

The Fall... and Rise of Autonomous Work Groups

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RESUME

In 1975, Leavitt, in a very interesting article on organization design, asked the question "suppose we took groups seriously?"

Well, after a "false dawn" in the late seventies and early eighties it seems that this is now happening as many managers - both in Europe and in the US - search for hitherto lacking forms of flexibility and creativity and find it in autonomous work teams.

In this paper I consider the theoretical work of J.R. Hackman, the American social psychologist who may be considered to have done more than anyone else in clearly analysing the major issues at the heart of team working - the interaction of teams and their organizational contexts, the determinants of team effectiveness, and the challenges to managers posed by the use of this organizational form.

My main focus here will be on what we might call "one function teams" - groups which are multi-skilled and to a degree self-managing, but which are made up of individuals from predominantly one single functional area of the organization. A consideration of "cross-functional teams" - product development groups, management task forces, matrix system units, etc. - will have to wait.

INTRODUCTION - the Analysis of Autonomous Groups in the Work of J.R. Hackman.

It is tempting - especially when reviewing the increasing quantity of American as well as European management literature proclaiming that "flat", "lean", team based organizations are the model for the nineties - to see some of the revival of interest in autonomous work groups as one of the cyclical fads and fashions of international management so well analysed by Thévenet (1985) and Midler (1986). The sober and realistic assessment of the real extent of the spread of innovations in participative management and "strategic" human resources management by authors on the U.S. such as Guest (1990), or of authors on quality circles in France such as Chevalier (1991), should give us pause for thought here.

In this paper however, while acknowledging the dangers of overestimation of the spread and importance of the revival, I want to assess the analytical progress that has

been made in understanding the management and the conditions of success of work teams. For this purpose I will concentrate - critically - on the work of J.R. Hackman and his associate researchers because he more than anyone else has comprehensively analysed the key issues, and this over more than twenty years, his 1968 article and 1990 edited book standing as historical markers and the justly famous text Work Redesign remaining a crucial landmark in between. To begin with it's useful to chart the changes which have taken place between 1980 and 1992.

We can recall that the essential contribution of the 1980 book was (as far as work teams are concerned) the formulation of a research-based normative model of group effectiveness building on his theory of the motivating qualities of individual jobs and of the kinds of people likely to prosper and develop in doing them.

The diagram below represents this model.

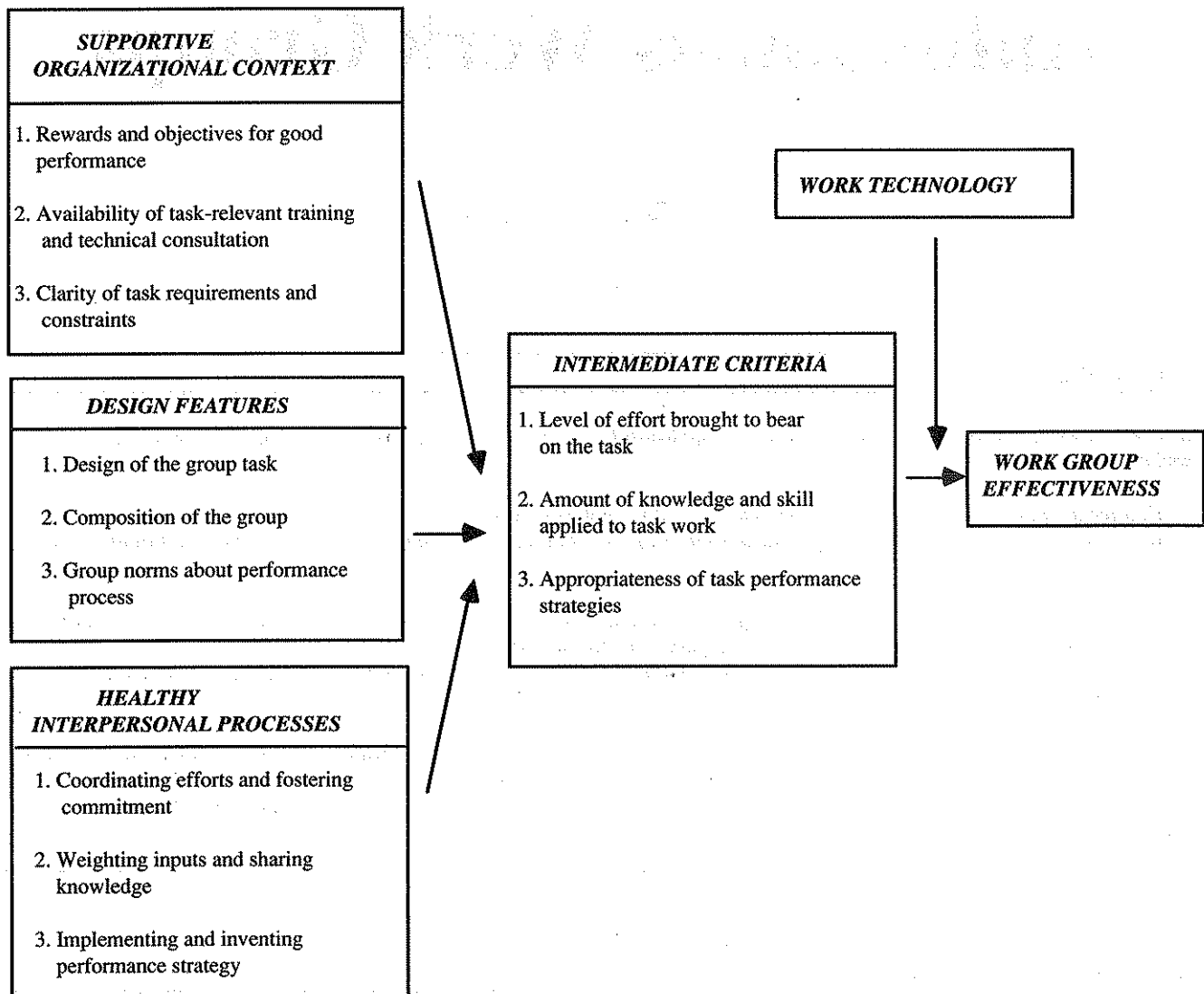


FIG 1 - The Effectiveness of Self-Managing Work Groups : a Summary Model

The strength of this model over earlier ones is undoubtedly its contingency features ; the way it makes the sought after result of effectiveness dependent on a mediation (by effort, skill and performance planning in the group) of parameters both internal to the group (its design and inter-personal processes) and also external to it (clear task/job instructions and appropriate human resources policies in areas like compensation and training). Hackman and Oldham here pinpoint many sources of failure which had shown up (and were to in the future) in empirical studies of group work, particularly those related to contradictions between team needs and the surrounding authority structure, managerial culture and personnel systems.

But in 1980 the conception of that surrounding structure is not elaborated - it remains a "black box" into which teams are fitted. Development of a view of the way different organizational structures and cultures relate to

teams does not come until 1986 and Hackman's collaboration with Walton. In their article in Goodman (1986) different types of organizational context for groups are evoked using a classification of two dominant paradigms or regimes of managerial control

1. Work Groups in Different Organizational "Contexts".

Right from the start they state their interest in two types of groups. On the one hand the self-enacted group which is "created by members themselves to express the needs and aspirations of the people who comprise them" and on the other, work teams which are created by managers to accomplish specific organizational tasks by means of a division of tasks and responsibilities".

Their use of "regimes" of control comes from Walton's

long held view that throughout the eighties many American firms were moving from "control to commitment in the workplace". This trend is a move

"... away from management strategies dominated by top-down controls, narrowly defined jobs and close supervision." (Goodman, p 168)

Furthermore

"...replacing a control oriented strategy in these organizations is an approach that seeks to foster high member commitment and the greatest feasible self-management." (ibid.)

The outcome is three types of regimes of control

- control strategy organizations
 - commitment strategy organizations
 - mixed strategy types
- (transitional between the first two)

This typology accepted, Hackman and Walton raise the essential problem of the "fit" between groups of different types and the three regimes. They aim at the following sorts of questions ;

- what kinds of groups are typically found under each regime ?
- how are groups used and managed in them ?
- what role do groups play in the transition from one regime to another ?

There is no doubt that these are some of the crucial questions to pose as we have suggested above. But of the many ways that we might characterize organizations - in terms of their structural qualities, their cultures, their core technologies etc. - is that of managerial strategy / regime one which helps most in understanding the relationship group <--> context ? There is some doubt about this, as we shall see.

The classification itself is a familiar one because it parallels others such as the following, at least as regards the central contrast between control and commitment strategy organizations ;

Mechanistic systems <-----> Organic systems
(Burns and Stalker 1961)
Theory X management <-----> Theory Y
management (McGregor 1961)
Machine bureaucracy <-----> Adhocracy
(Mintzberg 1979)
Segmentalist organization <-----> Integrated
organization (Kanter 1983)
Bureaucratic form <-----> Technocratic
form (Heydebrand 1989)

According to Hackman and Walton, the control regime organization features predominantly Taylorist and bureaucratic work designs with high specialization and standardization of tasks, low skill development, low work autonomy and a tolerance of minimal commitment from employees. Job classifications are complex with many demarcations and compensation is built on the "grill" this provides. A clear separation of managerial and employee domains exists and the authority of the

former is embodied in tall hierarchy and detailed rules for work and behaviour. Visual and other symbols of management prerogative and privilege abound - separate eating arrangements, distinct forms of dress, spatial distance and "perks". Such organizations are large blue collar and clerical "machines" performing routinized work in relatively stable economic environments.

In contrast the commitment strategy organization thrives on job enlargement and enrichment, high worker autonomy and continuous improvement. Job classifications are broad (or non existent) to match polyvalence and team work, and pay-for-skill, management by objectives and profit sharing schemes frequent. Competence and experience are the bases of managerial authority and their closeness to workers emphasized by "single status" conditions, few hierarchical levels and the playing down of control by rules. High trust relations and peer group authority are fundamental here as is a sense of a common mission which the companies work hard to propagate. These organizations tended to be small, new (often "greenfield") and high technology firms operating in turbulent environments, but their characteristics are increasingly as Walton and Hackman would have it spreading to control regimes thus creating a "mixed" type.

The two authors stress that these two types form the poles of a spectrum and that real organizations must be situated at some point on this spectrum either closer to the "control" or closer to the "commitment" model. They clearly want to avoid the accusation of caricature frequently levelled at such typologies.

Now not unnaturally groups (both self-enacted and work teams) and their activities differ very substantially in each of these settings. Hackman and Walton remind us of the wealth of research which has analysed the range of self-enacted groups in control regime organizations, from the Hawthorne studies onwards. Such groups function to combat and neutralize the straitjacket of rules and controls on work behaviour, to act as "islands of autonomy and conviviality" and to present a united front for bargaining purposes (Roy 1955, Mechanic 1962). They "play the 'insurgency games'" - so well analysed by Crozier and Friedberg (1977) and Mintzberg (1983) - which managers counter with their own strategies. Work teams with any real autonomy are infrequent in control régime organizations at the extreme end of the spectrum.

On the other hand, according to Hackman and Walton - and this despite the absence of much detailed research on such companies - work teams dominate the work designs of organizations at the commitment strategy end of the spectrum. These managements try to blend together the social qualities of the self-enacted group with the assignment of team tasks and responsibilities. Groups of 5 to 10 members are given considerable autonomy over work control and are allotted a coach or adviser. Bottom-up expertise and information flow are encouraged as are sharing company values and visions (its "mission") and involvement in day to day formulation of operational policy.

In such organizations, according to the two authors, managers work hard to make self-enacted groups and work teams coincide and they expect peer influence to play a key role in human resources areas such as pay and career development and in the everyday quality of working life. For this, very careful attention to recruitment into groups and to their psychological balance is essential.

Now, what should be our judgement of the use and utility of this "control/commitment strategy organization" distinction in understanding groups? A number of points need to be made before Hackman's later (1990) research on work teams is considered:

1. There is some uncertainty about the domain of application of the control/commitment distinction. It seems to be seen as primarily relevant to the USA and what is seen as a general process of change in US organisations from one end of the spectrum to the other (from control to commitment of course). Other national contexts are regrettably absent from the picture - with their important variations in industrial relations and legislative contexts - and the different historical phases of managerial diffusion of autonomous work groups are not considered.

2. The notion of the spectrum of types of organizations does run dangerously close to caricature in that vital aspects of organizations and their environments - such as membership of a particular field or sector of organizations, of their respective uses of ideology and of human resources systems, and more particularly of their task / technology specificities, are abstracted away.

The kind of general focus that the typology provides is as much a disadvantage as it is an advantage. This point has recently been stated very clearly by Goodman, Ravlin and Schminke (1990) who emphasize that "better, more fine-grained models of group behaviour and effectiveness" require an awareness that, for example

"professional sales teams are very different from wood harvesting crews. In the latter, equipment, technological arrangements and physical conditions dominate what goes on in the group. That is, the technology determines to a large extent the structure of the group. Therefore to understand group effectiveness, one needs to develop a model in the context of a specific technology, not in terms of groups in general." (p 342).

Further there is a need to "generate a group model for a particular class of technology in a specific organizational context" (ibid). Two commitment strategy organizations can use the same core technologies but variations in maintenance or inventory policy lead to different limits on group behaviour and thus effectiveness, given that groups will manage these in different ways. Klein (1989,1990) has shown this in her discussions of team behaviour under Just-in-time (JIT) to which we will return later.

In sum, Hackman and Walton's spectrum of types of organizational context lacks detail of key task and technology variables. We need to specify a great deal

about these variables for organizations in the same position on their spectrum if group behaviour in them is to be properly analysed. This problem of generality is reproduced in Hackman's most recent work, to which we now turn.

2. Analysing the Variations in Group Dynamics and Effectiveness.

The Hackman edited collection Groups That Work (1990) is a lot less programmatic and theoretical than the earlier text and builds on empirical work carried out on a wide variety of work teams by associates of Hackman's research project on groups at Yale and Michigan Universities. Its theoretical scheme on effectiveness, with one or two refinements, reproduces the essentials of the 1980 text. Its aim in the authors words is to

"...provide insights into how work groups function, insights that will be helpful to those who design such groups, lead them, serve in them or research them ... the book links detailed descriptive accounts of specific work groups with theoretical concepts to generate action implications for research and practice." (Hackman (ed) 1991, pXVII)

The activities and interactions of twenty seven different groups are described, these fitting into seven categories; top management groups, task forces, professional support groups, performing groups, human service teams, customer service teams and production teams. This diversity and the depth of description constitute the novelty of the book.

However right from the start Hackman anticipates the problem of generalisation from such a "sample" and states frankly that

"What we learned from the groups we studied does not necessarily apply to others. We aspired both to knowledge that is as general as possible and to findings that illuminate specific groups. The question ... is whether we purchased generality at the cost of superficiality or ...wound up with a rich understanding of specific cases but little ability to generalize beyond the groups we actually studied". (ibid. p 5)

This key difficulty is illustrated in the important summaries which synthesize the insights gained into each type of team. While new ground is broken in these summaries very often there is a lack of connection of the insights gleaned with other established work on the internal dynamics of the different types of organizations in which the teams are operating; dominant labour processes and content of work, labour - management relations and power brokering between different management groups.

A. Production Teams.

This last criticism can be illustrated if we take production teams - they operate in organizations (mass production manufacturing) to which a great deal of attention has already been directed and which are in many senses well researched.

They are actually - despite what they say - found in differing degrees at both the control and the commitment ends of Walton and Hackman's spectrum, operating with different degrees of autonomy in workshops or departments, and with varying degrees of integration into the organizational system of the main plant.

The generalizations offered by Hackman and his co-workers about these teams suffer from their brevity and also their isolation from other types of research on labour processes in manufacturing plants. Two central points are made, the first dealing with the influence of technologies and technical thinking and the second dealing with problems of group development and learning.

The first point is disappointing - it consists in a reiteration of the tension between the legacy of Taylorism (work should be fragmented and designed for individuals) and the use of autonomous groups, plus the following thesis -

"The imperatives of production technologies and the symbolism of smoothly functioning machines also impede the use of teams in production organizations ... when plants are laid out the "natural" thing to do is to array the machinery in a long line, with materials coming in one end and products going out the other. This layout is, of course, an immediate and significant obstacle to team performance, especially if differences are great or if noise is loud ... To the extent that the thinking of production system designers and managers about people and organizations mirrors the way they think about machines and technology, they are not likely to choose teams as the basic performing units of their organizations." (Hackman J.R. (ed) 1990 p 474-5)

This is sociologically naive, for two reasons . Firstly, research in recent years on the process of redesign of manufacturing work processes has more and more called into question the notion of any simple technological or production line determinism. Concerning the implementation of advanced manufacturing technologies (AMT) for example - a major cause of work redesign - authorities such as Bessant (1992) stress that what was "natural" in the Fordist model of production increasingly no longer obtains in many manufacturing plants.

The disposition of machinery is of course partly governed by its technical specification and by product design, but logistic innovations learned from the Japanese such as JIT, which are now widespread in "vanguard" producers such as automotive products and electronics, turn much of the traditional assembly line logic referred to by Hackman on its head. Machines are deployed in cells or U-shaped spaces and production teams correspond very well with the organizational logic this implies, even if the degree of team autonomy and its role in Taylorist work standardization often remain unclear (Klein 1990). The same can be said for the work designs often most compatible with optimum use of flexible AMT - work teams are often seen as furnishing the human flexibility and multi-skilling necessary for this.

The second point follows from this - these developments in the past decade or so testify to real changes in the "thinking of production system designers and managers". Hackman is right that contradictions remain and that the Taylorist legacy is strong, but this thinking is not just a "mirror of the way these groups think about machines and technology"(sic) precisely because of the massive influence of the technical and logistic advances I have just mentioned which have forced a managerial reassessment of the worker's role in, and value to, production processes

As far as production team development and learning are concerned, Hackman is perhaps here on more solid ground, building on the theory of effectiveness in groups which was already present in essence in the 1980 text. According to this position three different "process criteria" of effectiveness - essentially effort, skill and performance strategies in the group - must be related to conditions of group structure, organizational context and group coaching, upon which they putatively depend.

However this does not stop him putting forward a hypothesis derived from the studies undertaken which is of perhaps dubious utility. This is the notion that production teams "tend to develop an "inward" orientation... they focus on whatever its members are producing to a considerably greater extent than on transactions with outsiders". They become "islands unto themselves".

Despite accepting that this hypothesis is "highly schematic" and "awaits test", Hackman still insists on its generality (p 477 n 2) and gives three possible explanations of the phenomenon ; firstly members of production teams are encouraged "by the nature of the work process" to focus their attention very strongly on the particular sub-product they produce to the exclusion of others, secondly that these teams often suffer a certain geographical and social isolation in the organizations in which they function and finally, that groups avoid potentially troubling outside contacts in order to decrease the possibility of anxiety-arousing or threatening change.

One is tempted to shrug ones' shoulders and say "perhaps, it all depends..." especially as regards the last point, the weakest of the three. A number of cases suggest that managers in commitment strategy "high performance plants" (such as Japanese manufacturers and Americans such as Digital (Wickens 1987, Buchanan and McCalman 1989), which use autonomous teams for high quality production, organize as much as possible around the production core in order to elevate it to a position of pre-eminent importance in the organization. Spatial and social isolation of teams is thus substantially eliminated because "producing top quality first time" is given highest organizational priority - non production groups are structured around team activities precisely so as to serve them best. Quality policy is thus a key variable in influencing work layout and social relations.

Can production teams be prone to "inward obsession" with their products ?

We must accept that this might happen but the last point about quality policy counts here as well - the ethos of total quality in production encourages both inward and outward obsessions ! The purpose of "top quality first time" in job A is always stressed and re-stressed in terms of the quality requirements of job B which comes afterwards and depends on A, and so on and so on, until the final output. We have little evidence on whether this quality indoctrination works well or produces perverse consequences but it is worth remembering that the widespread total quality approach JIT builds into the relations between teams a customer - server relationship and thus an "outward" orientation ; if one team does not obtain work of appropriate quality from another then the whole workflow can be stopped by the former (the principle of the Toyota system now so popular in industry).

Yet it is true that Hackman has touched on something significant about group mentalities in the first and third points. As Manz and Sims (1982) have tried to show one danger in the use of autonomous work teams may well be the development of "groupthink" (Janis 1972) a socio-psychological condition which diminishes effective analysis, decision making and performance. Illusions, collective defenses, rationalisations and stereotyping processes can combine to generate the very reverse of the flexibility and dynamism hoped for. Outsiders to the group and outside "interference" may well be treated in the way Hackman has suggested - or at least if we accept the position put forward by Manz and Sims based on their case studies.

Now there is no space here to consider the strength of this view but clearly the question remains whether the emergence of the phenomenon is exaggerated and whether skilled team leadership can avoid it. Subtle managerial and supervisory intervention is crucial to autonomous teams - Hackman was one of the first to specify how, in detail - and Groups That Work contains much common sense about the timing and weight of coaching and consultation necessary to deal with a neglected issue ; the increased levels of uncertainty that job enrichment brings (Slocum and Sims 1980). We will return to the issue of team management in a later section.

B. Professional Support Teams.

When we move to the treatment by Hackman et al of professional support teams (PST) we are, of course, moving to a group phenomenon rather different to production teams. To begin with we are moving up the organizational hierarchy to its middle, and to a concern with line and staff interactions. PST's exist typically to provide expertise to line managers who may very often only place a modest value on it and who also may have a very different vision of organizational goals. This is well known from the empirical literature. PST's are the occupants of Mintzberg's (1979) organizational "technostructure" and "support system" coordinated in teams.

Three such teams are considered in Groups that Work : a government legislation monitoring team, a computer systems group and an airline maintenance coordination

team. As was the case for production teams, I shall focus on the generalizations offered about such teams in the synthesis given after the three analyses. Again I am going to suggest that many more problems are raised than resolved by the theoretical approach used.

The essential point raised by the synthesis concerns the ambiguity in the function of PST's which stems from their being, at the same time, skilled professionals with a strong sense of occupational identity and also "staff support" to serve the line manager-client in the firm. Typically they have a work rhythm/cycle, work methodology and professional ideology and language which differentiates them from the line groups with which they work. (This differentiation can mean that such teams develop a concept of their "effectiveness" different from that of managers in the line - a point not taken up by the authors).

The identity difference can also create integration problems which are compounded by the constant need of PST's to negotiate boundaries and responsibilities vertically (for the computer group, with "corporate systems staff") as well as horizontally (with the line staff). Hackman et al argue that PST's often have little competence in this type of negotiation and often suffer because of it - their internal unity and effectiveness are strongly influenced by this uncertain context.

Now generally Hackman has put his finger on a crucial problem in the lives of PST's, but I feel that he has lost an opportunity to relate the empirical analysis to existing work on the occupational cultures of professional groups and on their typical power resources in organizations. If we take computer systems analysts for example it is fruitful to bring in the work of Pettigrew and others (e.g. Newman and Rosenberg (1985)) on their organizational role and also to refer to Mintzberg's (1983) development of some of this work. This suggests that both analysts in the technostructure and skilled support staff have specific interests and sources of leverage but that their expression and effectiveness is governed by

- the overall structural configuration of the organization ; adhocratic, bureaucratic, simple structure etc.
- the balance which exists between the different organizational systems of control ; the system of personal and bureaucratic authority, of ideology, of expertise and of political "games" or manoeuvres.

Mintzberg argues that in team based organizations where PST's have considerable autonomy, both the authority system and the system of ideology (of shared beliefs and identification with the firm) are weakened and the system of expertise becomes more important - power comes to reside more "in the informal bases of influence of specialists ; in expertise based on specialized knowledge and skills" (p 165).

Yet it is not the PST's of the technostructure who stand to gain most from this because their work typically concerns the strengthening of bureaucratic and formal controls (information systems for example) when it is not simply reacting to system malfunctions.

Their position is indeed ambiguous in this organizational configuration but this has structural roots. The bewilderment of the computer systems group in a team based adhocracy described by Hackman et al can thus be reinterpreted in this light. It is the result of two tensions ; firstly between the pull of the organizational ideology and that of their own professional belief system, and secondly between two different interpretations of the organizational value of their work (line managers and their own) stemming from different views of the role of information control in a team based system.

The tensions of interest can only be fully understood if we consider the structural location of the team (operating core <--> production team, technostructure and support structure <-- > PST's etc.) and the balance of control systems which exists in the given type of organization.

My view is that neither the "control strategy/commitment strategy organization" distinction developed by Hackman with Walton, nor the somewhat vague view of "context" in Groups that Work can fully tackle the structural issues to which I have just referred, and that this detracts from the overall value of Hackman's analyses of work teams. Such groups can only be better understood if we develop a more sociologically informed perspective on task and technology variables specific organizations of a certain configuration and sector - as I stressed in discussing production teams above - and on the interaction of types of teams with organizational control systems and networks.

Without this we are likely to produce descriptions of teams of interest but uncertain relevance, and generalisations whose theoretical as well as empirical value is quite unclear.

3. The Management of Work Teams.

From what has just been said it will be evident that understanding work teams properly will depend on a comprehension of their specific structural locations and typical interests. On what will their effective management depend ? At this point it is important to bring in Hackman and Walton's refinement of the normative model of team management , first outlined in Work Redesign, which I summarised above.

In their 1986 article "Leading Groups in Organizations" the two authors construct a richer model whose logic is

clear and compelling. Right at the beginning they specify their focus : the model is to deal with the "leader" who is the putative interface between the group and the wider organization and it will specify the communicational, intellectual and behavioural skills essential for supporting and generating team effectiveness. In addition the model will focus on what is necessary to achieve effective group processes prior to actual effectiveness conceived in terms of quality and quantity of output ; adequate skill and knowledge application, adequate effort expenditure and use of appropriate performance strategies (planning, problem solving, etc).

To this normative stress is added the aim that the model will "prompt research on leadership that is both of scholarly interest and practical use" (p75) . Thus it is suggested that it should be possible to show empirically that

"... groups led by individuals who have been selected and trained in accordance with our approach are more effective than groups led by individuals not so selected and trained." (ibid.)

What follows then is a clear and logical deduction - supported by some research findings on American firms taken largely from Walton's (1980) work - of the "points of leverage", as they are called, for promoting group effectiveness and of the leader's corresponding functions. This functional approach to team leadership is seen thus

" The critical leadership functions for a task-performing team are those activities that contribute to the establishment and maintenance of favourable performance conditions ... monitoring - obtaining and interpreting data about performance conditions and events that might affect them - and taking action to create or maintain favourable performance conditions". (ibid. p89)

More substantively the leader must

- set a clear and engaging direction for team efforts
- mould and refine a group structure, membership composition and a set of norms which promote competent work
- negotiate and shape an organizational context that supports and reinforces excellence (the reward, training and other human resources systems as well as appropriate information systems)
- provide expert coaching, technical help and adequate material resources

The following diagram summarizes these points in terms of group effectiveness

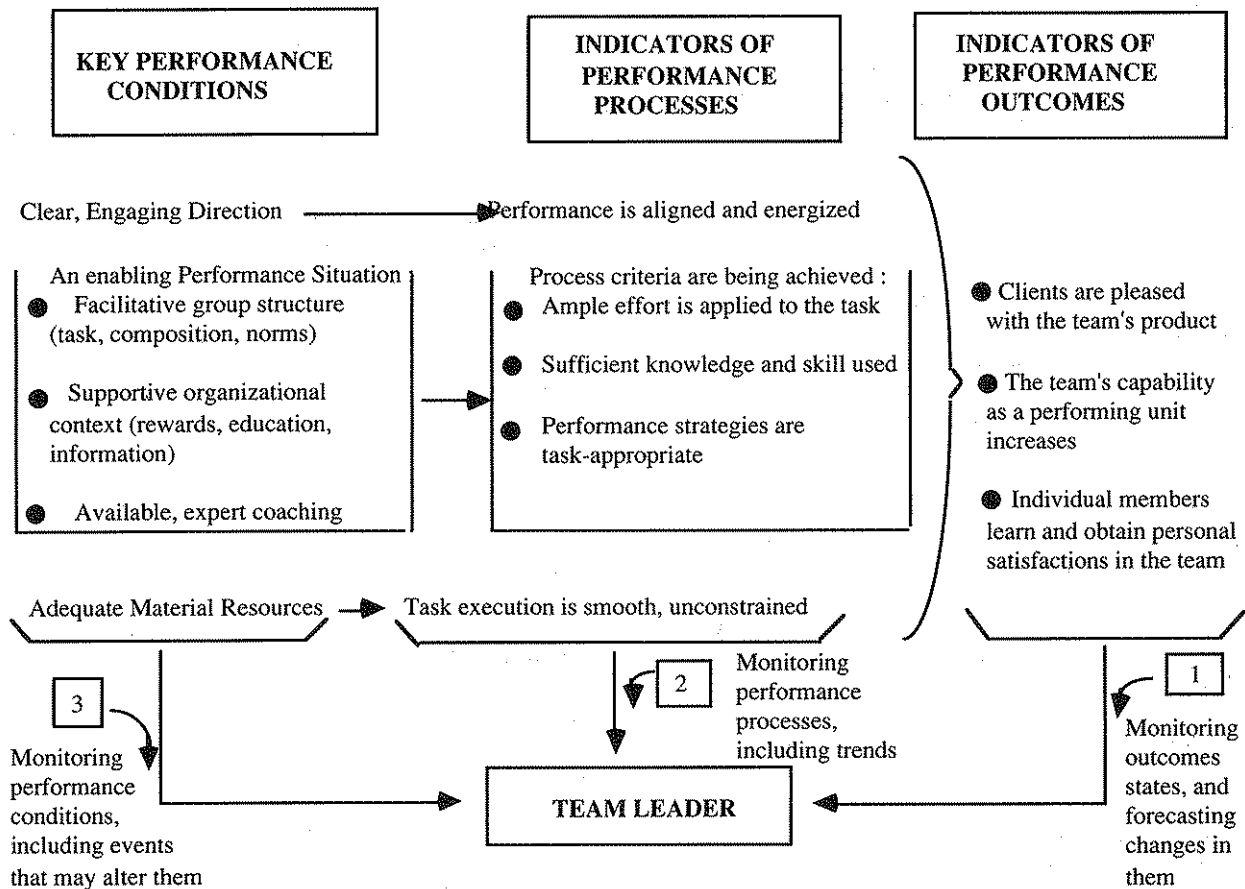


FIG 2 - Summary of the Team Leader's Monitoring Function

The qualities and behaviours necessary for the dual monitoring/reacting role on the part of team leaders are of course intellectual - they need to have a cognitive model of group effectiveness which gives due weight to most of the elements of the above model - and diagnostic. Diagnostic skill involves sensitivity to the level of maturity of the group (its phase in a life-cycle of evolution and development) as well as data gathering and forecasting abilities. But the required skills are also seen as more subtle ones of imagination and social sensitivity, such as would be demanded of an effective teacher/mentor. Hackman and Walton's list includes "envisioning", "inventive" and inter-personal skills and they also speculate - as they admit - that traits such as courage, emotional maturity and a commitment to "the value of individual personal development" as well as that of economic efficiency may well be significant in candidates for leadership positions.

As far as designing the leadership role is concerned the two authors reject an approach which would seek to answer, in advance, questions about the relative weight to be accorded to internal and external team leadership and about the amount of official power and authority that such individuals should have. Such crucial interrogations are seen as rendered "derivative" by the functional approach, which alone raises the "real

questions" : what are the resources a leader needs to fulfill the critical functions well and how can his/her job be structured so that such access is obtained and effective performance in the post achieved ? Managers with responsibility for such issues should proceed pragmatically, considering the alternative possibilities for the job design and description in terms of the degree to which the functions for a specific group will be fulfilled by each one. Important considerations in this weighing exercise will be ;

1. As regards the direction of group activities ; will the leader be setting direction or just translating and communicating it ? What working position for the leader fits with this and how much authority does she need built into the job for it to be seen as legitimate ?

2. As regards the groups structure and autonomy ; given organizational constraints how can a group be given maximum leeway ? Would internal team leadership help preserve the right balance between collective direction and freedom to act ?

3. On "managing the context" ; what degree of external influence is necessary for leaders and how can this be obtained ? How can inter-leader coordination be facilitated, when it is needed ?

4. On information and resources ; what are they in order of priority and how can the leaders job be set up so that getting them is facilitated ?

The final question to be posed is that of feasibility - is the chosen design possible "given organizational circumstances such as work loads, organizational politics and the like". Hackman and Walton invite those facing this crucial issue to ask "how" rather than "can", to "avoid objections and skepticism".

Thus the functional model is also, of course, a contingency one. As the two researchers put it, there is no "one best type of job design" for team leaders

"... the "right answer" is to have a device that will help generate an answer that is right for particular organizational circumstances". (*ibid.* p113)

Similarly it is understood that derivative propositions can be developed from the model to specify key functions - and the leaders attributes - for different teams in different conditions.

Now the immense merit of this process/contingency theory of team management lies undoubtedly in its tight internal logic, its isolation of key variables and in its plain good sense. But a central question is whether it can illuminate the roots of team leadership difficulties and malfunctioning as revealed in in-depth case studies of the use in organizations of autonomous groups. My view is that empirical studies reveal issues that the model cannot tackle adequately.

Take for example the study of Mazda (US) by Fucini and Fucini (1990). Despite obvious questions of objectivity which might be levelled against their analysis of work in the Flat Rock (Michigan) automobile plant, it seems clear from turnover levels, productivity disappointments and worker reactions that Mazda managers did not provide very satisfactory answers to the above questions (1. to 4.) Considerable contradictions between promised team autonomy and actual experienced group work emerged as the plant accelerated to full production levels. We have a vivid portrait of autonomous team stress.

Two central difficulties seemed at the root of problems ; on the one hand the way the "context" constraint of JIT task flow and work timing was handled and on the other an unsatisfactory delineation of team leader and first-line manager authority and responsibility.

As I said above the problems posed for work teams by JIT discipline have been highlighted by Klein (1989,1990). It is not that JIT inevitably reduces team autonomy, but that it can if safeguards are not provided in the form of some "slack" in the system (some buffer stocks to allow for "breathing space" for example) and limits to work formalization and standardization. A delicate balance between JIT rigour - and thus work intensity - and team freedom and discretion has to be maintained. At Mazda such safeguards seemed to be left on one side during a relentless build up to optimum production necessitated by adverse trading conditions.

JIT was pushed to its limits ; inventory levels were maintained at an absolute minimum (a single shift's worth for most parts) as were manning levels (500 to 1000 workers less than in comparable plants in the US). Utilization of work time was as a consequence pushed to a maximum. The management credo of "kaizen" - the search for continuous improvement by elimination of all forms of waste - considerably reinforced the process at all levels.

"Direction setting" for team work at Mazda was embedded in these JIT and management philosophy constraints but still had to be interpreted, translated and communicated - in terms of day to day assignments, movements etc. - by those managing teams. Unfortunately it seems that two developments undermined the team autonomy that Mazda workers had been given to expect. On the one hand the legitimacy of the authority of internal team leaders was eroded by upper management giving more and more power (and responsibility for targets) to "unit leaders" (first line managers). Only the latter, for example, were given disciplinary powers over team members and control over work schedules. Some team leaders left because of the ambiguity of their position and their lack of direction-setting authority.

On the other hand teams themselves were less and less heard by their external managers, the "unit leaders". Team meetings became a forum for top-down orders and less and less a space for the communication of worker proposals for change. Furthermore it seems that even worker recommendations for improvements to work standardization (employees time-and-motion studying their own jobs) had the same fate.

Many managers and workers ended up seeing a big contradiction between the theory of work design advocated during plant set-up and training and continually espoused as company philosophy (team autonomy, consensus decision making and mutual trust, etc.) and later practice.

Now looking at these circumstances through the lenses provided by Hackman and Walton's model we could simply say that Mazda had clearly not thought through the four considerations on team management above - particularly as regards the issue of team leader's authority. But it seems to me that the lessons of Mazda, like those at Digital (Ayr, Scotland) outlined in another book length case (Buchanan and McCalman, 1989) point up weaknesses in their approach.

While middle management at Digital were able and willing to proceed in an experimental manner as regards degrees of team autonomy and type of leadership, this was ruled out at Mazda by upper managements unwillingness to compromise on JIT rigour, on manning levels and on productivity targets. While disseminating a "high commitment" ideology and a symbolism of egalitarianism and high trust, they allowed sacred productivity targets to foster authoritarian personal control (by unit leaders) and extensive bureaucratic work control (high standardization and formalization).

The control systems that were thus generated became more and more mutually contradictory.

Here Hackman and Walton's view of the context of teams (seen also above from a different angle in the "control strategy/commitment strategy organization" classification) and of their leadership seems to me to oversimplify this issue of the mix of control systems in which teams and leaders are embedded. Setting out critical leadership functions as they do is of course essential for any normative model but the image they present of a leader negotiating and shaping the structure and the context of his/her team seems sociologically weak.

Each member of a team, as well as team and leader, is an actor whose interests and power depend on their skills and their capacity to - amongst other things - manage uncertainties in the group and around its boundaries. Power in all this is not just an element of "context" external to the group, a "derivative issue" but a dimension of the active leader <---> led negotiation and re-negotiation of limits to liberty of action, limits themselves inscribed in the specific configuration of ideological, authority, skill/expertise and political systems which characterize - as Mintzberg (1983) has made clear - the management of any organization.

If team leaders or managers are to "manage the context" of teams then a lot more must be said about the political behaviours and resource mobilization necessary at the edges of teams (these in their respective structural locations in organizations) and in the interstices of organizational configurations of control. This seems forgotten by the two authors because of their model's stress on processes for attaining group effectiveness. Concepts capable of representing this "control configuration" are, it follows, indispensable for a real grasp of the way teams work and how they can be led. Such variables are an essential element of any normative model in tracing the limits of its application and giving it a basis in empirically corroborated theory.

CONCLUSION

Above, as well as emphasizing the recent resurgence of interest in team based organizations, I have tried to deal sympathetically but critically with the important work of Hackman and his associates. His normative models have advanced our understanding of work teams and their management enormously. My criticisms have centred on three sorts of weaknesses; firstly the limits of Hackman's concept of the range, internal mechanisms and importance of the organizational forms within which teams are embedded, secondly, the limits of his view of the role of task and technology variables in understanding group specificities and finally, the oversimplifications surrounding his view of the interactions between team leadership and organization management and control systems.

These criticisms are offered in the belief that, as authors such as Crozier, Pfeffer and Mintzberg have stressed, it is only through a more complete sociological understanding of power and control in organizational systems that the real viability of managerial innovations can be established.

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