



## INQUIRING INTO THE TEMPORARY ORGANIZATION: NEW DIRECTIONS FOR PROJECT MANAGEMENT RESEARCH

JOHANN PACKENDORFF

*Umeå Business School, Umeå University, Sweden*

*(First received April 1994; accepted in revised form April 1995)*

**Abstract** — The theoretical field of project management (PM) can be described as a set of models and techniques for the planning and control of complex undertakings. The three main shortcomings of PM research and theory are identified as: (1) PM is seen as a general theory and a theoretical field in its own right, (2) research on PM is not sufficiently empirical, and (3) projects are seen as “tools.” Instead, a diversity of theoretical perspectives should be employed in field research on “temporary organizations” in order to construct middle-range theories on different types of projects. These proposed future directions call for research on expectations, action and learning in project settings.

**Key words:** Project management, temporary organization, project organizing, organization theory.

### PROJECT WORK AND PROJECT MANAGEMENT

For thousands of years, participation in various kinds of projects has been a complement to the eternal struggle for food and a roof over one's head. Constructing pyramids, discovering the New World, crowding the shores of Dunkirk with Allied soldiers; the history books are full of unique, complex undertakings limited in time and scope. Business activities have also often been organized as projects; craftsmen and shipowners have always offered unique products for unique purposes.

Industrialism acquired legitimacy from the way products were made accessible to the common man: low prices from economies of scale from the standardization of products. Frederick W. Taylor and others added the necessity of standardizing the work and specializing the workers to fit the industrialist agenda: if machines are more efficient than humans, then humans should work like machines. Although this reasoning came to pervade society as a whole, projects were still important as unique and creative work environments on two counts: (1) investments providing the basis for mass production (such as railways, factories, steel mills, etc.) required project management skills for their implementation; and (2) the life-cycles of products, organizational structures and technologies all became shorter and shorter, thus highlighting the need for projects as instruments for achieving continuous improvement and innovation (Kanter, 1983; Kreiner, 1992). The efficiency of mass production is dependent upon isolation from the environment and protection against heretical ideas from within; disturbances and freethinking are referred to temporary work settings for further exploration. Thus, if industrialism in the guise of mass production can be said to require stability and inertia in production systems, project management can be seen as a way of evoking change and renewal in these systems (Kreiner, 1992).

Today project work thus seems to have become increasingly common in all kinds of organizations. In most project management literature (cf. Butler, 1973; Gaddis, 1959; Lundin, 1990;

Morris and Hough, 1987, p. 3; Pinto and Prescott, 1988; PMI Standards Committee, 1987), the project is usually defined as:

- a unique, once-in-a-lifetime task;
- with a predetermined date of delivery;
- being subject to one or several performance goals (such as resource usage and quality);
- consisting of a number of complex and/or interdependent activities.

Although all the elements in this definition could be questioned (cf. Engwall, 1992), as is the case with most general definitions, the usual conception of the project is nonetheless that it is a given, plannable and unique task, limited in time, complex in its implementation and subject to evaluation. This conception has given rise to a field of knowledge in the borderland where theorists and practitioners meet, a field of theory in between technology and business administration. This field is usually referred to as "project management," and is defined as follows:

Project Management is the art of directing and coordinating human and material resources throughout the life of a project by using modern management techniques to achieve predetermined objectives of scope, cost, time, quality, and participant satisfaction (PMI Standards Committee, 1987, p. 4-1).

Project management is a field with its own professional associations (PMI and IPMA), its own journals (*Project Management Journal* and *International Journal of Project Management*) and its own conferences and symposia. It is a field that is traditionally linked to normative techniques and methods for project planning and control, developed by the consultants and engineers of industrialism (cf. Engwall, 1992). During the 1980s, the need for structuring the project management knowledge of researchers and practitioners became obvious. Apart from an abundance of advice on planning and control techniques, the literature in the field covers topics as diverse as risk analysis, project leadership, investment planning, group dynamics, computer-supported project management, human resource management, and so forth.

The outcome of the structuration work that followed an initiative of the PMI (Project Management Institute), resulted in the *Project Management Body of Knowledge (PMBOK)*. In the PMBOK, it is assumed that all knowledge on project management can be classified under the following headings: (1) scope management, (2) quality management, (3) time management, (4) cost management, (5) risk management, (6) human resources management, (7) contract/procurement management, and (8) communications management. The organizational aspects covered under the "human resource management" (HRM) heading are administration (employee relations, compensation and evaluation, and government regulations and evaluation) and behavioral (individuals outside the project, team members, and the project team) (PMI Standards Committee, 1987).

As Kreiner (1992) indicates, project work in the future will provide a way for organizations to release the creative forces within themselves rather than to plan; a way to enhance participation rather than to control. Key words like "learning," "participation," "renewal," and "innovation" will thus have to become as common in project management terminology as they have been for years in modern organization theory. It is the aim of this article to make a critical investigation of the present body of knowledge in project management, and to propose an alternative research agenda concerning research methods, theories and foci for further empirical studies.

In the next section, the present state of the project management field will be briefly described. Some of the underlying assumptions and research practices within the field will then be subjected

to criticism, and an alternative research metaphor for the project — “the temporary organization” — will be proposed. The article concludes with an outline of the theoretical and empirical implications of the alternative view on theory-building, theory usage and theory focus which the proposed metaphor implies.

## PROJECT MANAGEMENT AS A THEORETICAL FIELD

Even though the emergence of project management as a theoretical field was essentially a phenomenon of the 1950s (following the development of network planning techniques), some important theoretical work had been done before the Second World War. Around 1910 Frederick W. Taylor’s “disciple” Henry L. Gantt constructed the Gantt-chart, and in 1931 the Polish scientist Karol Adamiecki presented his network-like technique “Harmonogram”.

The now famous network planning techniques CPM and PERT were developed at the end of the 1950s, CPM for stable industrial application settings at the chemical giant DuPont, and PERT for the vast and almost confusingly complex Polaris project. Since then CPM and PERT have appeared in numerous incarnations, all designed to overcome one or more of the practical problems caused by the simplicity of the original techniques.

The preoccupation with planning techniques attracted some criticism in the 1960s, and project-related research concerning organization theory, human resource management and leadership was initiated. Originally evolving around problems related to organizational structures (matrixes) and project leadership, this line of research has developed into a substantial body of advice on human resource management procedures and project team building (see the overview in Fabi and Pettersen, 1992).

Alongside the growth of this “organizational” project management research, the increasing use of computers in daily work-life has given rise to a “second generation” of operations research devoted to computer applications and expert systems for project planning, control and risk analysis. As we shall see, all these theories share some basic assumptions on the nature of the theories themselves, on the empirical basis for these and the view of the project as the object of inquiry.

Projects as time-limited sequences of events are usually divided into three distinct stages: development, implementation and termination (PMI Standards Committee, 1987; cf. the descriptions in Miles, 1964, or Pinto and Prescott, 1990). Development, in its turn, is usually further divided into conceptualization and planning. In the traditional project management model, these stages are sequential; the implementation of a project is always assumed to be preceded by development and succeeded by termination. Following this ideal internal project logic, the theoretical field of project management can be described in terms of planning, controlling and evaluation theories.

### *The core of project management: planning the project*

One of the basic assumptions about projects is that the project task is clearly defined and unambiguous (Lock, 1992, ch. 3; PMI Standards Committee, 1987). By viewing the task as something externally given, the efforts of the project manager can be directed towards the efficient use of resources and techniques in accordance with the project management definition quoted above. Having defined the task and the various goals restricting the work of the project organization, conventional project management wisdom is then to construct a work breakdown structure (WBS). The aim of the WBS is to identify the activities (or work-packages) that have to be performed in order to fulfill the project task. The WBS serves the same purpose as specialization and

Research focus	Traditional Project Management Theories
Development	Plan ↓
Implementation	Control ↓
Termination	Evaluation

Fig. 1. Research foci of traditional project management research.

division of labor in mass production planning: to assign different tasks to different people by identifying controllable action sequences. Most methods for project planning and control are in fact different ways of finding the optimal sequence of activities and of allocating resources to them accordingly. Following the leading metaphor in the project management discipline, the general systems theory (cf. Cleland and King, 1983; Nathan, 1991, 33f; Roman, 1986), the project is seen as a whole, constructed from its parts and the interdependencies between them. The better the structuring of the parts, the better the whole.

Apart from the planning models stemming from operations research during the 1960s, the field of project planning has been mainly preoccupied with concepts such as life-cycle planning, risk analysis and project valuation. The implementation of the planning models — i.e. how to make them useful to project managers — has also been a subject of interest. It has been suggested that they will be more user friendly if they are presented in the shape of computer software, a development that might cause the role of the project manager to change from practitioner to administrator (Thamhain, 1987).

Research on project planning today is nowadays a highly sophisticated discipline, and further efforts will therefore have a limited impact on high threshold costs. Furthermore, it can be questioned whether the results of this research are really put into practice; it appears that only the most basic models are actually used (Liberatore and Titus, 1983; Link and Zmud, 1986), and that they are not always used as intended (Sapolsky, 1972).

Recently a new line of research has evolved on the borderline between project planning and project control, dealing with the implementation of project plans; the plan is not evaluated for its logical elegance, but for its part in the success of the project. This research has been concerned with different implementation environments — a kind of contingency theory of project planning procedures (Nutt, 1983; Turner and Cochrane, 1993), with the evaluation of the planning work itself (Woodward, 1982), and with the way the importance of planning procedures changes over the life-cycle of the project (Pinto and Prescott, 1990).

#### *The human side of project management: control, structure and leadership*

The theoretical field of project control can be divided roughly into two areas: project organization and follow-up plans. The first of these contains research on the problems of defining the project organization *vis-à-vis* the permanent surrounding organization, and the second with

research and advice on the follow-up of plans and budgets, and the way such follow-up can be used by the project manager.

The most usual subject of inquiry concerning the delimitation of project organizations from their environment is the matrix structure (cf. overviews in Ford and Randolph, 1992; Knight, 1976; Larson and Gobeli, 1987). Since organizations had for long been divided along functional lines, the matrix structure was the natural way to gather competence together from different parts of the organization in order to undertake important renewal efforts. Research on matrix organizations has focused on two problems in particular: conflict and communication. The usual idea has been that conflict is dysfunctional (Archibald, 1992; Wilemon and Baker, 1983), even though some researchers see conflict in small doses as a catalyst of innovation and renewal (Barker, Tjosvold and Andrews, 1988; Butler, 1973; Hill, 1975, 1983). Studies of communication in and around projects have generally concluded that project effectiveness is strongly correlated to the quantity of communication in the project organization and the quality of the communication with the project environment (cf. Ancona and Caldwell, 1992; Katz and Allen, 1982; Katz and Tushman, 1979; Tushman, 1978; Tushman and Katz, 1980).

According to much of the literature on project leadership the destiny of the project manager is to be a jack-of-all-trades between corporate management and project specialists (Gaddis, 1959). The project manager should, for example, be able to plan, motivate, evaluate, formulate visions, apply a participative management style, create an agreeable working climate, solve conflicts, negotiate with external contacts, coordinate and integrate, enhance internal communication and find relevant information and knowledge (cf. Archibald, 1992; Barczak and Wilemon, 1989; Barker, Tjosvold and Andrews, 1988; Briner, Geddes and Hastings, 1990; Fabi and Pettersen, 1992; Jessen, 1992; Slevin, 1983).

As regards the continuous control and follow-up of projects, the conventional literature concentrates on methods of comparing plans and budgets on the one hand and outcomes on the other. Plans and budgets are often in need of updating during the initial phases of a project; it might be necessary, for example, to make several later cost estimates as new information "emerges." Great importance is attached to the creation of functioning routines for cost control, routines that require a well-designed organization structure and information systems characterized by high frequency and detailed examination (Burke, 1992).

### *The performance of project management: goal-fulfillment and evaluation*

When it comes to project evaluation the normative theories, otherwise so abundant, are conspicuous by their absence (except for some mathematical models in capital investment theory). It seems as though successful projects are in no need of evaluation; meeting the objectives in terms of cost, time and performance is the same as putting the project aside without asking why it was such a success. "Evaluation" is thus operationalized in terms of "degree of goal fulfillment," a measure that has been used in a number of quantitative enquiries aimed at identifying reasons for good and bad performance.

When projects fail, on the other hand, project evaluation seems to be far more common. Since it is assumed that the key to success is to be found in literature, the task of finding the reasons for failure is thought to be an easy one. A number of books on project failure have been published, books that in general can be said to provide comprehensive case descriptions but superficial analyses. Project failure — contrary to the advice about how to achieve success — is not usually ascribed to the project managers or the individuals actually implementing the project; it is the irrationality and indetermination of the initiators and/or owners of projects that cause fiascos (Hall, 1980; Kharbanda and Stallworthy, 1983; Morris and Hough, 1987; Sapolsky, 1972).

## WHAT IS MISSING IN PROJECT MANAGEMENT RESEARCH?

In terms of the theoretical coverage of planning and control requirements, projects are well researched and much analyzed, while further research on project evaluation should be of interest and importance. It could be argued that further research on project management should aim at the refinement and compilation of the available knowledge. There are three major objections to such a course, however. The first is concerned with the assumed generality of project management theory. The second concerns the lack of empirical studies of projects, and the third is a proposal for an alternative research metaphor for "projects."

### *Project management is seen as a general theory*

The general assumption underlying the PMBOK and subsequent ambitions to create a project management profession, is that project management knowledge is applicable to all sorts of projects in all sorts of industries and environments (Engwall, 1992). A construction project may differ from organizational renewal projects in terms of outcomes and knowledge requirements, but the procedures for planning, controlling and leading the projects are nevertheless assumed to be the same in both cases. In the literature, genuinely unique projects like military operations are treated in the same way as "repetitive" telecommunications projects, where the product is unique but the process is standardized in corporate project management handbooks. In analogy with the conventional wisdom of organization theory, these differences should have important implications for such things as the desired competence profile of the project manager, the policy for composing the project team, the choice of planning methods or the evaluation criteria to be used.

Furthermore, project management has become a generic concept (Engwall, 1992), an umbrella for all sorts of different disciplines and theories applicable to project work. A distinct arena for academic discourse has indeed been created, but at the expense of innovation and creativity in research on projects. Project management has become a scientific field in its own right, a field defined not by its theories or its origins, but by the habit of human beings to label a variety of coordinated, time-limited undertakings as "projects." The field is obviously held together by certain conceptions on process rationality; differences in outcome and process are disregarded in favor of alleged similarities in the planning and implementing of projects. But is there really a single, consistent, unambiguous empirical phenomenon that can be labelled "the project"?

Apart from simple listings of different application areas (cf. Hunter and Stickney, 1983), the few existing typologies of projects indicate the problems involved in viewing all projects as similar. The usual dimension along which projects are classified runs from well-defined, easily planned projects to ambiguous, unpredictable ones (cf. Briner, Geddes and Hastings, 1990, 90f; and the matrix models in Boos and Doujak, 1990; Turner and Cochrane, 1993). The recommendations following from these classifications, however, are mostly concerned with the use of planning and control procedures, and are grounded in empirical observations to a limited extent only. The different types of project described in the classifications are thus ideal types forming typologies, rather than empirically identifiable types forming taxonomies. The problem of the project as being *de facto* a multifaceted phenomenon, contingent on the nature of the task and environmental characteristics, has received only sporadic attention in the project management literature. The impact on empirical research is thus yet to come (for an exception, cf. ECOSIP, 1993).

The problem about general theories on organizations is that they have to accept the omission of characteristics of any deviant individual organizations or groups of organizations, in order to attain universal applicability. The anthropologically "thick" studies of single cases are also prob-

lematic, in that it can be difficult to distinguish generally valid observations from case-specific ones. The formulation of theories of the middle range (Pinder and Moore, 1979), recognizing the need for different theories on different types of projects, might thus be a path worth pursuing in order to achieve better project descriptions.

### *Abundance of normative advice despite lack of empirical evidence*

Project management textbooks (as well as most papers presented at professional conferences or symposia) contain a lot of normative advice on how to plan and manage projects. The years of practical experience often referred to by the authors in order to enhance their own trustworthiness are rarely used to illustrate the normative models. Case-histories are either success-stories showing the benefits of the advocated project management approach, or failure-stories showing what could happen if proper managerial techniques are misused or not used at all. Descriptive empirical research grounded in theoretical problems is rare; academics often seem as eager as the practitioners to provide straight answers, elegant models and universal truths.

Despite all the practical advice and academic knowledge available, projects still fail in various respects (cf. Buchanan, 1991). By compiling and analyzing public reports on 3,500 investment projects, Morris and Hough (1987, p. 7) found cost overruns between 40 and 200 per cent to the rule rather than the exception. The literature on project failure usually explains the fiascos in terms of non-rational decision-making, organizational politics and/or bad planning and control (Hall, 1980; Janis, 1972; Kharbanda and Stallworthy, 1983; Morris and Hough, 1987). It appears from this literature that projects tend to develop an "inner logic" of their own, to slip out of the hands that created them. With few exceptions the literature on project mismanagement fails to offer any profound theoretical explanations of such things as deviations from plans, cost overruns, goal obsolescence and conflicts within projects or between projects and their environments. Practitioners seem well aware of these phenomena, but project management handbooks still fail to offer a thorough understanding of them (cf. Kreiner, 1992, p. 47). Thus, on the research front, empirical studies of what is actually taking place in project organizations are still needed. Theories can never in themselves enhance the practice of project management, but they might be helpful to the people actually involved in project work.

The main source of information about the course of action pursued within a project should be the individuals forming the project organization; action has to be understood as enactment of the subjective and inter-subjective realities of individuals and groups of individuals. Such an approach will require a change in epistemology, in that there will not be any "truth" beneath or beyond the narration of the project member. An understanding of decision making and organizational politics in a project, for example, means creating sense-making descriptions of the project reality which it is possible for practitioners to subscribe to.

### *Projects are seen as tools, not as organizations*

A major consequence of viewing project management in a general systems theory perspective (as in Cleland and King, 1983, and Roman, 1986, among others) is that the project becomes a tool, a means for attaining ends at higher levels in the system. This is a view that corresponds to the classic notion of the organization as a machine (Morgan, 1986, ch. 2), a view that has been surprisingly persistent in the field of project management (Nathan, 1991, ch. 2). A product development project is thus a means for achieving the market share objectives of the firm concerned, and a construction project is a means for erecting a building and contributing to the cash flow of the construction company. However, in explaining the existence of the project in terms of its

inputs and outcomes, the real reasons for initiating it might be overlooked, as well as the motives for the participation of the individuals in the project organization.

The rationalistic view of management that is prevalent in western society seldom recognizes the existence of subjective rationality. Instead, behind the decision to initiate a project there is supposed to be a well thought-out strategy, against which the outcome of the project can be objectively evaluated. In practice, projects can be initiated for unclear reasons (Sahlin-Andersson, 1992), undertaken with the process itself rather than the outcomes in mind (Buchanan, 1991), and pursued despite environmental changes which render the project objectives obsolete or even undesirable (Benghozi, 1990; Christensen and Kreiner, 1991, p. 32). Once it is recognized that rhetorics, decisions and actions are neither necessarily sequential nor mutually coherent (Brunsson, 1989), the question "Why projects?" can evoke all sorts of different answers.

When projects are regarded as tools, the various motives of the individuals in the project organization for participating (and, of course, for individuals outside the project not participating) are also neglected. Traditionally, individuals are not supposed to have motives when they join the project organization; they are to be motivated by the project manager (cf. Archibald, 1990). Consequently, projects are described as exciting, non-hierarchical, and stimulating experiences, in which the team spirit can flourish and creativeness be nourished. Such an idealistic view of the project as something very different from a firm overlooks the fact that projects suffer from the same sort of "dysfunctions" as do most organizations. As far as motivation is concerned, people may see projects as ways of making career-moves, of escaping their usual work-setting or improving their job satisfaction. In an action perspective that may enjoy the *esprit de corps* more than the actual producing, or spend more time socializing than attending to the task (Keith, 1978).

It has been argued above that project management research would benefit from thinking in metaphorical terms other than those stemming from general systems theory. Projects should be researched in terms of culture, conceptions, relations to the environment, longitudinal processes, etc., rather than simply as goal-fulfilling subsystems whose *raison d'être* is provided by a decisive and strategically aware super-system. In short: the project is a temporary organization.

## RESEARCH PROPOSAL: THE TEMPORARY ORGANIZATION

From the critique of traditional project management research discussed above, a number of

Table 1. Common and alternative assumptions on project management

	Common assumption	Alternative assumption
Project management theory	General theory for all kinds of projects, generic concept collecting different theories applicable to projects under one umbrella.	Middle-range theories on different sorts of projects, classified according to different selection criteria.
Aim of research on projects	Prescriptive, normative theory, grounded in ideal models of project planning and control. Research undertaken as survey studies of large samples of projects.	Descriptive theory, grounded in empirical narrative studies on human interaction in projects. Research undertaken as comparative case-studies.
Research metaphor for the project	A tool, a means for achieving higher-level ends.	A temporary organization, an aggregate of individuals temporarily enacting a common cause.



alternative assumptions can be derived (Table 1). Where research is concerned, the argument following from these assumptions can be described in terms of a new research proposal, whereby the project is seen as "the temporary organization." To be able to go beyond the prevalent notions of what a project really is, another "label" was needed. Adopting the "alternative assumptions" that this involves means studying organized action on a basis of individuals' conceptions rather than of the structural features of projects (cf. Weick, 1979).

Ever since Matthew B. Miles published his pioneer work "On Temporary Systems" in 1964, the "temporary system" has been the prevailing concept in the literature of the temporary organizations (Bennis, 1968; Bryman *et al.*, 1987b; Goodman, 1981; Goodman and Goodman, 1972, 1976; Keith, 1978; Lundin, 1992). The denomination "temporary organizations" is less usual (Hadjikhani, 1984; Morley and Silver, 1977). Another term for the same phenomenon is "transitory organizations" (Palisi, 1970). There are also, of course, many studies using the project concept, but in fact studying temporary organizations in the way proposed above (cf. Benghozi, 1990; Borum and Christiansen, 1993; Ekstedt, Lundin and Wirderius, 1992; Engwall, 1992; Hellgren and Stjernberg, 1987; Midler, 1993; Sahlin-Andersson, 1992; Sapsky, 1972; Stinchcombe, 1985).

In this approach the "temporary organization" is the main concept, defined in the same manner that projects usually are (a definition also traceable in many of the articles cited above):

A temporary organization:

- is an organized (collective) course of action aimed at evoking a non-routine process and/or completing a non-routine product;
- has a predetermined point in time or time-related conditional state when the organization and/or its mission is collectively expected to cease to exist;
- has some kind of performance evaluation criteria;
- is so complex in terms of roles and number of roles that it requires conscious organizing efforts (i.e. not spontaneous self-organizing).

This definition excludes all time-limited assemblages to which the last part of the definition is not applicable, i.e. simple systems without need for coordination efforts (compare this with the project definition in the beginning of the article, where the very same criterion is used to detach the project concept from tasks too trivial to be included). It also excludes unintentionally created temporary systems such as mobs and panics (Miles, 1964). It does not, however, exclude temporary contacts between "permanent" systems; inter-organizational temporary organizations are likely to be as important in research contexts as are the intra-organizational kind.

Perceived time limits are not, of course, the only property that differentiates temporary organizations from most of their permanent counterparts (Bryman *et al.*, 1987b). Other attributes are that goals are usually more specified, the personnel more likely to be recruited because of task-relevant competence, and the members are often more isolated from the environment. Time limits may in themselves create a sense of dedicated urgency and stimulating scarcity, however, but they are also capable of evoking stress and feelings of insufficiency (Miles, 1964; Palisi, 1970). There are also temporally related behavior patterns, i.e. the inclination of groups to emphasize consensus (Janis, 1972) or to change the basic assumptions concerning the task (Gersick, 1988, 1989) when becoming aware of the need for "delivery." Furthermore, time itself also affects the way people define job satisfaction; for shorter periods spent doing the same work, task characteristics are more important to job satisfaction than the social context of the work (Katz, 1982).

A change in the metaphor from "project" to "temporary organization" means that traditional

concepts of project management such as “planning” or “structure” become less important, at least as objective entities beyond the perceived reality of organizational actors. What is to be studied, in fact, is temporary organizing processes, i.e. the deliberate social interaction occurring between people working together to accomplish a certain, inter-subjectively determined task. “Planning” and “structure” may be important inputs into such a process, but it is the inter-subjective meaning attributed to project plans or structural arrangements by project members that “explains” whatever action is taken with reference to these phenomena. Organizing is, in the words of Karl E. Weick:

*... a consensually validated grammar for reducing equivocality by means of sensible interlocked behaviors. To organize is to assemble ongoing interdependent actions into sensible sequences that generate sensible outcomes (Weick, 1979, p. 3; italics from the original).*

In contrast with the traditional focus on structure, an organizing perspective means viewing the actions of individuals (which can be put together to form processes) as the basic elements:

The relationship between the acting individual and the structure can be “translated” into a relationship between process and structure, since the process concept represents the actions of a number of individuals. Processes are in that respect the concept against which structure can be contrasted when organized human interaction, rather than individuals in general, is in focus. Organized human interaction, like the acting individual, cannot therefore be ascribed any “mechanical” motives [...], i.e. the organizing cannot be understood in terms of the structure “causing” a certain organizing pattern (Söderholm, 1991, p. 45; our translation).

The implications for theory of using a “temporary organization” metaphor are less obvious than in the case of the “tool” metaphor. Temporary organizations can be viewed from several different perspectives, while the “tool” implies the perspective of the “user” only (e.g. the owner and the manager of the project). Moreover, the sequential order described in the second section above as the disposition implied by the “tool” theories, is less discernible when the new metaphor is applied; the temporary organization is incessantly enacted by individuals continuously learning by experience and expecting further learning. The difference between the traditional sequential view and the organizing processes of temporary organizations can be depicted as in Fig. 2.

In the “development” phase, the formal project organization is provided with a plan and an organization structure. On a basis of the project task specifications, the work to be done is structured into controllable parts, and a budget is drawn up to facilitate continuous follow-up.

Project meta- Research focus	The project as a tool	The project as a temporary organization
Development	Plan ↓	Expectations ↓
Implementation	Control ↓	Action ↓
Termination	Evaluation	Learning

Fig. 2. Research foci of project management research in different metaphorical systems.

Simultaneously, expectations concerning the nature of the project are formed among the project team members, based on their previous assignments of a similar kind or on the rhetorics (including plans and budgets) of the project to come.

Implementation thus involves structuring, controlling and leading the organization according to plans, and handling all unforeseen eventualities that emerge during the project. Organizing, i.e. the removal of equivocalities between the individuals concerning conceptions of the nature of the project, is followed by the enactment of these very conceptions. During the life of the project this expectations–action–learning “loop” is repeated many times (in analogy with Gersick, 1989; at least twice). The project can thus be seen as a cyclical design process.

Finally, the project is terminated, (hopefully) achieving the desired output as regards delivery time, resource expenditure and product quality. At the same time, the organizing processes are discontinued as the project organization dissolves. Learning has occurred at the individual as well as at the organizational level; the question is how to preserve the organizational learning after the dissolution of the project.

## RESEARCHING TEMPORARY ORGANIZATIONS

Using the above discussion as a point of departure, some theoretical areas for further exploration of the reality of project management can be identified. The common denominators of these areas are (1) that different types of project will require different theories, (2) that extensive empirical fieldwork is required in order to build these theories, and (3) that a diversity of theories and perspectives will enhance our understanding of projects as compared to the single viewpoint of rational management.

### *Research on expectations regarding projects*

Projects, like any other human endeavor, are associated with conceptions of the nature of their own implementation, conceptions about the task to be solved or the very essence of the term “project.” Such conceptions are usually based on previous experiences of a similar kind, and projects can thus be said to be *institutions*, incessantly being reproduced through actions based on these experiences. These conceptions are not usually specific to a single organization. On the contrary, they may be common to a large number of organizations and people; conceptions about what a project really is could be the same through a whole industry. It should be noted, however, that conceptions and/or expectations do not provide a full explanation of the actions in organizations; without commitment and motivation, expectations cannot “evoke” action (Brunsson, 1985).

A field of theory that grew in popularity during the 1980s is the neo-institutional organization theory, which attempts to explain organizational structure and action by the systems of norms, values and conceptions surrounding the individual organizations (cf. Meyer and Rowan, 1977). Except in some minor cases, institutional theory has not been used in empirical studies of project organizations. Since the term “project” is common in most organizations, there are also a lot of institutionalized conceptions of what a “project” really is, conceptions that influence what happens in project organizations. The effects of institutionalized conceptions in different value systems upon the supposedly goal-rational behavior of project participants, is an interesting research field for future exploration.

### *Research on action in projects*

Studies of action in projects (i.e. human interaction within the project organization leading to

the outcome of the project) can be divided into longitudinal case-studies often employing action research (cf. Benghozi, 1990; Ekstedt, Lundin and Wirdenius, 1992; Goodman and Goodman, 1972, 1976; Midler, 1993; Sahlin-Andersson, 1992), and case-studies produced after completion of the project (Borum and Christiansen, 1993; Engwall, 1992; Goodman, 1981; Hadjikhani, 1984; Hellgren and Stjernberg, 1987; Katz, 1982; Morris and Hough, 1987; Sapolsky, 1972; Stinchcombe, 1985). Studying projects as action systems means putting less energy into studying what is meant to happen, and more into what is actually happening. Further, it is the enactment by the individuals rather than the behavior of individuals that is of interest; action cannot be studied without also investigating the expectations that form the action base, and the learning that occurs as a result of the action.

There are several possible perspectives in which research on action in projects can be approached. One perspective can be that of the project managers, focusing on project leadership. In the project management literature, projects are often conceived as a way of attaining the rationality that ordinary bureaucracies cannot maintain, mostly because project leadership is regarded primarily as task-oriented and only secondly as relation-oriented (Bryman *et al.*, 1987a; Goodman, 1981). In the perspective of the individual project participants, projects have been viewed as the individuals' task-related context, while the surrounding permanent structures have been assumed to provide participants with their emotional affiliation (Miller and Rice, 1967). On the other hand, projects can also be seen as a way of enhancing participation and workplace democracy; by constructing a new and temporary organizational setting, hierarchies and inertia in the ordinary structure can be left behind (Goodman, 1981; Kanter, 1983; Kreiner, 1992). Empirical investigations of this "paradox" are needed if we are to be able to construct better theories on project leadership and project participation; different types of projects are likely to require different types of leadership and different degrees of empowerment.

Conceptions of time can also provide a fruitful line of research (cf. Gersick, 1988, 1989); a time limit known beforehand can be enacted in various ways by the individual project members. Some may perceive the time available as being unreasonably short and react by speeding up the process, while others feel the time horizon to be something remote and thus adopt a laid-back attitude towards the project. In internal renewal projects for example, some people may do anything to put the rhetorics of the project into practice to become part of the front line of the organization; others look upon the final date as the end of the renewal effort, and just wait passively for whatever will come next. Time limits and projects may also be described as social constructions; by putting "brackets" around a certain sequence of action in the past, a slice of order can be cut out of a complex stream of events. To understand the processes of collective action in projects would take us a step further, relative to the rather superficial leadership theories.

### *Research on learning in projects*

Theories on learning in projects — i.e. theories on how project work causes learning at the organizational as well as the individual level, and how this learning can be made useful to the organization in subsequent projects — are almost non-existent today.

Learning in projects should be studied not only within projects, but also between projects; the learning in one project influences the learning in the next one, even though the projects and the respective roles of the individuals in them are different. The nature of learning in projects is probably also affected by the degree of institutionalization; in cases where there are strong conceptions about what project work is all about, the possibility of renewal seems to be slight (cf. Ekstedt, Lundin and Wirdenius, 1992).

In a more instrumental perspective, the project can be conceived as a way of enhancing learning in organizations. By removing people from their usual routines and setting them an unusual task to be solved in interaction with unknown individuals, the permanent organization structure can be opened up to renewal and change (Södergren, 1994). Research on such endeavors is likely to be of significance in the future.

In this article I have described the traditional status of project management research, criticized its assumptions and briefly discussed some of its latest and future developments. The last two years have seen the birth of at least two international research networks in the field, and the still scattered attempts at formulating the new theories will thus hopefully become subject to systematization and integration in the near future. It is a future in need for such theories, a future which, in the almost 30-year-old words of Warren G. Bennis, is:

[. . .] not necessarily a "happy" one. Coping with rapid change, living in temporary work systems, developing meaningful relations and then breaking them — all augur social strains and psychological tensions. Teaching how to live with ambiguity, to identify with the adaptive process, to make a virtue out of contingency, and to be self-directing — these will be the tasks of education, the goals of maturity, and the achievement of the successful individual (1968, p. 75).

*Acknowledgements* — The study reported in this article was supported by the Work Environment Fund, Stockholm. The argument outlined benefited from the comments of Yngve Hammarlund, Chalmers University of Technology, the participants of the IRNOP Conference on "Temporary Organizations and Project Management," and three anonymous reviewers. I am also grateful for the ideas and comments of my research colleagues at the Umeå Business School and the FA-Institute in Stockholm: Tomas Blomquist, Eskil Ekstedt, Lars Lindbergh, Tomas Müllern, Hans Wirddenius and Katarina Östergren.

## REFERENCES

- Ancona, D. G. and Caldwell, D. F., Bridging the boundary: external activity and performance in organizational teams, *Administrative Science Quarterly* (1992), Vol. 37, No. 4, pp. 634–665.
- Archibald, R. D., Project team planning: the need, methods and benefits. In: H. Reschke and H. Schelle (Eds), *Dimensions of Project Management. Fundamentals, Techniques, Organization, Applications* (Berlin/Heidelberg: Springer, 1990), pp. 219–231.
- Archibald, R. D., *Managing High-Technology Programs and Projects* (New York: Wiley, 1992).
- Barczak, G. and Wilemon, D. L., Leadership differences in new product development teams, *Journal of Product Innovation Management* (1989), Vol. 6, No. 4, pp. 259–267.
- Barker, J., Tjosvold, D. and Andrews, I. R., Conflict approaches of effective and ineffective project managers: a field study in a matrix organization, *Journal of Management Studies* (1988), Vol. 25, No. 2, pp. 167–178.
- Benghozi, P.-J., Managing innovation: from *ad hoc* to routine in French telecom, *Organization Studies* (1990), Vol. 11, No. 4, pp. 531–554.
- Bennis, W. G., Beyond bureaucracy. In: W. G. Bennis and P. E. Slater, *The Temporary Society* (New York: Harper & Row, 1968), pp. 53–76.
- Boos, F. and Doujak, A., How to improve failing in project planning. In: R. Gareis (Ed.), *Handbook of Management by Projects* (Vienna: MANZ, 1990), pp. 332–341.
- Borum, F. and Christiansen, J. K., Actors and structure in IS projects: what makes implementation happen? *Scandinavian Journal of Management* (1993), Vol. 9, No. 1, pp. 5–28.
- Briner, W., Geddes, M. and Hastings, C., *Project Leadership* (Aldershot, UK: Gower, 1990).
- Brunsson, N., *The Irrational Organization: Irrationality as a Basis for Organizational Action and Change* (Chichester, UK: Wiley, 1985).
- Brunsson, N., *The Organization of Hypocrisy: Talk, Decisions and Actions in Organizations* (Chichester, UK: Wiley, 1989).
- Bryman, A., Bresnen, M., Ford, J., Beardsworth, A. and Keil, T., Leader orientation and organizational transience: an investigation using Fiedler's LPC scale, *Occupational Psychology* (1987a), Vol. 60, No. 1, pp. 13–19.
- Bryman, A., Bresnen, M., Beardsworth, A., Ford, J. and Keil, T., The concept of the temporary system: the case of the construction project, *Research in the Sociology of Organizations* (Greenwich: JAI Press, 1987b), Vol. 5, pp. 253–283.
- Buchanan, D. A., Vulnerability and agenda: context and process in project management, *British Journal of Management* (1991), Vol. 2, No. 3, pp. 121–132.
- Burke, R., *Project Management: Planning and Control* (Chichester, UK: Wiley, 1992).

- Butler, A. G., Jr, Project management: a study in organizational conflict, *Academy of Management Journal* (1973), Vol. 16, No. 1, pp. 84–101.
- Christensen, S. and Kreiner, K., *Projektleidelse i løst koblede systemer — ledelse og læring i en ufuldkommen verden [Project Management in Loosely Coupled Systems: Leadership and Learning in an Imperfect World]* (København: Jurist- og Økonomforbundets Forlag, 1991).
- Cleland, D. I. and King, W. R., *Systems Analysis and Project Management* (New York: McGraw-Hill, 1983).
- ECOSIP (V. Giard and C. Midler (Eds)), *Pilotages de Projet et Entreprises: Diversités et convergences [Management of Projects and Firms: Differences and Similarities]* (Paris: Economica, 1993).
- Ekstedt, E., Lundin, R. A. and Wirdeus, H., Conceptions and renewal in Swedish construction companies, *European Management Journal* (1992), Vol. 10, No. 2, pp. 202–209.
- Engwall, M., Project management and ambiguity: findings from a comparative case study. In: I. Hägg and E. Segelod (Eds), *Issues in Empirical Investment Research* (Amsterdam: Elsevier Science, 1992), pp. 173–197.
- Fabi, B. and Pettersen, N., Human resource management practices in project management, *International Journal of Project Management* (1992), Vol. 10, No. 2, pp. 81–88.
- Ford, R. C. and Randolph, W. A., Cross-functional structures: a review and integration of matrix organization and project management, *Journal of Management* (1992), Vol. 18, No. 2, pp. 267–294.
- Gaddis, P. O., The project manager, *Harvard Business Review* (1959), Vol. 37, No. 3, pp. 89–97.
- Gersick, C. J. G., Time and transition in work teams: toward a new model of group development, *Academy of Management Journal* (1988), Vol. 31, No. 1, pp. 9–41.
- Gersick, C. J. G., Marking time: predictable transitions in work groups, *Academy of Management Journal* (1989), Vol. 32, No. 2, pp. 274–309.
- Goodman, L. P. and Goodman, R. A., Theater as a temporary system, *California Management Review* (1972), Vol. 15, No. 2, pp. 103–108.
- Goodman, R. A., *Temporary Systems: Professional Development, Manpower Utilization, Task Effectiveness, and Innovation* (New York: Praeger, 1981).
- Goodman, R. A. and Goodman, L. P., Some management issues in temporary systems: a study of professional development and manpower — the theater case, *Administrative Science Quarterly* (1976), Vol. 21, No. 3, pp. 494–501.
- Hadjikhani, A., *Organization of Manpower Training in International Package Deal Projects. Temporary Organizations for Transfer of Technology* (University of Uppsala: Dept. of Business Administration, 1984).
- Hall, P., *Great Planning Disasters* (London: Weidenfeld and Nicolson, 1980).
- Hellgren, B. and Stjernberg, T., Networks: an analytical tool for understanding complex decision processes, *International Studies of Management & Organization* (1987), Vol. 17, No. 1, pp. 88–102.
- Hill, R. E., Interpersonal compatibility and workgroup performance, *Journal of Applied Behavioral Science* (1975), Vol. 11, No. 2, pp. 210–219.
- Hill, R. E., Managing the human side of project teams. In: D. I. Cleland and W. R. King (Eds), *Project Management Handbook* (New York: Van Nostrand Reinhold, 1983), pp. 581–604.
- Hunter, M. B. and Stickney, F. A., Overview of project management applications. In: D. I. Cleland and W. R. King (Eds), *Project Management Handbook* (New York: Van Nostrand Reinhold, 1983), pp. 644–668.
- Janis, I. L., *Victims of Groupthink: A Psychological Study of Foreign-Policy Decisions and Fiascos* (Boston: Houghton Mifflin, 1972).
- Jessen, S. A., *The Nature of Project Leadership* (Oslo: Scandinavian University Press, 1992).
- Kanter, R. M., *The Change Masters: Corporate Entrepreneurs at Work* (New York: Simon & Schuster, 1983).
- Katz, R., The effects of group longevity on project communication and performance, *Administrative Science Quarterly* (1982), Vol. 27, No. 1, pp. 81–104.
- Katz, R. and Allen, T. J., Investigating the not invented here (NIH) syndrome: a look at the performance, tenure, and communication patterns of 50 R&D project groups, *R&D Management* (1982), Vol. 12, No. 1, pp. 7–19.
- Katz, R. and Tushman, M., Communication patterns, project performance, and task characteristics: an empirical evaluation and integration in an R&D setting, *Organizational Behavior and Human Performance* (1979), Vol. 23, pp. 139–162.
- Keith, P. M., Individual and organizational correlates of a temporary system, *Journal of Applied Behavioral Science* (1978), Vol. 14, No. 2, pp. 195–203.
- Kharbanda, O. P. and Stallworthy, E. A., *How to Learn from Project Disasters. True-life Stories with a Moral for Management* (Aldershot, UK: Gower, 1983).
- Knight, K., Matrix organization: a review, *Journal of Management Studies* (1976), Vol. 13, No. 2, pp. 111–130.
- Kreiner, K., The postmodern epoch of organization theory, *International Studies of Management & Organization* (1992), Vol. 22, No. 2, pp. 37–52.
- Larson, E. W. and Gobeli, D. H., Matrix management: contradictions and insights, *California Management Review* (1987), Vol. 29, No. 4, pp. 126–138.
- Liberatore, M. J. and Titus, G. J., The practice of management science in R&D project management, *Management Science* (1983), Vol. 29, No. 8, pp. 962–974.
- Lock, D., *Project Management* (Aldershot, UK: Gower, 1992).
- Link, A. N. and Zmud, R. W., Organizational structure and R&D efficiency, *R&D Management* (1986), Vol. 16, No. 4, pp. 317–323.

- Lundin, R. A., Incentives for chief executives to manage by projects. In: R. Gareis (Ed.), *Handbook of Management by Projects* (Vienna: MANZ, 1990), pp. 48–53.
- Lundin, R. A., Interactive research on organizations — applying a temporary system metaphor. In: T. Polesie and I.-L. Johansson (Eds), *Responsibility and Accounting: The Organizational Regulation of Boundary Conditions* (Lund: Studentlitteratur, 1992), pp. 79–94.
- Meyer, J. W. and Rowan, B., Institutionalized organizations: formal structure as myth and ceremony, *American Journal of Sociology* (1977), Vol. 83, No. 2, pp. 340–363.
- Midler, C., *L'auto qui n'existait pas: Management des projets et transformation de l'entreprise* [The Car that Did Not Exist: Project Management and Company Renewal] (Paris: InterEditions, 1993).
- Miles, M. B., On temporary systems. In: M. B. Miles (Ed.), *Innovation in Education* (New York: Teachers College Press, 1964), pp. 437–490.
- Miller, E. J. and Rice, A. K., *Systems of Organization: The Control of Task and Sentient Boundaries* (London: Tavistock, 1967).
- Morgan, G., *Images of Organizations* (Newbury Park, CA: Sage, 1986).
- Morley, E. and Silver, A., A film director's approach to managing creativity, *Harvard Business Review* (1977), Vol. 55, No. 2, pp. 59–70.
- Morris, P. W. G. and Hough, G. H., *The Anatomy of Major Projects. A Study of the Reality of Project Management* (Chichester, UK: Wiley, 1987).
- Nathan, P., Project Planning and Control Systems: An Investigation into their Application and Implications of Usage in the UK Construction Industry (Henley, UK: The Management College and Brunel University, unpublished dissertation, 1991).
- Nutt, P. C., Implementation approaches for project planning, *Academy of Management Review* (1983), Vol. 8, No. 4, pp. 600–611.
- Palisi, B. J., Some suggestions about the transitory–permanence dimension of organizations, *British Journal of Sociology* (1970), Vol. 21, pp. 200–206.
- Pinder, C. C. and Moore, L. F., The resurrection of taxonomy to aid the development of middle range theories of organizational behavior, *Administrative Science Quarterly* (1979), Vol. 24, No. 1, pp. 98–118.
- Pinto, J. K. and Prescott, J. E., Variations in critical success factors over the stages in the project life cycle, *Journal of Management* (1988), Vol. 14, No. 1, pp. 5–18.
- Pinto, J. K. and Prescott, J. E., Planning and tactical factors in the project implementation process, *Journal of Management Studies* (1990), Vol. 27, No. 3, pp. 305–327.
- PMI Standards Committee, *Project Management Body of Knowledge (PMBOK)* (Drexel Hill, PA: Project Management Institute, 1987).
- Roman, D. D., *Managing Projects: A Systems Approach* (New York: Elsevier Science, 1986).
- Sahlin-Andersson, K., The use of ambiguity — the organizing of an extraordinary project. In: I. Hägg and E. Segelod (Eds), *Issues in Empirical Investment Research* (Amsterdam: Elsevier Science, 1992), pp. 143–158.
- Sapolsky, H. M., *The Polaris System Development. Bureaucratic and Programmatic Success in Government* (Cambridge, MA: Harvard University Press, 1972).
- Slevin, D. P., Motivation and the project manager. In: D. I. Cleland and W. R. King (Eds), *Project Management Handbook* (New York: Van Nostrand Reinhold, 1983), pp. 552–580.
- Stinchcombe, A. L., Project administration in the North Sea. In: A. L. Stinchcombe and C. A. Heimer, *Organization Theory and Project Management. Administering Uncertainty in Norwegian Offshore Oil* (Oslo: Norwegian University Press, 1985), pp. 25–120.
- Söderholm, A., *Organiseringens logik — En studie av kommunal näringslivspolitik* [The Logic of Organizing — A Study of Municipal Industrial Policy] (Umeå University: Dept of Business Administration, 1991).
- Södergren, B., The learning effects of project work as a mechanism of organizational change. In: R. A. Lundin and J. Packendorff (Eds), *Proceedings of the IRNOP Conference on Temporary Organizations and Project Management* (Umeå: IRNOP, 1994), pp. 29–37.
- Thamhain, H. J., The new project management software and its impact on management style, *Project Management Journal* (1987), Vol. 18, No. 3, pp. 50–54.
- Turner, J. R. and Cochrane, R. A., Goals-and-methods matrix: coping with projects with ill defined goals and/or methods of achieving them, *International Journal of Project Management* (1993), Vol. 11, No. 2, pp. 93–102.
- Tushman, M., Technical communication in R&D laboratories: the impact of project work characteristics, *Academy of Management Journal* (1978), Vol. 21, No. 4, pp. 624–645.
- Tushman, M. and Katz, R., External communication and project performance: an investigation into the role of gatekeepers, *Management Science* (1980), Vol. 26, No. 11, pp. 1071–1085.
- Weick, K. E., *The Social Psychology of Organizing* (New York: Random House, 1979).
- Wilemon, D. L. and Baker, B. N., Some major research findings regarding the human element in project management. In: D. I. Cleland and W. R. King (Eds), *Project Management Handbook* (New York: Van Nostrand Reinhold, 1983), pp. 623–641.
- Woodward, S. N., Performance in planning a large project, *Journal of Management Studies* (1982), Vol. 19, No. 2, pp. 183–198.