect — by election of worker-representants, in the kibbutz plants the participation on the plan-level is also direct, through participation in the worker-assembly.

The difference between the two levels is related more to the different types of topics discussed (plant-policy in the assembly and work related matters in the group) and to the different types of social relations — (more face to face and informal in the group and more formal in the assembly).

Other modifications of Lammers' model are:

a. The distinction between personal motivation and attitude toward management-representing the organizational climate.

b. The assumption that an increase in the flow of communication may result from the sheer fact that workers participate in assemblies and discuss there plant and work-related matters and must not result mainly from a rise in worker's influence as assumed by Lammers.

EMPIRICAL FINDINGS

We will present the findings in the framework of this model in two steps:

I. When participation is the independent variable, member's influence the intervening variable and member's motivations, member's attitude

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Figure 2. Member's participation in decision-making and total influence — a theoretical model
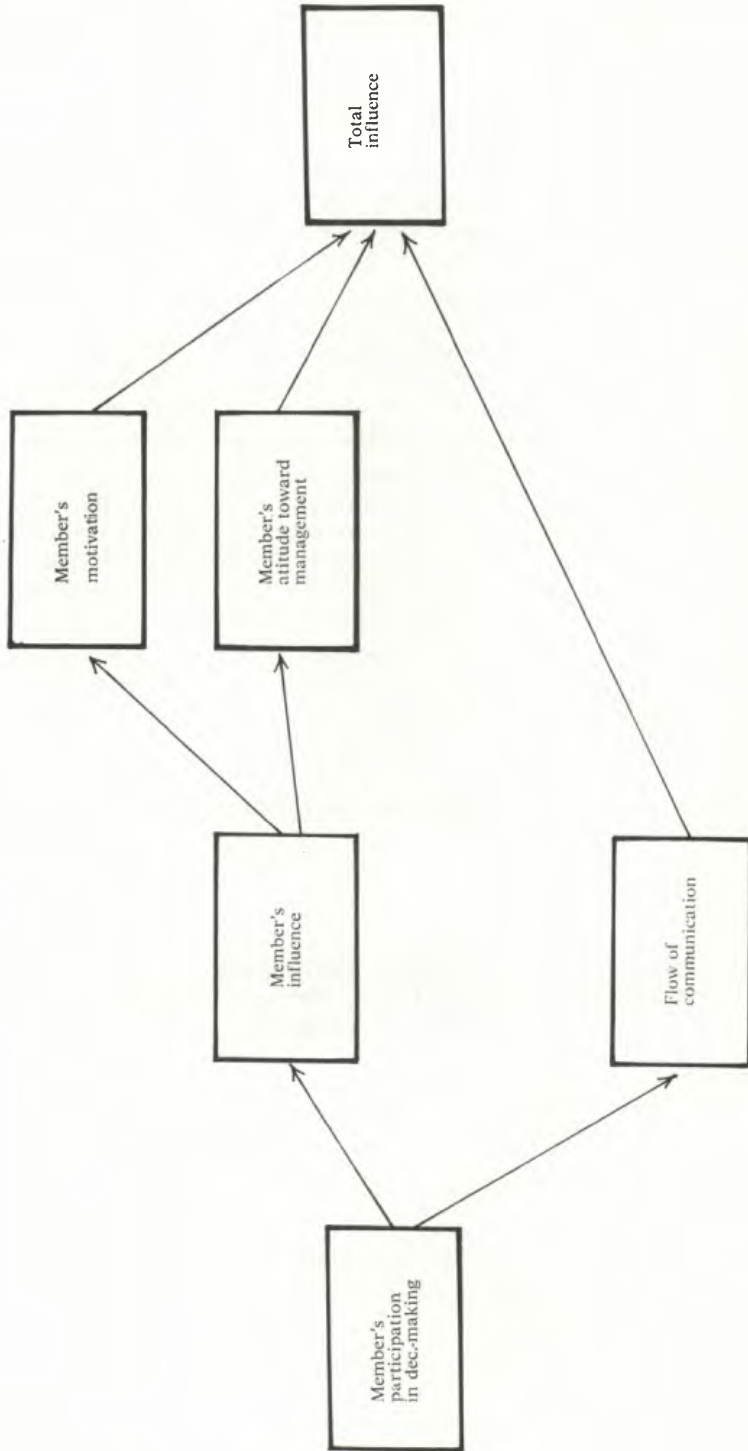
toward management and the flow of communication are the outcome variables.

    II. When these outcome variables are the intervening variables between member's influence and total influence.

I. The impact of the degree of participation on the motivational and organizational variables was studied by correlational methods on both levels, the plant and the work group or department. The index of the influence of the worker assembly was chosen as an independent variable on the plant level.

    The degree of participativeness of the work group supervisor as seen by his subordinates was chosen as an independent variable on the group level. This variable was measured by an index composed of two questions. For each work group the average score was computed. The distribution shows that 26 supervisors were seen by their subordinates as highly participative, six as non participative while 42 had an intermediate position on this score.

    The dependent variables were two individual motivational attitudes (satisfaction with the plant and commitment to plant goals) and two organizational characteristics (the trust of members in management and the attitude of workers toward management). Members' collective or personal influence was seen as an intervening variable between the degree of participation and the individual or organizational outcomes.

    The rationale for this assumption is that it is not participation itself but the increase of members' influence resulting from it that may cause the different outcomes. On the other hand a direct relationship was assumed between members' participation in decision making and the flow of communication in the plant or the work group.

    The correlations among the independent, intervening and dependent variables are presented in Table 3.

TABLE 3

Correlations between Member Participation in Decision Making on Plant and Work Group Level, Member Influence and Different Outcome Variables

Correlations between:	plant level	group level
a. Participation and member influence	.85***	.74****
b. Member influence and satisfaction with plant	N.S.	.27**
c. Member influence and commitment to plant goal	N.S.	.60****
d. Member influence and trust in management	.59*	.28**
e. Member influence and perception of member attitude to management	.76**	—
f. Participation and flow of communication	.90***	.56****

*   p < .01   **   p < .05   ***   p < .10   **** p < .001

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All the variables were measured by taking the average for the plant and for the work group of respondents' score.

Because of the different situation there were differences between the measures used for variables on the plant level versus the work group level:

a. on the plant level member influence was measured by a question asking how much influence workers have as a group in the plant while on the group level we used the question how much influence have you personally.

b. On the plant level members' trust in management was measured by an index composed of questions dealing with the attitude of management toward workers as perceived by the respondent. On the group level the parallel index is composed of questions dealing more directly with the personal trust of the respondent in his supervisor.

c. On the plant level the measure of the flow of communication deals with communication between departments while on the group level the parallel question deals with frequency of communication on work matters between the respondent and his supervisor.

d. On the work group level we had no measure of the perception by the respondent of workers attitude toward management.

On the plant level a clear pattern seems to occur. While no correlation was found between participation or workers influence and the variables measuring personal attitudes, significant correlations were found with the measures of organizational characteristics. In plants where workers have more influence, based on a high degree of members effective participation in decision making, they also have more trust in management and the general attitude toward management is more favorable.

When participation is more effective there is also more communication among work groups in the plant. In contrast to the lack of significant relationship between effectiveness of participation, members influence and personal attitudes on the plant level, strong positive correlations between these variables were found on the group level. Especially strong is the correlation between member influence and commitment to plant goals. The correlation between participation on the group level and communication is also very high.

By comparing the impact of participation on the two levels we found that at the plant level this impact is mainly on organizational and collective variables such as members attitude and trust toward management and the influence of workers as a group, while on the group level the impact is also on individual and motivational variables.

These differences can be seen as related to the more formal and impersonal character of the worker assembly where general organizational issues are discussed and decided versus the more informal and personal nature of participation at the group level.

The decisions at the group level are also more related to personal conditions of work and work content and may therefore trigger more personal involvement.

II. In the following we will present the second part of the model dealing with the intervening variables between workers influence and total influence on the plant-level and on the work-group level. On the work group level we will use for technical reasons, instead of a measure of total influence — the sum of supervisor and subordinates influence — only a measure of supervisor influence. This measure was obtained from the supervisors as answers to the question: »In your work to what extent can you have authority over other people?« All the other measures are based on the averages of subordinates answers.

TABLE 4.

Correlations between Members' Influence on Plant and Work Group Level, Different Intervening Variables and Total Influence on Both Levels

Correlations between	Plant level	Group level
a. Member influence and total influence	.70**	.35***
b. Satisfaction with plant total influence	n. s.	n. s.
c. Commitment to plant goals and total influence	n. s.	.61***
d. Trust in management and total influence	.76**	n. s.
e. Member's attitude to management and total influence	.79***	—
f. Flow of communication and total influence	.66**	.35***

* $p < .10$ ** $p < .05$ *** $p < .01$ **** $p < .001$

The findings shown in this table together with those shown in Table 3 stress the differences between the major intervening variables on the plant level and those on the group level. On the plant level these are the two organizational variables: trust in management and attitude toward management while on the group-level it is the main motivational variable: commitment to the plant. The following two models show therefore the different ways in which an increase in the influence of the workers — the members as a group — is related to a rise in the influence of other groups supervisors on the work group level, the board of management and other managerial personnel on the plant level.

The flow of communication is the only common intervening variable on the two levels. On both levels it is shown that influence is an expanding quantity so that the rise of the influence of one group does not result in a reduction of influence of the other group, as a zero-sum model of power

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Figure 3. The impact of participation in decision-making on different intervening variables and on total influence — on the plant level
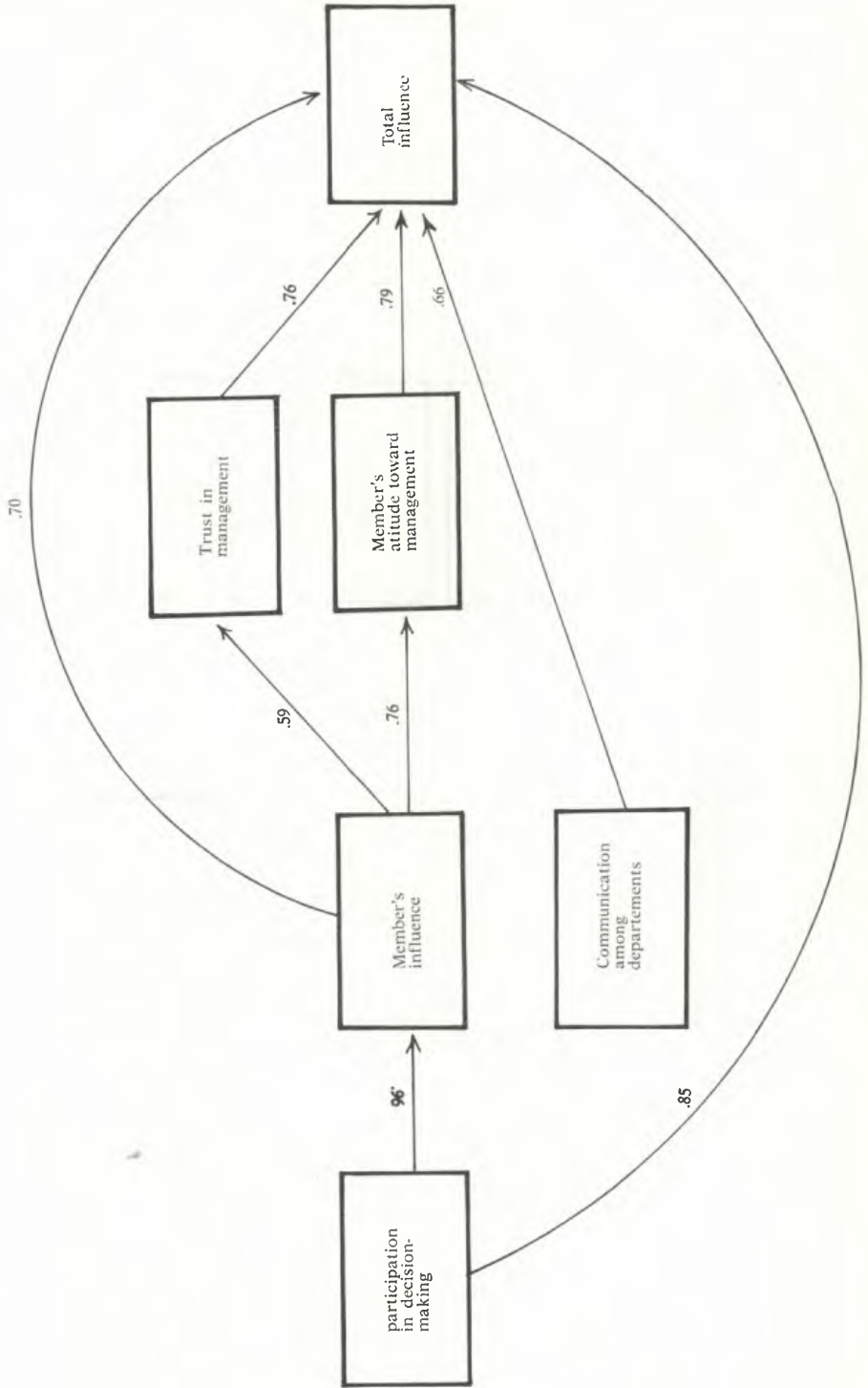
Figure 4. The impact of participation in decision-making on different intervening variables and on supervisors influence — on the work group level
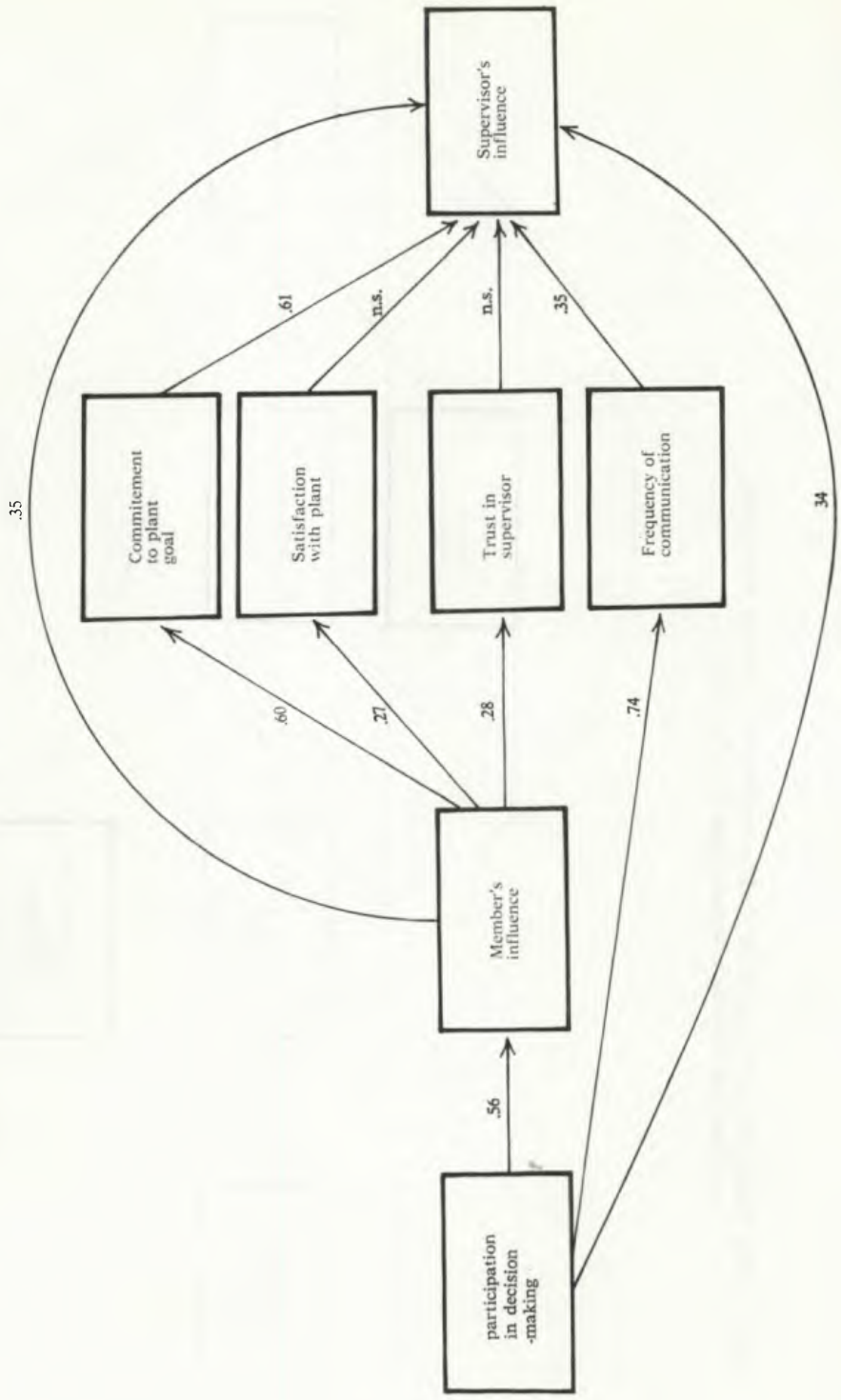
Mills (1956); Dahrendorf (1959) would predict. Is this finding conditioned by the special nature of the kibbutz system based on collective ownership and a communal form of life? This question is open to further research.

In a later stage of our research the relationship between the motivational and organizational variables and between economic outcomes have been studied and significative positive correlations have been found. A more detailed presentation of these results is given in Appendix B.

D. CONCLUSION

As conclusions it seems important to specify some of the limitations for and possibilities of generalization from the specific kibbutz model of worker participation in decision making in industry.

    a. Each kibbutz plant is a part of the larger kibbutz social system, a community which encompasses all aspects of a member's life. The social relations in the plant are therefore part of a more comprehensive system of relations.

    b. The workers in kibbutz industry are co-owners and their attitude toward the plant is not like that of wage and salary workers.

    c. Kibbutz plants are relatively small, but relatively capital intensive.

    d. There are no material incentives in the kibbutz and there is no direct relationship between the individual contribution of a member and his standard of living.

But despite these limitations some important lessons can be learned from the experience of kibbutz industry:

    a. Technologically advanced industrial plants can be managed effectively on the basis of direct democracy by means of decision making within the framework of the worker assembly.

    b. Beside the mechanism of direct democracy there still exists a hierarchical organizational structure. But this hierarchy is limited by the fact that a high degree of participativeness prevails in the relationship among hierarchical levels, and supervisors engage in production work.

    c. A rotation system functions not only for higher management as in Yugoslavia, but also for managers and supervisors on the line. The system of rotation stimulates a large dispersion of professional and technical knowledge and of leadership skills.

    d. Our findings stress the importance of worker participation in decision making both in smaller work groups and larger worker assemblies and the specific and different impact of these two forms of participation.

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APPENDIX A — THE MEASURES OF VARIABLES

The variables	**The measures**

I. *On Plant Level*

1. Influence

How much influence do the workers as a group have on what happens in this plant?

2. Satisfaction with plant

An index formed from 5 questions:

a. How much satisfaction do you get from your job in the plant compared to what you do after leaving the plant?
b. Do you like working for this company?
c. Do you like to work in this plant?
d. Are you interested to continue working in this plant?
e. How good is this plant compared to the other branches in the kibbutz?

3. Commitment to plant goals

An index formed from 5 questions. To what extent do you feel really responsible for the success of:

a. Your own work group
b. Your department
c. The whole plant?
d. In your kind of job, is it usually better to let your supervisor worry about producing better or faster ways of doing the work?
e. How often do you try out on your own a better or faster way of doing the work?

4. Trust in management

An index out of 3 questions:

a. Do you think the responsible people here have a real interest in the welfare of those who work here?
b. Do the responsible people in this plant improve working conditions only when forced to?
c. When a worker in this plant makes a complaint about something is it taken care of?

5. Attitude toward management

a. How frequently do the workers in the plant suggest innovations and new approaches?

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	b. Do the workers in this plant encourage each other to contribute their best for the plant's success?
	c. What are the attitudes of the company's members toward plant management?
6. Communication	Do the workers in the different departments communicate to each other on what happens?

II. *On the work group-level*

1. Influence	How much influence have you personally, on what happens in this plant?
2. Satisfaction with plant	The same as on plant level
3. Commitment to plant goal	The same as on plant level
4. Trust in supervisor	An index formed from two questions:
	a. Do you have trust in your superiors?
	b. Would you like to have your superior changed?
5. Communication	How frequently do you speak to your superior on work matters?

APPENDIX B

Following the research reported in this paper, a study comparing kibbutz agricultural branches and industrial plants was conducted by the Center for Social Research on the Kibbutz. In addition to sociological, psychological, and organizational variables, a series of economic variables was also studied in a sample of 24 plants of varying size. Table 5 shows the relationships between motivational and organizational variables measured by questions similar to those of the first study, and economic variables.

TABLE 5

Correlations between Psychological and Organizational Outcomes and Economic Results

Psychological or organizational variable	Economic indicator		
	Rate of return on capital investment	Both profit invested capital	Not profiit per may-days worked
Members' influence	n.s.	n.s.	n.s.
Satisfaction with plant	n.s.	n.s.	n.s.
Commitment to plant goals:			
responsibility	n.s.	.42*	n.s.
innovativeness	.50*	n.s.	.43*
Trust in management	.51**	.43*	.4*
Flow of communication	n.s.	n.s.	n.s.
Total influence	n.s.	n.s.	n.s.

* p < .05
** p < .01

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PARTICIPATION AND DECISION-MAKING RE-EXAMINED

INTRODUCTION*

What is usually called 'Participation' overlaps with the literature described by the terms leadership, democracy and power-sharing.

The theoretical position described in this paper and the research framework on which it is based has been influenced by these three areas of work (Heller 1971, 1972). We will argue, moreover, that participation and its related subjects have to be considered from at least three points of view:

— interpersonally as events between people and groups
— structurally as a political system based on a framework of law or conventions
— having either universal characteristics or depending on contingencies which apply to some events more than others.

As far as we know, no research has yet been able to consider all three sets of variables at the same time, but this should be possible in the future. In this paper we will concentrate primarily on the third point and to some extent on the first. However, the research which will be described briefly in this paper as well as in another to be given at this Congress is being carried out in eight countries which have varying legal structures relating to participation. Eventually, it may therefore be possible to make certain inferences about the second point as well.

Preoccupation with participation and industrial democracy stems from many sources and there are many alternative definitions. Moreover, this is an area of behavioural science in which personal values and aspirations play a substantial part in formulating the concept and in designing research projects. According to the opening paragraph of Kenneth Walker's Times Management Lecture (Walker 1970) visions of democracy which he calls dreams »have appealed to various reformers and social groups for a variety of reasons over 100 years«. There is little doubt that new visions will be formulated, old ones refurbished and that our subject will still be discussed, in one form or another, by congresses in the late twenty-first century. While this gives us the satisfaction of operating in an important conceptual field, it also imposes on scientists the obligation to look for constant improvements in methods and theories rather than to formulate once and for all solutions«. The

research to be described attempts to introduce a theoretical framework and a fact finding methodology which limits the impact of value assumptions. However, we do not believe that we have eliminated values nor do we think this is possible.

THE MAJOR ALTERNATIVES

Walker (1970) distinguishes four forms of industrial democracy:
1. Democratization of ownership
2. Democratization of the government of the enterprise
3. Democratization of the terms of employment
4. Democratization of management

He goes on to argue that: »Combined with the fact that democratization of ownership and the government of the enterprise do not appear to have much effect on the situation of the individual worker and are therefore rather remote from his immediate interests, the tendency for collective bargaining over the terms of employment to develop into bargaining over management implies that it is the democratization of management that is the key issue in industrial democracy. In addition to collective bargaining over management, this problem may be approached through formal democratization (modifying the formal organization of the enterprise so that those lower in the hierarchy share some of the power attached to the authority of their superiors) or by informal democratization (replacement of an authoritarian style of supervision by a 'participative' approach).«

These two alternative approaches also happen to describe the different emphases in work carried out in Europe and the United States. In Europe, a **formal** democratization approach has been more forcefully implemented. Thus structural and legal provisions give influence and power as a matter of right, but only in the formal sense. No method is available to implement these structural schemes at the interpersonal level by assuring that people know how to handle the complex process in a group setting and have the necessary perceptions and skills for translating theory into action. As a consequence it is often maintained that the far-reaching German co-determination laws are relatively ineffective at the shop floor level where interpersonal relations can still be autocratic.

In America the emphasis has been largerly on an individual's leadership style, and remedial action has usually concentrated on changing people rather than organizations or tasks. Participation becomes a question of personal sensitivity and the choice of a particular training programme and value system.

A NEW APPROACH

The contribution of this paper to the ongoing discussion will make three points. Firstly, it will be argued that the concept »participation« is less use-

ful for an understanding of organizational reality than a reformulation based on the notion of power and influence.

Secondly, we will challenge the idea that participation or power can be used universalistically. Our evidence will show that in modern, large and progressive companies participation and power are seen to be anchored in the situation, particularly in the nature of the task. This is a form of socio-technical analysis and fits in well with a pluralistic view of social phenomena.

Thirdly, and as an extension of the socio-technical view, we suggest that interpersonal systems of influence and power-sharing are related to other external system, such as the legal framework, which interact with it, and that participation at the interpersonal level cannot be understood without bringing environmental variables into the theoretical framework (Heller 1972).

THE INFLUENCE-POWER CONTINUUM

One of the aspects entailed in the definition of participation is that it is descriptive of a particular manner of social interaction. Further, it seems descriptive of how power is shared amongst different members of an enterprise. All social organization within enterprises has some kind of control system which is used to integrate a variety of resources, both human and material, required in the productive process. Controls commonly entail hierarchical systems of authority in which increasing amounts of power are located in position at the top of the organization.

In the making of decisions we argue that different people contribute to a flow of events which we can call the decision process. If people have access to this process they may be said to have **influence,** and if their influence affects the final outcome then they have exerted some degree of **power.** Different patterns of influence and power will reflect different ways of making decisions. From this description it seems that participation is a particular style of interpersonal interaction. Participation, however, is one style among many. The research to be described here uses five alternative styles (in the context of the relationship between a boss and his subordinate). The following definitions are given to all respondents and it is stressed that they must describe their actual behaviour without assuming that any one of these styles is better or worse than the others.

1. **OWN DECISION**[1] **without** detailed explanation

   These are decisions made by **you** without previous discussion or consultation with subordinates and no special meeting or memorandum is used to explain the decision.

   This method includes decisions made after consulting with managers at the same level or superiors.

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[1] **Definition of »Decision«.** This term includes the process leading up to the final decision. Advice or recommendations that are usually accepted count as decisions for the purposes of this research.

2. **OWN DECISION with** detailed explanation
   The same as above, but afterwards you explain the problem and the reasons for your choice in a memo or in a special meeting.

3. **PRIOR CONSULTATION** with subordinate
   Before the decision is taken, you explain the problem to your subordinate and ask for his advice and help. You then make the decision by yourself. Your final choice may or may not reflect your subordinate's influence.

4. **JOINT DECISION-MAKING** with subordinate
   You and your subordinate(s) together analyse the problem and come to a decision. The subordinate(s) usually has as much influence over the final choice as you. Where there are more than two in the discussion, the decision of the majority is accepted more often than not.

5. **DELEGATION** of decision to subordinate
   You ask your subordinate to make the decision regarding a particular subject. You may or may not request him to report his decisions to you. You seldom veto his decisions.

From the definitions given it can be seen that as we go down the list the boss allows the subordinate a greater degree of influence and power in the making of the decision. Thus the decision styles seem to lie on different points of what might be called an influence-power continuum (IPC). In general it can be argued that what is usually called participation, lies somewhere in the range of what we call styles 3 and 4, while style 5 cannot be called participative since it does not require an interpersonal process. However, in terms of the benefits usually claimed for participation, namely greater self actualization and making better use of skills at lower levels of an organization, style 5 is at least as relevant as styles 3 and 4.

METHOD OF RESEARCH

The method used is called Group Feed-back Analysis (Heller 1969). It consists of three steps; one begins by gathering a group of managers of the same level of seniority (in our case senior executives one level below the head of the organization) around a large table. A series of short questionnaires are explained and filled in. During the second stage, the research worker calculates the results of this inquiry by producing simple averages and a measure of the spread of individual answers around the average. The third and most interesting step is the feedback session. The group receives a summary of its own results and is asked to discuss them. Particular attention is paid to the interpretation the managers themselves give to their average answers in terms of the specific business circumstances to which they refer. The researcher gradually leads the group to discuss certain questions which enlarge the scope of the questionnaire material. This session is taperecorded and later analysed. The method is powerful because it produces two kinds of information. In the first place, there are the answers from carefully prepared

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questionnaires which can be submitted to a sophisticated statistical analysis. The relationship between the statistical material and the feedback data is particularly close since the group discussions are based on the statistical material and help to extend it. The same procedure is repeated with a group of immediate subordinates.

THE RESEARCH

Twenty British companies and over three hundred senior managers provide this sample. A similar research on a slightly smaller sample had previously ben carried out in the United States.[2] Fourteen questionnaires are administered during Group Feed-back Analysis and they have been described in the literature referred to previously. Three questionnaires use the Influence-Power Continuum to get managers at two senior levels to describe how they make decisions. The other questionnaires measure

— perceived skill differences at the two levels
— actual educational and other skills of the two levels
— various job and environmental constraints operating on the manager
— attitudes to participation
— job satisfaction.

Only a part of the available material will be used for the present report, which will attempt to answer the following three questions:

1. What distribution of influence and power sharing are reported by managers in large successful companies?

2. Does the extent of influence and power-sharing vary according to situations?

3. What are the factors that appear to affect the variations in influence and power sharing?

TABLE 1*

Percentage use of decision-making styles as perceived by L.1 & L.2

Style	L.1	L.2
1	12.0	12.4
2	18.6	12.9
3	35.5	25.5
4	23.0	29.7
5	10.7	19.4

* All statistics reported in Tables 1 to 6 relate to an N = 172 for each level.

TABLE 2

**Alternative interpretations of decision-making styles as
perceived by L.1 and L.2**
(in percentage)

	L.1	L.2
Interpretation 1		
Styles 1 & 2	30.7	25.4
Styles 3, 4, 5	69.3	74.6
	100.0	100.0
Interpretation 2		
Styles 1, 2, 3	66.2	50.8
Styles 4 & 5	33.8	49.2
	100.0	100.0

In order to shed light on these questions we would like to report some findings from the research programme whose method has been described earlier. As part of the questionnaire battery, we ask senior (L. 1) managers how they make decisions with their subordinates in twelve different decision situations. L. 2 is asked to say how his immediate boss makes the same decisions in relation to himself. Each manager is asked to proportion, out of 100, the use of the five different decision styles described earlier. By summing and averaging across the twelve different decision situations, we can arrive at the average proportional use of the different styles by L. 1, reported by L. 1 and by L. 2.

The results of table 1 indicate that all five methods are used to some degree, with a predominance of method 3 reported by L. 1. The subordinate, however, feels that his boss displays method 4 more often. This is an interesting finding, but the point we would like to emphasize here is that in large and successful companies a variety of decision methods seem to be used by managers in our sample.

Furthermore, the answer to our first question depends on our definition of influence and power sharing. The distribution of decision styles (Table 1) can be broken down into two alternative interpretations (Table 2). If we assume that influence and power sharing starts with Prior Consultation and includes Delegation, then approximately 70% of decision interaction between both levels are reported in this way.

If we adopt a more stringent interpretation of power sharing, however, confining it to Joint Decision-making and Delegation, then managers in successful large companies report these styles on average between 40—50% of the time. This more restricted interpretation is more realistic if we take account of the results from the feed-back discussion which show that Prior Consultation is frequently justified as a way of 'making people **feel** that they have influence, rather than as a way of bringing them into the decision process.

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If we move now to the second question, »Does the extent of power-sharing vary according to the situation?«, we find that the reported use of the different methods is related to what kind of decision is being considered and to the type of job function in which the managers in our sample work. The content of the twelve decisions in the questionnaire described earlier can be divided into three broad areas, namely

1. Decisions concerned with the immediate subordinate, e.g. 'The decision to change an operating procedure followed by your subordinate.' called SUB

2. Decisions concerned with the subordinate's subordinates, e.g. 'The decision to give a merit pay increase to one of your subordinate's employees.' called EMP

3. Decision concerned with the department in which both work, e.g. 'The decision relating to the purchase of a piece of equipment for your department at a cost within your budgetary discretion' called DEPT.

Averaging the use of decision styles in these content areas shows different patterns in each (see Table 3).

TABLE 3

Percentage use of decision styles by L.1 in different situations

Decision	SUB	EMP	DEPT
Style 1	18.8	4.9	14.8
2	30.8	9.5	23.8
3	32.9	39.3	40.2
4	15.3	35.2	16.8
5	2.2	11.1	4.4

The clear differences in the Table above indicate that the content of a decision is associated with the method of decision-making. This finding reflects many things about the way our sample of managers interact with each other over particular issues and suggests a highly complex process underlying these patterns of interaction. If we turn now to job function, we find significant differences in the pattern of power sharing in decision-making in managers belonging to different functions (see Table 4)[3].

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[3] It is important to mention here that the figures representing the pattern of power-sharing within each job function are all related since our managers are asked to express the proportional use of different styles out of a total of 100. A significant difference found on one method (Method 4 in our case) therefore necessarily reflects differences on others. However, if parts of this difference are equally distributed amongst the other four methods then this may lead to significant differences on only one method being found. This arises as an artifact of the instrument.

TABLE 4

Percentage use of decision styles in different job functions

Style	Miscel	General	Produc[n]	Sales	Finance	R & D	Stores	Personnel	
1	10.6	11.9	8.9	16.6	9.7	10.4	22.3	8.0	ns
2	17.6	23.1	14.8	19.8	16.2	13.2	10.1	17.4	ns
3	49.5	36.5	30.2	30.2	38.6	40.2	34.9	28.1	ns
4	16.5	19.3	36.2	17.3	20.1	26.9	17.6	36.4	sig at 1%
5	5.7	11.7	9.9	11.7	9.1	9.3	15.2	10.1	ns

The conclusion we can draw is that our managers appear to modify their decision methods not only according to the content of the decision but also according to the **task situation** in which it is made. This seems to imply that some kind of choice is being made by the manager, consciously or otherwise, about how he will interact in a particular situation over a certain issue. Clearly, such a choice has implications for the subordinate and the use that is made of his skills. It now becomes pertinent to consider on what basis this implied choice is made.

This brings us to the third question, namely, what factors are associated with variations in power sharing? Two pieces of evidence contribute to this. A questionnaire included in the battery given to both levels in our sample was concerned with exploring the differences in skill perceived by each level compared with the other. Managers were asked whether their own jobs required more or less of a particular skill than that of their opposite number in the boss-subordinate pair. By correlating answers to this questionnaire with the average use of the different styles over the twelve decision situations, we find that some perceived differences are associated with the use of different styles. (See Table 5).

TABLE 5

Relation between how managers make decisions and their judgements of skills

Form 4	DCS
Technical ability	0.188
Contact with people	0.145
Human nature	0.076
Imagination	0.078
Self confidence	0.208*
Responsibility	0.211*
Decisiveness	0.264*
Tact	0.054
Adaptability	0.088
Forcefulness	0.164
Intelligence	0.032
Initiative	0.210*

* = significant

* A significant correlation indicates that powersharing styles are used when perceived skill differences between L.1 and L.2 are small.

In this Table, we have used an index derived from the scores assigned to the five different decisions methods. This is called the Decision Centralization Score (DCS) and is calculated by weighting the proportion assigned to each method by its order on the IPC scale, and dividing the result by 100. The findings indicate that the decision method used is associated with perceived skill differences in some skills but not others. Thus a manager seems to modify his decision method according to how he perceives his subordinate and his skill.

A second piece of evidence on this point derives from an examination of the **formal** skills possessed in our pairs of managers. By splitting our sample of pairs into four groups on the basis of possession of a university degree at either level, we can compare the preferences for different styles expressed by L. 1. Significant differences emerge between the groups. (Table 6).

TABLE 6

The possession of educational qualifications in boss-subordinate pairs related to decision-making styles (in percentage)

| | Dec style | Higher qualifications possessed by: | | | | |
		L.2 only	Neither	Both	L.1 only	Differences
	1	9.4 (9.6)	14.2 (13.4)	9.5 (11.5)	10.8 (13.4)	ns (ns)
Figures in	2	24.2 (12.9)	20.2 (12.9)	13.4 (12.2)	15.9 (13.3)	ns (ns)
brackets	3	37.1 (27.3)	36.8 (31.6)	39.9 (25.9)	29.9 (22.4)	ns (ns)
indicate L.2	4	22.2 (26.3)	19.1 (27.6)	27.3 (33.4)	31.8 (33.7)	5% (ns)
scores	5	8.9 (23.9)	9.9 (14.6)	12.5 (17.3)	11.5 (17.7)	ns (ns)

From this Table is seems that the decision method preferred by L. 1 is associated not only with perceived skill differences but also with differences in educational level attained by members of a boss-subordinate pair. This result supports the hypothesis suggested earlier that the existence of varying decision methods implies that managers have to make some kind of choice of how they interact with a subordinate. This choice is made on the basis of several factors among which are the content of the decision being made, the situation in which it is made and the qualities the boss perceives the subordinate as having. In short, a method of decision-making emerges from the particular conditions in existence at the time the decision-making occurs. To understand, therefore, how power-sharing occurs in the social organization of an enterprise, we must examine the socio-technical context of the decisions and the personnel who interact in making them.

The findings reported here are far from conclusive, they simply illustrate trends and they give tentative support to our hypotheses. However, these findings receive considerable support from the previously published American research (Heller 1971) and from the first account of the German results (Wilpert & Heller 1972).

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SUMMARY AND CONCLUSIONS

It seems that decision-making is a complex **process** to which many people in any organization contribute and a concept like participation cannot account for all the behaviour. Even if we confine ourselves (as in the research evidence reported here) to pairs of superiors and subordinates, we find that the interaction between them is based on a variety of factors which are a function of the socio-technical system within which the managers operate. Such a system entails a number of conflicting pressures being placed upon members of an enterprise. Somehow a balance is struck between all these pressures in arriving at a particular method of interaction.

Thus it appears that the chosen styles of decision-making do not depend solely upon the personality of the different actors involved in the decision process, but also apparently upon the context in which the decision is made. This, we feel, is an important finding because it forces us to recognize the need to measure the socio-technical context of decision-making.

We have argued that the concept of »participation« is of limited value if we study how people interact in the hierarchical organizations which exist in modern enterprises. From the point of view of what really happens between boss and subordinate in the decision process we need a wider range of alternatives. Participative behaviour as usually described in the literature falls somewhere within the range defined by styles 3 and 4 in our continuum, but the advantages claimed for participation, for instance greater job satisfaction, are just as likely, or more likely, to be associated with Style 5. The same is probably true of organizational effectiveness, although it is at the moment impossible to find adequate measures for this variable. If we assume, however, that organizational effectiveness is improved if human skill resources are more extensively used at all levels of the hierarchy, then delegation of **appropriate** decisions is clearly a method that must be considered as an extension of the process of interpersonal relations.

The international research project was started in America in 1966—68 and was completed in Britain in 1971. It is almost finished in Germany and Holland and is now being carried out in Sweden, France, Spain and Japan, with 1973 as the probably completion date. With each extension improvements are being incorporated. Standardization of field methodology has been an important aim, but the scientific responsibility for every national research project rests with the national centre and its senior staff.

The framework within which the work was planned is called a contingency model because it attempts to assess the relationship between the environment and decision-making. For instance, the preference for certain decision styles is contingent on the nature of the job being done and on the amount of skill and training of the managers concerned. In theory there are a large number of potential contingency variables, in practice it is likely that a few will account for the major portion of the observed variance of behaviour. Progress in this direction is a major aim of the research. Organization structure, size and legal requirements are among the factors which will have to be examined. In this way we might eventually be able to decide whether the present European preference for structural or the American preference for interpersonal solutions are viable alternatives, or whether useful lessons can be learned from both approaches.

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CO-DETERMINATION IN GERMANY
Preliminary Report

on

Behavioral Patterns of Influence and Power Sharing among Senior Management Levels

INTRODUCTION

»Mitbestimmung« (co-determination) has traditionally been the term relating to the German conceptual variant of industrial democracy. In general it referred to the institutional facilitation of equal contribution by employers and employees to the solution of problems existing within the enterprise: »the equally balanced participation in planning and decision authority within firms« (Duvernell 1962). The conditions for making such equal contributions possible in spite of existing hierarchical levels and corresponding power and influence gradients are seen to lie in legally prescribed institutional reforms: the constitution of works councils (Betriebsräte) representing employee interests and the delegation of employee representatives into supervisory or management boards of a company.

Quite in line with this preoccupation we find German social scientists, who study co-determination, very much concentrating on issues of institutional innovation and the legal antecedents and consequences of introducing a larger amount of co-determination (Potthoff et. al. 1962).

Heller has drawn the attention to the curious difference which seems to mark European and American thinking on participation: while in Europe one tends to confine oneself to organizational and structural variables and their analysis by methodological tools of social anthropology, sociology and jurisprudence, »in America the emphasis is on leadership practices seen as patterns of interpersonal relations and examined with the tools of traditional social psychology« (1971).

Still in the vein of the European institutional—legal tradition but opening new vistas is Biedenkopf, who considers as most important goal of co-determination »to insure a leadership style by institutional means which is characterized by an obligation to give arguments and reasons« (1972).

Indeed, it seems necessary to begin to interweave both aspects, institutional — structural and behavioral — interpersonal ones.

TOWARD A NEW FRAMEWORK OF ANALYSIS OF CO-DETERMINATION

Prominent theoreticians and analysts of co-determination have stressed the aspect of integrating employees' arguments and interests in the decision

making processes of a company as the most crucial operational elements of co-determination (e. g. Biedenkopf 1972, Duvernell 1962). If, for analytical purposes, we are to take this seriously, we are forced to take many more facets into account than just the legal provisos for the creation of new organizational units and their endowment with certain legal rights (e. g. works councils) and organizational roles (e. g. employee representation in supervisory boards). What is required is an open socio-technical system's approach which considers phenomena and events within the socio-technical system of a company as being influenced by and influencing environmental forces, and approach which has also been advocated by Neuloh (1960).

More specifically: the success of co-determination in Germany will depend on a large variety of variables of which the specific legal requirements are just a part of the larger package of environmental variables working on individual companies. Environmental factors such as public opinion, degree of economic and political stability are others. Immediate work environment, organizational structure, task structure, technology, and skill availability then must be considered as variables belonging to the system »company«. The intra-organizational forms of interaction, participative decision making and information exchange will in turn most likely be influenced — among others — by attitudinal factors such as the readiness of management to use participative leadership styles and the management's perception of the ultimate goals of participative decision making. The same can be said about the impact of perceptions and attitudes held by employees (Siegwart 1972). Diagram 1 represents a tentative list of the various factors most likely to influence the forms of intraorganizational exchanges and behavioral patterns of cooperation and co-determination.

SOME BEHAVIORAL QUESTIONS RELATING TO CO-DETERMINATION

Diagram 1 depicts the great variety of factors assumed to influence co--determination as intra-organizational forms of interaction and their outcome in terms of organizational effectiveness and of the realization of certain personalistic and social values. Co-determination as an institutional approach with the objective to take into account employee interests in the decision making processes of the firm can and probably must be looked upon as an attempt to distribute social power in industry, »so that it tends to be shared out among all who are engaged in the work rather than concentrated in the hands of a minority« (Emery and Thorsrud 1969).

From such a vantage point it must be important to know:

Firstly, what are the ultimate goals and benefits of power and influence sharing practices in decision making as perceived by the upper levels of business organizations?

Secondly, to what degree does the leadership of an organization already share influence and power between various hierarchical levels of an organization's authority structure even without formal legal compulsion? This is the question to what degree »informal democracy« is already »lived« in enterprises.

Thirdly, what are the factors that influence the degree to which participative decision making techniques are used?

To be sure, all these are questions that can be and are posed quite independently from issues of the formal, institutional issues of co-determination. However, consistent with our proposed analytical framework we must assume that these variables constitute constraints or contingencies which will modify the behavioral patterns also of intra-organizational institutional interactions (between works councils and management) and their results.

RESEARCH DESIGN AND METHODOLOGY*

The research was or is being conducted in a parallel fashion in USA, UK, Netherlands, France, Sweden, Spain, Japan, and Germany. Matching samples of about 160 — 250 managers are chosen in each country from roughly 15 large, »progressive« firms which are carefully matched according to industrial branch, technology, size and management level. It is on a subset of 195 German managers that the preliminary evaluation of data is reported in this paper. Two levels of managers praticipated in the research: Level 1 (L1) which is the management one or two levels (depending on the organizational structure) below the president and Level 2 (L2) composed of the senior level's chief subordinates.

The methodology (Group Feedback Analysis) has been described in detail elsewhere (Heller 1969). It proceeds in three steps:

1. Filling in of a set of 14 standardized questionnaires by the group of managers of one level,
2. calculation of averages and measure of distribution of individual answers,
3. feedback and discussion of results by the participating group of managers with the objective to relate the results to the specific circumstances of each individual firm.

The same procedure is followed for the second level of managers.

The main instrument for the measurement of influence and power sharing (Influence — Power Continuum — IPC) differentiates five decision styles:

I   Own Decision without detailed explanation
II   Own Decision with detailed explanation
III Prior Consultation with subordinate
IV   Joint Decision-Making with subordinate
V   Delegation of Decision to subordinate

In addition, other variables assumed to constitute contingencies for the core variable »influence and power sharing« are measured by the standardized instrument: experience and education of managers, perceived job performance requirements, perceived skill availability and utilization, work

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* See also F. A. Heller's and J. S. Rose's contribution to this Conference

environment in terms of turbulence and pressure, attitudes towards power sharing, satisfaction, organizational variables.

RESULTS

1. In the »power sharing rationale questionnaire« (form 13) participants are asked to rankorder five reasons for participative decision making which were most often mentioned by managers in pretests. The criterion for the rank-order is »degree of importance for you personally«.

For both management levels of German managers (N = 195) the same over-all rankorder emerges:

1. Improve technical quality of decisions
2. Improve communication (understanding of problems)
3. Increase satisfaction
4. Train subordinates
5. Facilitate change

A somewhat technocratic, at any rate output and effectiveness oriented attitude (rationale 1) ranges above issues that reflect more humanistic values (rationales 2 — 4) usually associated with objectives of industrial democracy.

2. The »general decisions questionnaire« (form 6) assesses the use of decision styles I — V among our sample of German Level 1 and 2 managers. Participants are asked to describe their own behavior when making important decisions in their job. The measurement is made with a five point cumulative percentage scale, each point representing one decision style.

TABLE 1

Decision Style of German Managers in 10 Companies

Level 1 and Level 2 compared. Figures are percentages
(Form 6)

COMPANY	LEVEL 1 THE FIVE STYLES					LEVEL 2 THE FIVE STYLES				
	I	II	III	IV	V	I	II	III	IV	V
1.3	0,3	26,3	24,2	32,5	16,7	5,0	22,8	31,7	27,2	13,3
1.4	4,0	7,0	25,0	48,0	16,0	1,3	14,4	37,5	36,3	10,6
4.1	0,5	10,0	31,0	22,5	36,0	0,3	26,8	35,8	24,5	12,6
6.2	6,7	17,5	39,2	14,2	22,5	3,3	18,3	40,0	21,7	16,7
8.2	5,0	13,8	25,0	31,3	25,0	9,1	21,4	28,6	26,4	14,5
11.1	20,0	16,4	37,1	16,4	10,0	0	17,1	24,3	57,1	1,4
13.1	29,5	18,2	22,3	13,6	16,4	15,4	18,6	31,4	24,6	10,0
13.2	18,1	20,8	35,4	19,2	6,5	25,5	21,2	24,8	22,8	5,8
2.1	6,4	11,4	29,3	34,3	18,6	4,3	27,1	32,1	29,3	7,1
9.3	12,5	19,2	35,8	17,5	15,0	3,8	11,3	29,4	35,0	20,6
All Companies	12,1	16,4	30,7	23,1	17,7	8,8	20,8	31,0	28,5	10,9

The results show that virtually in all companies managers believe to be using all decision styles to some extent. Per average, both levels believe to use style III (prior consultation) more than any other style (30.2% and 31.1%). But more striking are the inter-firm diferences which in part are highly significant (e. g. the comparison of the senior levels in firms 1.4 and 11.1)

3. The »specific decisions questionnaire« (form 5) contains 12 specific decision situations assumed to occur in the higher management of practically all large organizations. Again, the answers have to be given on five point cumulative percentage scales. While in form 6 both levels describe their own decision behavior, in form 5 it is only Level 1 which judges its own behavior while participants of Level 2 judge the behavior of their seniors in specific decision situations.

The twelve decisions can be grouped into three larger categories as relating to the immediate subordinate (SUB), to the employees working for the subordinate (EMP), and to issues affecting the whole department (DEPT). An aggregate evaluation of these three categories is presented in Table 2.

TABLE 2

Variation of Decision Styles in Different Decision Situations (Form 5)

Both levels describe the senior level's decision behavior
(Figures are percentages)

Decision Style	SUB		EMP		DEP	
	L. 1	L. 2	L. 1	L. 2	L. 1	L. 2
I	13,8	(11,2)	7,0	(2,2)	7,6	(6,7)
II	28,6	(13,1)	11,3	(3,9)	15,4	(6,0)
III	33,3	(29,3)	36,8	(30,1)	46,1	(30,0)
IV	15,1	(28,2)	38,0	(49,8)	27,5	(43,7)
V	9,2	(18,2)	6,9	(14,0)	3,4	(13,6)
III — V	57,6	(75,7)	81,7	(93,9)	77,0	(87,7)

The emerging pattern of the distribution of answers strongly suggests that senior managers as well as their immediate subordinates see the senior level using different decision styles in different decision situations.

As second feature should be noted that the distribution of Level 2 in comparison to Level 1 has a characteristic trend towards the more participative end of the Influence — Power — Continuum (consider the respective sums of style III — IV). In other words, members of Level 2 believe to participate more strongly in the decision making of the firm than the superiors of Level 2 seem to be willing to grant them. This is a finding (statistically significant) which has invariably appeared among four different national samples (Wilpert and Heller 1972).
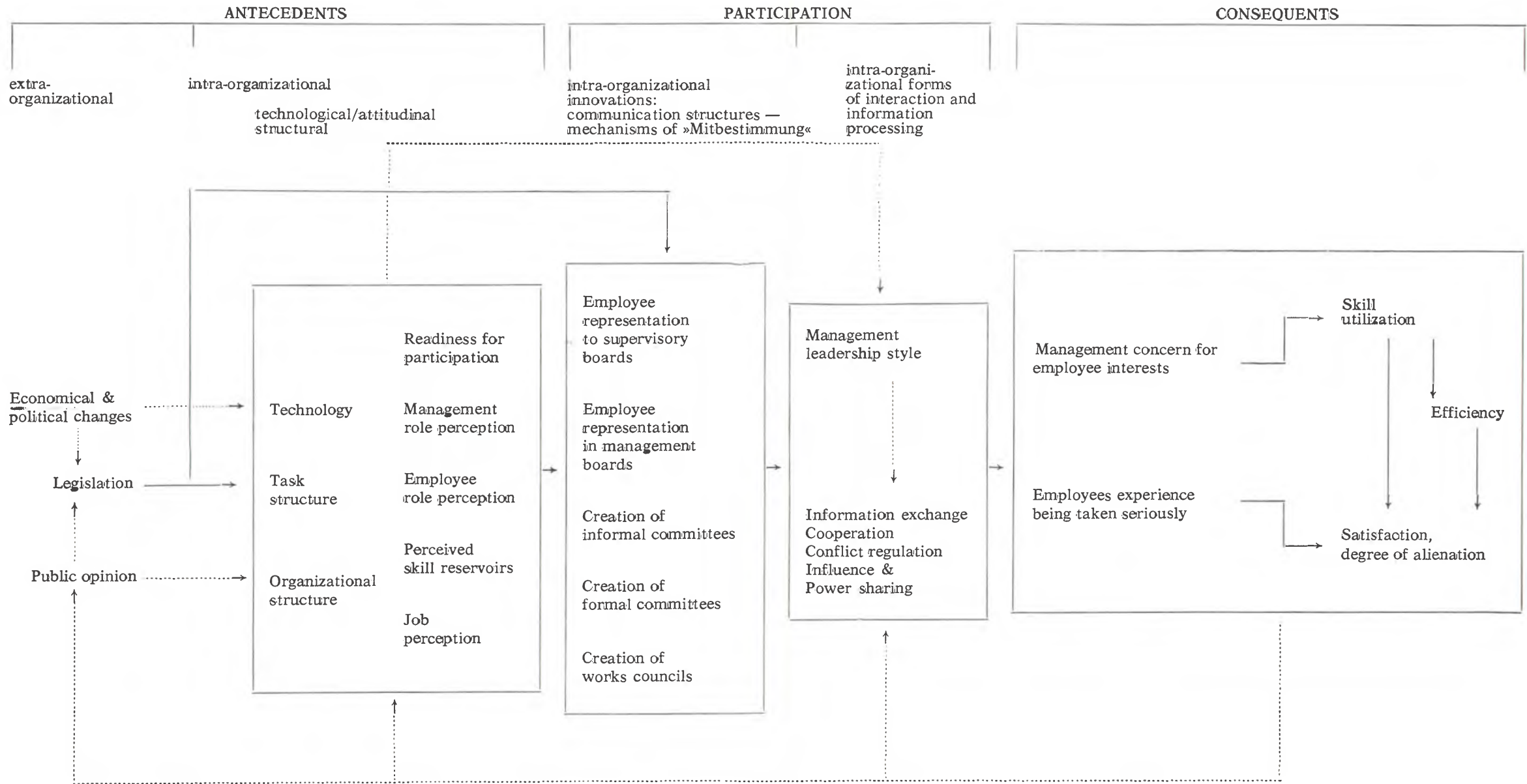
SUMMARY

In this paper we have considered some »informal« ingredients (ante-cedents?) of co-determination, i. e. some behavioral patterns indicative of the readiness of or the liminal conditions for German managers to use partici-pative interaction methods which would amount to an effective sharing of power within an enterprise. This is by no means to belittle the legal and structural prerequisites for effective co-determination but only to draw atten-tion to the hitherto somewhat neglected other side of the same coin.

We have argued that co-determination must be studied in a more com-prehensive analytical framework of which the legal prescriptions and conse-quent organizational innovations are only two sets of variables to be taken into account. The kind of attitudes towards power sharing which upper management holds, will, within such a larger framework, have a significant impact on form and content of co-determination in Germany. If further re-search should substantiate our findings that participation in the eyes of upper management is in the first place exercised for reasons of improving the technical quality of decisions, then argumentation for expanded forms of co-determination will have to be addressed to that concern. It raises the question, if members of lower levels in the organization share a similar view and if such an »economical« position is consistent with a postulated leader-ship style »which is characterized by a coercion to give arguments and rea-sons«.

The substantial differences among patterns of power sharing between two interlocking levels of management in different companies might be taken as an indication that there exist differences also because of different con-textual variables. It becomes important, therefore, to identify the various factors and the strength of their impact on the corevariable — power sharing. Traditionally social scientists have emphasized the factor personality. But other themes emerge. So we have seen that power sharing patterns seem to be strongly influenced by the content of the questions to be decided. There exists evidence that methods of decision making between senior — junior management dyads depend on the degree to which Level 1 and Level 2 agree about available skills and expertise in Level 2, i. e. if the gap of percei-ved skills is large, then senior managers tend to use more centralized decision making styles, if both levels tend to agree in their estimates of available skills, then senior managers tend to use more participative decision styles (Wilpert & Heller 1972).

Far from being able to advance any general conclusions on the basis of these results we still feel encouraged by the continuing accumulation of evidence for our main perspective that participation and co-determination — even in such special cases as the interaction patterns of senior management levels — must be studied under auspices of a contingency model including the socio-technical systems characteristics of organizations. It seems urgent to assist the ongoing debate about the future of co-determination in Germany by adding to the supply of such behavioral science data on forms, content and conditions of co- determination.

Diagram 1: Influence and Powersharing — antecedents and consequents in socio-technical perspective (the German case)

ANTECEDENTS   PARTICIPATION   CONSEQUENTS

extra-organizational

intra-organizational

    technological/attitudinal structural

intra-organizational innovations: communication structures — mechanisms of »Mitbestimmung«

intra-organizational forms of interaction and information processing

Economical & political changes

Legislation

Public opinion

Technology

Task structure

Organizational structure

Readiness for participation

Management role perception

Employee role perception

Perceived skill reservoirs

Job perception

Employee representation to supervisory boards

Employee representation in management boards

Creation of informal committees

Creation of formal committees

Creation of works councils

Management leadership style

Information exchange
Cooperation
Conflict regulation
Influence & Power sharing

Management concern for employee interests

Employees experience being taken seriously

Skill utilization

Efficiency

Satisfaction, degree of alienation

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ON HUMANIZING WORK

During the past generation, social and cultural changes in the United States have led to rising expectations and demands about life and work. Modes of work and life styles that were acceptable in the past are increasingly felt as oppressive by young workers in factories, offices, and development labs. It is no longer considered sufficient to have a »decent« job that pays enough to provide adequate food and shelter. The goal of comfort and security is still central for the majority of production workers, employees and service workers. However, as recent studies by Harold Sheppard and Neal Herrick show, for many workers the quality of the job is as important and after reaching a certain level of income and safety even more important than increases in wages.[1] Herrick's investigations begin to suggest that management and even union officials tend to overestimate the workers' satisfaction with work conditions and underestimate a growing consciousness that the quality of work needs to be improved.

What is meant by improving the quality of work? Most workers have never been stimulated to evaluate their work in broad human terms, and less to consider alternative ways of designing tasks. In those few companies where workers have been encouraged to analyze their jobs critically, a general consensus emerges of negative and positive work attributes. Workers in general want to avoid jobs that are monotonous. repetitive, over-controlled, and isolated from interaction with others. In contrast, they seek jobs that require activeness — planing and judgment — autonomy on the job, variety, and that are demanding enough to stimulate learning. Beyond these psychological factors, workers are also concerned with the dignity associated with the job and with opportunities for career development. They are also increasingly concerned that the work be »meaningful«, that it involve clearly useful tasks and require sufficient skill to be worthy of respect.

Taken together, these requirements move in the direction of humanizing work. In contrast, dehumanized work is a job which makes the worker into a machine part, totally controlled, fully predictable, and easily replaceable. For quite a while there has been evidence that when work is less dehumanized, most workers are more satisfied and there is less absenteeism and turnover. In the recent past, however, Americans appeared more willing to adapt themselves to mechanized work. Many appeared to have been satisfied by such jobs, as long as they paid a decent wage. There are a number of reasons for this.

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[1] See their forthcoming book, **Where Have All the Robots Gone?**, to be published by the Free Press of MacMillan.

1) Some industrial workers, such as the ones described by Frederick W. Taylor, were imigrants, for whom the pay and standard of living were superior to what they had known before. Indeed, before the wave of immigration in the 1880's, there was a growing movement to democratize the workplace. The imigrants generally came from traditional cultures where one accepted his place in society. Furthermore, the worker might gain satisfaction from his role in the subculture rather than in the factory. At home, he might have headed a patriarchal family. There, he was respected by his wife and children, and he could feel compensated for the dreary work.

2) Other factory workers including early union organizers considered the first priority for workers to be decent wages, health and unemployment benefits and the establishment of collective bargaining principles. In return for security and benefits, management retained control of design and organization of work. Many people accepted the notion that work had to be organized so that human considerations would be sacrificed for maximal efficiency. It was generally taken for granted that the requirements of advanced technology should determine the work, and that maximum specialization and repetitiveness, combined with minimal training was the most profitable approach. Even many humanists accepted this idea and aimed for a shorter work week as the main relief from dehumanization, ignoring the probability that to be creative in leisure while mindless and passive in work demands a schizoid attitude.

Today, these attitudes of workers are changing, and industrial experiments indicate possibilities for modifying technology and the organization of work. As Sheppard's studies indicate, younger workers are more democratic and less authoritarian than workers over forty. Members of the new generation are more self-affirmative and expect to be treated with respect by their employers. They seek work that allows them to be more active and autonomous. Judson Gooding's interviews with workers, as reported in his **Fortune** articles during 1970—71, supports these findings. Gooding also suggests that many are resentful and rebellious, and he cites incidents of industrial sabotage as protests against dehumanized work.

What are the forces that have led to this new character and ideals of workers which is so different from the old stereotypes? It is probable that changes in technology, education, and the organization of work, have all played a role.

Technological developments have led to increased productivity and consumption of goods. The average American industrial worker now enjoys a standard of living that seems fabulous to most of the world. Once a certain level of affluence is taken for granted, this tends to undermine the attitudes based on the principle of scarcity, that one must sacrifice individual expression and growth in order to survive. Furthermore, Americans are less willing to accept their fate passively; the fatalistic ethic of traditional societies has been replaced by the values of the American technological society which Tocqueville described in the early 19th century. This ideology reinforced by the achievements of science and industry suggests to Americans, rightly or wrongly, that there are no limits to possibilities for improving society. The American worker is thus especially likely to feel that change for the better is possible.

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Technology has also been responsible for the development of mass communications networks which have spread the values of autonomy and technological progress into every home. Neither »ethnic« families from Eastern and Southern Europe nor farmers from middle America can hold the cultural line against the onslaught of radio, television, and juke boxes. Furthermore, the consumer goods themselves, on display in stores, worn by working-class people and driven by them on highways, are themselves a media message, suggesting that everyone can participate in the affluent society.

The traditional authoritarian submissiveness is also undermined by the movements of rock, civil rights and war protest. The media has reported and also stimulated the challenge to traditional values that has dominated the 20th century. Children no longer blindly accept the authority of parents; the pater familias can no longer demand respect, but must earn it. Students question the knowledge of teachers, and no longer are bedazzled by degrees and titles. Black Americans have rejected the servile role and the racist image. Women are challenging inequality and lack of opportunity structured by the male dominated bureaucratic-industrial society. These challenges to authority are often harsh and bitter; sometimes they express resentment and revenge. But they also reaffirm humanistic and democratic principles of the American Revolution submerged during the period of rapid industrial growth and immigration, including the right to pursue happiness and to have a voice in decisions which determine one's life. As the concepts of community control and decentralization have gained new life, so too the goal of industrial democracy.

Education has also made a difference. Some of the radical critics of schooling, myself included, have denounced the factory-like organization of the schools, the conventionality and abstractification of what is learned, and the boring, non-productive atmosphere. These criticisms make sense, when the actual is contrasted to the possible. Schools are not sufficiently oriented to the development of individual potentialities. The content and structure of pedagogy can be significantly improved. However, the attacks on schooling gain support mainly from the upper middle class on the one hand and the ghettos on the other. In the former case, this is because parents want the public schools to feature the latest innovations, to prepare children to make it in the competitive world of professions and corporations. In the case of the ghettoes, the schools have simply been unequal to the task and have often used force because they are unable to teach.

However, this is not the case for the whole country. A recent census study reported that the percentage of Americans with a high school diploma has almost doubled from 38 percent in 1940 to 75 percent in 1970. (The percent with college degrees has gone from 6 to 16 percent; the proportion of those with one or more years of college has gone from 13 to 31 percent in the same 30 year period.) For many young Americans, particularly those who are to become blue collar workers, the atmosphere of local schools is both more stimulating and democratic than either the home or work place. At school these young people are expected to learn, to develop competence and to play with their peers in democratic groups, which stress fairness and competence, rather than seniority and submissiveness. In contrast to many factories, their school work allows variety and some initiative, and achievements are recognized. Students are sometimes pushed around by their teachers (and teachers

are sometimes pushed around by students), but students are generally not exploited. Thus, one finds in Sheppard's studies that for white blue collar workers, years of schooling is positively correlated with democratic attitudes, while workers with less schooling tend to be more authoritarian. This finding explains why the auto companies have discovered that young workers with high school diplomas are more likely than the older generation to find assembly work oppressive and to rebel against it. The young people compare this mechanized organization of work with their other experiences and against their values; the contrast increases frustration and anger.

American workers may also be influenced by new models of organization in the workplace, particularly on the managerial level. The requirements of advanced technology have led to an increase in projects and teamwork. The old-style bureaucratic structures no longer serve for industries which are oriented to innovation, nor to those which emphasize service. Some corporations have adopted new programs or organizational development (sometimes including sensitivity groups) in order to develop team work and smoother interpersonal relationships. Furthermore managers have been taught new ideologies of human relations, stressing the importance of autonomy, and the quality of the work itself. These models may also have some effect on stimulating new attitudes and hopes on the part of both white collar, and blue collar workers.

It should be added that dissatisfaction with mechanized work is not limited to factory workers. Engineers in highly technological organizations also bridle at being highly controlled parts of a megamachine in companies that develop large electronic or aerospace projects. (See, for example, R. Richard Ritti, **The Engineer in the Industrial Corporation,** Columbia University Press, 1971). These highly schooled individuals feel deep dissatisfaction in jobs which do not demand a fuller use of their skills. In large part, this is because they are thus unable to show their abilities, and have no chance to make the first team. A significant number, however, seek work which allows intiative and growth.

Indeed, the growing dissatisfaction on the part of workers to being overcontrolled is experienced in all parts of the society, even on the part of many symphony orchestra members. These young musicians contrast the model of the chamber group or the rock combo, organizations combining cooperation with individual expression, with the orchestra which demands submission to the absolute authority of the conductor. There are of course differences in orchestra conductors. Some are martinets, who require musicians to fit into a hierarchy at the cost of their dignity and sense of self, and others are mode humane teachers and coaches. However, the structure of the orchestra tends to make the individual into part of a machine, while that of the chamber group tends to develop a sense of relatedness and mutuality.

The spirit of the times and the prevailing ideology is anti-bureaucratic and suspicious of all hierarchy. Such is the extreme expression of this spirit that some young people reject all forms of structure and interdependence and glorify an ideal of individualistic egoism. However, the importance of this strident anti-social childishness tends to be exaggerated by those who favor pyramidal structures and rigid control. In contrast, the goals of workers who want to improve the quality of work are not narcissistic; to the contrary, they seek personal development and a less schizoid relation to their work.

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Indeed the question may be asked as to which workers today are satisfied with being a part of a megamachine. What does it mean to be adapted to mechanized work which requires little or no autonomy and activeness? Sheppard's data demostrate that the most authoritarian workers are the ones who complain least about dehumanizing work. These are individuals who assent to the statements that:

> *The most important thing to teach children is absolute obedience to their parents.*
>
> *Any good leader should be strict with people under him in order to gain their respect.*
>
> *A few strong leaders could do more for this country than all the laws and talk.*

The authoritarian character has been described by Erich Fromm as that of a person whose sense of strength and identity is based on a symbiotic subordination to authorities, and at the same time a symbiotic domination of those submitting to **his** authority. That is to say, the authoritarian character feels himself strong when he can submit and be part of an autohority which (to some extent backed by reality) is inflated, and when at the same time he can inflate himself by incorporating those subject to his authority. This is a state of sado-masochistic symbiosis, which gives him a sense of strength and identity. By being part of the powerful organization — the megamachine — the authoritarian feels big; if he were alone, by himself, he would shrink to nothing.

Since the authoritarian men are the ones most satisfied with routinized, repetitive work, this implies that adaption to mechanized work has important social implications. These individuals tend to be the most anti-democratic in their roles as husbands, fathers, and citizens as well as in the factory and in trade unions. They are the men who try to crush independence in their children and who treat their wives as chattels. They are likely to support the opressive elements in schooling, and whatever political positions are taken by »strong leaders« who are contemptuous of citizens' rights.

It is of course true that human beings are capable of adapting to dehumanizing conditions. However, such adaption tends to be extremely costly, individually and socially. The authoritarian personality is one form of adaptation to the megamachine. Another form is the passive compliant personality, resigned and without hope. A third form is the depressed, schizoid individual who goes through the motions, whose deadened attitude freezes an unbearable feeling of rage, such workers tend to escape from factories into a world of canned dreams. As Harlod Wilensky has shown through interview studies, they spend their »free time« watching TV, tortured by feelings of guilt and waste.

The relationship between adaptation to work and the personality of workers is one which merits particular attention. There is evidence suggesting that the mode of work is a key element among the character forming elements in a culture or subculture. For example, in a traditional farming society of small land owners, workers tend to develop the productive-hoarding character traits that fit them for their work. The traits of compulsive saving, indenpendence, cautious conservativism, patience, and suspiciousness of strangers are

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all highly adaptive for the small farmer's mode of production.[2] In contrast, the peons who were landless and under the control of semi-feudal masters on haciendas in Mexico and other countries tended to develop traits of submissiveness, passiveness, and dependence which were rooted in the receptive character. These character traits are still adaptive for landless argicultural workers in traditional societies. The character traits most adaptive to a society's mode of production become the attitudes which determine cultural and political attitudes. The independent hoarding small farmer is conservative in his politics although he may become rebellious and militant if his traditional rights and particularly his property are taken from him. The pasive-receptive laborer is unlikely to concern himself with his rights, and tends to follow strong leaders who offer him something for nothing.

Since each type of work organization tends to produce a character type most adapted to it, one cost of structuring work in a particular way must be measured in terms of the kind of person molded by it. It should be kept in mind that the relationship between work and the individual's character is an indirect as well as direct one, since the traits needed in work tend to be the ones developed in the family and also by the schools. Parents tend to emphasize traits that are adaptive to work as they know it, and they may lobby for school programs they believe will effectively develop a »successful« child. Our society is of course much more complex than any traditional culture. Here, there are different social classes and within each there are different kinds of work which allow the development of many types of character. However, the way work is organized in factories and industries which employ hundreds of thousands may have a decisive role in the formation of our national character.

Today, as we have suggested, the character traits required by mechanized work and the traits stimulated by schooling and popular culture do not always coincide. Increasingly, children from blue collar families are being raised according to the values of autonomy, democracy, and meritocracy. The values of the megamachine, compulsive order and obedience, no longer take root in children who are encouraged to be both democratic and self-indulgent. At best, they are also stimulated to be more daring and unconventional in their approach to learning and to develop their own intellectual interests. One may expect, if the upper middle class critics succed in further reforming schooling to stimulate active learning in the »open classroom« and through teaching by dialogue, the effect will be to create an even greater tension between the mechanized workplace and the character of the workers.[3]

The results of Sheppard's studies suggest that workers who experience most intensely the conflict between their needs for self-realization and the monotony of the mechanized workplace will be the ones who are most alienated from the society. Can one expect it to be different?

To consider the problem one of »alienation« may muddy the water, unless the meaning of the concept is clearly understood. Indeed, the term has at least two basic definitions which are not only different, but in certain contexts have opposite meanings. In the sense that Sheppard uses the term, alienation implies deep dissatisfaction with the society, often to the degree

[2] See Erich Fromm and Michael Maccoby, **Social Character in a Mexican Village** (Englewood Cliffs, N. J., Prentice-Hall, 1970).
[3] This problem of course also exists for those middle class students who in the past worked at low-level bureaucratic jobs. In the future, such jobs are the ones which are most likely to be replaced by computer systems, which will eliminate paper work and paper workers.

that the individual seeks radical change in the status quo. A second meaning taken from traditional psychiatry refers to the separation of mind from emotions. In terms of this definition, the alienated individual feels »depersonalizcd« and cannot experience the full reality of himself. For example, the alienated person in this sense may be the one who adapts himself to mechanized work by cutting himself off from his feelings of anger, becoming emotionally deadened and passive. Alienation from self which characterizes many »normal« people is **the** human problem of industrial society. The movement to humanize work can be summarized as man's struggle to create conditions which do not alienate him from himself.

In terms of the self, who will be the more alienated, the worker who is adapted to mechanized work or the one who resists it? Will the individual who is most alienated from dehumanizing social conditions be more alienated from self than the one who accepts these conditions without protest?[4] It seems unlikely, even more so if we consider the opposite of each type of alienation. The opposite of alienation from society turns out to be the national problem most discussed by intellectuals 15 years ago, namely conformity. In that sense of the term, alienation is a potential for progress, depending on whether or not the alienation becomes a stimulus for constructive change. The growing dissatisfaction of the workers may signify a change in the American character in the direction of stronger demands for a productive and stimulating life. Or if no changes are possible such alienation may only increase the worker's sense of powerlessness and his feeling that hc is a »loser« in the meritocratic game of life. As a result such an individual may be attracted to violence or to movements like that of George Wallace, based on resentment, which shape a particular consciousness of powerlessness and make it the basis of a political ideology.

The opposite of alienation from self is more difficult to define. It is perhaps best formulated in terms of mature development. The psychologically unalienated person is productive in work and love; he is in touch with himself, others and society. Such an individual has perfected his capacity to understand and create, in areas of human relationships as well as art, science athletics, and industry. In this context, the organization of work can be measured in terms of whether it increases human alienation or whether it moves toward improving possibilities for fuller human development. In this sense, the »problem« of alienation will not be solved unless the quality of work is improved, so that the worker need not sacrifice his dignity and potential in order to earn a living.

How will these changes take place? The humanization of work is not a problem to be solved simply or mechanistically. It requires systemic changes in people, organizations, and perhaps even in the larger society. We can begin to learn from studying the experiments in job improvement that have taken place over the past decade in some forty American corporations.[5] These programs have been of two main types, either changing specifications of jobs within existing structures or developing new, generally more automated fac-

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[4] A meaning of alienation related to this is the use of the term by Hegel and Marx, based on the distinction between existence and essence, in the sense that alienated man is not what he could become. An alienated man may be one who has surrendered himself in order to serve the machine. As Erich Fromm points out, this concept of alienation is close to the prophetic view of idolatry in the Old Testament. See his **Marx's Concept of Man,** (New York, Ungar, 1961).

[5] According to Fred K. Foulkes. See his book, **Creating More Meaningful Work** (New York, American Management Association, 1969), which describes some of these experiments.

tories, such as the one created by Lyman Ketchum of General Foods, where from the start, work is organized to be freer and more interesting.

We do not yet have sufficient data from these experiments to arrive at definitive conclusions about what works best. On the basis of preliminary reports, the new factory model appears a particularly promising way to improve work. However, there is considerable evidence concerning resistances to changing the nature of work within existing structures. In one company, it was discovered that a program including on-the-job education with job enlargement while extremely satisfying to those workers involved, was not readily accepted by the rest of the organization. Workers left out of the program felt a natural resentment. And some managers were threatened by the program and its effect on the workers. One manager who favored the program cautioned that, »Before we continue the education of people, we must understand that the result of education is a freer man and not a more controllable man.«

One finds managerial coolness or active opposition to job enrichment programs, even where there is evidence that these programs are profitable for the company in terms of more efficient work, drops in absenteeism, and less turnover. The reason is that humanizing work gives more initiative and autonomy to the worker. He or she becomes less controlled by the manager. Once the worker is given responsibility for an area of work, he is no longer a simple part in the machine, easily replaceable on the manager's whims. In the new situation, there is less need for managers, since workers take over many managerial functions. Those managers or foremen who are needed must win the respect and confidence of the workers; they can no longer manage on the basis of autocratic authority. Thus, while programs to improve work appeal to democratic workers and productive managers, they are resisted by individuals who are authoritarian, threatened by freedom and spontaneity. As one manager of an auto company remarked during a discussion of humanizing work, »Where will it all lead?« Once the worker is encouraged to question and think, one can no longer predict what he will think about. For example, as he gains more responsibility, the worker may become more concerned about the products he makes. He may object to making products that are shoddy or destructive. Some people have faith that greater freedom will in the long run humanize our society; for others it conjures up only fears.

Given the resistances and costs of humanizing work, few industries will move in this direction solely in terms of their own initiative, although some particularly creative managers have dedicated themselves to improving the nature of work. Generally, these innovators must explain their efforts to the company in terms of profits in order to »rationalize« their creative vision so that it is acceptable within the corporate world view.[6] In some areas of industry, the movement to humanize work may also gain support from increased international competition, forcing steps to increase efficiency. However, the movement depends also on the role taken by labor unions. As Herrick

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[6] At the Williamsburg conference on the quality of work in April, 1971 one manager presented his vision and another corporate-governmental official insisted that the manager's »real goal« must be making money. This official could not conceive that an industrial manager might have the same creative goal as an artist, who, of course, also wants to sell his product. In other words, the concept of an unalienated industrial manager clashes with a world view that is rooted in a materialistic social character. There is a strong tendency for people to rationalize their own attitudes in terms of an ideology which attributes them to »the nature of man«. Thus, those who are concerned solely with making money argue that this is human nature. Such people are the ones who most challenge the idea that blue collar workers may want autonomy and interesting work as much or more than pay increases.

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points out, high union officials are now far less concerned with the humanization of work than they are with the bread and butter issues of pay and benefits. Probably, some union leaders would have resistances similar to those of the managers who are threatened by autonomous workers. The free worker is more likely to question the organization and decisions of the union as well as those of the industrial organization. As Marcus Raskin argues, the unions have bargained away the quality of work for security and benefits, and have become a powerful force to keep the workers »in line«.[7]

In conclusion, it should be emphasized that the major reason to humanize work is to create an America in which resources are organized optimally to allow each individual to develop himself to the fullest, and in which projects are carried out by free people, none used as an object by another. Progress toward this goal will require that individuals become more self-directed, less competitive and more responsible. The process of humanizing work will enrich the lives of many people, and at the same time, move towards a society which **needs** free and active citizens.

[7] **Being and Doing**, New York, Random House, 1971.

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MOTIVATION AND PARTICIPATION: AN INTEGRATION

In the current literature on managerial behavior and motivation, there are two major schools of thought which are frequently described as opposites. On the one hand, we have the task motivated, rational or scientific management approaches. On the other side is the participative, human relations, more emotional approach. While it is true that there are distinct differences in these approaches, there are also some similarities. It is the purpose of this paper to show how a current theory of motivation can reconcile and integrate many of the conflicting elements of these two positions.

MOTIVATION

Psychologists have been concerned for many years with the question of what motivates an individual. In our present economic environment, this question is becoming more and more critical for a number of reasons. First, people are generally demanding that their work environment be responsive to their needs and their ideas. The suggestion that money is the only reward that motivates people has not been empirically supported. Second, organizations are hiring increasing numbers of people from different cultural and racial backgrounds. To retain these employees and have them actively contribute to the organization requires a thorough understanding of what motivates them.

Three major theories have been developed (Maslow, 1954; Herzberg, 1966; & Vroom, 1964) which purport to explain organizational motivation. All three of these theories suggest that man's motivation is dependent upon his satisfaction of various needs, but the empirical results seem to support the theory presented by Vroom (Mitchell & Biglan, 1971). This approach suggests that an individual's behavior is a function of the degree to which the behavior is instrumental for the attainment of some outcomes and the evaluation of these outcomes (Tolman, 1932; Lewin, 1935; Atkinson, 1964; Rotter, 1954; Vroom, 1964). It has also been argued that an individual's attitude toward something is determined by its relationship to other objects or goals and the evaluation of these goals (Peak, 1955; Rosenberg, 1956; Fishbein, 1965). For the purposes of clarity we will refer to the theory as expectancy theory, alt-

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hough other names such as instrumentality theory or social learning theory have also been used.

The important idea, however, is that the theory is essentially based on a rational man model. The individual is believed to process large amounts of information in a rational manner and behave in a fashion that will maximize his return. The symbolic representation and empirical support for these ideas will be presented below.

THEORETICAL AND EMPIRICAL SUPPORT FOR EXPECTANCY THEORY: JOB SATISFACTION

It has been suggested that one's satisfaction with his job is essentially an attitude (Vroom, 1964; Grean, 1969), and that this attitude can be predicted from an expectancy theory model. More specifically, job satisfaction is conceptualized as one's overall feelings of favorability about the position he currently holds. This feeling is predicted by the following model:

$$S = \sum_{i=1}^{N} I_i \ V_i$$

where S = job satisfaction

I_i = instrumentality of the position for the attainment of the ith outcome

V_i = the valence or importance of the ith outcome

N = the number of outcomes.

Satisfaction with one's position is predicted from the degree to which one feels the position is instrumental for the attainment of some outcomes, multiplied by the evaluation of the outcomes.

There is already some support for this model (Porter & Lawler. 1968; Graen, 1969; Evans, 1970). However, recent discussions have suggested that certain types of outcomes may be more important than others. Graen (1969) and Mitchell and Albright (1972) both found that intrinsic job outcomes were more highly related to satisfaction than extrinsic ones. These latter outcomes accrue to the individual from sources other than himself. For example, praise from fellow workers or obtaining a promotion are possible extrinsic consequences. Intrinsic outcomes deal with the feelings that one has as an occupant of a given position such as feelings of accomplishment or an appreciation of ideas.

One study (Mitchell and Albright, 1972) was conducted with Naval Aviation officers. Table 1 presents the data predicting job satisfaction overall, as a function of intrinsic and extrinsic outcomes, and the subject's intention to reenlist in the Navy.

TABLE 1

Correlations between Job Satisfaction Model (and its components) and Overall Satisfaction (and its components) and Retention

	Job Satisfaction Predictors		
	Total satisfaction	Intrinsic satisfaction	Extrinsic satisfaction
Criteria	ΣIV	ΣIV_{INT}	ΣIV_{EXT}
Self-evaluated overall satisfaction (S)	.48**	.60**	.26*
Self-evaluated satisfaction with position (Sp)	.57**	.70**	.33*
Self-evaluated satisfaction with Navy (Sn)	.30*	.41**	.14
Retention (R) (intentions)	.47**	.51**	.32*

N = 48   *p < .05   **p < .01

A similar model has been employed to predict job preference. In a study composed of 106 psychology and business students about to graduate from college the model was again supported. Subjects indicated the degree to which they thought a job in American business would lead to various outcomes and the importance of these outcomes. The score generated by the theory correlated .70 (p <.01) with job preference as indicated by an independent estimate (Mitchell & Knudsen, 1972). Another study (Holmstrom, 1972) found a mean correlation of .82 between the job preferences for eight jobs and the degree to which each of these jobs was instrumental (weighted by importance) for the attainment of 18 job values.

AN EXPECTANCY MODEL FOR JOB EFFORT

The job effort model is conceptually distinct from the job satisfaction model in that here we are trying to predict behavior rather than an attitude. One exerts a certain amount of effort based on three factors: (1) the degree to which effort is seen as leading to good performance, (2) the degree to which good performance is instrumental for the attainment of some outcomes, and (3) the evaluation of these outcomes.

Symbolically,

$$W = E \left(\sum_{i=1}^{N} I_i V_i \right)$$

where   W = amount of work (effort)

E = expectancy; i.e., the degree to which effort leads to successful performance

I_i = the instrumentality of performance for the attainment of the ith outcome

V_i = the valence or importance of the ith outcome

N = the number of outcomes

Note that the $\sum_{i=1}^{N} I_i V_i$ is essentially the same equation as in the satisfaction model. Here, however, the attitude assessed is one's feelings about performance rather than one's position. The prime on the instrumentality symbole (i.e. I_i) signifies this distinction. This attitude is weighted by one's expectancy (E). Thus, one intends to work hard if (1) he thinks his effort will lead to good performance (E), and (2) he believes that good performance will lead to valued outcomes ($\sum_{i=1}^{N} I_i V_i$).

Although some data has been gathered relevant to this model (Hackman & Porter, 1968; Graen, 1969; Galbraith & Cummings, 1967; Arvey & Dunnette, 1970; Lawler, 1968), a recent review of this literature (Heneman & Schwab, 1972) suggests that few accurate tests of the theory (using all the specific measures indicated) have been conducted. Our recent study with Naval Aviation Officers did collect these measures and Table 2 presents the results. A more detailed discussion of why the theory was better in predicting self ratings is presented elsewhere (Mitchell & Albright, 1972). Two other studies (Mitchell & Nebeker, 1972; Mitchell & Pollard, 1972) also generated significant relationships for this model and these data will be presented later in the paper. The important point is that the theory has been shown to be significantly related to measures of both satisfaction and effort. The following of participation suggests theoretical and empirical support for an integration of the rational and participative approaches.

THEORY AND RESULTS: PARTICIPATION

The word »participation« in management theory means many different things. While there would surely be disagreement on specific definitions of each aspect, there are some broad statements with which most people would agree. In general, participation implies that there is shared decision making. People contribute according to their competence and not necessarily by posi-

tion. Communication channels are open in all directions resulting in greater and more accurate information flow. Four of these general type statements will be discussed below in light of the expectancy theory. The first two will deal with the major components of the theory (i.e., expectancies and the values placed on outcomes), while the latter two will incorporate some additions to the theory. We'll present some empirical support for these latter additions.

1. Organizational contingencies are clearer with participation.

Numerous studies have shown that including people in the decision making process clarifies the expectations about what leads to what. Leavitt and Mueller (1967), for example, present data showing that feedback and information exchange »increases the accuracy with which information is transmitted.« (P. 483). This accurarcy is directly incorporated into expectancy theory.

TABLE 2

Correlations between Job Effort Model and Effort Ratings

	Superior-Rated Effort	Self-Rated Effort
Total Motivation $E (\Sigma I'V)$	26*	64**
Intrinsic Motivation $E (\Sigma I'V)_{INT}$	25*	65**
Extrinsic Motivation $E (\Sigma I'V)_{EXT}$	25*	59**
n = 48	*p < .05	**p < .01

Supposedly, the subject should know fairly well which behaviors are likely to be rewarded and which ones are not. The effort-performance relationship should be chearer and hopefully higher in magnitude under a participative system. By definition, the higher the expectancy, the greater the predicted effort (with outcome values held constant). We would expect, therefore, that clarified contingencies would lead to greater effort.

Although we have not carried out any studies specifically testing this hypothesis, there are other investigations which are related. Most recent theories of productivity suggest that productivity is a joint function of ability and effort and since it is more likely that participation would change one's moti-

vation (and therefore his effort) than his abilities, studies showing a relationship between participation and performance could certainly be seen as possible support for this idea. Studies by Coch and French (1948), French (1950), Lawrence and Smith (1955), Morse and Reimer (1956), Vroom (1960) and many others have found that participation leads to greater output. Vroom (1964) in a review of this literature has stated that »When the entire pattern of results is considered, we find substantial basis for the belief that participation in decision making increases productivity« (p. 226).

2. Participation increases the likelihood that employees will work for outcomes they value.

A second way that participation may directly influence the components of expectancy theory is through the values that workers have for organizational outcomes. More specifically, through the process of participation, employees may be able to help set work standards, negotiate on working conditions and influence the reward structure. According to our equations, they would therefore ascribe higher valences to the outcomes that are contingent of their effort. Again, by definition, the higher the valences, the greater the effort (when expectancy is held constant).

Many of the studies mentioned in support of our first point could also be used as support here. However, since most of these investigations examined participation and performance, the support is only indirect. The study reported by French (1950) did deal with the relationship between the setting of work goals and performance, while a study by Strauss (in Whyte 1955) reported better productivity when workers controlled the work pace. Lawler (1971) has suggested that »cafeteria-style« benefit plans would be one way that each employee would get those cash and fringe benefits that he wanted. Nealey (1963), for example, has shown that while unmarried men want more time off the job, married men do not. Thus, by letting individuals help select outcomes they value, the motivation for greater effort should be increased.

3. Participation increases the effect of social influence on behavior.

There are numerous studies from the group dynamics literature which relate participation and influence. The greater the communication or cohesiveness, the greater the influence. (Schachter, Ellertson, McBride and Gregory, 1951; Berkowitz, 1954; Coch and French, 1948; Lewin, 1947; Bennett, 1955; Seashore, 1954; Vroom, 1960; Bachman, 1962). Vroom's review (1969) emphasized that participation increases »the strength of group norms regarding execution of the decisions, and the worker's 'ego involvement' in the decisions.« (P. 229) Since both communication and cohesiveness are integral components

of the participative approach, it would be expected that increased social influence would also occur.

These ideas have also been built into the expectancy motivational model by people such as Dulany (1968), Fishbein (1967), Graen (1969), and myself. Some people have argued that one can treat »meeting the expectations of others« as an outcome and include it in the ΣIV formula. However, there seems to be a distinction between what I would call internal and externally oriented motivation. Rewards such as salary, promotion or even intrinsic satisfaction are essentially oriented towards the question »What do I get«, while meeting the expectations of others seems to be theoretically different in that you are supposedly providing rewards for others as well as yourself. For these reasons, most theorists have included a second component to the expectancy model. Theoretically it is of the same structure as any IV in the model. One measures the degree to which effort meets the expectations of others weighted by the value of meeting these expectations. Note that we can include the expectations of peers, family, super-visors etc. in this social component.

We currently have completed three studies which support this idea. In a study by Mitchell and Nebeker (1972) three separate motivational estimates were generated. One was an attitude towards effort (A_w), the second was the expectancy of effort leading to good performance weighted by the attitude towards good performance $[E(A_p)]$ and the third was the whole model $[E(\Sigma I'V)]$. Table 3 presents the findings for using and not using this social component.

A second study by Mitchell and Knudsen (1972) found a correlation for the $\Sigma I'V$ of .38 ($p < .01$) with occupational choice. The multiple R which included the social component (again using peers and family) was .54 ($p < .01$). A third study by Mitchell and Pollard (1972) found a mean correlation (over 6 behaviors) of .61 when expectations were included and .44 without them. Of course, to have these expectations increase the level of effort suggests that they are both clear and valued. A more participative approach should meet these aims.

TABLE 3

Prediction of Effort from the Job Effort Model and Additional Components

Predictor	Correlation	Predictor	Multiple R
A_w	27*	$A_w + Ex$[a]	53**
$E(A_p)$	33*	$E(A_p) + Ex$	55**
$E(\Sigma I'V)$	23*	$E(A_p) + Ex$	51**

a Here the Ex = social component composed of peer and family expectations

*p < .05   **p < .01

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a Here the Ex = social component composed of peer and family expectations

*p < .05   **p < .01

4. Participation increases the amout of control that one has over his own behavior.

Supposedly, through the process of participation, there will be an increase in the degree to which an individual can influence and control those areas over which he has expertise. In this sense, the decisions would be made at the »appropriate« level.

What would this suggest for expectancy theory? Well, you will recall that the job effort model which we described actually predicts the individual's **intention** to behave in a certain fashion. More specifically, we predicat that an individual intends to choose that level of effort which he believes will maximize the receipt of valued outcomes. However, it is often the case that one may not have control over the degree to which he could carry out his intentions. So, for example, one might intend to spend two hours working with the boss but end up working twice that long or half that long depending upon the boss's intentions.

In general then, we would predict that the more control an individual has over his behavior, the higher the correlation between predicted effort and observed effort. We now have two studies which support this conclusion. We asked subjects how much control they had over how much time they spent on various activities. We then divided the subjects into a group of people with high and low control and examined the relationship between predicted and actual effort.

TABLE 4

Prediction of Effort for Subjects who Indicated High/Low Control over their Time Spent

Predictor	Correlation High Control	Coefficients Low Control
A_w	31*	16
$E (A_p)$	41**	19
$E (\Sigma I'V)$	25*	13

*p < .05   **p < .01

In the study by Mitchell and Nebeker (1972), when three sperate motivational estimates vere generated, we found support for this hypothesis. Table 4 presents these results. The study by Mitchell and Pollard produced essentially the same results with the mean (over 6 behaviors) for high control being .82 and .66 for low control subjects. These data suggest, then, that increasing control through participation will enable the individual to work at the pace he feels will maximize his return. This level may be low. However, if our assumptions about points 1, 2, and 3 are correct, his intended effort will be greater and participation will help him to carry out these intentions.

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SUMMARY AND CONCLUSIONS

The purpose of this paper was to join together two historically separate schools of management thought. It was suggested that expectancy theory, a highly »rational« theory of work motivation, could incorporate many of the tenets of the human relations, participative approach to management. This paper is only meant to be suggestive. Many of the relationships described are based on a rather loose definition of participation and some of the empirical support is only indirect at best. On the other hand, some of our recent research has dealt directly with the hypotheses suggested and the evidence is good. There are numerous studies left to be done in pursuit of this integration but hopefully these ideas provide a valuable initial step.[1]

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PSYCHIATRIC TREATMENT CENTRES AS THERAPEUTIC COMMUNITIES:

Some Implications for Participatory Management of Organizations

Although the focus of this conference is on industrial organizations, it occurred to me that as an early application of the principle of organizational participation was to mental hospital wards or psychiatric treatment centres, an examination of the psychiatric experience might be fruitful. At least, the experience in a psychiatric milieu might throw light on some of the problems, such as apathy or resistance on the part of organization members, encountered in participatory organization structures. At best, the psychiatric experience might contribute to the construction of a general model of organizational participation.

THE THERAPEUTIC COMMUNITY

My experience with psychiatric treatment centres began in a Canadian psychiatric hospital where I undertook research on an active treatment ward, mainly populated by schizophrenic patients, in which some elements of the therapeutic community were applied. My first study was followed by a project which attempted a comparison between a conventionally organized ward and a therapeutic community ward. In this study, I was given a certain latitude in determining and implementing the appropriate organizational design for each ward. Following this period of direct research, I spent several months visiting therapeutic community-oriented psychiatric hospitals in Great Britain and France. Consequently, I can claim some familiarity with this type of organization although my direct experience ended some years ago.

In outlining the general features of the therapeutic community, I shall follow the ideas pioneered by Maxwell Jones, and which he implemented in the care of psychopathic patients in the Henderson Hospital in England (Jones, 1953). I shall begin by observing that Jones' view of the appropriate organizational milieu for psychiatric treatment follows from his conception of the nature of psychopathy. Such patients were under treatment as a consequence of behaviour disorders, taking the main form of sexual problems, which reflected an inability or lack of motivation to conform to accepted norms of behaviour and an absence of »moral« sense, in that the patients showed little concern for the effects of their actions on others. In Jones' view, the patients' difficulties were primarily related to an inability to accept authority and

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to conform to norms developed by external authorities, i. e. the patients tended to respond to their own impulses and ignore externally developed and imposed norms.

The therapeutic problem, then, was to modify each patient's behaviour so that he or she would accept such external authority and the norms developed by external authority. As a condition of acceptance for treatment, a patient had to recognize his behaviour as a problem — stressful to himself and to others — and voluntarily accept treatment in Jones' treatment centre.

Jones regarded his patients' difficulties with authority as arising from their alienation from their social milieu, i. e., they refused to accept decisions and moral standards which had been formulated without their participation. In Jones' view, if the patients did not reject authority **per se**, but only imposed or external authority, then, they might conform to decisions and moral standards formulated by authority in which they shared. The appropriate organizational milieu, then, should emphasize community in which the contributions of all staff and patients would be therapeutically significant.[1]

Specifically, the organizational structure provided for equal participation in the decisions of the community (i.e., the hospital). This was accomplished primarily in community meetings held each morning at which various day-today problems were discussed. For example, if someone did not show up for the meeting, what action should be taken would be discussed—if, as in this instance a rule had been previously formulated, should it be applied? On another occasion, in response to a report of considerable sexual activity involving a male and a female patient, there was a lengthy discussion[2] of the positive and negative significance of this behaviour for the patients directly involved as well as for others. In addition to the general meeting, representative of staff and patients served on committees, such as the Admissions Committee which ruled on the admissibility of patients referred to the hospital. Other opportunities for group discussion included group therapy sessions, work groups and work group discussions. In all of these situations, participation was not associated, in theory or in practice, with rank. Indeed, the few attempts by staff to influence discussion or decisions by invoking role authority were vigorously opposed by the patients. Although participation was not equally distributed among those present, it was not, in my opinion, variable in relation to role. In addition to these structured decision-making opportunities, **community** was further emphasized by minimizing role distinctions. Thus, patients and staff wore ordinary clothing rather than uniforms. And when staff and patients participated in work groups, employed on various tasks in the hospital, all wore overalls during the working period. First names rather than surnames or titles were used. A main organizational difference between staff and patients was that, with the exception of the social assistants, staff worked a nine to five day, while patients and social assistants were in the hospital on a twenty-four hour basis.[3]

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[1] There is some indication that those who most frequently interacted had the greatest therapeutic significance. In effect this meant that patients themselves and **social assistants** — a staff category primarily filled by persons close in age to the patients and although likely to have a university degree, were without professional training. In practice, then, if not in theory, the therapeutic contributions were not likely to equal either in relation to roles or role incumbents.

[2] Longer, I believe, because there were no previously formulated rules that applied to the situation.

[3] Social assistants and patients had time off when they were free to go outside the hospital.

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I regard the Henderson Hospital as maximizing the implementation of the principle of therapeutic community and all other treatment centres[4] as approximating the model in varying but lesser degree. The variation is considerable. In some centres, there were only groups in which patients and staff discussed various ward problems, while in others there was some delegation of responsibilities by professional staff to non-professional and to patients. In brief, the variations in centres accepting the principle of therapeutic community ranged from lip service to full implementation of the principle. These variations concerned the number, participation and content of decision-making groups and the related distribution of authority to the various roles comprising the strucure. There were differences, too, in the extent that symbolic indicators of role differences such as titles and uniforms were employed.

PROBLEMS IN THERAPEUTIC COMMUNITIES

I found ward attendants, among staff, to be the most resistant to normative standards of the therapeutic community. In relation to patients, such nonconformity typically took the form of monopoly by attendants of the initiation of action- attendants directed the patients to clean themselves, to work, to participate in recreation. In short, attendants acted as if they continued to possess a previous right to direct patients' activities. In relation to staff with higher training and formal rank, attendants typically responded with conventional deference. In staff meetings, for example, attendants would offer information or opinions only when asked and would resist any opportunity to participate in decisions affecting ward operation, including therapeutic procedures. Thus, attendants failed to perform as expected by staff, usually psychiatrists, social workers and other more highly trained personnel, who were committed to therapeutic norms. Similarly, attendants failed to meet the expectations of patients who were committed to therapeutic norms. Consequently, stress was apparent in all these relationships. Response to stress took various forms. For example, professional staff might attempt to obtain advice on how to deal with the attendants. In one hospital, a psychiatrist asked me to pay particular attention to the attendants and to recommend ways of inducing them to conform to his expectations. In other instances, staff members, conforming to a general response pattern to deviance, abandoned attempts to educate attendants, dismissing them as lacking understanding, interest, etc. Patients also revealed optional patterns of stress reduction—some simply accepted the attendants' nonconformity, resigning themselves to their accustomed passive roles while others might draw attention to the attendants' nonconformity through verbal comments or by gestures. This latter response, usually by patients on active treatment and by alcoholic patients was risky as the attendants might respond punitively, for example, by reducing favours or privileges.[5]

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[4] In addition to psychiatric hospitals and treatment centres, I have observed the application of the model to a maximum security psychiatric prison in Ontario.

[5] On one ward, the psychiatrist developed a grading system for categorizing each patient's condition. However, to review each patient's category each week, the psychiatrist depended considerably on the chief attendant who used the category system to reward and punish conforming and nonconforming patients. Some patients, at least, knew that conformity was the price to be paid for the A or B rating which allowed the highest privileges.

Among the treatment centres I visited, little attempt was made to determine any other reason other than a personal one such as disinterest or lack of ability for the attendants' recalcitrance. Indeed, Maxwell Jones' solution was to replace low-paid, low-skilled, low-educated ward attendants by low-paid recent university graduates who were trained at the centre. Those in other centres who could not exercise such an option had to depend on the chance presence of attendants interested in the therapeutic community approach or resign themselves to the presence of the disinterested.

STRUCTURAL BARRIERS TO COOPERATION

However, my bias is toward looking for a structural explanation. I assume that organizational structure aims at maximizing cooperation and consequently must also aim at maximizing satisfaction (or minimizing stress). Structural arrangements, therefore, may be regarded as more or less effective in achieving these objectives and I am led to consider what structural elements in these situations may have hindered cooperation and contributed to dissatisfaction.

For example, I observed that these innovations in psychiatric treatment began at the top of the skill hierarchy, originating, typically, with the psychiatrist who had lost faith in other methods. Consequently, the new structure with its implied democratic values was imposed on those lower in the hierarchy, including attendants and patients. Those initiating the changes should not be criticized for assuming that their subordinates would enthusiastically accept the new structure. After all, many studies reveal that employees resent supervision and that job satisfaction is inversely related to autonomy. Morse and Reimer (1956), in an explict comparison of two structures varying in degree of hierarchy reported an inverse relationship between hierarchy and several dimensions of worker satisfaction. We could even go back to the Western Electric Studies for further supporting evidence. Research also reveals, however, that interest in participatory management can be weak among workers (e. g. Kolaja, 1961 : 31). That, in fact, it is positively associated with occupational rank, i. e., the more skilled and the more responsible the occupation, the more interest in participatory management. Among universities where decision-making powers have been redistributed, the evidence indicates that motivation to participate in decision-making structures is weak among both faculty members and students even though greater interest may have been expressed in bringing in such structural change. What we must recognize is that the realization of democratic values can be both gratifying and depriving — i. e., while increased participation in decision-making may increase gratification as a result of increases in sensed autonomy, the procedures associated with such participation may make demands on time and energy that reduce gratification. My observations indicated that the attendants were nither accustomed to a democratic organizational structure nor was there evidence to suggest that they were interested in achieving democratization of the structure. It is possible that the generally low educational level and lack of contact with or understanding of progressive psychiatric theory may have

made the attendants skeptical of a treatment orientation which required the patient to be regarded as a person, that is, having rights, especially to human dignity and for making decisions concerning his own activities. There may well have been, given the working-class origin of most attendants, a tendency to prefer authoritarian control over participatory democracy (Lipset, 1960).

Average score for attendants on »my« wards were markedly toward the authoritarian end of the F scale (Adorno, 1950) and the Custodial Mental Ideology Scale (Gilbert and Levinson, 1957).

I can identify two categories of such influence. One concerns the careers of the attendants. As most of the attendants I encountered had worked on the wards for a number of years, I assume that persons employed as ward attendants are not exceptionally occupationally mobile. In part, motivation to such mobility may be frustrated by the low educational level of most attendants and/or the fact that many attendants are immigrants. At any rate, as the ward attendant's job is a low skill, low power, low mobile occupation, the main possibility for occupational achievement lies in promotion within the system. And, indeed, being the attendant in charge or in charge of a shift appeared to be regarded as highly desirable. If career advancement is desirable, then ,it would seem that the norms for attendant's behaviour held by those who determine advancement would be important. In my treatment centres, such decisions were made or based on the recommendations of the Chief and the Assistant Chief Attendant. Moreover, as the more highly trained staff tended to be mobile, with most having periods of short service, those occupying higher positions in the attendant and nursing staff tended to exercise power whose source was more in the relative permanency of their employment than in their position in the hospital hierarchy. Conseüuently, how the Chief and the Assistant Chief Attendant responded to the way attendants carried out their duties was important.[6] On the whole, incumbents of these roles tended to conservatism, defending established procedures rather than supporting innovations that affected role relationships on the ward. Thus, in my research, the attendants participating in the therapeutic community ward were subject to comment for wearing ordinary clothing rather than uniforms as well as for their »permissive« attitudes and actions in relation to patients. Following the Chief Attendant's comments on clothing, the ward attendants resumed wearing uniforms even though participation on the therapeutic community ward did not specify what clothing should be worn. Given this response, it would not be surprising to find that the attendants showed greater commitment to conventional ward norms than to therapeutic community norms. Conformity to the new standards, even where interest existed, was too costly when measured against career expectations.

The second structural condition influencing the attendants' behaviour related to task performance on the wards. Under custodial conditions, patients were assigned task related to maintaining the ward. Such work could not be accomplished by the attendants without the help of the patients. As the attendants were evaluated according to the extent that the ward was clean, that

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[6] R. K. Crook, in his analysis of one of the wards included in my research, provides several examples of the importance of the Chief Attendant and the Assistant Chief Attendant for the operations of the wards. He observes, »The formal demands of the 'Front Office' constitute a further demand in minimum performance which must be met or appear to be met by the continued operation of the ward through time. These performances, the basis for their assessment, and their implication for organizational goals, provide the background for social control as it affects the ward in its 'external transactions' with the 'Front Office'.« (1963 : 116).

meals were served and other activities were routinely performed, it would seem that changes that might affect the organization of the ward maintenance would be threatening to ward attendants. And that turned out to be the consequence of innovations in the direction of therapeutic community. Once, as a consequence of role-redefinition, the patients had the right to refuse to work, and the related right to choose the kind of work, additional work for the attendants or a less acceptable standard or ward maintenance was inevitable. Indeed, it was likely that, among the staff, the major share of the »costs« of innovation were borne by the attendants.

The patients' right to choose to perform work as ward duties also reduced the attendants' control over the patients. Under custodial conditions, the attendants could punish patient nonconformity by assigning him some ward task, isolating him, etc. However, as nonconforming behaviour, such as not maintaining personal cleanliness, bothering other patients, arguing with attendants, became subjects for group discussion, as matters of therapeutic significance, the attendants could not deal directly with such behaviur. As the maintenance of order on the ward had a high priority for the attendants-there was considerable anxiety about the »irrational« behaviour of patients as well as many references to the value of medication in maintaining calm on the wards—therapeutic community norms were perceived as reducing the attendants' control in a situation where ward control or patient management remained an important item in the official assessment of attendants' performances.

A shift to a therapeutic community organization resulted in a fundamental redefinition of the attendant's role. Perhaps, people only favour democracy when its perceived rewards out-weigh its perceived disadvantages. At any rate it would appear that the attendants saw few gains in the change—they had to spend more time in meetings, they were expected to participate in decisions on matters previously thought to be beyond them, and their control over the patients, seen as critical in relation to the evaluation of attendant's performances, was weakened. It is apparent that not only an educational program but some redefinition of career contingencies was required to alter the balance. If redefined performances in relation to expectations means a loss in relation to promotion or in prestige from colleagues, conformity is not likely to be achieved.

I contend that this is a situation where innovation was introduced on a single dimension of role differentiation — the allocation of authority — but where other changes affecting the achievement of limited role objectives and the evaluation of performance, and thus, the distribution of rewards, were not adjusted or modified to support structural change. If the attendants did gain such authority from professional superiors which might have been experienced as rewarding, their losses, given the lack of change in the larger organizational context, reduced their motivation to comply with the redefined role expectations.

Patients nonconformity generally took the form of passivity or withdrawal — for example, patients did not participate very much in ward meetings. This, in part, related to their psychiatric condition. On active treatment wards, where the behaviour of most patients was not obviously diffe-

rent from non-patients, participation was higher than on chronic schizophrenic wards.[7]

Lack of experience for most patients in group discussion was likely an inhibiting factor. Here, there may have been interaction between individual characteristics and an organizational structure which stressed committees or discussion groups as a means of making and communicating decisions.[8] As such structures have been developed and used primarily by the middle class, and despite the use of committees and discussions in trade unions, it is likely that inexperience was also an inhibiting factor for attendants whose origins were largely working class.

It must also be recognized that to the extent that attendants lacked commitment to therapeutic community norms, they were likely to discourage, perhaps to punish patients who initiated action, who acted to protect their rights, and who sought to contribute to decision. As this did occur, it suggests that despite some reallocation of authority, the organizational innovation did not greatly alter the distribution of power or influence on the wards. In such a situation, analogous to the attendants' career plans, the cost of innovation might have been greater for the patients than the benefits in the realized values.

A BASIS FOR SYSTEMATIC ANALYSIS

Although I hope this impressionistic explanation of some problems associated with participatory management is useful, I think it is necessary to enlarge the perspective and attempt to lay the base for systematic analysis by specifying some critical concepts and some general propositions.

I assume that the main concern in designing organizational structures is to achieve an optimum level of cooperation. Furthermore, I assume that cooperation varies in relation to variations in organizational structure. And although I do not intend to elaborate the argument, I shall attempt to show what is involved in this relationship.

I propose that levels of cooperation vary, to some extent, in relation to consensus and cohesion.[9] In other words, organizational participants who agree about the goals and relevant norms or role expectations relevant to their activities will cooperate more than organizational participants who disagree in these respects. Similarly, organizational participants who like each other will cooperate more than those who dislike each other. Cooperation may be positively associated with consensus because actions can proceed without requiring an expenditure of time or energy settling the »terms« of the activity and also because the consensus may be experienced as satisfying. Cooperation and cohesion may be positively associated because positive emotional commitments may be sustained by cooperative actions, i. e., role expectations may be

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[7] Schizophrenics appear to have a low tolerance for prolonged interaction and a low level of interaction is characteristic of most schizophrenic wards. Systematic observation on three wards revealed that the duration of most contacts could be measured in seconds.

[8] Some patients were skeptical, not without foundation, of staff intentions in holding group sessions. These patients regarded the group sessions as merely opportunities for the staff to communicate decisions already made. Consequently, they were not motivated to participate in what they perceived to be a sham democratic process.

[9] Consensus — agreement concerning goals and role expectations. Cohesion — interpersonal and emotional commitments of participants to each other.

met to insure continued emotional commitment of the other (s). Organizational structures, then, which promote high or low consensus and cohesion[10] will experience high or low, respectively, levels of cooperation.

Consensus and cohesion, in turn, are inversely related to role differentiation, a critical element of organizational structure (see Jones, 1968 for further argument). To the extent that participatory structures reduce role differentiation by reduction of differences in decision-making, an increase in consensus and cohesion should result. However, as roles have other dimensions, such as task, skill, prestige and other material and immaterial rewards, it is necessary to explore further the specific significance of each dimension for consensus and cohesion, and ultimately, cooperation. If change is introduced on only one dimension, there may be no significant effect on consensus or cohesion. The relations between the dimensions should be analysed for, as we have seen with hospital attendants, a change on one dimension may have negative consequences in relation to other dimensions.

As consensus and cohesion are positively associated with rewarding interaction, and organizational structures and activities define and influence interaction patterns, it is necessary to be aware of the consequences of organizational structures, whether stable or changing, for interaction.[11] The consequence of participatory structures for interaction patterns, especially between those whose organizational tasks differ, should be explored. Again, where change is limited to a redistribution of decision-making responsibility, interaction patterns which may have a negative effect on consensus and cohesion may not be influenced, with consequent effect for cooperation.

In addition to the foregoing concepts, we must explicitly identify satisfaction in relation to various dimensions of roles as directly related to motivation. Generally, as satisfaction seems to be directly related to skill, prestige and material security, it would seem that, without modifying conditions, that the minimization of differentiation, depending on whether it is an up-or down-grading of task, authority and reward will decrease or increase satisfaction for those in lower or higher positions, respectively. If the motivation of those whose authority is decreased or whose status is reduced is to be sustained, some other sources of satisfaction, such as ideological commitment, must compensate those who lose in the change. As the research evidence suggests that these dimensions of satisfaction are independent, it should be borne in mind that the effect of change on satisfaction may not be same for all dimensions.

Even if these tentative propositions are rejected, I suggest that the concepts I have advanced present a more realistic model of organizations, recognizing, for example, such other dimensions of role differentiation, in addition to decision-making, as task differentiation, distinctions of skill and function and distinctions in material and immaterial rewards. The significance of these other dimensions is evident in my suggestion that the career lines of hospital attendants was an important factor in their response to the therapeutic community changes.

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[10] Although the relationship between consensus and cohesion bears exploration, it will be neglected here.
[11] Again, the relationship between role differentiation and interaction which should be explored, will be neglected here.

CONSEQUENCES OF ROLE DIFFERENTIATION

Identification of role differentiation as a critical set of variables calls attention to the possibility that organizational structure itself is a barrier to cooperation. Role expectations provide, with varying degrees of clarity, each participant with a statement of his rights and responsibilities. However, roles, which represent differentiated rights and responsibilities, also serve to differentiate individuals. Organizational participants identify themselves and are identified as managers, clerks, secretaries, machinists, assemblers, psychiatrists, attendants, patiens, and so on. To the extent that significant rewards are associated with maintaining such identities, then, incumbents will strive to maintain role boundaries. In short, a tendency to identify with the rights and responsibilities constituting a role is a function of the reward/cost associated with performance in relation to these rights and responsibilities. Hughes' observation (1958: 51-53) that incumbents tend to redefine roles so as to increase and retain rewarding tasks and to transfer the remainder to others[12], may be seen as a corollary to this proposition. If it is rewarding to perform certain responsibilities, then incumbents of a particular role will fight off attempts by incumbents of other roles to take over these rights and responsibilities. Consequently, conditions arise, as in the conflict between staff and line managers (Dalton, 1950), where roles because divisive and inhibit the emergence of cooperation on which the organization depends.

Such competition and conflict are likely to be observed where rewards are associated with achievement of narrow[13] role objectives. Thus, line managers may perceive rewards to be associated with completing existing tasks on schedule whereas staff managers may define their role objectives as maximizing efficiency by introducing change. Since change can be perceived by line managers as disrupting task schedules, they interpret the staff managers' innovations as likely to reduce line managers' rewards. In the psychiatric treatment centres, the shift to participation can be rewarding for attendants in that they have increased responsibility in the treatment process but these rewards must be perceived to exceed the losses involved in the transfer of rights and responsibilities to the patients. If this balance is not realized, then the attendants will adhere to earlier definitions of the role and ignore or undermine new definitions.[14]

Research by Burns and Stalker (1961) in electronic engineering firms implies that role boundaries tend to be minimized in a changing environment, that is, people pay less attention to defined or »traditional« responsibilities and rights, a »traditional« division of labour, and redefine their roles as they confront the problems facing them. That is, their roles are redefined in the course of interaction. They further suggest (1961: chapter 7) that the influence of environment may be inhibited by other conditions such as competition for power among organizational participants occupying different roles. Paterson (1955) provides further hints in his deliberate redefinition of roles on a Royal Air Force base in Britain. In an attempt to understand the above-average flying accident rate at this base, he diagnosed a strong identification with roles as

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[12] They may also try to eliminate them by persistent non-performance.
[13] That is, role objectives are differentiated as are role expectations.
[14] Attendants used various ways to define the boundaries between themselves and the patients: by giving them orders, by wearing uniforms, by visibly carrying keys and keeping ward and cupboard doors locked, and by teasing and ridiculing the patients.

the influence inhibiting the cooperation necessary to maintain safe flying conditions. To change the situation, he persuaded those on the base to substitute, for the goal of defeating the enemy — and therefore a goal to which only the flyers could relate directly—, the goal of defeating the weather, a goal to which most if not all role incumbents could directly relate, moreover, incumbents of all roles could more easily understand their contribution and that of others to the new goal. Consequently, incumbents of all roles perceived the task as requiring cooperation with others rather than providing for unequal competition for prestige as was the case when defeating the enemy was seen as the main goal. Certainly, a marked improvement in the flying record of the base followed Paterson's attempt at redefinition.

UNIDIMENSIONAL VS MULTIPLE DIMENSIONAL CHANGE

My concepts and propositions, in presenting a more complex perspective on organizations, suggest the possibility that organizational change as one dimension is, indeed, limited change and may not significantly effect levels of cooperation. For example, change which is limited to a redistribution of decision-making responsibilities which, on performance level, means selected representatives of the organization attending meetings where decisions are taken, may not materially influence consensus, cohesion or rewards, nor be experienced as a significant reduction of role differentiation. In many instances of change in the direction of participation, role structure remains intact, with change limited to the authority dimension.

In this connection, Jones' changes at Henderson are instructive for he not only changed the authority of decision-making structure but also reduced status distinctions, as expressed by titles and uniforms, and also reduced task differentiation so the patients took on certain professional responsibilities. These changes changed patterns of interaction so that staff and patients interacted more frequently as they discharged common responsibilities—admitting, treating, evaluating patiens—on behalf of the organization. In short, the changes involved several organizational dimensions and on balance appeared to be more successful than changes in other treatment centres which were limited to fewer organizational dimensions such as authority and perhaps limited change in interaction patterns.[15] It is, of course, only a guess to suggest that cooperation at Henderson was improved by increased levels of consensus and cohesion. However, if it is valid to assume that cooperation is facilitated by minimizing role differences, then if follows that a partial minimization would be less effective than a more complete change. It may be further observed that Jones, by establishing an autonomous unit, removed it from the organizational context of a conventional mental hospital. Thus, his staff did not operate in a context where rewards might be distributed in terms of standards inconsistent with the operating principles of the centre.

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[15] These, however, differed from Henderson in that role differentiation remained relatively constant even though interaction frequencies between staff and patients may have increased. Possibly the positive effects of increased frequency on consensus were reduced by the consequences of role differentiation.

Paterson's work (1955) on the RAF base is also instructive. He showed that organizational performances could be improved by redefining the goals and by changing interaction patterns, without changing the task or authority dimension of role differentiation. Although this approach may not be in accord with the philosophy of participatory management, the influence of the variables he changed should not be ignored.

Clearly, a great deal of theoretical clarification is required to achieve a better understanding of the consequences of structural innovation, or of specific organizational structures such as those identified with participatory management. However, I do think that I have called attention to the critical variables for such analysis and I hope that I have shown that it would be a worthwhile undertaking.

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CONDITIONS FOR PARTICIPATION IN TREATMENT ORGANIZATIONS: A RESEARCH NOTE

ABSTRACT

The problem-areas of participation and self-management have usually been discussed with reference to industrial organizations. In this paper an attempt is made to deal with the issue of participation as applied to treatment organizations, e. g. hospitals, schools, and mental care institutions. Active client participation is seen as basic to effective goal achievement. Some conditions for participation are identified and commented on, i. e. conditions inherent in, (a) the professional model for work organization and, (b) environmental factors related to (i) the functions of treatment organizations and (ii) economic pressures to which these organizations are subjected.

INTRODUCTION: TREATMENT ORGANIZATIONS AND THE CONCEPT OF PARTICIPATION

The value-basis of organizational participative democracy may be formulated as every member's equal right to influence decisions concerning management of the organization. Thus, no individual or group should be granted greater weight because of ownership, higher position, higher education, seniority, longer tenure, etc. (Cf. Dahlstrom 1969, p. 9, and Karlsson 1969, p. 25).[1]

The formulation does not require that every member takes part personally in decisionmaking, but allows for various methods of indirect member representation. It applies to decision areas on all levels, e. g. investment and financing; localization of plants; increasing, decreasing or terminating production; public relations; employment and discharge issues; promotions; work supervision; work hygiene; training and education; planning of work; time--and-motion studies.

Various approaches, theoretical as well as practical, have been made in order to increase the degree of organizational democracy in industrial organizations: see, for example, the literature on Yugoslavian decentralized industrial administration and workers' councils (Gorupić and Paj, 1970; Rus

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[1] A similar conceptualization is given by the Yugoslavian Federal Constitution: »The undertaking is a work community, an association of producers, in which the working people establish mutual labour relations and are equals in self-management« (quoted from Gorupić and Paj, 1970 p. 81)

1970 a, 1970 b; Kolaja, 1965; Israel, 1969, pp. 64—69; Karlsson 1969, ch. 14; Blumberg, 1968, and others); on self-managing work groups (e. g. Thorsrud & Emery, 1964); and the large variety of efforts to employ the concept of alienation in analyses of industrial working conditions (e. g., Seeman 1961, Blauner, 1964, Goldthorpe 1966, Israel 1971).

The purpose of this paper is to outline some problems concerning organizational democracy in a considerably less-noted area, i. e. so-called treatment organizations (Vinter 1967).

Treatment organizations may be characterized as organizations working on people in order to change them from certain states diagnosed as being deficient in one way or another (e. g. uneducated, physically or mentally sick, non-conforming the social or legal norms), into states where these deficiencies are removed.[2] The organization exerts its influence through various forms of stimuli (normative, physical, bio-chemical, etc.) according to plans or programs usually made up by specially hired professional personnel.[3] Examples of treatment organizations are schools, hospitals, mental care institutions, welfare agencies, guidance clinics.

With regard to the problem of participation, industrial and treatment organizations differ from each other in at least one important respect. In the latter type of system, professionals play a dominant role, usually exclusively determining the content of the organization's services: lower rank personnel and clients typically are allowed little influence over treatment programs. Although in industrial organizations experts of various kinds (e. g., engineers, personnel consultants, laboratory personnel) may have considerable power, expertise as such is usually not recognized as a legitimate reason for denying other categories of employees the right to take part in decisions concerning, for example, the organization's output.

This paper proceeds on the assumption that active participation on the part of clients as well as personnel in treatment organizations is an important condition of effective goal achievement. The degree of participation that can be achieved, in turn, is dependent on (a) factors in the organizational system itself, and (b) environmental conditions. With regard to (a) this paper deals primarily with some restraints on participation inherent in the **professional model** of working relationships. With regard to (b), environmental conditions will be discussed under the heading of **functions** and **economic pressures.** The examples to follow are primarily taken from Sweden, but since the developmental tendencies for treatment organizations are similar in other highly industrialized countries as well, I believe that the discussion may have some wider applications.

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[2] This notion of treatment organization is based on their expressed (overt) goals. It should be noted that organizations often have additional, covert goals that more or less dominate their activities. The custodial mental hospital is a case in point, where official goals such as »care« and »re-socialization« in practice frequently give way to the simple aim of keeping patients locked up.

[3] Vinter (op. cit., p. 209) has chosen to differentiate between »socialization« (schools. universities etc.) and »treatment« institution within a large class called »people-changing organizations«. This distinction is not maintained here, for the following reason. Vinter characterizes »socialization agencies« as working with (a) clients **motivated** to receive treatment, and (b) clients who are »moving along normal developmental gradients« (p. 209). Since both the degree of motivation and »normality« may vary considerably between clients, these intra-personal criteria appear unfeasible as means to classify organizations.

THE PROFESSIONAL MODEL

A profession is an occupation whose members (a) possess a high degree of specialized, theoretical knowledge, plus certain methods and devices for the application of this knowledge in their daily practice, (b) are expected to carry out their tasks with due attention to certain ethical rules and, (c) are held together by a high degree of corporatness stemming from the common training and attachment to certain doctrines and methods.[4]

A proffessional theory consists of a set of doctrines that the members of the profession believe fundamental to their function and practice. The theory gives the professional a certain authority vis-a-vis non-professionals (»laymen«), and provides a major basis for the autonomy of the expert group. As Everett C. Hughes has put it:

> Professionals **profess.** *They profess to know better than others the nature of certain matters, and to know better than their clients what ails them or their affairs. This is the essence of the professional idea and the professional claim. (1965, p. 2)*

Thus, a basic feature of professionalism is its conception of the client (and other non-professionals) as **incompetent in matters of treatment.**

Descriptions and analyses of treatment organizations usually depart from the professional role as the main structural unit. However fruitful this may be from certain points of view, it leads to a heavy emphasis on the relationship between expert and client (e. g., doctor/patient, teacher/student), and to the conception of the **client** as the prime (and often the only) beneficiary to organisation's activities. Thus, according to the professional model, the main raison d'etre for treatment organizations is the welfare of the individual client.[5] However, the hierarchic relationship presumed by the professional model — i. e, that clients should subjects themselves to expert recommendations and refrain from questioning professional advice — contains potential tensions. Occasionally, clients refuse the image of themselves as persons being **worked on** rather than **members** of the organization, and may define their needs in ways that differ from professional diagnoses: e. g., students may demand other books on the reading-lists than those recommended by professors, and patients may feel that their emotional or social problem are inadequately taken care of by the health and welfare organizations.

It may be instructive to see in what ways the professional model attempts to explain conflicts between individual demands and professional diagnoses. To the extent that the treatment is ineffective (i. e, fails to change the client in the presumed direction), this may be seen as caused by one or more of the following circumstances.

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[4] Abrahamsson (1972, p. 15). This notion of profession follows the gradualistic strategy of definition developed by Greenwood (1957) according to whom an occupaton may be seen as **more or less** professionalized depending on the degree to which it is characterized by certain factors. This is in contrast to attempts at separating »professions« from »nonprofessions« as distinct categories (see, e. g., Carr-Sunders and Wilson, 1933).

[5] Blau and Scott (1965, p. 51) emphasize this aspect as the primary characteristic of what they call »service organizations«. I have deliberately avoided this term, for the reason that the »service« given by organizations such as schools, universities and hospitals frequently extends beyond the needs of the clients. There may be other beneficiaries whose demands (if fulfilled by the organization) may be opposed to those of individual clients.

1. The expert lacks sufficient compentence to analyze the client's needs.
2. The client does not succeed in articulating his need.
3. The expert lacks sufficient competence to give adequate treatment, even if 1. and 2. are positive.
4. The client is not susceptible to treatment, either because of low motivation or of inadequate physical or mental capabilities.

The solution offered by the professional model to these problems is primarily **technical,** i.e., concerns the improvement of methods: better methods for the transmission of information between expert and client (e.g., through improving diagnostic techniques in medical practice or adding behavioral science education to professional training programs)[6] and better methods of treatment. Its main assumptions are that the coincidence of organizational and individual goals are, first, always desirable (even if the client sometimes fails to realize this, case (4) and, second always possible (even if the methods sometimes are deficient, cases 1 to 3). **Basically, the professional model is one of harmony and consensus.**

It would obviously be a gross exaggeration to postulate that individual and organizational goals are always opposed to each other. Individual demands for good education and efficient medical care more often than not coincide with demands on the organization made by other partners (e.g., state and local authorities, employers, other organizations). Equally wrong, however, is the supposition inherent in the professional model that such a consistency of demands always exists. For example, an educational or health care system which strongly emphasizes productive aspects (i. e., educating for the demands of the industrial sector and rehabilitating patients in, primarily, productive age categories) will set aside the welfare of persons who are less attractive to the labor market.[7]

Seen from a broader viewpoint, the policies and actions of treatment organizations are resultants of several functions besides that of providing individual welfare. In the following section, this perspective will be developed at some length. Hopefully, the discussion will serve to point out the importance of political and socioeconomic aspects, in contrast to the more traditional features of the professional model.

TREATMENT ORGANIZATIONS: FUNCTIONS

An alternative perspective on treatment organizations which takes into account not only professional/client relationships but also the organization's environmental relations may be developed by considering the various functions fulfilled by social sub-systems such as schools and hospitals. This perspective allows for simultaneous influences by several, more or less powerful, external actors on the organization. It follows that the »services« performed by the

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[6] See e. g. the special issue of **Acta Socio-Medica Scandinavica** devoted to discussions on the role of sociology in medical training (vol. III, fasc. 3, 1971).

[7] Especially in the field of education the conflict between »education as investment« and »education as consumption« is a much-debated issue. For a recent contribution, see Lyytikäinen (1971).

organization not necessarily coincide with the interests of individual clients. The following five functions may be distinguished:[8]

1. **Individual welfare.** Educational and medical policies have been employed as two of the main components of welfare programs in a large number of countries. Through educational curricula tailored to individual demands and to the projected structure of the labour market, and through free or low--cost medical care, the welfare state strives to provide its citizens with a »protective net« of basic economic security.[9]

2. **Reproduction of labour.** Persons leave the labour force, permanently or temporarily, for various reasons such as death, retirement, physical or mental illness, marriage, childbirth and entry into adult education or military service. Educational organizations supply the labour market with trained personnel as a restitution of those who leave. The health organizations seek to rehabilitate persons so that they may re-enter their previous jobs or some other productive occupation.[10] The economic gains achieved by effective health care may be considerable. In Sweden, for example, production losses caused by job absenteeism due to illness amounted to 7 billions Sw. cr. (approx. 1,4 billions US $) in 1965.[11]

3. **Absorption of labour and production.** In contemporary welfare states, the public sector (of which education and health care often are the two heaviest expence areas) represents both a highly important **labour market** and a **market for goods** produced in other sectors of the economy. For example, in Sweden in 1968 the educational and health fields employed 61 per cent of all personnel in the public sector, or about 10 per cent of the total labour force. In 1969, investments in those two areas were about 70 per cent of all public investments, or about 9 per cent of all national investments.[12] Together with function (2), this highlights the importance of treatment organizations as potential regulators of the national economy.

4. **Social control.** The social control functions of educational and health organizations take the form of (a) normative and (b) custodial measures (psysical confinement of person diagnosed as needing supervision). Schools, universities and other organizations in the educational sector have traditionally been analyzed from the perspective of normative social control. For example, A. H. Halsey describes the »universal functions« of schools as (i) cultural transmission and (ii) the formation of social personalities.[13]
Normative control within the health care area primarily takes place through the propagation and consolidation of certain concepts of illness, i. e. notions concerning what should be regarded as legitimate criteria for care (rather than, for example, mere detention). Note, for instance, the extensions of medical definitions to such traditionally stigmatized areas as alcohol and drug addiction or various mental disturbances. The growth of health care resources

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[8] This scheme may used for (a) comparisons of different types of treatment organizations (time constant), (b) studies of a specific treatment organizations over time, and (c) comparison of a specific type of treatment organization (e. g., primary schools) cross-nationally.

[9] Cf. the definition of welfare state by Asa Briggs (1967, p. 29).

[10] Regarding this functions, see e. g. **Educational Policy and Planning: Sweden,** EIP Raport by the Swedish Government, Directorate for Scientific Affairs, OECD, Paris, 1967.

[11] Asplund (1970, p. 167).

[12] 1970 ars langtidsutredning, **SUO 1970: 71,** pp. 274 and 54.

[13] Halsey (1967, p. 385).

seems to have the general effect of »liberazing« the concept of illness.[14] Campaigns to improve cost habits and to heighten the public's awareness of the importance of physical exercise also belong to this category. The school system's function of providing custodial control of large cohorts of individuals has been noted by, among others, Illich (1971) and Cristie (1971). As the latter points out, the closing of schools would create considerable problems in modern industrial societies, since the production system, cities and housing areas, traffic system etc. are not designed to absorb millions of children let at large.[15]

Physical confinement is a marked feature in the field of health care: it is motivated by the need to keep patients under close observation, to avoid the spreading of epidemic diseases and (in mental hospitals) to prevent violent patients from harming themselves or others.[16]

5. **Selection.** The educational system carries out selection and competence grading of students as a service partly to the students themselves but also to institutions of higher learning and organizations on the labour market. The selective facet of education has grown considerably in importance, concurrently with the extension of secondary and higher education to large parts of the population in various countries.[17] Although the selective function of public health organizations is somewhat less obvious, it is nonetheless important. The best example is perhaps the medical certificate, often requested by employers, by state authorities in matters of early retirement and pension, by insurance companies for disbursements, by driver's licence authorities, etc.

ECONOMIC PRESSURES ON TREATMENT ORGANIZATIONS

In many nations the post-World War II period has been characterized by a rapid swelling of public expenditures. Statistics for the OECD countries indicate that during the 1960's increase in public consumption have exceeded increases in the respective GNP's. Also for these countries, areas such as education and health care have expanded especially fast.[18] It has been calculated that if health care costs in Sweden continue to rise at the same rate as they have done during the 1960's (about 8 per cent per year), the total cost in the year 2007 will exceed the size of Sweden's gross national product (which, of course, is an impossible situation). During the 1960's Sweden doubled its GNP. Health care costs, however, were about six times as high in 1970 as in 1960.[19]

These trends will put treatment organizations under heavy pressure to become more effective. For example, in Sweden recent economic prognoses for the period of 1970—75 emphasize the need for increasing the efficiency of the public sector through productivity evaluations, rationalizations, program-budgeting and other forms of economic control. An offical raport sta-

[14] Cf. Pernow (1971, pp. 141—142).
[15] Christie (1971, p. 45).
[16] For discussion on the custodial aspects of mental care, see e. g. Lochen (1965), Sundin (1971), pp. 17 ff) and Agevik-Magnusson et al. (1970).
[17] Cf. Coomb (1968, ch. 1) on the »education explosion«. On the meritocratic implications of equality of opportunity strategies, see e. g. Lena Johansson (1971) and Husen (1971, p. 64).
[18] Hook (1972, p. 111).
[19] **Dagens Nyheter,** June 2, 1972.

tes that »it is quite evident that ... a continuing increase in the standard of living essentially depends on improvements in productivity which can be achieved (within the public sector)«.[20]

These tendencies are not limited to Sweden, Coombs (1968) emphasizes the acute scarcity of economic resources as one of the main factors behind »the world educational crisis«. Educational systems, he states, will need more money. »But money will be harder to get since education share of national incomes and budgets has already reached a point that restricts the possibilities to adding on further increments.«[21]

The upward trend of educational unit costs (i. e., costs per student), according to Coombs, depends mainly on the fact that »education remains a labour-intensive industry, still close to the handicraft stage. Indeed it becomes even more so with each effort to raise its quality through its conventional means«.[22] In order to slow down the rise of educational expenditures, Coombs suggests a number of measures for innovations within the school system, such as

a) communication by radio and television of excellent teaching;
b) lengthening of school hours to provide more time for teaching and learning;
c) sharing of expensive school facilities and specialized personnel by two or more neighboring institutions;
d) use of teaching aids in the classroom (i. e., paraprofessional 'helpers');
e) greater emphasis on well-planned self-instruction (e. g., use of programmed learning materials, 'teaching machines', language laboratories);
f) application of modern management practices to school services;
g) consolidation of undersized educational institutionis into larger, more effective and better qualified units.[23]

Within the health care system the same principles, aiming at the reduction of labour-intensity, are at work, manifested by centralization of treatment institutions, increases in organizational size, service specialization, and innovations in management, work-organization and technology. For example, since 1950 the number of hospitals in Sweden has been reduced by 10 per cent (from about 1000 to some 900) while at the same time the number of beds per hospital increased by 40 per cent.[24] The growth in size has a counterpart in geographic concentration, with hospitals more and more being located to big cities and densely populated regions (and concurrently reduced availability of hospital care for more sparsely populated areas). Specialization has been rapid. As one example, diagram I shows the succesive increase in the number of special clinics in a large Swedish central hospital, starting as an undivided institution and developing into an organization of 17 medical specialties in the mid 1960's.

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[20] 1970 ars langtidsutredning, **SOU 1970 : 71**, p. 48.
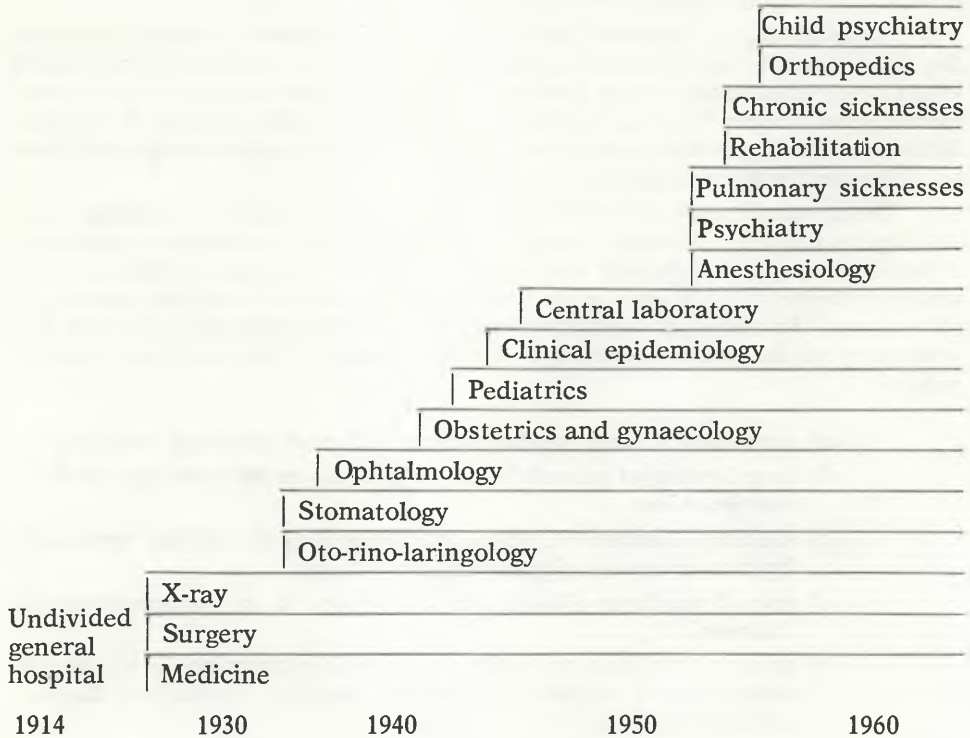[21] Coombs (1968, p. 5).
[22] Ibid., p. 165.
[23] Ibid., p. 135—136
[24] **Allmän halso — och sjukvard 1968**, table A. 3, p. 27

Diagram I

					Child psychiatry
					Orthopedics
					Chronic sicknesses
					Rehabilitation
					Pulmonary sicknesses
					Psychiatry
					Anesthesiology
				Central laboratory	
				Clinical epidemiology	
			Pediatrics		
			Obstetrics and gynaecology		
		Ophtalmology			
		Stomatology			
		Oto-rino-laringology			
	X-ray				
Undivided general hospital	Surgery				
	Medicine				
1914	1930	1940		1950	1960

Source: Rhenman (1969, p. 34)

New managerial roles, such as hospital director, economic director, personnel assistant, and organizational expert have been created. Work organization has been rationalized by the use of maintenance and support teams, i. e. special »patrols« for room cleaning, food provision, transportation and supply, bed-making and desinfection, taking of blood-tests, etc, and by large-scale use of disposable articles. The demand for engineering and technical personnel (to supervise laboratory equipment, electricity, water, heating, communication and data systems) is rapidly rising (the projected increase in Sweden for the period od 1968—75 is 70 per cent.)[25]

In short, treatment organizations tend to be made centralized rather than dispersed, big rather than small, capital-intensive rather than labour-intensive (i. e., more buildings, machines, equipment, and fewer people to take care of clients), and specialized rather than generalized.

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[25] RUPRO 69, p. 16

Task differentiation and demands on increases in productivity provide the groundwork for routinization of work procedures.[26] The primary, Gemeinschaft-oriented aspects of treatment tend to disappear in favour of formalized, technocratic and »production-oriented« practices.[27] Marked tendencies toward reification of clients exist.[28] Hospital patients are identified by their room and bed number or by their symptoms. Relations with personnel are usually formal and impersonal, and tasks specialization hinders communication with non-professionals in matters of treatment (since this is the province of the expert).

Some features of client reification are congenially represented by the so--called »machine model« in medicine, according to which the patients is regarded as a complex of biological parts, each one with its potential deficiencies. Medical diagnoses seek to describe these deficiencies as carefully as possible; available personnel and technical resources are then employed to »repair« the various faults in the organism.[29] Organizationally this may lead to a lack of total perspective, to fragmentation of the client and to referal chains (i. e., sending the client between different specialists), without anybody being responsible for the patient as a person and as socio-psychological whole.[30]

Similar tendencies may be found in other fields as well. For example, the teacher manual for the Swedish primary school presents a fragmented and symptom-oriented image of the students, in many respects comparable to the basic assumptions of the »machine model«. Teachers are instructed to make detailed observations of the pupils, and to evaluate their capacities with regard to a variety of functions: cognitive, manual, emotional, aesthetic, motoric and social.[31]

These ideologies — being reflections of current practices in treatment organizations — provide rationales for the conceptualization of treatment as primarily a distribution of stimuli to **passive objects** according to schemes designed by professional experts. Not unexpectedly, clients themselves often experience their own role as one of subjection and isolation. The phenomenon of infantilization or »regression« among hospital patients is well-known to psychiatrists;[32] and a study by Israel shows that hospitalized persons fre-

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[26] Note, for example, the following account by a patient with long experience from hospital life: »Two assistants make all beds in the ward. One assistant is responsible for all glasses used for brushing teeth. Another goes from room to room vacuumcleaning. The assistant nurse inquires the patients about whether their stomachs function normally, etc. For the patients, it is important to ask the right things from the right person at the right moment. The person bringing in the water tray does not concern herself with throwing away old newspapers into the waste paper basket. If you want your bed folded down after eating, you will have to wait until the assistant responsibile for serving food comes in to pick up your tray«. Lindblom (1972, p. 36).

[27] See Rahman (1969, ch. V) and Asplund (1970, ch. 3) for descriptions of hospital as »production systems«, comprising various kinds of »products« (i. e., types of treatment), and whose activities can be analyzed in terms of »production flows«, »product complexity«, »product assortment«, »productive vs. administrative units«, etc.

[28] See Israel (1971, pp. 319 ff) for a cogent discussion of the concept of reification.

[29] Cf. Sjovall (1969, pp. 13 ff) .

[30] Inghe (1971, p. 178) emphasizes the need for specialists in social medicine to be especially aware of the patient's social situation when under hospital treatment: »How can it come about that the social needs and requirements of so many hospital patiens are quite simply overlooked? How is it that some patiens are buffeted around from one hospital ward to another without being properly examined anywhere, at the risk of their becoming regarded finally and passed as 'regular troublesomes'? Human grinding down can take place just as well inside hospital and welfare services as outside«.

[31] Lgr 69. pp. 71—72. For a criticsm of fragmentation tendencies in the Swedish primary school system, see Brandén (1971, pp. 88—89).

[32] Cf. e. g. Bage (1969, pp. 36—38)

quently complain about the absence of emotional and psychological support from doctors and nurses, while much less emphasizing the professional, treatment-technological aspects of hospital care.[33] Although modern medical organizations often are successful with regard to their purely instrumental functions, they fail considerably with regard to their humane, caretaking facets.

PARTICIPATION: MICRO-ASPECTS

An important condition for increasing active client participation in treatment organization is to break current trends toward increasing subjection and reification of clients. Attempts in this direction may be grouped under two different headings. First, procedures have been suggested to create **representative systems** to take care of personnel and client interests vis-a-vis the interests of the organizational elite (managers, professionals). For example, personnel and clients in hospital wards elect representatives on clinic boards; clinic boards elect representatives on the next level, etc (the last level being the hospital executive board).[34] In the Swedish university system similar solutions have recently been tried out in order to respond to student demands for taking part in decisions (in actual practice, however, student influence has been limited to relatively small-scale issues on the departmental level). Second, participative democracy within treatment organizations has been attempted through various approaches to the **therapeutic community** concept, i. e. principles emphasizing common goals for all treatment-involved persons, decentralized power and shared responsibility for treatment results, open communication between various hierarchic levels, and the active involvment in treatment of the clients themselves.[35]

These and other similar efforts to modify the internal working-patterns of treatment organizations basically proceed on the assumption that a major obstacle to the motivation to participate (among clients as well as rank-and--file personnel) is the dominant position of the professional expert. Thus, the therapeutic community movement aims at reducing the rigid division between professional and client roles; in the educational sphere, Christie (1971) and others have proposed that schools — contrary to current centralizing trends — should be permitted maximum autonomy with teams of students, teachers, and parents deciding together in what way the curriculum should be composed and school work organized.[36] In like manner, much of the students opposition against universities has been motivated by the need to compensate for teachers influence in the composition of reading lists, by demands for group teaching rather than teaching ex cathedra, student representation on faculty bodies, etc.

In short, the micro-aspects of participation in treatment organizations have concerned revisions of the immediate organizational system, typically represented by the professional/client relationship.

[33] Israel (1962, pp. 99 and 104)
[34] See e. g. Bjorklöf et al. (1970, chs. 7 and 8).
[35] Bage, op. cit.; for a summary of characteristics of therapeutic communities, see Sundin (1970, pp. 152—155)
[36] Christie, op. cit., p. 99

However, if the analysis of the functions and external pressures on treatment organizations carried out above is reasonably correct, then the conditions for participation in (and influence over) these organizations should be looked for as much in the organizations' environments as in their internal characteristics.

Treatment organizations are part of an increasingly important economic and political sphere, and fulfil functions both as economic regulators and as providers of services to a large variety of beneficiaries, more or less powerful. It is reasonable hypothesis that clients as well as personnel more and more will come under the influence of forces which they cannot control by acting on the micro-system, and that, therefore, the macro-aspects of participation (i. e., means of achieving the desired reforms by working on environmental factors) will grow in importance. The professional model is inadequate as the singular basis for internal modifications of treatment organizations, and has to be integrated with models in which these organizations are seen as dependent units rather than as solitary, self-sustaining settings for professional activities. In other words, the issue of participation — here as well as in connection with industrial organizations — should be dealt with as a **socio-political** problem.

Let me briefly sketch a few implications of this assumption. First, the prevailing trends toward capital-intensive treatment will have to be further examined with regard to their consequences for creating close, emotionally supportive, and Gemeinschaft-oriented treatment institutions. Reductions in personnel tend to strip treatment of these aspects, leaving fewer opportunities for contact between clients and employees and subjecting both to the forces of technology.

Second, the economic pressures on treatment organizations tend to put these under heavy influences to process more people at lower per capita cost. Thus, it seems highly likely that functions (2) (reproduction of labour), (3) (absorption) and (5) (selection) will attain increased weight, i. e., treatment organizations may be tempted to emphasize (far more strongly than today) their economic profitability. This carries the risk that treatment resources will primarily be allocated to clients with high productive capacity, and that other clients will be given only secondary attention (e. g., old, handicapped and cronically sick people in the medical case, not-so-bright students in the educational case).

Obviously, such tendencies will have to be counteracted by an increased awareness of the priorities involved in treatment decision, i. e., to what extent demands from economic interest groups and other power-centralized can be made to coincide with individual demands. In this process, the professional expert has a key role. Third and lastly, therefore, it would seem that professionals should take on a more explicit political task close to the position indicated by the following statement by a specialist in social medicine:

> The specialists in social medicine should ... study the forces underlying the apparently ruthless structural rationalizations which are now going on in the more industrialized countries. If we discover

or suppose that these great changes are harmful to many persons and wish to see such harm prevented or undone, we have first of all to gain insight into the social processes concerned. I can see the doctor here having to grasp economic problems. He will have to deal with such terms and conceptions as productive forces, profitability, productivity and concentration.... My view is also that the training of specialists in social medicine should include at least an elementary grounding in various economic theories and cause-and-effect models including, naturally, marxsism.[37]

[37] Inghe, op cit., p. 181

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SUPERVISION IN EFFECTIVE AND INFFECTIVE HOSPITAL WARDS

This paper deals with the creation of instruments for measuring the efficiency of hospital wards. It also deals with how, by means of these efficiency measurements, one discriminates between effective and ineffective hospital wards. Furthermore, it describes which personal traits and which kind of supervisory behavior distinguish the head nurse of an effective ward from the head nurse of an ineffective ward. The research is based on data from 187 hospital wards and includes answers in a questionnaire from 3.694 persons.

The ultimate criterion of efficiency in hospital will be the quality of the patient care compared with the resources allocated. Measuring patient care however is a very difficult task. It includes many variables which do not easily lend themselves to traditional quantification. The purely medical variables are not the easiest. There are different so called medical audit systems by means of which one tries to solve the problems. These systems are used mainly in the United States. The medical audit methods are expensive and they require a lot of expert staff. Therefore it would be highly interesting to construct instruments which are reliable and enough valid to be used more easily than the medical audit programs now available. Attempt at a solution has been presented by Georgopoulos and Mann (1962). They investigated ten American hospitals and used the following instruments for measuring the care:

1) Instruments which measured the medical care
2) Instruments which measured the nursing care
3) Instruments which measured the total care and comparative instruments for the total care.

The measurements were based on subjective evaluations of the surgeon/physicians, registered nurses, technical personnel and the administrative personnel in these hospitals. In order to validate the evalutions made, statistical data, statements from the patients and the general public were used. In addition external suregon/physicians expressed their views on the quality of the care of the respective hospitals. When external criteria for validation were used it was found that they correlated to a large extent with the results arrived at by use of subjective measurements. These researches made by Georgopoulos and Mann gave our team a reason to start a project whereby it would be possible to measure the efficiency of individual hospital wards in the same way.

In 1968 the Finnish Hospital League, where I was research director, had collected a material based on a questionnaire comprising 565 items given to all personnel in randomly selected hospitals in Finland. The response percen-

tage of the questionnaire was approximately 94, which means that 4.925 respondents have answered the questionnaire. The research project was called »The hospital as a social organisation«. Several reports have already been published in Finnish on this project.

In the present study the material was classified in the following manner: First, the hospitals were classified according to size: Big hospitals which comprised more than 500 beds, medium sized hospitals which comprised 125 to 500 beds, small hospitals which comprised hospitals with less than 125 beds. Secondly, all the 3.694 persons working in the hospital wards were classified in two groups. One group consisted of the higher ward personnel, the second group of the lower ward personnel. As higher ward personnel were counted head nurses, assistant head nurses, specialist nurses, and registered nurses. As the lower group were counted nurses aids, ward clerks, cleaning personnel, midwives and childrens' nurses. The following table presents the distribution according to the two classifications.

TABLE No. 1

Hospitals	Professional group		Total
	High	Low	
Big	702	897	1 599
Medium sized	710	1 011	1 721
Small	138	236	374
Total	1 550	2 144	3 694

THE CHOICE OF VARIABLES

For the above mentioned questionnaire the items and combined variables were chosen according to Georgopoulos' and Mann's results, our own earlier research and on the basis of experiences from hospital staff experts. General organization theory was of course also taken into account.

Out of the total of the 565 items which are included in the questionnaire 56 variables were selected for a closer analysis with the purpose to investigate to what extent they could be transformed into an instrument for measuring the effectivity of individual hospital wards. Out of these 56 variables, six were so called combined variables consisting of certain psychological scales which measured rigidity, toughness, sociability, profession satisfaction, job satisfaction and the evaluation of the head nurse by those in inferior ranks. The rest of the variables were related to the work as such, the work situation, changes, cooperation etc. All these 56 variables were taken into account when the answers given by the high staff groups were analyzed. The low staff group were requested, in the questionnaire, to answer questions referring to only 37 of the 56 variables The 19 variables which accordingly relate only to the high staff group concern the cooperation and coordination throughout the hospital and the general patient care outside the individual ward.

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Factorial analysis was chosen as the method. The purpose was to explain the statistical variance throughout the population of variables with the means of as few factors (dimensions) as possible. This method gave a good picture of which items and combined variables discriminated best and could be included in an effectivity scale. In the factorial analysis the condensing method used was the principal axis method. After the factorization a varimax rotation was employed. It was decided that the number of factors should not exceed six and that their eigenvalues must be at least .80, as the objective was to create as general a measuring instrument as possible. As in estimate for the communalities the highest correlations were used. For each of the 6 groups a factor analysis was made and the following symbols will be used in the tables.

The high group in big hospitals HG
The high group in medium sized hospitals HM
The high group in small hospitals HS
The low group in big hospitals LG
The low group in medium sized hospitals LM
The low group in small hospitals LS

As a result of the factorial analysis we got for each group 6—7 factors which had the eigen values and percentages of estimated communalities (see Table No. 2, p. 194).

The cumulative share of each factor is rather small. The factors only explain 20 — 32% of the variance. The interpretation of the factors showed, however, that they corresponded well with the results from research in other fields. The names of the factors were given according to which variables had the higest loadings.

High group, big hospitals.

The first factor was interpreted as a factor concerning **»the ease in the cooperation** between wards and professional groups«. In this factor coordination, cooperation, lack of conflicts and the ease of interaction are emphasized. The second factor is called **»job involvement«,** as the variables with the highest loadings emphasize satisfaction with the ward and satisfaction with work methods. The third factor is called **»opennes to change«,** as it mainly includes items which show a tendency to accept changes and development. In the fourth factor the combined variables rigidity, toughness and the items which represent feelings of too big a workload get the highest loadings. This factor is called **»rigidity«.** The fifth factor can be interpreted as an **»effectivity of the ward factor«,** as the highest loadings relate to items which are connected with the efficiency of the hospital and of the ward. In this factor also itemes referring to work methods, coordination and the evaluation of the head nurse by those in inferior ranks are emphasized. The

TABLE No. 2

Staffgroup	Factor	Eigenvalue	Cumul.
HG	1	8.11495	.14491
	2	2.11474	.18267
	3	1.90414	.21660
	4	1.45023	.24222
	5	1.12684	.26234
	6	0.95025	.27931
HM	1	7.95025	.14214
	2	2.24686	.18226
	3	1.72533	.21507
	4	1.45568	.25978
	5	1.21816	.26153
	6	1.06252	.28050
HS	1	9.43205	.16843
	2	2.08585	.20564
	3	1.88115	.25323
	4	1.77479	.27093
	5	1.50724	.29784
	6	1.45511	.32382
LG	1	4.72384	.12767
	2	1.59229	.17071
	3	1.40134	.20850
LM	1	4.72042	.12758
	2	1.44247	.16656
	3	1.37557	.20374
LS	1	5.51972	.14918
	2	1.60006	.19243
	3	1.33727	.22057
	4	1.29536	.26358
	5	1.16105	.29496

sixth factor can be seen as an »informality« factor. The informal direct communication and a less formal social climate get high loadings in this factor.

High group, medium sized hospitals.

Also in this group six factors are found. **The first factor can be given the same name as the first factor in the first analyzed group,** as the same items get the highest loadings, except the items which, in the first group, fell out in the effectivity factor. **The second factor is also the same** as in the

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higher group, big hospitals, viz. »**job involvement**«. The third factor is a pure »workload« factor, and the fourth factor is here as in the big hospitals called, »openness to change«. The fifth factor is also here an »effectivity of the ward« factor as in it were found high loadings for items referring to efficiency, coordination and cooperation. The sixth factor in this group is a »rigidity« factor.

High group, small hospitals.

In this group the factors are partly the same as we have observed earlier. **The first factor is interpreted as a »cooperation«** factor. It corresponds to the first factor in big and medium sized hospitals although items referring to cooperation between wards have not fallen out. This can be explained by the smallness of several hospitals, Some of them may have only one or two wards for which reason the personnel may know each other better and cooperate better in a natural way than in a bigger hospital. The second factor is a combined »rigidity-workload« factor. The third factor is interpreted as a »profession satisfaction« factor, as the highest loadings concern not so much the actual work as such as the profession chosen. The fourth factor is called »adjustment to the group«. This factor is partly similar to the »job involvement« factor found earlier. The fifth factor is openness to change« and the sixth factor is also here »effectivity of the ward«.

Low group, big hospitals.

The first factor is difficult to interpret. It reminds one of the factors which in the other group were interpreted as »**job involvement**« but in this group efficiency emphasizes items also get high loadings. We call this factor »effectivity of the ward and involvement« factor. **The second factor is a distinct »rigidity«** factor and the third factor one which emphasizes »openness to change«.

**Low group, medium sized hospitals.**

The first factor is the same as in big hospitals, the second is a »rigidity- -workload« factor as in the high group, small hospitals. The third factor is also in this group »openness to change«.

Low group, small hospitals.

The first factor is interpreted as »job involvement«, as the items with the highest loadings are the same as those which occur in the »job involvement« factor in the other groups. **The second factor is »openness to change«, and it can be seen that it occurs in the same way in all the groups.** The

third factor is rigidity. The fourth is a »workload« factor. The fifth factor in this group is the »effectivity of the ward factor«, as it is clear that items emphasizing efficiency at the wards, cooperation, planning and the evaluation of the head nurse by those in inferior ranks occur.

Diagram 1. Correspondence between factors.
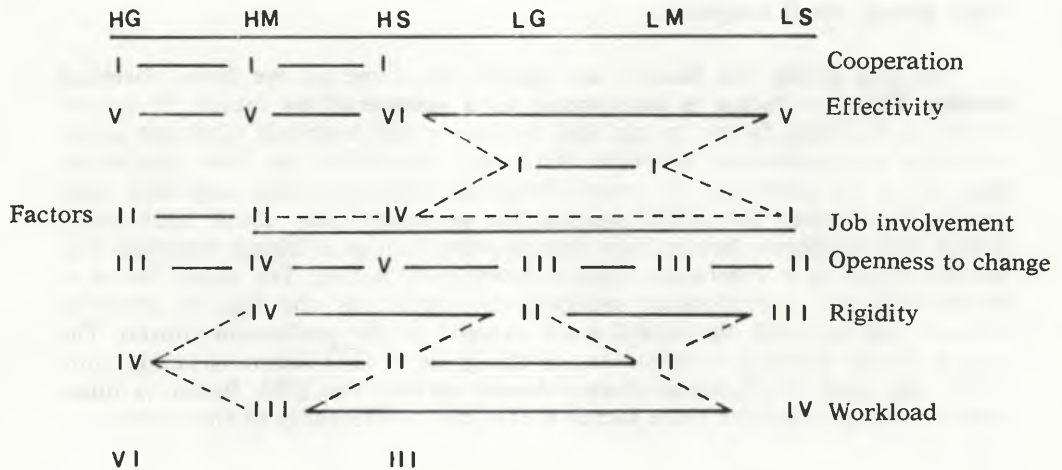
In the diagram a line stands for the complete correspondence of the factors. A dotted line means that the factors only partly correspond to or in some ways are similar to one another.

CONSTRUCTION OF SCALES

When examining the results of the varimax rotation more closely, one observes that in all groups an »effectivity of the ward« factor will be found which has almost the same content regardless of groups. It was, however, decided to make a new manual rotation. From each of the unrotated factor matrices the most loaded effectivity factor and the second most loaded effectivity factor were combined for manual rotation. The rotation was done twice, but the result was not any better the second time than the first time except in a couple of the small hospital groups. Here a slight improvement occurred. The means of the loadings were computed over the factors. These means were later used as weights when a standardized effectivity scale was created. From table 3 on the following page the factors falling out by the manual rotation, their loadings and the means of the loadings will be seen.

In order to investigate and ensure the correspondence between the factors the coefficients of congruence were computed according to the method

TABLE No. 3

x	Variable	HG	HM	HS	LG	LM	LS
-03	152	00	02	11	-15	-04	-12
10	171	21	05	12	04	06	11
-05	172	-02	05	-07	-03	-09	-11
41	223	38	37	47	41	39	44
50	228	47	50	40	57	55	52
48	229	46	47	35	56	51	51
54	230	53	49	58	56	60	50
-12	233	-08	-05	05	-11	-30	-20
18	251	12	12	31	27	07	16
27	257	28	28	40	22	24	22
-08	259	-03	04	-23	-16	-07	-05
66	329	64	63	69	59	64	77
66	331	65	56	66	63	64	79
-19	348	-16	-07	-41	-27	-21	-03
-11	352	-06	-04	-15	-22	-20	-01
33	355	39	34	44	29	27	24
-15	357	-07	-07	-07	-16	-26	-27
38	359	37	35	45	47	32	34
50	363	47	59	42	52	50	49
39	366	42	37	24	37	37	57
-29	367	-31	-27	-33	-22	-19	-40
-29	368	-25	-19	-18	-39	-27	-43
31	378	26	32	23	31	33	42
31	379	28	25	34	31	35	34
43	642	48	37	45	45	45	35
27	667	38	18	29	34	18	24
-21	674	-21	-14	-18	-19	-26	-27
-08	721	-20	-13	00	-03	-04	-08
12	722	10	9	06	15	20	12
07	727	04	02	12	07	13	01
-06	732	-08	02	-07	-15	-05	-01
15	RIG	22	01	24	23	09	13
13	TOUG	14	02	17	20	03	24
08	ALT	14	22	-09	06	08	09
35	VT	43	29	32	36	41	30
53	VO	48	58	49	55	66	39
54	EA	49	48	45	60	66	53
32	916	21	34	41			
25	919	18	30	27			
41	924	38	54	31			
61	925	64	67	52			
39	926	47	47	24			
38	927	44	45	26			
39	928	50	47	21			
52	929	56	53	47			
48	930	54	54	37			
36	931	43	41	23			
46	932	45	48	45			

36	933	37	34	37
38	934	42	36	35
41	935	46	42	36
-30	936	-32	-28	-31
-33	937	-39	-27	-33
-37	938	-48	-37	-27
41	939	46	41	37
09	950	23	10	-06

of Wrigley and Neuhaus. The coefficients showed figures betwen .921 and .975. The values of the coefficient show a remarkable good correspondence. Therefore, the factors can be seen as constituting one and the same factor.

The scales constructed in this project are so called Likert — summa — — scales. The Likert-scales are characterised by item analysis and in this case the item analysis was made on the basis of the results of the factorial analysis. Only those items were included in the scales wich had the highest means in their loadings in the individual effectivity factors. Four scales were created in all: the original effectivity scale and its three variants. From the items supposed to be answered by both rankgroups those were included in the effectivity scale which had loadings showing a mean higher than .33 in the effectivity factors. As regards the variants relatings to higher rank groups those showing a mean higher than .40 were included. The final effectivity scale comprises 14 variables. The variables and their means in the effectivity factor will be found below. The numbers of the variables relate to the numbers of the items in the original questionnaire.

The effectivity scale

223:	satisfaction with work method	(.41)
228:	cooperative climate in hospitals	(.50)
229:	cooperation between wards	(.49)
230:	work organisation in ward	(.54)
329:	quality of patient care	(.66)
331:	efficiency in ward	(.66)
355:	involvement in work (work group)	(.33)
359:	realization of activity plan	(.38)
363:	the estimate by staff of patient satisfaction with hospital care	(.50)
366:	smoothness between work shifts	(.39)
642:	allocation of duties within a shift	(.43)
PS:	professional satisfaction	(.35)
JS:	job satisfaction	(.53)
ES:	evaluation of supervisor (head nurse)	(.54)

It should be noted that the variables PS, JS and ES are combined variables.

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The first variant of the effectivity scale was constructed in such a way that the satisfaction elements were disregarded. As regards the rest of the items only such items were included wich were related to the higher rank groups and wich also showed means higher than .41 in their loadings.

The first variant

230: work organization in ward	(.54)
329: quality of patient care	(.66)
331: efficiency in ward	(.66)
363: the estimate by staff of patient satisfaction with hospital care	(.50)
642: allocation of duties within a shift	(.43)
ES: evaluation of supervisors (head nurse)	**(.54)**
925: the coordination of work and duties	(.61)
929: timing of work	(.52)
930: planning of cooperation between wards	(.48)
932: smoothness of cooperation between wards	(.46)
935: ease in vertical cooperation	(.41)
939: solution of coordination problems	(.41)

The second variant of the effectivity scale comprises the same variables as the first variant apart from the combined variable of evaluation of head nurse by those of inferior ranks (ES). The third variant comprises all the items included in the original effectivity scale and in all of its variants. The following table shows to what extent the same items are found in the individual scales.

		A		
Scale	Efficiency	I variant	II variant	III variant
Efficiency		6/14	5/14	14/14
B I variant	6/12		11/12	12/12
II variant	5/11	11/11		11/11
III variant	14/20	12/20	11/20	

The relation between A and B shows how many items scale A has in common with scale B. The standardized, weighted scales were constructed in such a way that the mean of the loadings of each variable in the effectivity scale was used as weight for each separate variable. In this way it was possible to compute a score for each ward so that the raw scores for each individual were transformed to a z-value by using the means and the standard deviation of the total material. The z-values arrived at in this way are weighted with the above weights and are added to get the score for an individual ward. This example shows how this is done.

$$= \left[\left(41\,\frac{k223-3.87}{0.85}\right) + \left(.50\,\frac{k228-2.95}{0.70}\right) + \left(.48\,\frac{k229-3.20}{0.70}\right) + \right.$$

$$\left(.54\,\frac{k230-3.40}{0.80}\right) + \left(.66\,\frac{k329-3.28}{0.74}\right) + \left(.66\,\frac{k331-3.40}{0.74}\right) +$$

$$\left(.33\,\frac{k355-3.35}{0.75}\right) + \left(.38\,\frac{k359-3.50}{0.50}\right) + \left(.50\,\frac{k363-4.42}{.1.33}\right) +$$

$$\left(.39\,\frac{k366-3.80}{0.75}\right) + \left(.43\,\frac{k642-3.35}{0.72}\right) +$$

$$+ \left(.35\,\frac{\overset{PS}{(k213+k214+k215+k216)-15.50}}{2.35}\right) + \left(.53\,\frac{\overset{JS}{(k220+k227+k232)-11.30}}{2.20}\right) +$$

$$+ \left.\left(.54\,\frac{(k231+k360+k369+k370+k377)-17.80}{4.05}\right)\right]$$

Reliability of the scales

The constructed measuring instruments show a high reliability. Because the scales can be looked upon as combined variables, the coefficients of reliability were computed according to the formula used for computing

$$r_{ss} = \frac{\sum\limits_{j=1}^{p} r_{jj} + 2 \sum\limits_{j=1}^{p} \sum\limits_{k=j+1}^{p} r_{jk}}{p + 2 \sum\limits_{j=1}^{p} \sum\limits_{k=j+1}^{p} r_{jk}}$$

the reliability of combined variables. In the separate rank and size groups the coefficients of reliability of the effectivity scale and its variants are as follows

		Original scale	I variant	II variant	III variant
Staff-	HG	.861	.868	.881	.898
groups	HM	.858	.863	.853	.895
	HS	.888	.893	.889	.925
	LG	.870			
	LM	.868			
	LS	.890			

The combined variables GS, JS and ES have the following reliabilities .82, .79 and .91, respectively.

Validity of the scales.

The construct validity of an instrument can be regarded as proved when a measuring instrument has been constructed for the measurement of a factor arrived at by means of factorial analysis and when this instrument is to be used in situations where the factor which one wishes to measure is relevant. The logical validity of the effectivity scale was corroborated in an investigation made at a central hospital, in which the effectivity scores of the individual wards were computed. Here it was shown that the five most effective wards according to the scale were two intensive care units, a unit for prematures and one maternity ward. Other validity investigations have also been made in Sweden by members of our team, but a presentation of those falls outside the scope of this paper.

CHARACTERISTICS OF HEAD NURSES

The investigation of the second problem was made in the following way. The earlier mentioned 3.694 respondents came from 187 wards. The original effectivity scale was used, and for every individual ward a score was computed which disregarded the answers given by the head nurses. The distribution of the scores was normal. The wards were then divided into quartiles on the scale. In this way we got 47 wards in the most positive and most negative quartiles. The upper quartile is called + wards and the lower quartile — wards and the head nurses of these wards were accordingly called + head nurses and — head nurses. The plus and minus head nurses were compared according to their positions on some 70 organizational and psychological variables. In this way the comparison relates to the head nurses whose personnel perceive their ward as either efficient or inefficient. The following significant or almost significant differencies were found.

»Ineffective wards«	»Effective wards«
The head nurse is	The head nurse is
— older	— younger
— has been working on her present ward for a longer time	— has been working on her present ward for a shorter time
— her ways of communication upward more formal	— her ways of communication upward less formal
— her ways of communication downward more formal	— her ways of communication downward less formal
— experiences more stress in her work	— experiences less stress in her work
— believes freer work conditions would deteriorate output of work	— believes freer work conditions would improve or not affect output of work

- less interested in general nursing
- more interested in special nursing
- less interested in administration

- emphasizes **instrumental communication**
- doesn't emphasize expressive communication
- emphasizes only instrumental communication
- experiences her workload bigger

- usually feels she needs more personnel
- feels she has to use more time to handle conflicts
- is extremly strongly identified with the hospital
- feels she gets less information from her subordinates
- is less job involved
- experiences less job satisfaction

- doesn't want to uphold freer social contact on her ward
- experiences the effectiveness of her ward to be worse
- is more intolerant
- is less sociable, not interested in people
- weaker ego strength
- is more rigid
- is more individualoriented
- doesn't like changes
- less professionally oriented
- more traditionally oriented
- experiences the organizational effectiveness of the ward to be worse
- the personnel experiences the communication climate to be more formal
- the personnel experiences the social distance to be greater

- more interested in general nursing
- less interested in special nursing
- more interested in administration

- emphasizes instrumental communication but not as much
- emphasizes also expressive communication
- emphasizes both instrumental and expressive communication
- experiences her workload smaller

- rarely feels she needs more personnel
- feels she has to use less time to handle conflicts
- is strongly identified with the hospital
- feels she gets more information from her subordinates
- is more job involved
- experiences more job satisfaction

- wants to uphold freer social contacts on her ward
- experiences the effectiveness of her ward to be better
- is less intolerant
- is more sociable, interested in people
- stronger ego strength
- is more flexible
- is more grouporiented
- would like changes
- more professionally oriented
- less traditionally oriented
- experiences the organizational effectiveness of the ward to be better
- the personnel experiences the communication climate to be less formal
- the personnel experiences the social distance to be smaller

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OFFICE WORKERS' PARTICIPATION IN ORGANIZATIONAL DEVELOPMENT: AN EXPERIMENT IN A SWEDISH INSURANCE COMPANY

1. SUMMARY

The Development Council for Collaboration Questions is a joint committee formed by the three most important organizations in the Swedish labour market. Experiments with new forms of cooperation between employers and employees have been started in a number of companies under the auspices of the Council. This paper presents some experiences from attempts to establish increased participation for junior personnel in an office situation. These experiences are drawn from observations of a »reference group« and an »experimental group« in a major insurance company. We contend that increased participation can only be achieved if other supportive organizational changes are made at the same time. The supportive organizatonal changes which are discussed and illustrated in this paper are changes in other units in the company, formal redistributions of power, the introduction of self-managing groups and changes in the company's administrative levels and the technology it employs.

Finally we take up the relations between the junior personnel's possibilities of increased participation and individual's conceptions of society and long-term planning in the company.[*]

2. THE BACKGROUND OF THE STUDY

The working population in Sweden numbers roughly 4 mill. people. 75% of these are employed in the private sector of the economy. The labour market in this sector is almost entirely dominated by three central organizations, the Swedish Employers Confederation (SAF), the Swedish Confederation of Trade Unions (LO) and the Swedish Central Organization for Salaried Employees (TCO). Those companies which are members of SAF employ roughly 1.2 mill. people, whereas LO has roughly 1.7 mill. and TCO roughly 0.8 mill. members. These organizations have strived to solve different problems concerning the

labour market by negotiations, and through joint agreements and problem solving.

In this fashion they have managed to a large extent to avoid formal legislation and other state intervention regarding the relations between employers and employees.

The major parties in the labour market have shown relatively little interest in questions concerning industrial democracy until recent years. However, increased attention is now being paid to these questions, partly as a result of the interest displayed in these questions by politicians. In accordance with their traditions the three labour market organizations have created a joint body for cooperation in these matters. This body, which is called the Development Council for Collaboration Questions, includes some of the most influencial officers in the labour market organizations. One of the tasks of the Development Council is to give interested member companies support in undertaking experiments with new and different forms of cooperation even if this may entail durations from agreed standards and norms. The Development Council has also initiated research into various new forms of cooperation in a small number of companies. Several important features are common to the research methods adopted in the different projects. Each project may be characterized as a longitudinal case study in which the researchers follow up a conscious attempt to alter the conditions of cooperation between the employers and employees by making detailed observations over a period of years. Each of these experiments is always directed by a »development group« in which both management and the workers are represented and have the right of veto.

This paper will describe one of the research projects initiated by the Development Council. The aim of this change experiment is to establish new forms of cooperation in an office situation.

Before we go any further in describing this project we would like to point out some problems regarding the utility and applicability of the research results which may emerge from the projects initiated by the Development Council. We would like to emphasize in this context, however, that the research is not directed by the Development Council. The costs of this research are mainly met by grants from government research funds and the research have complete freedom and responsibility for the way in which research is conducted.

As has been pointed out the Development Council is made up of representatives from the central bodies in the labour market. Their traditional tasks have consisted partly of reaching agreements on wages and conditions of work, and partly on influencing the government and legislators. However, in order to negotiate or legislate one must have a number of specific questions to negotiate or suggest legislation about. Examples of such questions are the agreement on joint councils which was reached in 1946 and the legislation on employee representation in company boards which is currently being drawn up.

The research which is being carried out on industrial democracy and increased participation will hardly be able to lead to the types of suggestions incorporating concrete measures which the organizations are possibly hoping for. If the research is to form the basis e.g. for legislative measures it should have the aim of examining general obstacles to participation. The research which is in fact being carried out is directed to conditions which are specific

to the individual company. In addition, the research is to a large extent focused on process questions, e.g. on how different factors need to interact if good cooperation is to be established in the individual work situation. But the parties in the labour market require more concrete and tangable demands as a subject for their negotiations — e.g. it is very difficult to negotiate or legislate on leadership style.

These differences in the fields of interests of the researchers and the consumers of the research include the possibilities of mutual disappointment. The parties in the labour market may be disappointed because the researchers have spent their time examining the wrong or all too esoteric questions, while the researchers may be disappointed because their results do not seem to have influenced the parties' understanding of cooperative relations in companies. Thus, a basic question is:

How can a fruitful communication process between the researchers and the major organizations in the labour market be established?

3. THE AIMS OF THE STUDY

The study aims to increase knowledge on how a company's organization may be designed so that a high degree of participation from the junior personnel is possible. By organizational design or structure we mean the relatively stable pattern of work routines, contacts, expectations and values which form the frame of reference for the ordinary work processes in the company. The distribution of influence is also included among these structural variables.

The study is carried out in a white-collar company, i.e. an organization where the employees are salary-paid office workers. There are two reasons for this orientation. As a large and increasing proportion of the working population is employed in work which involves the processing of information rather than physical production it is of interest to know more about the organizational problems associated with information processing. The second reason is that (up to the present time) problems in factories and manufacturing companies have been studied to a larger extent than problems in offices and in salaried worker companies.

The subjects of this is to examine the issue: which organizational solutions in different situations support or hinder a high level of influence or participation from junior personnel? The study also examines how a successful change in a company's organization may be carried out. This problem, however, is not dealt with in any depth in this paper.

We use the term junior personnel to cover workers and non-supervisory staff as well as the first and possibly the second level supervisors. However, the composition of the group »junior personnel «as interested party in participation contexts may assume many different forms. We intend to study influence and participation when the party »the junior personnel« may refer to any of the following groups.

1. Individual employees as persons and holders of different roles.
2. Primary work groups.

3. Bodies in which the primary work groups or the individual employees are represented by a group supervisors, elected representatives or the like.

4. Trade unions.

A company's organization may be built up in accordance with a compensatory principle.[1] If a given condition or relation in an organization is changed it is usually possible to maintain the attainment of desired results by altering other conditions at the same time. For example, in many cases a desired level of productivity may be maintained by compensating a reduction in the labour force with increased investment in plant and machines. The situation is roughly the same regarding participation and influence in terms of our frame of reference. We consider that it is usually possible to bring about changes in the distribution of influence while maintaining the desired levels of performance by making compensatory changes in other organizational variables.

In the light of our reasoning above it may be said that the question »What are the effects of increased participation on productivity and work satsfaction?« is of little interest and perhaps as also incorrectly formulated. Even if it is theoretically — and perhaps also practically — possible to hold all the other organizational variables except participation constant in a given situation, the design of the study would however have at least two serious limitations:

1. It would disregard that an organization is a system of mutually interdependent relations between different variables. No simple causal relationships can be distinguished in this system of interdependencies.

2. The effects which would be measured in such a design would be entirely dependent on the initial pattern of values of the other organizational variables which had been held constant. Depending on what one wanted to prove it would be possible to ascertain that increased worker participation has positive or negative consequences by suitably arranging the initial pattern of values in the other variables.

The more relevant question which we seek to pose in this study has the following formulation:

What other organizational changes have to be made at the same time in order that desired effects shall be maintained when a change in participation has been made?

4. THE DESIGN OF THE STUDY

The study commenced early in 1971 in a production unit made up of roughly 200 employees in a major Swedish insurance company. In future we will refer to this unit as the reference unit. At this time an organizational change had already been introduced in the reference unit. This was partly aimed

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[1] Cf. the open system theory's concept »equifinality«, see Buckley, W., Sociology and Modern Systems Theory. Englewood Cliffs., N. J.: Prentice Hall, 1967. A thorough discussion of how organizations as distinct from biological individuals have the ability of compensating for structural deficiencies is to be found in Rhenman, E., Organization Theory for Long-Range Planning. London, Wiley, 1972.

at tackling the problems of high costs and inexperienced personnel. The main features of the organizational change are noted below:

1. The positions of first and second line supervisors were abolished. Instead roughly 20 groups with no formal leaders were placed directly under the section managers' authority.

2. Each work group was specialized, i.e. was given a specific task, e.g. claims' adjustments or records and register control. Written task descriptions were drawn up for each group. It was hoped that this specialization would lead to a quick growth in experience and skill among the personnel.

3. The work groups were placed directly under the section management which was made up of a section manager and four functional experts within the areas of claim adjustment, claim inspection, insurance and administration. In addition to this a number of consultants were attached to the section management who would assist the groups in different ways. Those individuals who were previously departmental and group supervisors were appointed functional managers and consultants.

4. Each group had to appoint a representative who had a two-month mandate. He would represent the group in contacts with the section management and the other groups. A meeting was held between the section management and the group representatives every fortnight.

5. In order to avoid the possible stagnation in personal development associated with the work specialization in the groups a program of job rotation between different groups was envisaged.

6. The entire change was planned and executed by the section manager and the administrative manager. The influence the personnel had in this matter was of an indirect form via questionnaires concerning the personnel's opinions which were administered after the plans had been drawn up. The plans were to be adjusted if the personnel had differing opinions.

7. Even if the senior management levels in the company were primarily interested in an increase in the efficiency of the reference group, the section manager also had other motives for the change. He wished to apply new ideas regarding self-managing groups and increased possibilities for participation from the personnel which he had come across in the literature and in management training courses he had attended.

The researchers' task was to describe those problems which the organizational changes in the reference group had entailed and in particular to observe the changes in the personnel's influence and participation. The observations in the reference group also form a basis for the second stage of the study which involves a comparison with an experimental group.

The experimental group consists of a unit with roughly 100 employees in another geographical division of the same insurance company. An organizational change is also being carried out in the experimental group. The main difference from the reference group is that the personnel have played an active part from the outset in the planning of the organizational change. This planning work was started early in 1972 so that we can only report those features which have characterized the initial stages of the organizational change:

1. The experimental unit consist of two departments under the same manager. Senior management stipulated on appointing him that a reorganiza-

tion should be carried out so that the personnel should have a high level of influence. This reorganization was occassioned in the first instance by the fact that the company will move from its present confined office space in a late-Victorian mansion in the town center to a new building with open plan offices in the outskirts of the town. The senior management also felt that the prevailing old-fashioned style of leadership in the division must be altered by experimenting with ways of decision making which entail greater participation on the part of the employees.

2. The experiment is based on a formal agreement between the company and the trade union. This agreement states that the parties will jointly evaluate the results of the experiment.

3. According to the terms of the agreement the reorganization should aim to establish a common administration for both the departments. Special consideration should be given to the personnel's opportunities for work satisfaction and participation in the new organization.

4. The planning was to be carried out by a project group in which three members and three deputies were appointed by a general election amongst the personnel in the experimental unit and three representatives were appointed by the company. Both parties have the right of veto when decisions are to be made. The researchers are also members of the project group but have no voting rights.

5. The project group has been given a relatively long time for its work. The time between the commencement of the project and the move to the new offices is two years.

6. After a hesitant start the project group appears to have adopted a process orientated approach to its work. Problems of an organizational nature are examined as they arise. This approach gives the opportunity of discussing and testing different principles for the future design of the organization. The project group works parellel with such current organizational problems and with the future organization.

Besides conducting what might be called a horizontal comparison between the reference unit and the experimental unit the research also aims to examine vertical dependency relationships in the company. Thus we are interested to see to what extent the company's administrative levels and the company's long-range planning level give rise to conditions which can facilitate or obstruct an increase in influence for personnel in lower levels in the company.

A number of propositions regarding the relationships between increased participation and other organizational conditions were formulated before the study was started. We will present some of these propositions in the following six sections. In addition we will illustrate the types of problems which the propositions deal with with material from the reference unit. We will also indicate an approach that may be adopted in the organizational work in the experimental unit in order to solve these problems if possible.

It should be emphasized that these comparisons between the reference unit and the experimental unit do not constitute conclusions. They have the character of working hypotheses in the spirit of Lewin (if you want to understand a system, try to change it). As such they are open to discussion and we are grateful for comments on the development of this work.

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5. THE INTERDEPENDENCY BETWEEN THE ORGANIZATIONAL LEVELS

The decision processes in the company have a hierarchical structure. This hierarchical structure arises from the fact that long-term decisions govern short-term decisions, and the decisions which hold for major parts of the company form the framework for decisions applying to smaller parts of the company and that general comprehensive decisions form the basis for more detailed decisions.[2] This hierarchical (or tree-formed) structure in decision making does not necessarily imply a hierarchical or bureaucratical structure of the positions in the company. But irrespective of the form of the decision structure, the hierarchical nature of the decision making has consequences for attempts to alter the level of participation:

P1   Change in a participation at a lower organizational level (short--term, small unit of the company, detailed decision) can not be carried out unless supportive changes in higher organizational levels (long-time range, greater part of the company, more general decisions) are taken at the same time.

The organizational change was carried out in the reference unit without the rest of the company needing to make any change in its methods of work. Naturally disturbances occurred as when irritated clients turned to senior management and explained that when they had asked to speak to the manager they had recieved the reply »We have no manager«. It is possible, however, to deal with these difficulties within the reference unit itself.

On the other hand, the reference group has been forced to make other changes as the result of decisions made in other parts of the company during the change process. The most far-reaching of these were taken at the administrative level and involved changes in the data processing systems. One such change was the introduction of data terminals in the production units. These radically altered the conditions for the maintenance of the claims register in the reference unit. These external changes have occasioned major disturbances in the work in the reference unit. Work on the organizational changes had to be put to one side to some extent in order to make resources available to come to grips with the accumulation of unprocessed claims and policy applications occassioned by the constant break-downs following the new developments of the data processing system. Interviews with the personnel have revealed that many of them regarded the changes in the data systems as of much greater import than the new organization. Thus, the opportunities for the personnel to obtain and to experience greater influence and participation were limited as no supporting measures were taken at the same time at the administrative level regarding the design of the data systems.

The organizational change placed a series of new demands on the personnel in the reference unit. These demands were of an extreme nature for those individuals who had previously been departmental managers and group supervisors. They no longer had a supervisory capacity but were required to function as experts, consultants and advisors. But the rest of the personnel were also expected to function in groups where the demands for mutual

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[2] Cf. the discussion of how the decision programmes in an organization are built up in Ramström, D., The Efficiency of Control Strategies. Stockholm: Almqvist & Wicksell, 1967, pp. 112—125.

consideration and joint decision making were greater than before. Furthermore, the plans for job rotation required specific development programmes to enable the exchange of personnel between the groups. All this would have added up to a massive investment in training. The section management found it could not delay the start of the reorganization until such a training program had been completed. It formed a project group in cooperation with the central training department at the administrative level to work out the required program in detail. This was presented to the regional management but died a natural death following a negative response from several managers at the administrative level (but not on the training side). They maintained that the management of the reference unit were totally unrealistic if they though one could put half the personnel in the class room — it was after all a production unit and not an educational institution.

The changes in the reference unit were not supported by any changes in other parts of the company. Thus, the increase in the personnel' s influence and participation may have been limited to an unnecessarily high degree. Thus, there is cause to consider how one can tackle such problems in the experimental unit.

One of the measures which has already been taken by the central training department was to arrange a week's residential course for the project group in the experimental unit. Exercises in group dynamics and organizational questions formed the salient feature of this course. In addition the departmental manager has had discussions with the marketing side of the company in order to obtain more detailed information about the changes it is considering in its long-term planning and development programme. It would also seem necessary for the experimental unit to establish similar contacts with the department which is responsible for the development of data processing systems in the company. These contacts should not be solely restricted to an exchange of information on which plans exist on the system side, but should also seek to influence the views of the system personnel regarding the purposes to be served by the production units and how they can meet the needs of day-to-day production.

Another area in which changes on the administrative level in the company may be required in order to support increase influence on the part of personnel in the experimental unit are the accounting and budgeting systems. The groups will need more information adapted to their needs if they are to be able to play a greater part in decision making.

6. SHIFT IN THE DISTRIBUTION OF POWER

Individuals in group in a company have always »vested interests« in the existing organization. These interests may lie in the fact that a given person or a given group has interesting work, a major say in decisions, high prestige, material advantages etc. Changes in the personnel's influence constitute a threat to these interests. The threatened individuals and groups will attempt to defend themselves against both these imagined and real threats.[3] The

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[3] An analysis of processes of the type referred to here is contained in Selznick, P., TVA and the Grass Roots. Berkeley, Calif.: Univ. of Calif. Press, 1949 and Crozier, M., The Bureaucratic Phenomenon. London: Tavistock, 1964.

distribution of power is critical in situations characterized by conflicts between different interests. Whether groups with vested interests will succeed in warding off changes in participation is to a large extent dependent on the power these individuals and groups have. Thus, the following expectation may be formulated:

P2 Changes in participation must be supported by changes in the distribution of power.

As can be seen from the expectation above we distinguish between influence and power in the present study. We use the term influence here to refer to how much say the personnel have (as long there is a positive climate of cooperation etc). Power refers to what actually happens if a real crisis situation should arise. This viewpoint is in agreement with Weber's[4] definition:

> *Power is the probability that an actor within a social relation will be in a position to carry out his own will despite resistance, regardless of the basis on which this probability rests.*

The reference unit's plans to abolish two supervisory levels resulted in many managers and supervisors in different parts of the company feeling threatened and made them adopt a negative attitutde to the experiment. Certain individuals in staff positions at the administrative level also felt themselves by-passed as the measures taken by the reference unit were in conflict with their ideas of how the cooperation between their own departments and the production units should be organized. That the change could actually take place in spite of this resistance was largely dependent on the support given the section manager in the reference unit by the divisional manager and by the central staff directly under the corporate managing director. The divisonal manager, however, confined his support to those measures which were regarded as increasing the efficiency of the unit. Thus, the section manager felt that his possibilities of sharing his responsibility for how the unit should be run with his personnel were thereby reduced. The section manager tried thus to carry out the change in the unit without altering the distribution of power. He attempted, however, to establish a kind of indirect influence by seeking the personnel's opinions in different ways.

As far as we can judge from our interviews the change does not entail any increase in the influence of the personnel in matters which concern the unit as a whole or the relations between work groups. On the whole people were dissatisfied with both the information they had received on the coming changes and with the possibilities they had of influencing the course of the changes.

A shift in the power distribution from the management of the unit to its personnel has been realized in the experimental unit by giving the personnel the right of veto in the work of the project group. We have the distinct impression that this has somewhat invcreased the personnel representatives feelings of influence. To what extent this shift in power can lead to an increased interest in trying to influence the developments on the part of the rest of the personnel is at present unclear. What is clear, however,

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[4] Weber, M., Wirtschaft und Gesellschaft, translated by Parsons, T.: The Theory of Social and Economic Organization. New York: Free Press, 1947.

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is that there exist doubts in the minds of the personnel representatives regarding the management's good intentions and about their own abilities in this situation. It should be pointed out in this context that senior management have retainted their traditional right to overrule decisions made in subordinate units in order to reduce the proportions of the risk of this experiment getting out of hand.

The examples given show how difficult it is to bring about a shift in power in the company. The objection which is most usually cited against such shifts in power is a general fear of the economic consequences for the company if the employees are given more power. Another traditional objection is that it is necessary to have clear conceptions of accountability. These are difficult to maintain if power is shifted from an individual (a manager) to a group The example of the project groups shows, however, that a limited and specific shift in power can possibly involve positive effects for influence in a part of the company. Perhaps these positive effects will then be able to spread and facilitate shifts in power in other parts of the company.

7. SELF-MANAGING SYSTEMS

Time is a factor which limits the possibilities of influence from the personnel, in any case when influence involves many people participating in a mutual exchange of information. Time is costly both for the company and for the individual. A form of participation in which everyone participates in all phases of every decision would be cumbersome and would probably be felt to be rather meaningless by many. An increased participation in the organization must thus be accompanied by changes which counteract unnecessary waste of time. The following proposition expresses how unnecessary loss of time may be avoided in the case of routine daily tasks:

P3   A change in a direction of increased participation can be supported by the introduction of self-managing systems for individuals and groups.[5]

By self-managing systems we mean that every individual or group in a company is alotted tasks which in some way hang together and form a system with relatively clear boundaries from the other tasks in the company. Such chages demand in their turn increased professional training for the individual and that the groups function more effectively as social units.

The organizational change in the reference unit involved the removal of supervisors and the groups were left to make decisions in a number of questions on their own. For example, these concerned the positioning of rests and free time. However, the possibilities of self-management were limited by the fact that most of the work groups had highly specialized tasks. Thus, the work in such service groups as the claims register unit and the typing pool was highly dependent on the work in the other groups and thus

[5] Cf. Thompson's discussion of the conditions for rationality in companies. Thompson, J., Organizations in Action. New York: McGraw-Hill, 1967.
    Several experiments concerning the development of autonomous work groups in organizations are described in Thorsrud, E. & Emery, F., Mot en ny bedriftsorganisation. Oslo, Tanum, 1969.

they had very limited opportunities of influencing their own work. Nonetheless, it was these groups which were mainly made up of young women, who were most positive to the organizational change and to self-management. Perhaps the organizational change had contributed to a reduction in their relative deprivation. We also found evidence that the interest of these groups in trying to bring about changes in the unit as a whole had grown.

The results from the reference group would seem to give support to the idea that attempts should be made to form some sort of self–managing groups in the experimental unit. The prospects of forming groups in the experimental unit wich will follow the principles of socio-technical groups are greater than was the case in the reference unit, i. e. the groups will have a complete task in which the efforts of the individual members mutually supplement each other. But is it absolutely certain that such groups are best from the point of view of participation? Perhaps a group which has relatively strong, preferably mutual dependency relations with other groups has a greater interest in attempting to exert influence over its environment than a »self-sufficient« group?

8. THE COMPANY'S ADMINISTRATION

The following proposition is formulated regarding the administrative level in the company:

P4   A change in the organization in the direction of increased participation is supported if the form of administration is changed from a bureaucratic organization to an »ad hoc« organization or project organization.

An administration which includes a high level of influence from the employees and which is organized on bureaucratic lines should imply that every role or body which has the task of coordinating, planning or adapting the work of different units and solving conflicts between units would be replaced by committees which would represent all the work groups. Time resources probably make such an organization seldom feasible. A non-bureaucratic alternative to such an organization would be to give each of the primary groups, mentioned in the third proposition, the right to confront and discuss with each other if and when they felt the need for this existed due to current difficulties or for other reasons. This would result in a company with a relatively stable organization of self-managing (autonomous) work groups with fixed tasks. Discussions, confrontations and project work involving a signale group or the mutual problems of several groups would be carried on continually within this organization. These discussions should result partly in an organization displaying a high degree of change, and partly in a higher level of awareness and accuracy regarding the mutual expectations between different units.[6]

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[6] The difficulties in bringing about increased participation in companies by the use of committees with formally determined tasks has been illustrated in the Swedish debate on the tasks of joint councils in companies and the way they function. The functioning of the councils has not lived up to people's expectations. The idea that the administrative processes can be partially carried out by direct contact between various work groups has been presented for example by Likert, R., New Patterns of Management. New York: McGraw-Hill, 1961.

In order to accomplish coordination between the different »leaderless« groups in the reference unit, fortnightly meetings between the elected group representatives were introduced. The meetings were conceived as a means of mutually exchanging information between the section management and the presonnel, but they did not function in this fashion. Most people thought that the meetings were rather meaningless. They became a forum for a one-way flow of information from management. The meetings became shorter and shorter until they were finally replaced by a periodic information sheet. Several of those we interviewed were convinced that the meetings failed for psychological reasons in that people did not dare to express themselves in front of so many others or when there were high risks that their contributions would be met by depreciating comments. What is more important than these explanations is probably the fact that there already existed other meetings which dealt with the problems arising in the different functional areas within the unit. The meeting of the group representatives became a bureaucratic institution in which an insufficient number of individuals invested enough interest for it to become an important administrative body within the reference unit. The disbanding of the meetings did not mean, however, that there did not exist any administrative problems regarding coordination issues. On the contrary, our interviews provided extensive exemplifications and a report from the administrative rationalization department in the company also indicated several such problems. The management in the unit has now formed problem-oriented project groups in an attempt to come to grips with these difficulties.

Giving more influence to those units which, like the reference unit, are responsible for direct production probably has consequences for the administrative level immediately senior to the production units. These levels have the tasks of insuring that the systems, products and policies developed by the central management levels are applied in a uniform, rational and coordinated manner in the individual production units. If the production units are given greater opportunities of making decisions of an administrative character their need of being directed from above is thereby reduced. Naturally there still exists a need for means of successfully tackling the coordination between the intentions of the central bodies and what is actually done in the production units. If the intermediary administrative levels between management and production are still needed they should presumably function more as communication channels, mediators and service units than as hierarchical coordinators.

Problems involving the administrative level have also arisen in the experimental unit. Thus, it has seemed desirable to screen-of the experimental area from the influence of certain parts of the administrative level. Similarly it has appeared desirable to establish direct contacts with the central staff departments in the company. The formal communication channel between the experimental unit and the administraive level is however a permanent joint body with representatives from the employers and the trade union. Those working in the experimental unit have queried what qualifications the personnel representatives in particular in this body have for evaluating the problems in the experimental unit. This is mainly because the trade union members there work in completely different parts of the company from the experimental unit.

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9. TECHNOLOGY AND PARTICIPATION

The organization is determined to a large extent by the technology, i. e. those conceptions on how the work in the organization should be carried out and knowledge of the means — goal relations.[7] Thompson has suggested the following typology of technologies:

1. The long-link technology, which consists of complete knowledge of all the steps wich are to be taken for the achievement of the final result. In the long-link technology the different steps involved follow each other in a time sequence so that it is known that step A must be carried out before step B can be taken, etc.

2. The mediating technology which consists for example of a number of measures which are known in adwance which are to be taken when the need for a certain product arises. An example of this is the steps that will be taken to accomodate the wishes of a given customer visiting a bank. A characteristic of the mediating technology is that practically every single product is unique and that the orders and inquiries received from the organization's environment determine which products are produced.

3. The intensive technology, which is also called »therapeutic« consists of combining many different techniques and fields of knowledge in order to achieve a change in a specific object. Examples may be drawn from health care or the building industry. The distinctive characteristic of the intensive technology is that different measures can not be decided on until the outcome of previous measures in the process are known.

If the production technology is of the long-link type the work organization is already »frozen« at the long-term planning level. In such a situation the possibilities of participation in both the production and the administrative processes is relatively limited as the meaningfulness of participation in a situation where most things are already predetermined will be called in question. As both the mediating and intensive technology demand independent decisions and accommodations at the production level these technologies are in line with increased participation in the production process. The mediating technology may also be assumed to incorporate the requirements for participation in the administrative processes as the means of achieving rationality in this technology lie in the design of policy and standardized routines at the administrative level. The above reasoning may be summarized in the following expectation:

P5   The emergence of a high level of participation is facilitated in organizations with a strong element of mediating or intensive technologies while it is impeded in organizations with long-link technologies.

The technology in the reference unit could be described as mainly mediating. For example the product »claim adjustment« could be obtained from information originating from the client, the other party, the register unit, the police, etc. In the organizational change the management strived to bring

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[7] This definition of technology is taken from Perrow, C., Hospitals: Technology, Structure and Goals in Handbook of Organizations. Chicago: Rand McNally, 1965, pp. 915—916. See also Thompson op. cit., pp. 14—19.

about a technology which was more characteristic of the long-link type by designing work groups as specialized »stations« in the work flow. It was not possible to realize this idea because of the nature of the tasks. One can go as far as saying that personnel's desires to bring about change arose as a result of the incongruencies they experienced between the nature of the tasks and the design of the organization.

Claim adjustment is not carried out in the experimental unit and the tasks are better suited to a long-link technology where customer service, tariff setting, statistics, premium calculation and the writing out of the insurance policies (contracts) constitute »stations« in a work flow. According to our fifth proposition such a technology constitutes an obstacle to increasing participation. However, it should be possible in the experimental unit to attain job enlargement by grouping several types of tasks in one and the same group. Thus, the technology would assume a more mediating character from the point of view of the groups. It should be possible to further reinforce such a change in the technology by transferring a number of more qualified tasks which are presently carried out in other units to the experimental unit.

10. SOME UNSOLVED PROBLEMS

As we pointed out above several other organizational changes must be made at the same time if the influence of the junior personnel is to increase. We have taken a number of examples from a current study in an insurance company in order to show how participation on a lower level must be supported by organizational changes on higher levels. We have maintained that shifts in power are probably a requirement for changes in participation. Furthermore, we have discussed to what extent self-managing groups may contribute to increased influence. We have also aimed to illustrate the assumption that increased participation on the production level demands of more direct contact between functional units instead of bureaucratic administrative forms of coordination. We have also defined a proposition regarding the relation between technology and the possibilities of participation.

In rounding off we would like to mention two problems which are included in our frame of reference, but about which we had not as yet collected very much material. The first problem concerns peoples attitudes to change. It may be assumed that every individual has formed his own »image of society«.[8] This image is a product of the individual's experiences and his present situation. An individual's image of society may include for example whether he sees society as stable or changing, as capable of being influenced or not, as steered by elites or by the will of the people as a whole, as dominated by a single conflict or as containing a set of complicated systems. We have formulated the following expectation regarding the relation between individuals view of society and the possibilities of participation:

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[8] Re. »image of society«, see Boulding, K. E., The Image. Ann Arbor, 1964. Cf. Lewin's »life-space«, e. g. Lewin, K., Behavior and Development as a Function of the Total Situation and Field Theory and Experiment in Social Psychology, Field Theory in Social Science, D. Cartwright (ed.), London: Tavistock, 1952.

P6   An organization with a high level of participation is facilitated
if the individuals in the company have an image of society as
differentiated and capable of being influenced but is impeded
if individuals have an image of society as fixed and incapable
of being influenced.

An important question, however, is to what extent is it possible to in-
fluence people's image of society? Is it possible or even desirable, to work to
increase the participation of people who have an image of their environment
as impervious to influence?

The other remaining problem concerns the company's plans for the fu-
ture. A certain security regarding an individuals personal future may be as-
sumed to be a requirement for his willingness to participate in the design of
the day-to-day work. Employees who had invested time and energy in improv-
ing the conditions at a factory would certainly feel it to be a cynical mockery
to receive notice completely unexpectedly that the business was to be wound
up. Thus, influence on the company's long-term planning is required if the
personnel are to have real influence over their own situation. This should
have the object of allowing the employee to understand and plan his situation
with the knowledge of conditions in the company and allow the company to
plan its future taking into consideration for instance that the personnel need
time to plan further education and a transfer of personnel between depart-
ments or company locations.

The experience gained from experiments with employee representatives
on different company boards does not seem to have lead to a better function-
ing of the long-term planning process.[9] Some reasons for this can probably
be sought in the highly expert nature of long-range planning work. Others
than the fact that it requires an holistic viewpoint which is difficult to deve-
lop outside a limited group who has been working together over a long period
of time, and others in the fact that it sometimes requires decisions which go
against tradition, ingrained ways of thinking and the short-term interests of
many parties and individuals. Furthermore, certain considerations of a long-
-term character must be kept confidential, for example for competitive rea-
sons. Thus, there is much that argues for the core of long-term planning work
being carried out by a relatively small group within top management. Diffi-
culties will arise in maintaining participation in the long-term planning pro-
cess. Irrespective of whether this group includes representatives for the em-
ployees or not. These difficulties are referred to in the following expectation:

P7   Increased participation in the company's long-term planning
must be supported by a system which enables the incorporation
of the personnel's opinions in the long-term planning process.
Furthermore the personnel should be able to evaluate the resul-
ts of top management's efforts and influence its composition.

The first of these problems has similarities with the so-called parti-
cipation problem in the political science literature. If one is to be able to
speak of participation in the long-term planning process it is necessary that

[9] Cf. Emery, F., & Thorsrud, E., Form and Content in Industrial Democracy London: Tavistock,
1969 (1964). Examples of the difficulties in bringing about better long-term planning through direct parti-
cipation can be found in the so-called Montan-industries in Germany. It has not been possible to avoid
wide-spread industrial shut-downs in spite of a 50% representation of workers in the boards.

the employees' opinions are articulated and communicated to those who are responsibile for the long-term planning work. A condition for the articulation of the employees' opinions is that the premises and alternatives for long-term planning are made known to the employees and the employees must become involved in discussing the problems of long-term planning. The second of the conditions implied in the expectation has similarities with another topic much discussed in the political science literature, namely elite circulation. Such a circulation is a necessary, but not sufficient, requirement for a democratic system of society. A counterpart of elite circulation in a company could be that the employees are given the opportunity of influencing the choice of top management before it is appointed and of expressing their opinions on its general policies. This should also include the possibility of making later evaluations of whether the policies followed by top management were correct and of being able to influence changes in the company's top organization on the basis of the experience gained.[10]

But how is one to succeed in establishing the desired exchange of information between the top organization and the production organization in the long-term planning process? And more specifically: What methods should we use in the current investigation to study the relation between the personnel's influence in the experimental unit and what is happening in the company's long-term planning levels?

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[10] A summary of the literature concerning participation and elite circulation is to be found in Lewin, L., Folket och eliterna. Stockholm: Almqvist & Wiksell, 1970. Cf. also Dahlström, E., Fördjupad företagsdemokrati. Stockholm: Prisma, 1969.

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THE LEARNING OF PARTICIPATION

I. INTRODUCTION

Is Participation a Sacred Subject (a 'Holy Cow') or Useful Medium?

The prevailing attitude towards participation in my own country, and in other countries, may be illustrated by the following story.

Towards the end of 1968 the process of becoming democratic started at the social-science institute of a Dutch university. A new structure of leadership was soon set up, in which leadership was not in the hands of a small number of senior staff members but spread over chosen representatives of the scientific staff, the students and the administrative workers. One of the most able and loyal supporters of democratization was elected chairman of the council of the institute. Three years later, at the end of 1971, I asked him at a casual meeting how this process of participation was developing and he said »Oh, all right, but we are going to perish in the attempt«. This raised a laugh and he also smiled, but added: »But seriously, we do badly need a model of participation, that will be effective.

In my opinion this story tells us in a few words, that the worldwide movement for participation might fail in the end, because the approach is more often respectful than practical. However, participation is not a sacred subject, a holy cow, but a medium offering problems, that requires tentative application of theories and intensive empirical analysis.

Vidaković already stated in Yugoslavia in 1965, that the theory of self--government did not meet requirements and reliable research data were still lacking after a full decade of self-government by the Workers' Councils.

When **participation** is seen as a way to **reduce the differences in power between less powerful people and more powerful people,** it is still true in my opinion, that theory and empirical data on the reduction of power differences are still insufficient.

At this point I wish to express my gratitude that this conference, attended by such a large number of people who have been working on the problems of power differences, participation, self-determination in work, has been initiated and arranged in this country, here in Yugoslavia, where I found and still find the searching and striving for new forms of working relations so genial and stimulating!

Although I sincerely believe that progress in participation is finally to be measured in social organizations, factories, offices etc. and will not be

worked out at the desk or in the laboratory, I will try to contribute to the discussions here by presenting the core of a theory on power in human behaviour, and research data, that are chiefly the results of simulations in experimental laboratories.

I will not enter here into the details of the theory or present tables.[1]

I take the line that a reduction in the difference in power between the powerful and the less powerful should be the result of the participation in decision making by the less powerful people and this gave the theory its name of **power distance reduction theory.**

Reaching this goal may be described as **a learning process,** in which the less powerful people learn how to acquire power and to participate with good results.

What matters most, is the answer to such questions as: when will people be motivated to strive for more power and when will they be able to have more power, so what will be favourable conditions?

The basis of this paper is, that we may hope to shape our organizational and social structures in a way that will offer people the best possibilities for learning with the greatest probability how to reduce power differences and participate with good results, if we are able to determine the prerequisites for the striving for power distance reduction.

II. THEORY AND DATA

In the theory of participation[2] and the data we see

 a. positive factors oppening possibilities for the acquisition of power (power learning);

 b. negative factors impeding the process of learning how to cope with power differences;

 c. factors creating skepsis.

a. Positive Factors

The core of the theory is the hypotheses that people are inclined to reduce the power distance between themselves and more powerful other people functioning in the same social system and **this power distance reduction tendency will be stronger at a shorter distance from the more powerful person** (see figure 1.)

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[1] Theory, research projects, empirical findings and conclusions have been minutely described in: »The Power Game — on increasing and decreasing inequalities in power« by Mauk Mulder, soon to appear in print.

[2] Successful participation is taken to mean a real reduction in power distance for the purposes of this paper.

Figure 1.

<div align="center">

Power structures

</div>

Structure 1   Structure 2
»reversed Y«   »wheel«
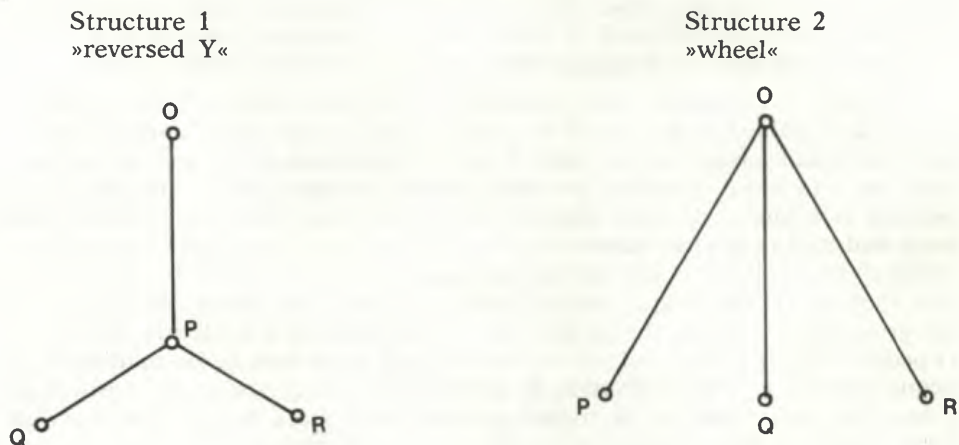
These are the diagrams of two small social systems. In structure 1 a person (P) is less powerful than the other person (O), the group leader, but P has power over Q and R. The power difference, or power distance, between P and O is relatively smaller in structure 1 than in structure 2.

Figure 2.

<div align="center">

The strength of the power distance reduction tendency

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long   medium   short
power distance   power distance   power distance
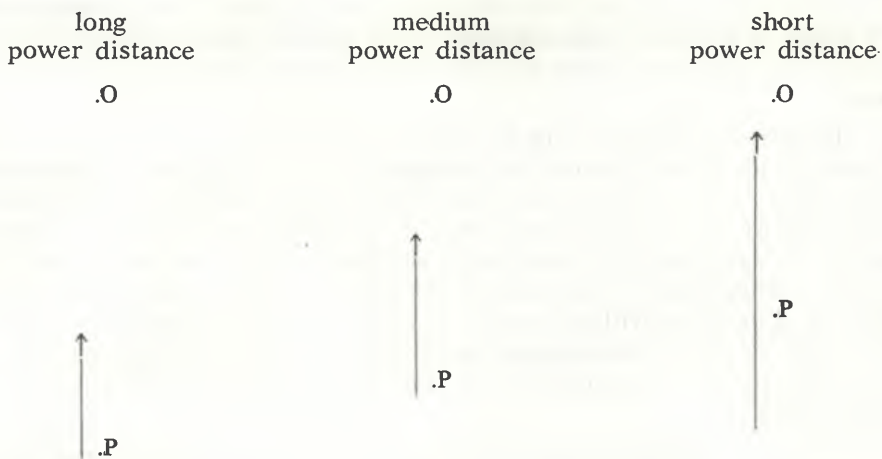
P = Person
O = more powerful Other person

The length of the arrow represents the strength of the power distance reduction tendency.

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The theory predicts, that persons in the position with 'intermediate' power (P) between Q, R and O in structure 1 of figure 1. will show stronger tendencies to reduce the distance to O than the persons at a long distance from O in structure 2. In this paper, the tendency to reduce the distance (the power difference) will be discussed in terms of real behaviour such as P actually striving to take over O's position, when an opportunity presents itself.

In our investigations this theoretical prediction was strongly supported by the data gained in the study of experimental simulations, large organizations and small groups in the field. People in positions with some power and quite near to more powerful persons showed stronger power strivings than persons at a longer distance and we found that they appeared to do so, **the ways and means or the reasons** for their being in the relatively powerful position (P in structure 1) playing **no part at all.** They only knew by experience, that they would not find it too difficult to perform the tasks required from the group leader. When the system shows the **inverted Y-structure** (structure 1) people will therefore feel the inclination and **learn how to be motivated to acquire power** (= **the motivation to participate**) if they are in the position of P and relatively close to the higher position with more power. The inverted Y-structure induces people to learn the power motivation.

How people are affected by the structural characteristics of a system was also demonstrated in another study. We then found that people **merely seeing the inverted** Y-structure, and **imagining** themselves in the position of **P,** started to show power strivings to the same extent as if they were holding P's position in reality. Therefore, the recognition and experience of the relatively powerful position of P in the inverted Y-structure in our culture creates the incentive to strive for power.

The inverted Y system is a **primitive,** a fundamental structure, that automatically calls forth the inclination to behave in a certain way in handling power. The behaviour linked with this structure must have been **learned in an early phase** of **individual development** in our culture because its pattern appears to be deeply and firmly fixed in the thinking and actions of the individual.

The power striving (or the striving to reduce the power distance) also depends on the distribution of the **abilities** related to the various positions within the system. The theory states that whenever the leader (O) in structure 1 is found to be less competent than P, the latter will shows a stronger tendency to take over O's more powerful position than when O shows no less competence than P. Data from simulations supported the theory. The distribution of abilities within the system may be seen as a characteristic feature of the system and the characteristics of the system again appear to determine the learning of the power motivation, that is how to handle power, how to participate.

People also differ in power motivation. Our investigations showed that persons in the position of P in structure 1, who were more self-confident than others in the same position showed stronger power strivings. Power behaviour therefore also depends on the phase a person has reached in individual development.

Conclusion. The data are very significant. Having minimal power in a social system an individual will show very weak tendencies to get power (to participate). The stronger power motivation will be seen in individuals who are somewhat higher up in the system and will have tasted the bitter-sweet taste of power.

The characteristics of the social system and the position in the system are the decisive factors in learning how to participate. Participation may and should be learned at all levels, the individual's power increasing **step by step** from one level to the next.

These conditions for learning how to participate should be fulfilled by keeping the point in mind in structuring an organization, which is not only in the interest of the growth of numerous individuals but serves the system as a whole as far less leadership potential will be lost.

b. Negative Factors

The reported results of the research into personality characteristics (self-confidence) also related to the costs generally involved in the acquisition of power. In social reality, a person, who expects that he will **actually** get the powerful position, will consider the psychological **costs** of great importance. Examples of such costs are anticipatory large energy expenditure, fear of failure, critical comments and the fear to be rejected, loss of warmth in human relations etc. Our investigation showed that the individual in position P in structure 1, whose expectations of successful performance of the system were low, did not feel inclined to accept the responsibilities of the powerful person (O). If the system was not likely to be successful, a higher threshold existed and only people of great self-confidence and general willingness to exercise power would accept leadership.

Therefore, power motivation will be restrained to the extent of the weight attached to the anticipatory costs of the power position.

Circumstances may create a climate that is favourable to participation or not. A crisis situation creates **an unfavourable climate.** The findings of our simulations and field studies were, that people in crisis were far less interested in reducing power differences between themselves and leaders than in survival of the system, being far more directed towards saving themselves. They felt the need of being told what to do by strong and powerful leaders. A crisis appears to be a bad situation, offering small chances to learn how to participate.

I have already said that in many circumstances people with minimal power are insufficiently motivated to learn to participate and reduce power distance. Now I wish to draw your attention to a parallel phenomenon, which is the **insufficient ability** of the less powerful person.

The theory states that in certain circumstances the intended participation in the decision making by the less powerful people will not result in reducing the power differences but, on the contrary, in enlarging them. These circumstances are a very great difference in ability and expert knowledge, which gives the more powerful an opportunity to exercise their power very effectively as soon as the people with less power participate in the decision making.

This hypothesis is strongly supported by the data gained by our simula-tions, that do not differ from the data of the reported field studies of Yugo-slavian Workers' Councils, and employees' councils in the Netherlands and other European countries. The hypothesis has been discussed and summarized in an article written in English and I will not go into details here.[3]

Conclusion. The negative factors are the **strong inhibitions,** the forces tending to make people shrink from participation or impeding their strivings for successful participation.

Negative factors are:

1. A too large power distance between the powerful leaders and the persons with minimal power (see structure 2 of figure 1.).

2. Environmental forces beyond control, that may create a crisis, for example. Crises are generaly unwanted, but they will happen.

3. Personal characteristics, such as the fear of taking risks, the fear of failure, feelings of uncertainty etc. A new paradoxical concept of good leader-ship should be emphasized, in which failures should not be black marks as any number of decision will contain mistakes on the average. The 'great man' concept, implying that a leader never fails, has never worked in reality and we should stop chasing phantoms! **Learning how to participate**, reducing power distances,**includes learning to accept the probability that mistakes will be made** and to accept the proportional number of mistakes.

4. The characteristic of the system, adapted to the individual members. When the less powerful people have to face problems in a field in which they are far less competent than the more powerful, they will learn in the negative, i.e. they believe to be participating effectively and feel proud, acqui-ring social status. But they will not be motivated to fight harder, to spend more energy or to work on real participation in the field in which they are competent, e.g. the shop floor.

They may also learn in the negative by experiencing that they do not really participate, the power distance remaining as long as ever, upon which they get a feeling of failing to realize what they planned to do, their hopes are crushed and they lose any self-confidence, the result being that they drop the good idea of successful participation and just will not try again when the opportunity offers itself.

In brief, when the power distance between them and the more powerful is long, the less powerful people will not be strongly motivated to participate or be able to participate. The people with the best education, the academic élite, who set the goals and decide how to reach these goals, (such as the wor-kers' councils) should consider the possibilities of differences between their own motives and abilities and the goals, ways and means of less powerful people.

c. Skepsis

To begin with, our investigations showed a general trend of powerful persons trying to keep their distance from the less powerful. They were not

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[3] Power Equalization Through Participation? by M. Mulder — Administrative Science Quarterly, March 1971, pp 31—38.

going to throw away any power! Secondly, the fact that the less powerful are supporting and encouraging the powerful must be emphasized! The abuse of power cannot just be laid at the door of the powerful, because power is a phenomenon of interaction, due to the behaviour of people with less power. Just one example from our investigations will illustrate this. We found that people tended to be very positive towards powerful persons, even when the latter had made use of **all illegitimate means to seize power.** In our simulation only 4% of the people refused to accept and follow the illegitimate leader. The attitude of the others was positive and they expressed feelings of liking the illegitimate leader when sounded privately. Now they were all normal people and they were not stupid or misled!

The powerful people cannot be blamed for anything the less powerful may do! It has been observed that the persons in position P of structure 1 were striving for more participation but connected with this is the tendency to increase the distance to Q and R, the persons who had less power than they had.

The greatest danger to the ideal of real participation is the fact that the power distance reduction tendency shows the features of **compulsion and addiction.** We already reported that normal people in the position of P in the inverted Y-structure in reality or merely in imagination, showed power strivings. **Paradoxically,** people with minimal power do not show power strivings, but the stronger power striving is seen in people who already have some power and should relatively be more satisfied than the powerless! So, power seems to be more like a 'hard drug' than an article of food.

From this theoretical point of view, it is not surprising that the leaders of movements in favour of participation appear to be victims of power addiction as they often do not allow their followers to take part in the decision making, tend to group themsleves as the power élite and that less powerful persons do not participate sufficiently in defining **their** primary goals, whether it is participation or something else — or in determining where, when and how participation should be increased. (cf. Mulder in A.S.Q., pp 33—35). The decisions about participation by the less powerful people are still taken by the powerful leaders without sufficient consultation with their followers. This means that new players are playing the old power game, which is a gloomy prospect. When young people see that the ideals of participation can only be **forced down** the threats of powerful people, they will continue to learn that power is the primary mover. When we are led by the idea of 'the end justifies the means' and just make self-government the concern of people, who did not ask for it, as the less powerful people seldom demand power, the idea of participation is nipped in the bud and gets lost in the first and critical phase of becoming social reality.

Conclusion. Power is interaction between the powerful and the powerless, a relationship also based on the acts and motives of the powerless, who often lend strong support to leaders after their illegitimate seizure of power. The addictive power distance reduction tendency has penetrated into every part of our society. This means that the people with minimal power are not the people with the strongest strivings for power. It also means that people with power who are looking up to people with more power will continue to strive for power, even when they are the leaders of movements for participation, favouring equality in power. The old power game is still going strong.

III. ALTERNATIVES FOR POWER RELATIONSHIPS

In our investigations we could also identify relations governed by influence, that could perhaps better be named communication relationships, in which power does not play a part. People sometimes appear less directed to **winning** their case, pushing their own ideas, than to finding a satisfactory answer to a question, a better solution of a problem, in discussing matters. In such **persuasion-directed** relationships, people are equal in strength and an observer cannot predict who is going to win. In a power relationship the winner may be pointed out in advance as the more powerful persons will drive their ideas, wishes and opinions through in 90, 75 or 55 per cent of all cases. In a persuasion process, there will be equality, but ability and competence relating to the business on hand is a prerequisite. In this respect all participants must equal to preclude the wielding of power by an expert, which would create a power relationship.

More fundamental alternatives were offered by the behaviour of very young children in a simulation, which showed that they were as easily inclined to behave kindly and helpfully, seeing an example of such behaviour, as to behave agressively, when seeing aggressive behaviour in others. The persons acting as models and the children did not receive any reward, which precluded learning by reinforcement mechanisms.

So, children may learn selfless pure kindness from others, when their minds have not been marred by later experiences. This is supported by the 'flower and love' movements in social reality.

Conclusion. The world is not only power striving (Nietzsche). Real alternatives are found in social sciences literature and also in our own investigations. But the most important fact is, that they are found in worldwide movements, chiefly among young people, but also among others.

IV. PROSPECTS

The process of learning implies choosing or may be defined as **learning to make choices.** Knowledge of participation and its alternatives is necessary to enable a person to make a real choice. Real alternatives exist, but I believe that they complete the picture and cannot replace power. Power and power differences are and will ever be a substantial part of reality, the alternatives being a matter of degree.

The model outlined by the reported theory and data is a **'power plus..'** **model,** 'power with the addition of something else, left to choice'. People may mix power with persuasion, kindness etc. in their behaviour and make their choice on the basis of a realistic assessment of the power mechanisms working in themselves and others (power behaviour mix).

The whole of the theory and data shows paradoxes and hidden dangers in participation such as:

The climate of a crisis situation is unfavourable to participation (= power distance reduction).

The less powerful people are handicapped in participation when their abilities do not match the expertness of the powerful people.

The gap created in the structure when the more powerful person lacks ability.

The lack of motivation in lesspowerful people.

The addiction to unlimited power distance reduction of the more powerful.

The blindly working of the power dsitance reduction tendency, because it originates from the mere perception of the different positions in the structure without taking different performance at the various levels of the system into full account.

The anticipatory heavy costs of the higher position prevents people from choosing the higher position in reality.

The distorted positive feedback from the less powerful, even when the leader has illegitimately seized power.

The process of learning in the negative, when power strategy and tactics play a part in the realization of participation.

A special conclusion is that a situation offers the most favourable climate for learning how to participate, if it allows people to get more power **step by step,** taking up a higher position with more power at a small distance from their former position. Participation in decision-making about their own, direct, environment by workers on the shop floor is to be preferred to discussions about economic analyses in the abstract, i.e. indirect participation, in the meetings of Workers' Councils and the like.[4]

Participation in **doing things** is preferable to **talking about things,** because the less powerful are often handicapped in communication. For instance: participation of young children should be concerned with arrangements about their playing grounds. Participation of school children and university students should be concerned with the form and content of their education. In work organizations, working in a team on a project of limited scope offers good conditions for learning how to participate and even more so when the project is to cover a wider field in the course of time. Foremen could participate in designing satisfactory information and communication channels between units. Although learning while doing the work must rank first, supporting training such as training in proper communication, new developments in the field of the work in hand etc. must be considered as a necessary continuous activity (»éducation permanente«)

And what is my conclusion?

Moving around in their own social systems, people should learn to identify power relationships and the magnitude of power differences. They should also learn the prerequisites and consequences of greater and smaller differences and learn to identify different qualities (types) of power, such as formal power, sanction power and expert power. They should learn the difference between any kind of power and a set to persuade.

[4] See Mulder in A. S. Q.; cf. »Improving attitudes to work especially by participation by H. J. J. van Beinum and P. de Bel, Review Paper for Symposium 16th International Congress off Applied Psychology, Amsterdam, August 1968; »Form and content in industrial democracy« by F. E. Emery, E. Thorsrud and E. Trist, 1969, Assen and London; »Industrial conflict and industrial democracy« by E. Thorsrud and F. E. Emery in »Operational research and the social sciences« edited by J. R. Lawrence, London, pp 439—447.

The most important point is to learn how to reduce dysfunctional power differences through social interaction. People should learn to proceed from **blind** formal or sanctional power relations to expert power relations and then take the step to persuasion. They should learn to be friendly and warm, even when they do not profit by it, and to be less subject to the compulsion of the power tendency than is now considered normal.

The structure of work organizations and other social systems should be shaped such as to optimize the conditions for such »power learning«. This holds for all structures, e.g. production units, administrative units, project teams and autonomous working groups. The same applies to socio-technical task structuring and to the jobs to be done by workers' councils.

Leadership is most important. A good leader is **an educator** and will foster the growth of others and he will perform better by showing a specific behaviour than by mere talk. The growth of the individual towards better performance in participation and behaviour without wielding power is of real interest to the individual and the organization.

In my opinion, the task is gigantic and learning how to participate requires a lot more energy than is spent on it today and far better choices could be made with regard to the best time and fields of learning.

Learning how to handle power and how to behave without wielding power should be done at a very early age, when the »pupils« are still very sensitive. After only a few years in school, the **special subject of power exercises** should be introduced. By doing practical interaction exercises the children should then learn how ro reduce a real power distance to more powerful other people, to make the behaviour of more powerful others turn to expert power instead of formal power and then take the step to persuasion, changing the behaviour of the powerful in this direction and then to kindness without profit.

Would not it make very good sense, to spend some out of many school hours on teaching and exercising behaviour that will be useful to children at any time and in any activity, then and later, because at this age they can start to learn how to behave towards the more powerful, as other youngsters, teachers and parents very often are the more powerful at this point in their lives?

This opinion is paradoxical, as often happens when power is under consideration. Educating all young people in how to mix power and other means in their behaviour should give people more freedom in making a choice when they have to face power, power differences and power struggles, which should reduce the dysfunctional power differences now existing in our social systems.

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PERSONNEL MANAGEMENT AND SHOP FLOOR CONSULTATION

INTRODUCTION

Industrial relations in the Netherlands are largely decided at the macro level. According to Windmuller a high degree of State control, the centralization of socio-economic policies and a complex pattern of consultation between public authorities and formal organizations of employers and employees are typical of industrial relations in the Netherlands. Agreements between the government, employers and trade unions are based on the macro socio-economic goals of full employment, a favourable balance of payments, a reasonable distribution of the national income, adequate economic growth and price stability. But the parties are united not only on the basis of their common goals. Their relations are also characterised by a strong institutionalization of the procedures leading to the realization of goals.

An institution occupying a central position is the Social Economic Council. It was originally intended to act as a top-level body for the co-ordination of industrial relations within the statutory corporative structures of the various branches of industry. This aim, however, has never been achieved. The main branches of industry have successfully resisted such an encroachment on their autonomy. The governement has long conducted a firm wage policy and has not attempted to decentralize wage control in favour of individual branches of industry. This fact combined with the lack of any real interest among their members has prevented trade union leaders from urging implementation of the corporative idea.

The Social Economic Council has primarily become a consultative body for the government, employers and trade unions. That consultation in fact amounts to **negotiation** on all questions concerning the socioeconomic goals mentioned above. Under the pressure of their members both employers' organizations and trade unions have displayed a growing reluctance to enter into binding agreements within the Social Economic Council. It is becoming increasingly difficult for parties at this level to integrate their goals. Industrial relations are moving away from the integration model pattern and are showing signs of assuming a more coalition-like form. This state of transition is mirrored in presentday socio-economic developments. Parties accuse each other of bad faith, unreliability, lack of national interest, undermining the existing system of industrial relations, and so on, particularly when collective bargaining on new agreements is due to start.

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[1] J. P. Windmuller, **Labor Relations in the Netherlands,** (Ithaca, N. Y., 1969).

The effects of the lengthy utilization of the integration model are clearly apparent at the lower levels of industrial relations. A typical feature of the model is that the executive level fails in the long run to maintain clear-out, satisfactory relations with its rank and file. In this connection, we shall confine our attention to the organization of labour. For some years past the national wage policy has been decentralized. This has enabled the trade unions to build up a comparatively strong position within the different branches of industry and within individual concerns, at least as far as collective bargaining is concerned. Trade unions have no appreciable control, however, in such matters as mergers, factory closures, the lowering of production levels, the introduction of new technological devices, etc. When they are consulted on policy matters it is usually too late for them to exercise any influence except as regards some of the social consequences of such management decisions.

For employees it is difficult to make known their interests and aims. Their influence within their own trade union is weak,[2] generally not much more than their influence on the management policy of the concern employing them.

One channel through which employees can express their ideas is the works council, whose members include their own representatives. It is, however, principally an advisory body and is not officially permitted to deal with matters concerning collective bargaining. Its meetings are presided over by the management. These points are an indication of the limited scope allowed to works councils. They are bodies well adapted to the process of industrial expansion, and to the task of keeping open the lines of communication between the top and the lower levels. So works councils are mainly found in large concerns,[3] where they often exercise some influence on general management policy but little on the day to day functioning of the concern.[4]

The works council's problems are twofold. Because of its largely communicative function it is often obliged to treat information confidentially, which tends to isolate it from the workers it represents. In many cases this confidential aspect is even explicitly stated. Many industries require the reports of the meetings to be treated as confidential information, and the various departments are informed only of the decisions reached. The councils' isolation is moreover usually exacerbated by the inadequate way the employees themselves are organised. So workers and works councils are seldom able to form a clear idea of each other's identity. It has recently been noticed that many workers, particularly among the lowest grades, do not bother to take part in the election of representatives to the works councils.[5]

This constitutes the background to the phenomenon that a variety of patterns of consultation known collectively as **shop floor consultation** are beginning to emerge at the lowest level. It takes place between departmental

[2] See for instance J. Bos, **Een onbewegelijke beweging. Eindrapport van een onderzoek naar positie en beleid van het Christelijk Nationaal Vakverbond** (An Immobile Movement. Final Report of an Investigation into the Position and Policy of the Netherlands Federation of Protestant Trade Unions; Amsterdam, 1970).

[3] J. P. Windmuller, **op. cit.**,

[4] H. J. van Zuthem en A. Wynia, **Medezeggenschap** (Co-determination; Noordwijk, 1967); P. J. D. Drenth, 'The Work Councils in the Netherlands' in **Industrial Democracy in the Netherlands** (Meppel, 1969).

See also J. P. Windmuller, **op. cit.**,.

[5] Of the 22,000 workers at The Royal Netherlands Blast Furnaces and Steel Works, an enterprise considered to have a progressive management policy, between 47 and 65 per cent voted in 1970, the percentage varying per department (from **De Volkskrant**, 15 May, 1970). Of the 4,000 workers at Wilton Feijenoord Shipyards 42 per cent voted (from **De Metaalkoerier**, 29 May, 1970).

heads and the employees. The latter constitute a weak group because of the centralist attitude of the trade unions, the absence of a democratic structure within the trade unions, the weak position of works councils and the fact that the workers at the lowest levels are not strongly organized. This being the case, it is not to be wondered at that the goals discussed at those lowest levels are usually those of the strongest party, i. e. the management. Shop floor consultation thus usually tends to serve the interests of management. That forms the subject of this article.

The data relate largely to semi-skilled workers (holding nothing more than lower technical diplomas) and unskilled production workers. It is derived from two investigations.[6]

The work environment would seem to be an obvious field for the achievement of a higher degree of workers' participation in the operation of the enterprise. This fact has been recognised in several publications and statements made by employers and their organizations, while trade unions often state that employees should be permitted a greater measure of participation in their day-to-day work activities. Sociological research has revealed that the employees themselves accord high priority to this kind of direct participation at shop floor level.[7]

Shop floor consultation falls within Lammers' definition of codetermination: 'All forms of consultation accepted by the parties as legitimate, in which the higher levels are influenced by the lower levels'.[8] In the present analysis, however, the concept of work consultation is restricted to the more or less formalised contact between the departmental heads and selected groups of workers from the departments concerned. The collective and more or less formalised nature of influencing processes is taken to be typical of work consultation. Special attention will be given to a description and analysis of the management-policy of shop floor consultation as an instrument of the over-all personnel management. This implies detailed examination of management motives, management policy and the functions of this. Other aspects of this type of consultation, such as employees' attitudes and trade union policies, will receive less attention.

Personnel management is used here in the sense of the policy pursued by management on the basis of certain values and directed toward a mutual understanding between the organization and its employees.[9] The contribution made by personnel officers to this consultationoriented policy varies considerably. Responsibility for consultation with the workers is in the hands of the department heads, for whom it is one of the methods available for running their departments. The participation of personnel officers is consequently often attributable to personnel motivation, which in many cases is shared with

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[6] J. J. Ramondt, **Verantwoordelijkheid in het werk** (Responsibility on the Job; Alphen a/d Rijn, 1968); and **Bronnenboek sociale experimenten** (Social Experiments; Amsterdam, 1968). The two publications give an account of six experiments carried out over a period of about two years. A summary is to be found in J. J. Ramondt, 'Reponsibility on the Job' in **Industrial Democracy in the Netherlands, op. cit.**, pp. 55 ff. The other investigation is an evaluation of shop floor consultation in thirty Dutch concerns. (Unpublished Report).

[7] H. J. van Zuthem en A. Wynia, **op. cit.**

[8] C. J. Lammers et al, **Medezeggenschap en overleg in het bedrijf** (Co-determination and Consultation in Industry; Utrecht, 1965), p. 31.

[9] P. Nas, 'Personeelbeleid in typen industriële organisaties' (Personnel Management in Different Types of Industrial Organizations) in **Syllabus bedrijfssociologische studiedagen** (1970). This is an abbreviated version of a paper on personnel management and personnel function read at a seminar on industrial sociology. By 'Personnel function' is meant the structures and processes in labour organizations that are relevant to the relation between the organization and those in occupations.

other higher-level figures indirectly connected with the department. Together they form what might be termed a social braintrust, a group whose composition tends to change and whose contribution consists in activating departmental processes.

MANAGEMENT MOTIVES

It is impossible to give a complete list of management motives. All enterprises have their own specific problems which can influence the matter of shop-floor consultation. This section will therefore be restricted to a general outline of the most frequently occurring management motives.

(a) Shop floor consultation as an instrument for controlling workers' behaviour.

In processing industries that are not fully computerised work consultation is based on the fact that employees bear a great deal of individual responsibility and have a fair degree of specialised knowledge about the work situation. This requires co-ordinating activities on the part of the organization, particularly as regards the areas in which jobs tend to overlap. The interdependence of jobs being fairly high, a considerable amount of consultation is required for it to function smoothly. Coordination takes place in both horizontal and vertical consultation. As has been pointed out by Blauner, it is indeed the case that processing industries have succeeded in solving the problem of alienation (feelings of powerlessness, social isolation, uselessness).[10] That solution, however, is largely related to the stage of technological progress reached.

Shop floor consultation of various kinds is also found in highly mechanised enterprises that have not yet attained a sufficient degree of either qualitative or quantitative technological and organizational control. This situation, especially in enterprises with a limited serial production, is characterised by a shift from input control to output control. Typical examples of output control are budgetting or return systems, whereby workers participate in the evaluation of production results and in the earlier stages of planning, work preparation, etc. The forms of control most frequently encountered in the present author's investigation were of a transitional nature.

One might say that in this type of industry many classical methods of control are beginning to lose their functionality, due to the fact that the workers' contribution to the shortcomings of the enterprise is decreasing both quantitatively and qualitatively. This undermines methods of control based on tariff systems. Moreover, tariff systems tend to undermine themselves by fixing production ceilings, by levelling-out tendencies, by differences of opinion on the interpretation of achievement, etc. Many enterprises are now moving in the direction of output-oriented systems of control. Shop floor consultation is sometimes regarded as one of the means which could help to achieve this end.

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[10] R. Blauner, **Alienation and Freedom**, (Chicago, 1964) pp 124 ff

What is now taking place is an integration process between management and workers, Department managers are no longer the men who exercise control and make corrections from behind their desks. They now conceive management as the exercise of control through co-operation. How shop floor consultation functions in this process is not clear. It is connected first and foremost with the question whether there are adequate and suitable methods of controlling workers' behaviour. Consultation is in fact only one of a number of means of controlling workers' behaviour, others being leadership, sanction and reward systems, administrative control, etc. The less adequate the other forms of control the greater the chance that consultation will be successful. Substantial rationality is applied to achieve the functional rationality of the system. This is the case in certain processing industries where workers are allowed a great deal of responsibility and the risk of diminishing control is accepted. Of course this requires a permanent evaluation of the work situation. In other industries recourse is made to consultation when the usual control systems no longer function properly, e.g. at those moments when the balance is temporarily disturbed.

(b) Shop floor consultation and a disturbed balance

Attention has so far been focused on the relation between technology and organization. That relation is disturbed when technological changes are introduced or when a department is reorganized. Both changes may cause a temporary disturbance in the balance maintained within the department. The implications of change in a department can no longer be assessed and decided upon wihout the help of the workers. Change, whether technological or organizational, is based on the assumption that certain problems will be discussed in joint consultation.

A less readily apparent type of change, one which does not immediately give rise to disturbance, is social development. There are various enterprises in which the processes of democratization in modern society are duly recognised and translated into terms of consultation in each department. What effects general social change may have on industrial relations is still a subject of some conjecture which is seldom expressly discussed in relation to the actual work situation. Trade union thinking on the question of co-determination is largely dominated by the idea of 'the trade unionism of management'[11] which implies on the whole a rather static and uncreative policy with regard to this aspect of industrial relations. This partly accounts for business concerns' imperfect understanding of social change. When work consultation is introduced on the grounds of social change it is often in fact the result of other forms of disturbance, such as the inadequate functioning of traditional control systems.

[11] J. G. Lulofs, 'Industriële verhoudingen in de welvaartsstaat' (Industrial Relations in the Welfare State) in **Vakbeweging in beweging** (Trade -Unionism in Motion; Meppel 1964), pp. 58 ff. Trade Unions plainly prefer bodies they can control from the present-day position and policy of trade unionism. The works council is a cler example of the trade unions' reluctance to delegate too much power. The conditions under which shop floor consultation ought to function have not been discussed in the Social Economic Council.

(c) The informative function of work consultation

A third category of motives for the introduction of work consultation is the need for information to be passed on from the lower to the higher levels. This situation occurs when working standards cannot be clearly defined and administrative insight into the progress made by the production process is insufficient, which means that the informative function of consultation is often the reserve side of its controlling function. It is often said that the informative function of consultation is unsatisfactory. All kinds of variables connected with workers' behaviour, such as apathy, indifference, fear of expressing an opinion because of a feeling of vulnerability, and a low opionin of consultation of course play a role here. Moreover, the lowest level of workers is the worst informed level in the enterprise. In such situations workers cannot be expected to pass on much information since they themselves are poorly informed and have already passed on what information they have through other channels. The system of consultation may also be used to pass information from management level downwards in that it provides department heads with a means of announcing new plans, changes and amendments.

(d) Evaluation of managerial motives

Managerial motives for the introduction of consultation are usually of a markedly **passive** and **instrumental** nature. They are **passive** when consultation is introduced because of a disturbance in the existent system. They are **instrumental** because consultation is often introduced primarily to promote the system's predominant values of productivity, profitability, efficiency and the maintenance of a tranquil atmosphere. Of course it is also sometimes regarded as a process of democratization, though here, too, its instrumental nature is still retained. Democratization is tolerated provided the changes it brings do not constitute a threat to the predominant values of the system. Consultation is judged chiefly in the light of the predominant values of the system and it may not, for instance, be a source of unrest in the enterprise.

As Ijssel de Schepper succinctly puts it, 'The need for consultation is determined by the question of whether it can contribute to management'.[12] Employees not being considered competent to judge standards of management, decisions concerning the introduction, scope and general feasibility of work consultation are taken at a level different from that at which consultation itself takes place.

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[12] B. J. Ijssel de Schepper, 'Medezeggenschap en bedrijfsbeleid' (Co-determination and Industrial Policy) in C. J. Lammers, et al., op. cit., p. 154. For instrumental orientation see also E. D. J. de Jongh, **Sociaal beleid en medeverantwoordelijkhed van arbeiders** (Social Policy and Workers' Co-responsibility; Assen 1969), pp. 109 ff., and P. van Berkel, 'Beleidsinvloed op organisatie en arbeidsvoldoening' (Management Policy and its Effect on Organization and Job Satisfaction), in **Arbeidsvoldoening en arbeidsbeleid** (Job Satisfaction and Labour Policy; Utrecht 1968), p. 97. M. Ways, 'Tomorrow's Management: A more adventurous life in a free-form corporation', in H. I. Ansoff, **Business Strategy**, (Penguin Books, 1969), pp. 122 ff.

From the day-to-day point of view consultation is characterised by isolation, which is manifest in three ways:

(a) Its marginal position in the information structure

Information is a prerequisite for the functioning of consultation. As a general thesis this is accepted without hesitation. Yet in practise it is extremely difficult to analyse. Given the competitive system, one problem which soon arises is what information should be passed on to whom, and at what moment. The answer to this question is not easy to give and depends on the risks involved. Even more difficult to answer is the question of who is to decide exactly what information can be released. Here we touch upon the point that in an autocratic organization information is an essential part of the control system. Pending a decision to democratize the organization, it will be necessary to use a certain information system so as to avoid action that could be at variance with the aims of the enterprise.

So information is not a neutral concept. The information reaching the various departments for consultation is clearly the result of a choice relating to the timing, the subject, the alternatives and the extent to which it can be checked.

The timing. Shop floor consultation is focused on one particular aspect of management, i.e. the implementation of decisions, its principal function being to analyse that implementation. The information provided is also directed to this end. So it follows that information on important matters of managerial policy (which usually involves workers' interests as well) is not released for consultation. Information is generally passed on for discussion when it is deemed necessary for the execution of the work or when a disturbance has occurred, or is likely to occur, at the lowest level.

Nature of the information. The moment of passing on information to a department largely determines the actual substance of that information. It is often the case that in addition to the information needed for operational activities, the lowest grade workers are also provided with general information on the way things are going in the enterprise. This has in any case a dual function. It meets the need to keep the employees informed of company affairs, while at the same time it is definitely a means of suggesting that all is well with the concern, even when that is not the case. Many managers are of the opinion that it would be morally unjustifiable to tell their employees about an impending setback.

Much of the information that is passed on to the lower levels is given for the purpose of maintaining their readiness to work hard to achieve the company's goals. The information they receive has to meet certain criteria: it must not be likely to cause unrest or to damage the favourable image of the company, it must foster the workers' sense of belonging and it must help to draw the apex and the base of the pyramid closer together.

Alternatives. As the information on the company reaching the various departments is so closely geared to a specific moment selected by management

and is moreover usually connected with comparatively simple departmental problems, there is obviously not much chance of policy alternatives being formulated at departmental level. Any such alternatives worked out are indeed limited to points like shop floor consultation as a system of representation or as a system of consultation pure and simple to which everyone makes his own contribution, the execution of orders, methods of keeping down production costs, and so on. There are of course a number of variables which impose restrictions on information, such as the divison of work in the concern, job levels, safeguards and the need for secrecy. At the same time, information is a prerequisite for the exercise of influence on policy. The limitation of information and, in many cases, its strategic use, imply a limitation of employees' opportunities to influence managerial policy. The quality and number of alternatives produced at departmental level through consultation are consequently seldom of a kind likely to carry any real weight.

Checkability of information. As noted above, in autocratic organizations information is always required to meet certain criteria relating to content, timing and strategic considerations so as to encourage a maximum effort on the part of the employees. Indeed, in none of the enterprises investigated was it the case that emlpoyees participating in consultations were in a position to gather information themselves, either directly or through their representatives. The general pattern is one whereby the workers are expected to accept without question the information that is passed on to them.

In addition, checking information is not made any easier by the obligation of secrecy imposed on works councils, members of which admitted to sometimes finding themselves in a role conflict situation through the possession of information which they could not use in their departments or in shop floor consultation.

(b) A marginal position in relation to other levels

Work consultation derives its influence not only from its own area of competence but also from the extent to which there is contact with other hierarchical levels. For that contact determines the amount of information received and the moment it becomes available. Contract with other levels makes it possible for the discussion to be continued at those levels when agreement cannot be reached in consultation at the departmental level. Analysis has shown, that there is a wide gap between the shop floor consultation level and the higher policy-making levels of management, works council and trade unions. Its isolated position is both a confirmation and a result of the marginal position of work consultation in the information system. It is not intended to function as a source of useful arguments, criticism or the like for other levels, but to help solve the problems always found in the marginal areas of organizations. In this way it contributes, albeit in a very indirect way, to managerial policy within the terms of reference fixed by the top management.

Now that collective bargaining at country-wide level is decreasing in importance, the trade unions have decided to move closer to the decision-

-making centres through workers' bodies.[13] Their contribution to shop-floor consultation has not been very conspicuous. A great deal could be said on this subject, but it is enough to state that virtually all reasons put forward to account for the trade unions' scant interest in work consultation are attributable to an authoritarian industrial structure, an authoritarian trade union structure which is closely interrelated with the social position of trade unionism, and the different views held by industry and trade unions regarding the control of labour.

(c) Justification mechanisms

Management implies an isolation of shop-floor consultation which is attributable in part to what has been termed a management ideology.[14] The latter stresses the imperfections of workers and the perfections of management, the dysfunctionality of bringing consultation out of its isolation, the hypertrophy of the future and democratic prospects of work consultation.

These justification mechanisms are in fact the non-planned aspects of management. There are no specific figures who assume responsibility for them, and there is nothing resembling an internal ideology bureau. Yet almost everyone is prepared to accept the management ideology. If we wish to think in terms of an ideology bureau, it can be located in the personnel department. What is regarded at departmental level as no more than consultation on some problem requiring a solution is suddenly transformed in the personnel department into part of a different system of values. Shop-floor consultation is seen as democratization, a human approach to the worker, workers' emancipation, and so on. There is nevertheless nothing to indicate the bureaucratic institutionalization of management ideology. Nor is it really necessary. For many people in industry, and particularly for those in leading positions, the existing structure is invested with such a degree of credibility as to obviate all further need for an ideology bureau.

Ideologies usually spring from the value system of a group or organisation, and are the expression of a belief in certain values. Their function is to maintain both the existing system of power relations and the existing fundamental values.[15] The concern with fundamental values is especially apparent in the emphasis placed on the dysfunctional effects to be expected from any attempt to widen the sphere of influence of work consultation: predictions of production losses, lowered efficiency, less rational decision-making and industrial unrest. These are the central values which the enterprise places before other values that might be used to evaluate work consultation, namely the democratic prospect of shop-floor consultation. The two points of view are not diametrically opposed. Productivity, efficiency and stability are not incompatible with the idea of employees exercising democratic influence within the organization. The only problematical aspect is the degree of compatibility of these values, the way in which they can be made compa-

[13] See P. H. van Gorkum en H. J. van Zuthem, **Vakbeweging en onderneming in Nederland** (Trade Unions and Industry in the Netherlands; Noordwijk aan Zee, 1968); C. Levinson, 'Collective Bargaining in Perspective', **Report 1B, Regional Seminars OECD**, (1969); and **Participation of Workers in Decisions Within Undertakings**, (ILO, 1969), pp. 73 ff.
[14] J. J. Ramondt, **Verantwoordelijkheid in het werk, op. cit.**
[15] L. Kolakovski, **De mens zonder alternatief** (Man without Alternatives; Amsterdam, 1968), pp. 24 ff., and J. A. A. van Doorn en C. J. Lammers, **Moderne Sociologie** (Modern Sociology; Utrecht, 1959), pp. 195 ff.

tible and, moreover, the question of who is to decide these points. The function of management ideology is to maintain a certain balance and to rationalise that balance in an irrational manner.

EFFECT OF MANAGEMENT-POLICY

Though shop floor consultation can have many effects, only a few points relating to the functions of policy will be discussed here. They are the anti-consultation syndrome among workers, discontinuity and the limited perspective.

(a) The anti-consultation syndrome

This phenomenon appears to be closely connected with the minimal institutionalization of legal relations in industry. Consultation at the lowest level is seldom if ever subject to statutory regulations. It is interesting to compare this situation with the regulations governing the collective bargaining procedure. None of the enterprises investigated had anything in the nature of rules or regulations providing a basis for points like: the questions to be dealt with in consultation, how representatives are to be chosen, the decision-making procedure, the legal protection afforded workers taking a critical or militant attitude, etc. Neither these nor any other rules had been drawn up to facilitate discussion. As a consequence, shop floor consultation is little more than the kind of discussion that is quite usual between supervisors and individual workers, albeit on a somewhat larger scale. The fact that it has not been institutionalized on a fixed basis is attributable to a variety of factors. It is a common phenomenon, for instance, in situations of negotiation between powerfull parties and parties possessing little influence. As such, it is also part of the division of areas of competence still adhered to in many cases by industry and the trade unions, whereby the latter have no contact with the lowest-grade workers. This lack of institutionalization can also be traced to the complementary function accorded to work consultation in the management techniques used by most of the enterprises studied. Those techniques are generally still of such importance that consultation makes little difference to the functioning of the organization. If this were not the case there would undoubtedly be more built-in safeguards.

What we are more concerned with here, however, is the effect of this lack of institutionalization on workers' behaviour. The blurred division of fields of competency enhances feelings of powerlessness. The lack of legal safeguards quite certainly impedes the neutralization of a feeling of vulnerability. In adopting a point of view workers are subject to social control by both their co-workers (tale-telling) and their superiors. They cannot be sure that any criticism they may voice will not redound to their own disadvantage.

Work consultation usually takes place in an unfavourable psychological atmosphere fostering suspicion, indifference, apathy, an instrumental attitude to the work situation, and so on. It calls forth a wide range of reactions. This complex social-psychological phenomenon might be described as the

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anti-consultation syndrome. It is characterised less by outright rejection of consultation than by the fact that consultation has to take place in an unfavourable psychological climate due to structural shortcomings as described.[16] It is a complex of attitudes expressing at best a willingness to give consultation the benefit of the doubt. Despite their hesitations, some workers are prepared to devote a certain amount of effort to making consultation work. It does not take much, however, to cause them to resume their former attitude. Because of the noninstitutionalization of consultation they cannot break free of the anticonsultation syndrome. Nor, at the very least, can a permanent basis be laid for its eventual neutralization.

(b) Discontinuity

The marginal position in the management process and the information structure, isolation from relevant policy-makers, and defective institutionalization, contribute to one of the most characteristic features of work consultation, namely its discontinuous nature. This manifests itself in such phenomena as:

1. Discontinuity through lack of subject matter. Consultation often comes to a standstill because there is nothing to be discussed, let alone to be decided upon. This is related to some extent to the function allotted to consultation, e.g. the passing on of information regarding impending technological or organizations changes. Once those changes have been effected the departmental system regains its stability and consultation is no longer required. There are numerous similar examples of the limited scope afforded to consultation. It is a situation not without paradox. Because there is so little to discuss, meetings are generally infrequent; the fact that they are infrequent means that after a time there is usually something requiring discussion. It is indeed not unusual for shop-floor consultations to continue at a very low influence level without that continuity having even the slightest effect on the general decision-making structure.

2. Discontinuity through dysfunctional action in other departments. Here we touch upon one of the consequences of the marginal position occupied by shop-floor consultation in the organization. Consultation is not possible without information. Democratization of the information system often meets with opposition in other departments, which refuse to pass on information or find some means of sabotaging the system. This may occur, for instance, when the employees in a certain deparmtent ask for improvements in their working environment, such as ventilation fans, draught-free doors or heating. Questions of this kind are connected with the matter of investments, and decisions on the latter are taken at a different level and at periods that are not concurrent with departmental consultation. In the course of our investigation we did not come upon one instance of a departmental budget being drawn up in consultation with the workers, the dysfunctional effect becoming apparent when problems occurred which could not be solved by consultation.

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[16] H. J. van Zuthem en A. Wynia, **op. cit.**

3. Discontinuity through sudden drastic decisions. Once or twice we were in a position to analyse the influence of a sudden radical decision (discontinuance of a production line, dismissals, etc.) on the continuity of work consultation. Decisions of this kind aggravate feelings of antagonism. They also bring about a sudden realization of the fact that consultation takes place at a comparatively unimportant level, and that the important decisions are taken over the workers' heads. The workers who make this discovery cease to participate in the discussions and the anti-consultation syndrome becomes manifest.

These discontinuity phenomena are also related to management's one-sided concept of efficiency. Its views on the rational use of means to achieve its goals are largely centred on economic values. In many instances this is so much the case that efficiency is synonymous with action geared to economic goals. One negative consequence of this attitude is the requirement that work consultation must not take up too much time. But neither the question of whether the time devoted to consultation is in fact well spent nor the constant threat of discontinuity is approached in terms of efficiency.

(c) Limited perspective

Shop-floor consultation derives its continuity from its functionality. This is connected above all with workers' behaviour being oriented toward the goals of the enterprise. Some of the factors upsetting that functionality have been referred to in the foregoing. But even when it retains its functionality, as is the case in certain processing industries, it is characterized by a limited perspective. 'Perspective' is used here in the sense of the contribution made by consultation to the progressive democratization of all levels in the decision-making process. In the most favourable instances it is possible to provide the scope needed for consultation at the lowest level, though this does not mean that those who are prepared to provide it are equally prepared to risk their own positions in the process. Consideration of the perspective of consultation cannot be limited to the sheer fact that it takes place, but must also extend to the conditions under which it functions. It is possible to be of the opinion that consultation as such should not be placed in the perspective of a further democratization of the decision-making structure within the enterprise, but that this should be achieved by other means such as amendments to the regulations governing the works council, or the co-option of members of the board of directors. But this view shifts the problem to such an extent that it becomes necessary to show that these attempts at democratization are not subject to precisely the same mechanisms as work consultation. With due recognition of the existing exceptions, I am personally of the opinion that the works council is subject to the same influences as shop-floor consultation, though the nature of those influences may be somewhat coloured by the specific position occupied by the works council in the enterprise. By and large, greater care should be taken in comparing the one with the other on this point of perspective.[17]

One of the major factors accounting for the limited perspective in work consultation is that the various levels at which discussion takes place are not

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[17] See the introduction to this article.

structured inderdependently. Organizations with an authoritarian structure also produce a certain measure of imbalance in the fringe areas of management which in the light of present-day social relations has to be resolved by consultative procedures. This accounts for the fact that the various forms of consultation deal with problems derived from the existing organization rather than with problems that could give unity of content to discussion at the various levels. The questions dealt with by the works councils of the enterprises investigated are not previously discussed in shop floor consultation. Nor do the works councils pass on questions for further discussion at departmental level.

SUMMARY

The principal characteristics of shop floor consultation are:

(a) Its complementary nature. It comes into being or functions in situations where other forms of social control have undergone a temporary or permanent loss of function. The latter is, however, so limited that consultation acquires no more than a complementary function in the control of workers' behaviour.

(b) Its isolation. It influences a marginal area of management and is not linked up through representative bodies with the more powerfull areas. This implies the further retention of its complementary function, and at the same time explains its limited perspective.

(c) Its instrumental orientation. The approach to shop floor consultation is instrumental, i.e. it is not seen in relation to the democratization of the enterprise. On the contrary, it is expected to fulfil a functional role in supporting the predominant industrial values of productivity, efficiency, internal solidity and a tranquil atmosphere.

Viewing consultation and personnel management as opposites invokes the danger of restricting the range of the problems. They both represent a view of labour and industrial relations which is widely accepted in industry and is, moreover, still popular with the trade unions as well. Labour fits into this pattern as the institutionalization of bargaining relations, offering itself in return for specific employment conditions. The conditions within which the bargaining relations function vary according to the social processes (higher levels of occupational training, etc.) and internal processes taking place in the enterprise. The current situation is one in which allowing the workers a certain measure of participation is considered to have a useful function in that it can help to achieve the goals of the enterprise, which latter, however, are not open to discussion at all. We should not be too hasty about concluding from this that a process of democratization is taking place. For a striking feature of these forms of consultation is that they tend to reinforce power rather than to bring about a redistribution of power relations.[18] Shop floor

[18] See **inter alia** R. L. Kahn, **Power and Conflict in Organizations,** (London, 1964); C. J. Lammers, 'Power and Participation in Decision Making in Formal Organizations', In American Journal of Sociology, (Sept. 1967); C. G. Smith and A. S. Tannenbaum, 'Organizational Control Structure' in **Human Relations**, 1963. A more general theoretical orientation is given in J. E. Ellemers, 'Macht en invloed: begripsvorming en kenmerken' (Power and Influence: Conceptualisation and Characteristics), in J. E. Ellemers (ed), **Macht, machthebbers en machtelozen** (Power, Power-Holders and the Powerless; Meppel, 1969).

consultation cannot be regarded as a component part of a democratization process on the sole ground of its existence. The investigator will need to examine the conditions under which it functions, for it is their amendment or stabilization that will determine the effect of consultation on the democratization of the enterprise concerned.

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LA PARTICIPATION DES TRAVAILLEURS
DANS UNE S. A. DE DROIT EUROPEEN

Le 7 octobre 1966, le Comité des représentants permanents auprès de la C.E.E. créait un groupe de travail chargé «d'examiner s'il serait opportun de créer une société commerciale européenne et, dans l'affirmative, d'étudier les problèmes relatifs à la création de cette société». Le groupe de travail a rempli ce mandat et rédigé un rapport sur les constatations auxquelles il avait abouti.

Le cadre de notre sujet ne nous permet pas d'exposer ici les arguments économiques, fiscaux et juridiques qui plaident en faveur de la création d'une société européenne. Disons toutefois que celle-ci a de nombreux partisans et qu'elle semble d'ailleurs présenter beaucoup d'avantages.

Mais avant d'en arriver à l'instauration de cette nouvelle forme de société anonyme, ses promoteurs devront résoudre l'important problème consistant à harmoniser la législation européenne et les législations nationales existantes. Problème qui, du reste, ne serait pas insoluble si nous ne nous trouvions actuellement dans une situation où la participation des travailleurs est de plus en plus au centre des préoccupations, notamment sur le plan européen.

La question essentielle est la suivante: comment la participation devra--t-elle se présenter dans la société anonyme européenne? Comment les différentes réglementations nationales dans ce domaine pourront-elles être ramenées à un commun dénominateur européen?

Il paraît exclu qu'une société anonyme européenne puisse se créer sans solution préalable du problème de la participation. A supposer, en effet, que la législation d'un pays donné en matière de participation aille plus loin que les statuts de la nouvelle S.A. européenne, cette dernière risquerait de servir de refuge. Inversement, si la société européenne instaurait une participation plus poussée que celle que prévoient les législations nationales existantes, les chefs d'entreprise montreraient sans doute peu d'empressement à choisir la formule européenne, en dépit de ses avantages.

Les employeurs européens, unis au sein de l'U.N.I.C.E., ont affirmé sans équivoque, dans leur déclaration du 28 octobre 1967, qu'ils considéraient la participation comme un point décisif et qu'ils n'étaient pas disposés à accueillir les travailleurs dans les organes de décision de la société anonyme. Cette déclaration disait en effet: «La seule conclusion possible est que la question de la participation, en ce qui concerne la société européenne, ne pourra être résolue que par le choix d'un système uniforme, excluant la participation des travailleurs aux organes de la société européenne.»

Sans doute convient-il, à ce propos, de faire la part de la vigueur polémique, mais il n'empêche que le règlement de la question de la participation demeure un préalable à la création de la société anonyme européenne, et que tout n'est pas dit en cette matière.

Nous nous efforcerons ci-après d'éclairer les facteurs qui ont joué dans l'élaboration des formes de participation existantes et de déterminer si un régime européen uniforme ouvrirait des perspectives réelles.

LA PARTICIPATION

La question fondamentale qui a suscité, sur le plan européen, les discussions actuelles concernant la participation, est complexe. Comment convient-il de régler la participation des travailleurs dans cette nouvelle forme de société anonyme? Faudra-t-il s'aligner sur la régime allemand, belge, hollandais ou français? Ou au contraire élaborer un système nouveau dans lequel seraient incorporées les principales dispositions de ces divers régimes nationaux? Comment se présenterait un tel système?

Avant de formuler quelques observations à ce sujet, nous voudrions toutefois examiner s'il est possible de donner de la notion de participation, dans l'optique européenne, une définition susceptible de constituer un point de départ commun. Les différentes conceptions qui ont cours dans les pays d'Europe occidentale, concernant la participation, peuvent-elles être ramenées à un dénominateur commun? Et auquel?

JUSTIFICATION DE LA PARTICIPATION

Les deux raisons principales qui militent en faveur de la participation dans l'entreprise sont les suivantes:

— Le besoin de rendre plus humaine la situation de travail (en sollicitant davantage les connaissances et la responsabilité des travailleurs, grâce à diverses possibilités de consultation au sein de l'entreprise);

— La volonté d'assurer une défense plus équilibrée des différents intérêts en présence.

Certains pays mettent l'accent sur le premier point, d'autres sur le second. Dans le premier cas, l'intérêt des employeurs se confond dans une large mesure avec celui des travailleurs. L'expérience et la recherche confirment, en effet, que des possibilités d'intervention réelles et des consultations judicieuses sont susceptibles d'améliorer la productivité, de sorte que ces possibilités et ces consultations répondent, non seulement au désir des travailleurs d'exercer une certaine influence sur la gestion, mais encore au souci de productivité de la direction.

Le deuxième point, en revanche, suscite des polémiques assez vives. Il porte, nous l'avons vu, sur une défense plus équilibrée des intérêts en présence (et sur une répartition plus équilibrée des pouvoirs dans l'entreprise, condition jugée indispensable).

Il y a là une source de conflits d'autant plus évidente que les employeurs ne voient aucun intérêt direct à procéder à une éventuelle redistribution des pouvoirs, sauf à tenter, par des concessions mineures, de prévenir des changements plus radicaux.

Quant au mouvement syndical européen, il aborde la participation, considérée comme un problème de pouvoir, par deux voies différentes. Dans certains pays, il s'efforce de conquérir notamment des droits de contrôle aussi affirmés que possible, d'édifier, en partant du bas de l'échelle, un pouvoir de contrôle contrebalançant celui de la direction.

Dans d'autres pays, par contre, le mouvement syndical revendique essentiellement des droits de participation à la direction des entreprises, c'est-à-dire le droit de participer à l'élaboration de leur politique (au sein du conseil d'administration, etc.).

LES PHASES DE LA GESTION DE L'ENTREPRISE

Avant de commenter ces différences, nous voudrions distinguer, dans la gestion de l'entreprise, certaines phases qui nous permettront de voir plus clair dans les desiderata exprimés dans les différents pays au sujet de la démocratisation des structures de l'entreprise:

— La phase de détermination de la politique;
— La phase de mise en oeuvre de cette politique;
— La phase de contrôle.

* Nous entendons par la première phase celle où sont tracées les grandes lignes de la politique et où sont prises les décisions les plus importantes, celles qui portent sur le programme d'investissements et la politique d'expansion, sur le financement des activités de l'entreprise, sur la répartition des bénéfices, sur la désignation des dirigeants chargés d'appliquer la politique, etc. Généralement, ces décisions sont prises par les organes suprêmes tels l'«Aufsichtsrat» allemand, le «raad van commissarissen» néerlandais, le conseil d'administration français ou belge, etc.

* La phase de mise en oeuvre de la politique consistera à en concrétiser les principes dans la pratique de l'entreprise. Compte tenu de la nature du système de production appliqué dans les entreprises, les responsables de cette mise en oeuvre devront disposer d'assez de liberté pour pouvoir assurer une gestion dynamique. Dans les entreprises à rythme constant, où les grandes fluctuations sont rares, les directives seront plus strictes que dans celles qui, en raison de leur nature même, sont plus sujettes aux fluctuations et plus fortement influencées par des facteurs externes très changeants. Ces différences déterminent pour une bonne part le degré de liberté des responsables.

L'efficacité constitue un critère important pour la qualité de l'exécution. Dans cette phase, il s'agit de trouver les moyens appropriés pour réaliser le mieux possible la politique élaborée.

Dans plusieurs pays, on constate qu'organisations d'employeurs et de travailleurs sont presque unanimes pour estimer que, dans cette phase de la gestion, qui exige une grande rapidité de décision en raison des circonstances, sans cesse changeantes, il n'y aurait en général que peu de résultats à attendre

d'une participation des travailleurs aux décisions de la direction. En revanche, certaines possibilités d'avis et de consultation justifieraient de plus grands espoirs.

* Quant au contrôle de la gestion, il consiste, dans l'acception la plus courante, à vérifier si l'exécution est conforme aux directives. Il sera exercé le plus souvent par un organe comme le conseil d'administration, sur la base de chiffres fournis par un bureau d'experts comptables (notamment en ce qui concerne la gestion économique), et par les syndicats, en collaboration avec leurs affiliés au sein de l'entreprise, pour ce qui est de la gestion sociale (délégués syndicaux ou du personnel, «shop stewards», etc.). On pourrait citer en troisième lieu les pouvoirs publics, qui disposent également de certains pouvoirs de contrôle (inspection du travail, etc.).

Il va de soi que le contrôle n'est pas seulement une activité de vérification formelle. Outre qu'il exerce une action préventive, le contrôle aboutit souvent, en pratique, à des propositions visant à faire modifier la politique initiale. Les droits de contrôle des travailleurs sont généralement conçus comme un ensemble de droits attribués au représentant attitré des travailleurs. Par l'intermédiaire d'un système de droits de contrôle, il est possible d'influencer sensiblement la politique de l'entreprise.
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DIFFERENTES APPROCHES

Des divergences considérables se manifestent souvent, d'un pays à l'autre, au sujet de l'influence qu'il convient d'accorder aux travailleurs sur la détermination, la mise en oeuvre et le contrôle de la politique de l'entreprise. Ici, c'est d'un pouvoir de contrôle fonctionnant efficacement que l'on attend les meilleurs résultats; là, au contraire, l'accent est mis sur la participation aux grandes décisions de politique, prises au sommet de l'entreprise; ailleurs encore, on s'intéresse surtout aux possibilités d'avis et de consultation sur le plan de l'exécution.

L'importance relative de ces objectifs change évidemment selon que l'on accorde la priorité à la défense des intérêts des travailleurs dans l'entreprise ou à l'humanisation de la situation de travail. Dans ce dernier cas, l'intérêt ira en premier lieu à la participation au niveau de l'exécution. Dans l'autre éventualité, on aura le choix entre la participation au sommet ou le renforcement des pouvoirs de contrôle.

En dépit de ces nuances, il existe une base commune indéniable résultant du fait que, dans tous les pays, on souhaite voir grandir l'influence du facteur travail sur la gestion globale des entreprises, sous une forme ou sous une autre. C'est pourquoi tous les pays tomberont sans doute d'accord sur la définition suivante de la notion de participation: l'ensemble des droits et des prérogatives des travailleurs ou de leurs représentants, leur permettant d'exercer une influence sur la détermination, l'exécution et le contrôle de la politique des entreprises.

Ajoutons que l'on s'accorde également à estimer que tout mécanisme d'influence (formes de relations humaines, gestion scientifique des entreprises, direction démocratique e.a.) ne constitue pas nécessairement une forme de

participation. Il convient d'institutionnaliser d'une façon ou d'une autre la manifestation de cette influence.

Pour qu'il puisse être question de participation ou de cogestion, il importe de satisfaire à certaines exigences d'uniformité et de continuité. Il subsiste une marge certaine entre un chef d'entreprise à penchant social et un penseur social entreprenant.

L'EVOLUTION DANS LES DIFFERENTS PAYS

Les formes de participation ou de cogestion telles qu'elles se sont développées dans les différents pays trahissent clairement les conceptions idéologiques divergentes qui les ont inspirées. C'est un thème que nous ne pouvons approfondir ici. Aussi nous bornerons-nous à renvoyer le lecteur à une étude plus détaillée (1).

En l'occurrence, les développements concrets nous intéressent d'ailleurs davantage que l'arrière-plan idéologique. Or, ces développements concrets permettent précisément de constater que les formes de participation existant dans les différents pays ont tendance à converger. C'est là une évolution qui mérite un examen plus attentif.

LA DETERMINATION DE LA POLITIQUE DE L'ENTREPRISE

En Allemagne occidentale, il existe depuis de nombreuses années un courant en faveur de la codétermination de la politique de l'entreprise au sommet, au lieu de la création, à partir des échelons inférieurs, d'un pouvoir de contrôle faisant contrepoids à la direction. L'Allemagne connaît des commissaires et des directeurs ouvriers, mais elle ignore les délégués syndicaux.

Pour le mouvement syndical, cette approche n'est pas la plus simple. Conquérir des sièges dans les conseils d'administration est une tâche difficile, pour laquelle l'appui des pouvoirs publics est pratiquement indispensable. Mais lorsque le mouvement syndical parvient à s'assurer une représentation paritaire dans ces conseils, il est en mesure d'exercer une influence considérable. Le professeur Voigt a montré, dans une volumineuse étude (2), que les travailleurs allemands avaient ainsi obtenu des avantages appréciables (directeur du personnel désigné par les travailleurs, climat d'entreprise favorable, excellent régime social, position renforcée du conseil d'entreprise, etc.).

Mais cette approche allemande de la participation présente aussi des inconvénients.

Tout d'abord, le travailleur allemand n'a pris jusqu'ici qu'une part personnelle minime à l'évolution en question, qui s'est accomplie pour lui, sans doute, mais trop souvent audessus de lui et sans lui. Il reste trop éloigné du sommet, tandis qu'une foule de petits problèmes ne peuvent être que difficilement résolus par cette approche. On sent très nettement, en Allemagne, que la participation n'a pas été édifiée à partir de la base.

Ce qui manque, dans l'évolution allemande, malgré ses aspects positifs certains, c'est notamment le contrôle exercé sur la gestion à partir des éche-

lons subalternes grâce à l'institution des «shop stewards» ou des délégués du personnel, telle qu'elle existe dans d'autres pays. Il est d'ailleurs intéressant d'observer l'intérêt croissant qui se manifeste en Allemagne pour cette institution, et les efforts qu'on y déploie pour renforcer la position des membres du conseil d'entreprise.

Elargir les droits et les prérogatives des membres des conseils d'entreprise allemands, dans l'espoir de les rapprocher des ouvriers, pourrait constituer la solution recherchée, bien que l'on puisse se demander si, à cet égard, les membres desdits conseils sont bien les personnes les plus indiquées. En effet, le conseil d'entreprise est généralement considéré comme un organe de consultation et de collaboration entre l'employeur et son personnel et non pas une institution chargée de défendre des intérêts.

Quoi qu'il en soit, il résulte d'enquêtes récentes que la popularité du «Betriebsrat» allemand continue de croître et que l'influence de ses membres grandit (3). Il sera intéressant de suivre l'évolution allemande et de voir, notamment, comment seront comblées les lacunes de la participation aux échelons inférieurs de la hiérarchie de l'entreprise. En conclusion, nous croyons pouvoir dire que l'institution allemande de la participation pourrait être utilement complétée par une procédure de contrôle et de doléances.

LA MISE EN OEUVRE DE LA POLITIQUE D'ENTREPRISE

Aux Pays-Bas, la participation s'est surtout traduite, jusqu'ici, par le droit d'avis et de consultation sur le plan de l'exécution, par l'intermédiaire des conseils d'entreprise et de certaines formes de discussion en commun du travail. Il n'existe pas, actuellement, de participation aux décisions de la direction supérieure de l'entreprise (commissaires ou directeurs représentant les travailleurs), ni d'organes de contrôle émanant des échelons subalternes (délégués syndicaux).

Cette évolution très unilatérale, exclusivement axée sur l'exécution de la politique, a déçu à plusieurs égards. Les thèmes qui pouvaient être discutés au sein du conseil d'entreprise étaient limités, de même que les pouvoirs de ses membres. Cette situation a amené le mouvement syndical néerlandais unanime à présenter une triple revendication:

* L'octroi de droits et de pouvoirs plus étendus aux membres des conseils d'entreprise (un projet de loi est en préparation, dans lequel le mouvement syndical voudrait voir inclure: des sanctions en cas d'infraction à l'obligation de créer un conseil d'entreprise; un droit de recours contre les actes erronés ou les négligences du président; le droit, pour les membres des conseils d'entreprise, de se faire assister par des experts; la protection des membres des conseils d'entreprise contre des mesures de renvoi, etc.).

* La nomination de commissaires représentant les travailleurs (leur titre restant à déterminer: commissaire social par exemple). De cette façon, les représentants des travailleurs pourraient être associés aux grandes décisions de politique prises au sommet. Des propositions ont été également formulées en ce sens par une commission (la commission Verdam) spécialement créée par les pouvoirs publics.

* Des droits de contrôle pour les travailleurs (ou le mouvement syndical).

Aux Pays-Bas également, une évolution se dessine en faveur de la délégation syndicale dans l'entreprise (le «bedrijvenwerk»). Les premiers «bedrijvenwerkers» sont déjà entrés en fonctions. La popularité de cette institution s'est rapidement affirmée, notamment dans les milieux syndicaux. Parmi les autres droits de contrôle que le rapport de la commission Verdam reconnaît au mouvement syndical, il faut citer le droit d'enquête et le droit de recours contre les décisions injustifiées de la direction.

Cette évolution est intéressante parce qu'elle témoigne d'une nette convergence des principes. Tous les éléments qui ont été développés jusqu'ici en Europe occidentale dans le domaine de la participation y sont, en effet, représentés.

La réalisation des trois possibilités précitées permettrait aux travailleurs et à leurs représentants d'influencer de façon plus équilibrée la gestion globale des entreprises. On regrettera toutefois que les Pays-Bas euxmêmes n'aient guère progressé dans la mise en pratique des propositions en question, de sorte que l'expérience de cette approche intégrée fait pour l'instant défaut.

LE CONTROLE DE LA GESTION DE L'ENTREPRISE

Dans certains autres pays (Grande-Bretagne, Etats-Unis et, dans une certaine mesure, la Belgique) l'influence des travailleurs sur la gestion des entreprises signifie avant tout l'édification d'un pouvoir de contrôle aussi fort que possible. Mais ce système de pouvoir de contrôle ou de contrepoids impose au représentant syndical dans l'entreprise une attitude plutôt militante. Aussi, les grèves sont-elles sensiblement plus nombreuses dans les pays qui l'ont adopté, que dans des pays comme l'Allemagne de l'ouest, les Pays-Bas, etc.

Cette attitude militante n'est pas toujours propice à la paix sociale ni à la productivité dans l'entreprise. Ainsi s'explique le développement, surtout dans les pays anglosaxons, où le système en question a vu le jour, d'un mouvement de relations humaines, de »scientific management«, d'expériences dans le domaine du commandement, etc. Certaines formes de « joint consultation » ont été instaurées, précisément pour accroître la productivité et la fidélité à l'égard de l'entreprise. Une forme de participation (shop stewards) engendre l'autre (joint consultation).

La Belgique, elle aussi, connaît les délégations syndicales dans les entreprises. Mais, dans ce pays, contrairement à ce qui se passe en Grande-Bretagne et aux Etats-Unis, on a également exploré, de façon plus délibérée et plus institutionnalisée, les voies de la consultation et de la collaboration dans l'entreprise, grâce à la création des conseils d'entreprise. Il reste à savoir si cette évolution se limitera au développement de la délégation syndicale et du conseil d'entreprise, ou si elle aboutira, ici encore, à des tentatives de percée vers le sommet, pour permettre aux travailleurs d'exercer une influence directe sur l'élaboration de la politique d'entreprise. A première vue, cette deuxième éventualité ne semble pas sur le point de se réaliser. Aucune proposition n'a encore été formulée par le mouvement syndical belge en vue de la création de commissaires délégués par les travailleurs et, si nous sommes bien enformé,

il n'entre pas actuellement dans ses intentions de déposer de telles propositions.

Il est néanmoins intéressant d'observer l'évolution qui se dessine à cet égard dans les compagnies de gaz et d'électricité belges et qu'illustre la création de » comités de contrôle pour l'électricité et le gaz ». Dans le secteur en question, les syndicats exercent effectivement une influence sur les décisions prises au sommet de la hiérachie (y compris celles qui concernent la formation des prix, la tarification, l'unification, les investissements, etc.), Encore convient-il d'ajouter que cette influence se manifeste sur le plan sectoriel. Les résultats enregistrés par ce système étant favorablem, il n'est pas impossible qu' une évolution analogue ne s'amorce dans d'autres secteurs (charboh ex acier?).

Ici encore, la tendance est donc d'accroître l'influence des travailleurs tant sur la détermination que sur l'exécution et le contrôle de la politique et de la gestion de l'entreprise.

PERSPECTIVES

L'évolution constatée dans les différents pays permet de se demander si, sur le plan européen, les approches nationales de la participation ne finiront pas par converger. En effet, en dépit d'écarts encore considérables, la participation s'étend progressivement à d'autres phases de la gestion que celle qui avait été choisie comme point de départ par chaque pays.

La nature l'emporte donc visiblement sur la théorie. Que, sur le plan idéologique, l'on préfère une certaine forme de participation, préconisée comme étant l'idéal démocratique par excellence, le réalité sociale (telle qu'elle se manifeste dans l'évolution technique, les rapports économiques, les structures des organisations, etc.) n'en finit pas moins par imposer ses exigences. Ainsi s'explique la tendance à la convergence des différentes conceptions.

L'expérience et la recherche confirment d'ailleurs que l'unité de gestion constitue pour l'entreprise une nécessité vitale, de sorte qu'une participation limitée à une seule phase de la gestion (détermination, exécution ou contrôle), ou bien n'a qu'un effet perturbateur, ou bien n'influe guère sur la gestion globale.

Ceci nous conduit à penser qu'en pratique les diverses formes de participation devront s'appliquer aussi bien à l'élaboration qu'à l'exécution et au contrôle de la politique d'entreprise, si tant est que l'on souhaite influencer cette politique de façon équilibrée et effective.

Cette conception ouvre en même temps une perspective pour la société anonyme européenne. Un régime de participation commun offre en effet l'avantage que chaque pays intéressé y retrouvera l'essentiel de son propre régime de participation, complété par des mesures intéressant la phase de gestion que ce régime n'englobe pas encore. Peut-être l'Allemagne manifestera-t-elle quelque méfiance à l'endroit de l'institution des délégués syndicaux, et la Belgique à l'égard des commissaires sociaux, mais en revanche chacun de ces pays retrouvera les trois quarts de sa réglementation dans la réglementation européenne. Du reste, il est probable qu'un régime européen basé sur la participation du facteur travail aux trois phases de la gestion ne fait que préfigurer une évolution qui ne tardera pas à s'accomplir dans tous les pays.

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MEASUREMENT OF INDUSTRIAL WORKERS' JOB SATISFACTION

I. STATEMENT OF PROBLEM

Democratic management of a plant presupposes some form of participation of workers in the decision-making which relates to their work, output, and distribution of the output. However, the reality of the plant operation is often contrary to the ideal of democratic management. The increasing complexity of technological development, organizational structure, and ideological orientations tend to place the workers in a powerless position. In this connection, Georges Friedman's statements seem rather significant:

> »One of the most alarming of these dangers seems to me to be the failure of human beings to participate in an environment which they can now control from outside by means of increasingly efficient, autonomous and widespread techniques. Needs and desires, capacities and aspirations, which are an essential part of man remain unused and run to waste«. (1)

In cognizance of the importance of the workers' needs and desires, the present study attempted to ascertain the attitudes of workers toward various topics. More specifically, the present paper will report on Korean workers' attitudes toward (1) their relative income, (2) job security, (3) work supervision, (4) consultation of subordinates' opinions, (5) workers' welfare, (6) labor union, and (7) job satisfaction. By ascertaining the workers' attitudes, the present study is interested in exploring some factors which relate to their job satisfaction which in turn may reflect the degree of participation which the workers should like to have.

II. METHOD OF DATA COLLECTION AND ANALYSIS

The data reported in the present paper derived from a larger study which is being conducted at the Social Research Division of the Asiatic Research Center. A brief description of (1) sample design, (2) questionnaire construction, (3) data collection, and (4) analysis follows:

1. Sample design

An ideal sample of industrial workers would be one based on a probability sample design covering the total population of industrial workers in Korea. However, since such an ideal sampling was not feasible, a purposive sample was taken out of two major plants in Korea. Characterization of the two plants may be stated as follows:

Plant 1	Plant 2
(1) State-managed	(1) Private-business managed
(2) More automated	(2) Less automated
(3) Longer history (1964)	(3) Shorter history (1967)
(4) 800 workers	(4) 1,200 workers
(5) Fertilizer plant	(5) Automobile plant

From plant 1 we selected 356 respondents and from plant 2, 455 respondents more or less on random basis. The study was concentrated on blue-collar workers exclusively.

2. Questionnaire construction

The larger study, of which this is part, dealt with a broader problem of the industrial workers' adjustment at their job. Upon a careful study of the literature on industrial sociology and organization and upon intensive informal talks with the industrial leaders as well as industrial workers, we felt that some questions along the following dimensions were highly relevant in understanding the adjustment problems of industrial workers:

1) Physical danger at the job
2) Work load
3) Self-realization at the job
4) Co-workers' perception of the job importance
5) Plant rules and regulation
6) Styles of work supervision
7) Job security
8) Job commitment
9) Relative income
10) Income and living expenses
11) Consultation of subordinates' opinions
12) Sense of friendship among workers
13) Necessity for a labor union
14) Plant effort for workers' welfare
15) Workers' identification with the plant

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16) Community attitudes toward the workers' status
17) Satisfaction with community life
18) Overall satisfaction with the job
19) Personal success value
20) Suggestions for plant development

Out of the twenty dimensions listed above, the present paper selected only those seven dimensions which are considered more relevant to the theme of this conference on participation and self-management. The exact content of the selected seven questions are incorporated in the statistical tables to be followed at some appropriate points where the survey findings are presented.

3. Data collection

The two plants were contacted by the research project director several weeks before the actual surveys were conducted to insure the full cooperation from them. Then two mature researchers and their assistants administered the structured questionnaries to the workers in the summer of 1972.

4. Analysis

Analysis done for the present paper is a simple percentage computation for each response category comparing the two plants in question. The results of analysis are presented in seven statistical tables below.

III. FINDINGS

The findings on the seven dimensions analized here will be first verbally presented followed by an appropriate statistical table one by one.

1. Relative income

It is the relative income, not the absolute income ,that matters to some workers when it comes to the issue of job satisfaction. Even if one is very poorly paid, he may be rather satisfied upon learning that his colleague at other plant is far less paid. That is to say, he could be satisfied with his job because his income is not bad relative to his colleague. It is from this perspective that we asked »How is the income of this plant's workers when compared with other similar plants here?« As the Table 1 clearly shows, the fertilizer plant seems to enjoy far more satisfaction in terms of the relative income. About 89% of the workers at the fertilizer plant feel that their income is of the automobile plant, the corresponding figure is only about 46%.

TABLE 1   **Relative income**

Question: *How is the income of this plant's workers when compared with other similar plants nearby here?*

Plants	Responses (%)					
	Much better	Somewhat better	About same	Somewhat less	Much less	n
Fertilizer plant	0.56	14.89	74.16	9.27	1.12	356
Automobile plant	0.00	1.32	10.55	36.92	51.21	455
Total	0.25	7.27	38.47	24.78	29.22	811

2. Job security

It is assumed that the job security is an important variable which contributes to job satisfaction. When the two plants are compared, again the fertilizer plant turned out to be far more favorable in terms of job security. The responses to the question, »How secure do you think your job is in view of the business conditions of this plant?« are provided in Table 2. A little over 76% of the workers at the fertilizer plant feel »somewhat secure (60.11%)« or »very secure (16.29%)«, whereas only about 24% feel likewise at the automobile plant.

TABLE 2   **Job security**

Question: *How secure do you think your job is in view of the business conditions of this plant?*

Plants	Responses (%)					
	Very secure	Somewhat secure	Average	Somewhat insecure	Very insecure	n
Fertilizer plant	16.29	60.11	20.51	2.53	0.56	356
Automobile plant	2.20	21.54	36.26	22.42	17.58	455
Total	8.38	38.47	29.35	13.69	10.11	811

3. Style of work supervision

Generally it may be hypothesized that the less the business leaders have trust in their workers, the more strict their supervision tends to be and in consequence the less participatory on the part of the workers in the business management. When the work supervision is too strict, it is also possible that workers lose their interest in their work and attempt to block the normal operation of the business through their informal group pressures. When a question, »How strict or liberal do you think your foremen are in their supervisory work?« was asked, the following results were obtained.

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TABLE 3 — Style of work supervision

Question: *How strict or liberal do you think your foremen are in their supervisory work?*

Plants	Responses (%)					
	Very liberal	Liberal	Average	Somewhat strict	Very strict	n
Fertilizer plant	5.06	34.27	23.60	25.00	12.08	356
Automobile plant	4.84	9.67	20.22	36.70	28.57	455
Total	4.93	20.47	21.70	31.57	21.33	811

The findings in Table 3 indicate that workers at the fertilizer plant feel that their foremen are »liberal (34.27%)« or »very liberal (5.06%)« but quite a high percentage of the respondents also feel that their foremen are »somewhat strict (25.00%)« or »very strict (12.08%)« However, in the case of the automobile plant, about 53% of the respondents consider that their foremen are either »somewhat strict (36.70%)« or »very strict (28.67%)«. Only about 14% of them felt that their foremen were either »liberal (9.67%)« or »very liberal (4.84%).« In general, the automobile plant seems more strict in work supervision.

4. Consultation of subordinates' opinions

Worker-oriented democratic managers would consult their subordinate workers in handling their business, whereas authoritarian managers tend to ignore them. The workers, even if their chances for participation in decision--makings are very limited for various reasons, would feel some sense of their worth and participation, thus increasing their job satisfaction, when their opinions are heard or consulted. Thus we asked »To what extent do you think the leaders of this plant consult their subordinates' opinions in running this plant?«

Table 4 shows that the leaders in the fertilizer plant consult their workers far more than the counterpart at the automobile plant. Nearly 60% of the workers at the former plant responded that their leaders consulted them, whereas only about 26% of them at the latter plant responded likewise.

TABLE 4 — Consultation of subordinates' opinions

Question: *To what extent do you think the leaders of this plant consult their subordinates' opinions in running this plant?*

Plants	Responses (%)					
	Very much	Somewhat	Average	Very little	Not at all	n
Fertilizer plant	10.67	48.88	27.81	10.67	1.97	356
Automobile plant	6.15	19.56	30.11	28.35	15.82	455
Total	8.14	32.43	29.10	20.59	9.74	811

5. Plant's concern for workers' welfare

When the workers at a plant feel that their welfare is well considered, we can hypothesize that they tend to feel satisfied with their work, other things being equal. The responses to the question, »To what extent do you think this plant is doing its best to improve the welfare of the workers?« are presented in Table 5. Here again the workers at the fertilizer plant are far more favorably disposed to their plant. A little over 70% of them think that their plant is doing its best to improve their welfare. On the other hand, only about 22% of the workers at the automobile plant feel likewise. Nearly 47% of them show negative views by responding that the plant is doing »a little« or »none« for their welfare. If we consider the fact the ultimate goal of industry is to promote human welfare, the negative responses should deserve a very serious consideration before they turn unmanageable with reason.

TABLE 5 Plant's concern for workers' welfare

Question: *To what extent do you think plant is doing its best to improve the welfare of the workers?*

Plants	Responses (%)					
	Very much	Much	Average	A little	None	n
Fertilizer plant	27.25	42.98	25.00	3.93	0.84	356
Automobile plant	8.57	13.63	30.99	29.45	17.36	455
Total	16.77	26.51	28.36	18.23	10.11	811

6. Necessity for labor union

The organization and activities of labor union vary from nation to nation. It is hypothesized that the more the workers are depressed for various reasons, the more they would tend to endorse the necessity for labor union. Regarding the necessity of labor union in connection with the participation theme for this conference, Professor Josip Županov stresses as follows:

> *Strong and autonomous labor unions vigorously representing the interest and viewpoint of various section of employees seem to be indispensable part of structural arrangement for effective participation.« (2)*

Now, turning our attention to the question, »To what extent do you think a labor union is necessary to improve the welfare of a worker like yourself?«, we see that the workers at the automobile plant are far more insistent for the necessity of labor union. About 88% of them feel that a labor union is necessary to improve their welfare. However, in the case of the fertilizer plant, only about 27% of them think likewise. Hence, it appears that the workers at the

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automobile plant are in rather unfavorable conditions and therefore they are more inclined to desire a group like labor union to protect their interest.

TABLE 6 **Necessity for labor union**

Question: *To what extent do you think a labor union is necessary to improve the welfare of a worker like yourself?*

Plants	Responses (%)					n
	Very much	Much	Neutral	A little	Not at all	
Fertilizer plant	5.06	21.63	37.64	25.00	10.67	356
Automobile plant	48.13	30.99	15.16	3.74	1.98	455
Total	29.22	26.88	25.03	13.07	5.80	811

7. Job satisfaction

Thus far, we have considered 6 dimensions which are somehow related to job satisfaction and indirectly to the theme of participation. Our final analysis deals with the overall evaluation of the workers' sentiment in terms of job satisfaction. To measure the job satisfaction, a seven-point rating scale was presented to the respondents with a question, »As a whole, how satisfied are you about your job? Please indicate on the following seven-point scale by circling an appropriate number.« In this case, the point 4 represents the neutral attitudes, i. e., neither satisfied nor unsatisfied. Thus understood, we see that the workers at the fertilizer plant show 50.84% of »satisfaction« responses, whereas those at the automobile plant only 15.17%.

TABLE 7 **Job satisfaction**

Question: *As a whole, how satisfied are you about your job? Please indicate on the following seven-point scale by circling an appropriate number.*

1	2	3	4	5	6	7
Very unsatisfied					*Very satisfied*	

Plants	Responses (%)							n
	1	2	3	4	5	6	7	
Fertilizer plant	0.56	2.81	8.99	36.80	34.55	11.80	4.49	356
Automobile plant	11.87	17.14	28.79	27.03	12.53	1.32	1.32	455
Total	6.91	10.85	20.10	31.32	22.19	5.92	2.71	811

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IV. SUMMARY AND CONCLUSION

The analysis of the survey on industrial workers in two Korean plants reveal the following results in summary form:

TABLE 8 **Summary of findings**

Dimensions	Plant 1 (Fertilizer)	Plant 2 (Automobile)
Relative income	Better	Worse
Job security	More secure	Less secure
Work supervision	More strict	Less strict
Subordinates' opinions	More respected	Less respected
Workers' welfare	More concerned	Less concerned
Labor union	Less desired	More desired

If we can assume that whole purpose of participation and self-management is to promote the welfere of the workers and to increase their satisfaction, the information contained in above findings should be instructive for the authorities concerned. The privately owned and less automated plant with large number of blue-collar workers tends to be inferior to the state-managed and more automated plant in satisfying the workers in the context of the present study. Further study is required to check the validity of this finding in more plants and in more countries which vary in their kind, size, system, and ideologies.

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