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Introduction

This article discusses some methodological observations on a clinical socio-scientific approach towards organization research. As far as I am aware, Wirth was the first to set down the contours of a clinical socio-scientific approach to reality (Wirth 1931; Larson 1991). Since then this approach has remained on the agenda of organization research, but has not occupied a prominent place, at least in the pecking order of academic research. In practical research, by contrast, considerable use is made of clinical viewpoints.

A wide gulf often separates practically-oriented research and academic research.

These are two worlds that appear not to understand one another's language. As Schein has recently noted, the concept "clinical" plays a key role in this mutual incomprehension (Schein 1987, p.13).

Clinical research has both an instrumental and an epistemological aspect. In an instrumental sense the attitude of the researcher is treated primarily from a reflective and intentional point of view. The focus is on the way in which the researcher establishes a relationship with the object of research, his value systems, his attitudes toward relevant knowledge about organizations and the way in which theory and the practical value of the research are linked up.

In this respect the clinical approach has much in common with the processes of action research. The practized method of research—how does one examine an organization?—tends to take a back seat in discussions of clinical organization research.

In the development of scientific knowledge, the concept of clinical also has a clear epistemological function. Many fields of scientific research have a clinical tradition in which the common feature is that it serves the function of practically-oriented basic research. Such basic research operates close to the problems within the field of investigation and generates new questions and primary insights in a living process of knowledge-building (Roethlisberger 1977, p. 368; Sackett 1985).

The epistemological function remains equally as neglected in discussions of clinical organization research. As a result, the clinical view is in danger of being increasingly reduced to a matter of instruments and devices. The link between the instrumental and the epistemological function is weak because the instrumental function tends all too frequently to be narrowly identified with sociological attitudes while epistemological questions remain in the background.

This article seeks to establish a closer link between the instrumental and epistemological functions of the clinical approach. The article examines areas in which a clinical approach can build on organization theory formulation, in which respect a distinction is drawn between a morphological and a dynamic organization paradigm. The article also examines the substantive steps forming part of clinical organization research.

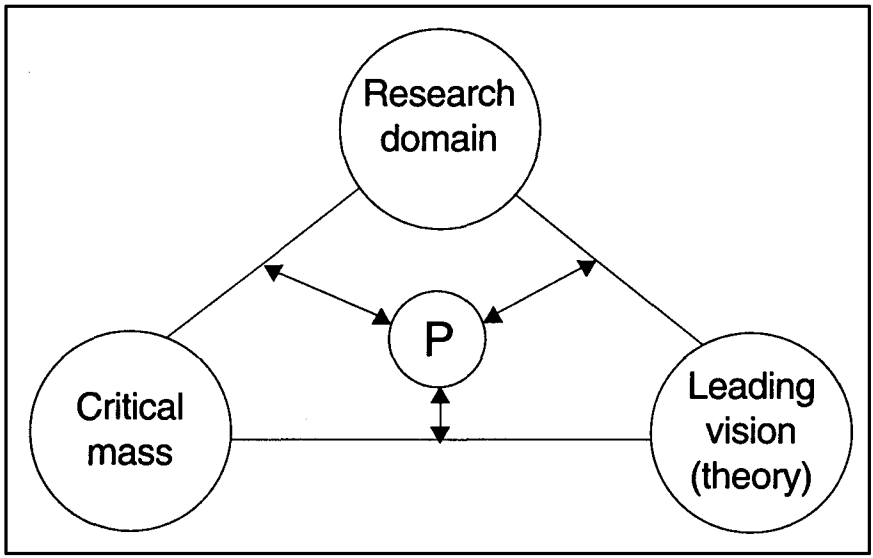
Two organizational paradigms

The understanding and formulation of theories concerning organizations may be reduced to two paradigms.

A paradigm is more than just a theory of reality; in particular, it relates to the management of knowledge in a particular area. A paradigm is a combination of a leading vision, a critical mass of researchers and vested interests (Kuhn 1974). Theories do not just have adherents because they provide an accurate picture of reality; researchers may group themselves around a theory not just on academic grounds but because they have an investment in it based on other considerations, such as security, habit and prestige. In addition there are other groups outside the academic field as such which have an interest in a particular portrayal of reality. A paradigm fulfills not just creative but also conservative functions. There are

numerous instances in which researchers, by adopting a challenging new approach toward reality, have exposed the interpenetration of theories and established (social and political) interests (e.g., Kuhn 1974; Prigogine and Stengers 1990).

Fig. 1 Schematic representation of a paradigm



The socio-scientific knowledge of organizations may be divided into two paradigms. One of these places the emphasis on the structure of organizations and may be termed the *morphology paradigm*. In this paradigm the research and theory formulation center on the many variants of organizational structure (i.e., typologies, metaphors, and structural models). The other paradigm may be designated the *dynamic paradigm*, in which the leading element is the organizing behavior of organizations (Weick 1969).

A cherished subject in the morphology paradigm is the bureaucratic structure of organizations, as originally developed by Weber. Weber's work has given rise to countless studies concerned with the structural nature of organizations (e.g., leadership studies, effectiveness research, legitimation issues, power and satisfaction research, etc.). Contingency theories of organizations also derive essentially from structural analysis. Essentially, contingency theories are based on the

premise that there is no one best structural form; the form—i.e., the structure of an organization—is instead a function of contingent factors such as scale, age, product and environmental turbulence, etc. Mintzberg's celebrated typology is a fine and mature example of morphological research in the context of contingent factors (Mintzberg 1979). In the Dutch-speaking world, the research survey conducted by Lammers provides a good impression of the subjects with which the morphological paradigm is concerned (Lammers 1983).

The dynamic paradigm is primarily concerned with the transformation processes within organizations. Here, the attention is focused on the transformation of organizations as such. Examples include the research into the life-cycles of organizations (Kimberly 1981; Greiner 1972). A more managerial approach is concerned with the way in which primary processes are arranged in organizations. Such research is concerned with the way in which organizations behave within the constraints of the available time, means of production and manpower, as cogently expressed by De Sitter (1990).

The dynamic paradigm centers on organizing behavior rather than the organization itself. The attention is transferred from the boardroom to the logistical design of the organization, from bureaucratic procedures to processes, from structures to networks, from the environment to system chains and flow-centered organization, from institutionalized codetermination (through the Works Council, etc.) to direct participation and project-based operation, from the measurement of costs to the measurement of all the critical factors making for the successful management of permanent processes of change (Nolan Norton 1991).

In the social sciences the morphology paradigm is dominant. The research has concentrated on comparative organization analysis. The dominant critical mass of the structure paradigm shines through in the substantial body of research in this tradition and the many handbooks and journals all bearing the stamp of the morphology paradigm.

A certain tension exists between the two paradigms. This is a familiar picture in scientific evolution. Paradigms do not merge into one another but set competitive boundaries. In particular, the dominant paradigm will resist the emergence of new insights.

The social conditions from which the two organization paradigms derive their worth are in a process of radical change. The morphology paradigm is of limited practical value for organizations and their present day's problems. Organizations under permanent pressure to adapt to a change in circumstances are not primarily interested in structures but in the handling of processes of permanent change. While structures do of course remain important frameworks for

action, the main question to the forefront in all organizations at present is how to move from situation A to situation B. In this respect the morphology paradigm often appears to deal with a reality not perceived as such by those in the organizations (Schein 1987).

Although academic interest in the dynamic aspects of organizations is more limited—as evident from the index of any organizational handbook—the literature is nevertheless extensive.

The theoretical language in which the dynamic of organizations can be described, analyzed and diagnosed is systems theory. In its most elementary form systems theory provides a conceptual framework in which organizational processes can also be placed: input, throughput and output, system limits, positive and negative feedback, regulatory functions, the relationship between parts, the whole and the environment, etc. Systems theory meets the need for an overall analytical language in which disciplines are able to understand one another within a certain frame of reference. Systems theory also provides a suitable frame of reference for handling questions concerning the relationship between structure (i.e., bureaucracy) and process. This central issue is reflected in systems theory in terms of the delimitation of boundaries and the linkage of the whole and constituent parts in a chain of activities deriving (properly) from the primary process.

Theory formulation may be divided into systems theory relating to the organizing behavior of organizations and theories concerned with processes of change. Both variants are discussed below. The insights in question provide footholds for a systematic approach toward organizations.

Systems theory and dynamic models of organizations

In the literature a number of process-based variants have been elaborated to the systems concept. A distinction may be drawn between diagnostic, design-oriented, and socio-technical models. These models differ in terms of the problem addressed by the researcher and the relationship maintained with the research field.

Diagnostic models are often highly general in nature. Generally they are designed to obtain an initial, general impression of an organization—for which reason they are often referred to as "quick-scan" models. Examples of such models include that of Leavitt (1965) and Harrison's (1987) systems model. These models have in common that a number of key elements are brought together, that data are collected relating to those aspects and that the researcher

subsequently provides information on the basis of the information collected. The degree of detail may vary considerably from aspect to aspect; Harrison for example provides a detailed list of points.

The relationship between these models and systems theory often leaves something to be desired. Harrison, for example, claims to operate from the basis of systems theory, but apart from the concept of systems and the distinction drawn between systems and environment there is no affinity with systems theory. Diagnostic models are often little more than collections of, in themselves relevant, aspects of organizations.

Examples of *design-oriented models* include Burns and Stalker (1961), Mintzberg (1979), and Galbraith (1976). Design-oriented models are less general in nature than diagnostic models and concentrate on one particular organizational characteristic that is regarded as key. In Galbraith's case, for example, this is the information management of an organization, while Burns and Stalker concentrate on the internal structure in relation to the task environment (e.g., the market, client systems) and Mintzberg focuses on a combination of contingent factors such as age, size, and type of product plus the dominant power structure of an organization.

An inspiring and more fundamental design vision is that of Morgan (1986), whose outline of the holographic organization reverts to the design question of how specialization in an organization should be tackled. By way of analogy Morgan takes the organization of the brain. In terms of cerebral specialization certain parts of the brain have general properties that enable them to take over specialized functions that can no longer be performed by other parts of the brain. Analagously, organizations are only capable of survival if they have a reserve of potential responses to cope with unexpected circumstances. This reserve or redundancy may be reflected in the specialization of functions in two ways: by continually creating new functions for new challenges (i.e., the redundancy of parts) or by equipping existing functions in such a way that those responsible for performing them are able to switch without difficulty to new or unexpected challenges (known as "redundancy of functions").

The holographic concept is based around the self-organizing capacity of parts of the organization. Functions need to be organized in such a way that a wide range of unexpected events can be handled at functional level without the need to refer to a higher level for instructions or approval. This requires a minimum of critical specifications (i.e., central regulations) and consistently applied learning behavior. Instead of the general bureaucratic practice of formulating detailed regulations, rules are kept to the absolute minimum. The learning behavior of the organization must support the application of these minimal rules. The rules are

designed not to enforce sanctions and prohibitions but to optimize behavior. The rules themselves also come up for debate if the results diverge from expectations, i.e., the principle of double-loop learning.

Morgan notes that design issues are both technical and political in nature. As such the self-organization of the constituent parts is always based on a politically derived agreement within the organization.

From the holographic approach it is only a small step to *the socio-technical approach* to the organization. The area of tension of the part/whole problem of organizations has been the meeting point for socio-technicians from the earliest days up to and including the so-called modern socio-technicians. Socio-technical models are much more specific than diagnostic ones. The researcher clearly presents himself as an expert who knows how an organization should be arranged in terms of the model in question. Silverman's observation that the socio-technical literature is characterized by prescriptive models for solving the process/structure problem remains valid (Silverman 1970).

There are a number of socio-technical variants, such as the specification of design rules (Davis 1977; Cherns 1976). Particularly familiar in the sociological literature is the dualistic socio-technical variant, which rests on a division into a social and a technical system. For an organization to function effectively the requirements of both sub-systems need to be incorporated and geared to one another in the design of the organization. Socio-technicians concerned with this variant have specified the respective requirements of sub-systems and their mutual interrelationships in great detail, a comparatively recent example being that of Mumford (1983).

Thanks to the anti-Taylorist crusade of De Sitter, "modern socio-technical approach" appears to be on the march (De Sitter 1989, 1990). This socio-technical variant differs from the preceding in its emphasis on techniques of production. There is a close relationship with the logistical literature on organizations—hardly surprising in view of the importance attached in "modern" socio-technical analysis to a flow-based analysis of organizations in an open-system model. Such analysis is based on the proposition that the internal structure of organizations must be capable of meeting the requirements for flexibility imposed by the product and labor markets and that the form of the primary process should be geared towards a number of specified design parameters.

The fundamental socio-technical design rule is that the bureaucracy should follow the design of the process, although not until the primary process has been laid down from the top. De Sitter emphasizes that the organization model must show how the organization deals with critical factors such as means of production and time. In doing so De Sitter touches on the Achilles' heel of many organization

models, which seldom take account of those critical factors. Many organization models are predominantly nominal structure models that show all sorts of different games but not the marbles and certainly not the combination of game and marbles. Modern socio-technical science, by contrast, sets out to place the organization design in a context of critical factors such as time, money, means of production, and people. The organizing behavior, rather than the organization itself, is central.

The problem posed, research role selected, and the disciplinary or inter-disciplinary nature of the research determines the utility of the systems-theory approaches toward organizations. Where there is close collaboration with information technologists, for example, it is useful if the latter and management consultants are familiar with socio-technical thinking. In the case of research into the strategic aspects of organization design it is important to be familiar with the ideas on the holographic design of organizations.

System theory and theories of organizational change

Where the foregoing models can provide an impression of the "what"-side of design questions, the "how" questions relate especially to the way in which intentions can be realized: the allocation of resources and expertise, the design of the help structure and the existing organization, the participation of those concerned and cooperation with trade unions and employees' councils. In short, we are dealing with a variegated assembly of actors and factors calling for a careful scenario of change if the project in question is not to founder in the cross-currents of resistance—resistance which tends all too often to be attributed in its entirety to human beings and too little to the environment of those involved in the management of change (Tichy 1980).

Theory formulation in this area may be subdivided into aspect models, innovation models, and policy evaluation models.

Aspect models for analyzing processes of change are as numerous as theories of organization design. In many cases these theories of change provide a fairly arbitrary summary of aspects deemed relevant in a predominantly descriptive portrayal of events. In most cases the aspect models are constructed about one central variable: the decision-making process, the help structure or cooperation with relevant groups, etc.

Tichy has developed a model that usefully paves the way for a combination of organization diagnosis and analysis of change. Tichy distinguishes three cycles of change within organizations: a technological, a political, and a cultural cycle.

The processes in each of these fields are cyclical in nature: at one point technological questions will require close attention by management, at other points political or cultural issues. An organization finds itself in a genuine crisis when the three cycles all jockey for position at the same point in time. The art of managing processes of change consists of creating space between the cycles. The localization of the phase which each cycle is in is done on the basis of a simple system model of the organization establishing a link between organizational analysis and theories of change.

The Tichy model is a useful starting point for combining organizational analysis and theories of change. Improvements are necessary and possible; the three cycles are not sufficiently discriminating and very broad in nature. The three cycles tend also to be rather aspect-oriented. They are derivatives of an organizational diagnosis model which—like many such models—devotes little attention to the flow-based structure of the organization. In this instance the diagnostic model also requires support from the body of socio-technical theory and Morgan's holographic model.

There is an extensive body of literature in which organizational change is treated as an *innovation process*. In turn, surveys of this literature have helped refine and adjust the models of innovation, (Van de Ven 1988).

It is our impression that the innovation metaphor has provided few usable insights for analyzing questions of organization design together with organizational change. The usual innovation models are assessment models, in which there is an independent variable—for example a new technology or new product—and the research centers on the diffusion problems and the handling of those problems by the management. The changes are treated not as a design process but as a diffusion process of an object.

Models charting processes of change have in common that they concentrate on the fact of change itself, leaving to one side the extent to which that change is based on orchestrated and consciously managed policy. The analysis of change gains when it is linked to models developed for the purpose of policy analysis. Policy analysis is concerned with the rational instrumentation of processes of change; the central concern is not the fact that change is taking place and how such changes interact but how such changes take place under conditions of controversial goals, scarce resources, tight time-frame and a volatile environment.

Effective policy evaluation models have been developed in this field, such as that of Greenwood, further elaborated by Van de Vall (1988, 1991).

The parallel with organization diagnosis presents itself. Research into processes of change is also dominated by a tenacious nominalist tradition in which social and organizational concepts are isolated from a context of time,

scarce resources, and means of production. Organizations and processes of change are, however, the vehicle, structure, and setting for the development of products and services, under conditions of mounting time pressures (due to technological change), limited resources, and a scarcity of skilled manpower. There is no one exclusive theory—and to pursue such a theory is an illusion—with sufficiently powerful variables that is capable of charting the broad field of organizational design and change and making prescriptive statements. The rough outline of possible theoretical stopping points provided above has been designed to indicate that there are numerous conceptual jigsaw pieces that could be fitted together more effectively. The overall organizational diagnosis models, the socio-technical frame of reference (as elaborated for example by De Sitter), Tichy's theory of change and policy evaluation models (such as that of Van de Vall) are all highly usable in various stages of the research process.

Following this discussion of theoretical points of departure in organization research it is worth recalling the drift of the argument. It was suggested that clinical research sets out to fulfill a bridging function between a problem-oriented approach toward organizations and the scientific development of knowledge on organizations. In terms of its theoretical foundations, clinical research may draw on the body of organizational theory. Such theory formulation takes place in the context of two paradigms, namely the morphological and the dynamic paradigms. On account of its concentration on the dynamics and mutability of organizations, the latter paradigm provides numerous points of departure. In this respect a distinction has been drawn between theoretical design models based on systems theory and those based on theories of change. Having established this connection between method and theory we may now examine the main lines of the method.

Methodological main lines in the clinical research of processes of change

Clinical organization research presupposes an open-minded attitude toward the reality under analysis. Theory is an aid but certainly not an imperative guideline in the way that it is for example in hypothetical deductive research. In addition, reality is studied by observing the processes at close hand.

Processes of change in organizations cannot be adequately covered through studies conducted from behind a desk or with the aid of a sample population and questionnaire. This means that particular attention has to be devoted to the methodological approach if the lack of distance and limited theoretical guidance are not to result in a kind of journalistic sociology.

In practice clinical research means that the researcher has to build up his research network carefully. Who are the clients of the research? How do I select my frame of reference within the organization? In addition there must be clarity about the validation and reliability of the research results. Here the rules of thumb are interactive surveys, a cyclical process of research and the recording of data.

With respect to the role a clear demarcation is required in relation to the two "competing" roles that can be encountered in organization research: the ethnographer and the expert (Schein 1987). In brief, it is a matter of which client system should be given priority: the theoretical client system or the object of research. The ethnographer assigns priority to academic knowledge, whereas the expert attaches priority to the organization which he represents as problem-owner. The clinical role operates two client systems: the organization and science.

The central research question in clinical research always concerns the combination of a problem, the siting of that problem in its environment, and the exploration of possibilities for change.

A problem needs to be clearly distinguished from a problematical situation. A problem is a concentrated representation of a choice that has to be made and implemented. A problematical situation is a circumstance in which those concerned are involved in processes over which they lack proper control.

Concentrating on a particular problem is characteristic of the clinical approach. Analysis of the problem environment is required in order to arrive at a realistic estimate of the scope for change. The incorporation of such possibilities for change into the analysis arises from the fact that problems are examined with a view to reaching solutions. Clinical research therefore concentrates on the possibilities for change in organizations.

Clinical research into possibilities for change closely follows the step-by-step approach adopted by organizations toward change. In broad terms the following stages may be distinguished: preliminary research, analysis, diagnosis, implementation, and evaluation. Problem identification takes place in the first three stages. In the implementation stage the proposed changes are carried out while in the evaluation stage intentions and their realization are compared with one another.

The clinical approach attaches particular importance to the preliminary investigation, which sets the framework for determining which problems are to be examined. The predominant culture in organizations is not a problem-setting but a solution-oriented one. In many cases this is the major source of problems within an organization; the problem has not been properly identified and poorly defined solutions are tackled.

The following items form part of the preliminary investigation:

- determination of the problem as viewed by the organization;
- critical incidents in the organization's developmental history;
- analysis of the primary process;
- analysis of the capacity for implementing change;
- validation of the problem and determination of solutions;
- compilation of scenario for change.

These subjects reappear with differing emphases in each successive stage. The clinical working method is not linear but cyclical. Linear working means that a problem is investigated once and for all, thereafter turning to the remaining steps. Cyclical working means that there is a process of continual examination as to whether a problem has in fact been solved and whether, on further consideration, the problem remains the one originally addressed. This does not amount to a licence continually to redefine the problem: cyclical working means defining the problem as accurately as possible in a number of rounds and then guiding the process of change. Among other things the difference between a linear and a cyclical approach is expressed in the attention to and effective room for feedback.

The subjects in the preliminary investigation as listed above will now be briefly examined. As noted, renewed attention needs to be given to these subjects at each stage of the research. The way in which the preliminary investigation is tackled therefore illustrates the working method in the succeeding stages. I shall therefore confine myself to the methodology of the preliminary investigation.

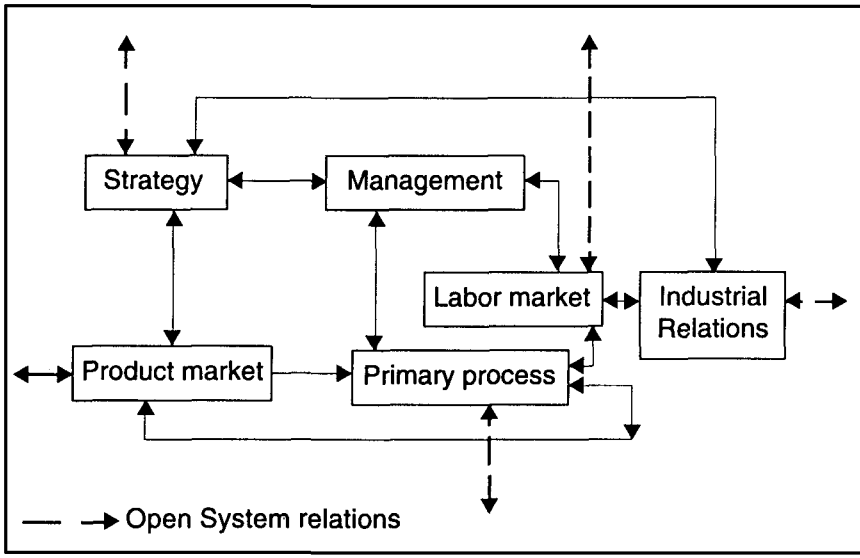
determination of the problem. Organizations will themselves always have a picture of the problems with which the researcher is confronted. The problem always merits more detailed examination. In clinical research the researcher forms his own impression of the organization's problem, hence entering into confrontation. The formation of an independent picture takes place by means of the analytical steps in the research process referred to below.

critical incidents. Organizations are human constructs and, as with individuals, the present can be strongly governed by the past. Examples of critical incidents include mergers, reorganizations, industrial disputes, and changes in the management structure. In most cases it is not difficult to obtain an overall impression of such incidents. People find it easier to discuss the past and the future than the present, and the way in which far-reaching events were handled in the past can provide an impression of the capacity for change of an organization.

analysis of the primary process. Organizations exist because they produce a product. Numerous activities support this primary activity. In view of the fact that organizations are always complex systems it is desirable to take the analysis of the primary activity as the starting point for the analysis of problem situations. This provides the touchstone for the functionality of the way in which processes are organized, the guidance (management) provided, the necessary information and the determination of the priorities of the problems arising in the analysis of an organization.

At the same time the primary process is approached by means of one of the two organization paradigms, namely the dynamic paradigm. The theory formulation in this paradigm is based on analyzing an organization in terms of organizing behavior, i.e., the way in which expression is given to organizational relations based around the primary activity. One model for analysis of a primary process is shown in the following activity flow chart.

Fig. 2 Flow chart of an organization



Each block in the chart represents a particular activity, which constitutes input for the next block. The input is brought about via one or more rules, which are characteristic of the relationship between two blocks. The type of rules differs in each pairing.

The relationship between strategy and management is characterized by "why" rules, the relationship between management and the primary process is determined by "what" and "with what" rules, the relationship between the primary process and labor is driven by "something in return for something" rules, etc. In utilizing the chart it is particulary important to note how activities flow through, where rules conflict and how such conflicts are managed.

capacity for change analysis. Such analysis is conducted in order to determine the capacity for change within an organization. If a comprehensive reorganization has just been completed (i.e., critical incidents analysis), if there are tensions in the line organization and if there also remains ambiguity about the main direction in which the organization is headed, so much will then be going on at the same time that it is difficult to concentrate the necessary energy around ambitious plans. The scenario for change needs to be geared to a realistic estimate of the organization's potentiality for change.

In determining that capacity it is helpful to distinguish the various domains making up an organization and the key problems associated with those domains. We may distinguish (Tichy 1981):

> a. The political domain: the key question in this domain concerns the allocation of scarce resources (money, manpower, expertise, and remuneration). The allocation issue is always bound up with the question of who has the decisive voice and who cooperates with whom. The latter may be determined by drawing up a simple diagram of forces showing the "plus and minus" relationships of key individuals in the organization.
>
> b. The cultural domain: the key question here concerns the degree of unanimity about norms and values relating to the central policy areas of the organization. What, for example, are the attitudes towardsthe primary product and personnel policy.
>
> c. The technological domain: the key question in this area relates to the design of the central processes for realizing a desired output.

Once it has been determined how much energy an organization is investing in each of these domains, an estimate may be made of the capacity for change, the basic notion being that a proposed change needs to be viewed against the background of the energy which an organization invests in the processes in each of the identified domains.

If there are major tensions in the line organization (i.e., the political domain) it is open to question whether it would be advisable to undertake significant technological innovations. Organizations do not have unlimited energy. The analysis of the capacity for change must provide a realistic estimate of what an organization is capable of tackling at a particular point.

validation of the problem. Once the information has been assembled on the subjects noted above, the researcher/transformation expert may then form an impression of the problem as he sees it. Generally this means that the nature and contours of the problem are determined on the basis of a dialogue with the key liaison officers (or "anchorage points"). A characteristic feature of clinical research is the fact that the researcher forms an impression of the organization and its problems on the basis of his own analysis and diagnosis. He does not shelter behind theoretical formulations or the opinions of relevant populations in a sample of respondents. Clinical research demands independent behavior on the part of the researcher.

scenario for change. Depending on the nature of the problem being investigated, there may, in highly simplified terms, be said to be two scenarios of change: a linear or a cyclical scenario. The former applies if the nature of the change is highly technological in nature or in the event of rigid interventions or force of circumstance. In the linear scenario interventions are as far as possible fended off. On the basis of a rigid timeframe and a step-by-step process of change, the selected goal is pursued, having previously defined a single problem and solution. Good examples of this approach may be found in the traditional approach toward computerization projects or rationalization exercises.

A cyclical or interactive working method is followed in a situation in which the main aim has been globally charted and there is conscious provision for interim feedback and the revision of priorities and procedures. Examples would include computerization projects that are not primarily technical in nature but which have been developed as part of a process of redesigning an organization.

In a linear process of change the contribution of the clinical researcher is largely confined to the orientation and evaluation stages. Provided he is admitted to these processes, the researcher can make use in the latter stage of the methods of policy assesment noted above (Van de Vall 1988; 1991).

By contrast a cyclical process of change provides considerably more room for clinical research, since here there is provision for the underlying principles of change to be assessed, and hence themselves be the object of research, as the process of change unfolds. The measurement of critical factors in the process of

change is a powerful agent for change. Clinical research can be an instrument for regularly measuring the impact of the processes on critical factors, (monitoring role). By way of illustration, table 1 shows the respective impact on critical factors of a linear and cyclical approach towards a computerization process (Ramondt *et al.* 1991). Analogously, it is possible to conceive of processes taking place in other than a technical environment.

Summary

A method is more than a convenient way of collecting data. Above, we have placed the clinical method in the context of processes of organizational change. The reason is self-evident: clinical research is problem-oriented. Problems are choice situations calling for decisions that require implementation. This generates a natural affinity between clinical research and the dynamic organization paradigm, which centers on the question of organized behavior. To some extent, organizing consists of the continual resolution of problem situations.

The attitude of the researcher toward the object of research is characterized by openness and impartiality. The dialogue or interactive working method is a central feature in the determination of the problem under investigation and the contribution made by the research towards finding effective solutions and their implementation. There is permanent and open communication about the way in which the researcher reaches his conclusions. This provides the basis for the validity and reliability of the research.

The attitude of the researcher toward existing knowledge and theory on organizations is characterized by a combination of eclecticism and the application of the principles of grounded theory formulation (Glaser and Strauss 1967). The attitude is eclectic in the sense that the researcher uses theory not with a view to appraising it but in order to obtain greater insight into the phenomenon under investigation. The findings, taking the form of models and concepts formulated closely in line with the practice of organizations, are added to existing insights on organizations.

The clinically-oriented researcher must take care to ensure that the bridging function between theory and practice is not neglected. This means that in principle he is open toward the research which, building on the insights obtained along the clinical path, contributes further to the foundations of the dynamic organization paradigm by means of generalizing and evaluative research; for the knowledge of organizations cannot be based on an exclusive method of research.

Table 1
Linear and cyclical approaches toward technological change in organizations.

Critical factors	Linear Oriented Introduction of Information Technology	Cyclical Introduction of Information Technology
Problem orientation	-technical delimitation of organizational problem -organization follows technical innovation	-placement of problem in context of business system -technical solution follows from organization design
Transformation scenario	-staged linear time-path and working method -goal-oriented approach -implementation issues placed at end of project	-staged working in non-linear context -problem-oriented approach -implementation starts in problem-definition stage
Management of process of change	-separation of project and line organizations -dominant position of technical expertise -line and project integration through periodic stage-by-stage coordination	-integration of project organization and line structure -experts and stakeholders in advisory roles (no steering groups) -intensive and continuous coordination of line and project organization
Users organization	-user generally the informant -organizational provision confined to users' platform (appraisal) -user authorizes	-user as informant, co-designer and client -platform organization and users' council (strategic questions) -user decides
Expertise	-information system design as basic knowledge -other disciplines (e.g., management science, HRM policy) in subordinate position -no methodological integration -separate development of knowledge	-multi-disciplinary approach as basis of knowledge -problem-orientation governs shifting emphasis on disciplines -methodological integration necessary -integral development of knowledge
Environmental control	-one-off problem definition directs environment -deferment of uncertainties -project-based working in closed system approach	-frequent reorientation on problem on account of openness toward environment -uncertainties incorporated in development method -cyclical working in open system approach
Learning behavior	-fixed route working and evaluation at end -single loop learning behavior	-evaluation during process -double loop learning behavior

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