Evolving patterns of enterprise organisation: The move towards greater flexibility

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Working life today is in a period of transition. The highly elaborate pattern of enterprise organisation based on a rigid application of the principles of division of work and hierarchical control is on the decline. This trend has been examined from various perspectives ranging from what might be called the democratic to the managerial.[1] The erosion of the conventional model of enterprise organisation can be attributed to a variety of factors, some of which we shall analyse here before going on to discuss what can be expected in the future.

The concept of "working life" is used for reasons of convenience. In reality, working life is an integral and indeed a major part of life itself, and because it cannot be separated from what happens in the larger society it is necessarily influenced by numerous factors. Since we cannot hope to cover all these factors here, we have selected a few of those which have the greatest bearing on enterprise organisation.

Technological development and enterprise organisation

In the first phase of industrialisation, technology consisted largely of separate tools and machines that could be used to increase labour productivity. When people and technology were brought together in factories it was as much for economic reasons as for imperative reasons of production engineering.[2] Gradually, however, a second phase got under way, gaining momentum towards the end of the nineteenth century. That phase was characterised by the combination of machines and other equipment to form more comprehensive production systems and by the formulation of theories on the design of an optimal system. Those theories – such as Taylorism – eventually gained almost universal acceptance, being applied nearly everywhere that industrialisation was taking place. Here one can speak of a period of *convergence* in the sense that production systems throughout the indus-

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trialised world began to be organised around a small number of guiding principles. Of these the assembly line is the most pervasive; continuous process is another; and automation – which implies the successive taking over by machines of such human capabilities as observation, effort and decision [3] – is a third. The application of these principles was so rapid that one might even call it a process of *implosion*. During this period it became possible to speak about "technological development" as if it were a straightforward process with universally predictable results.

By and large, we are still in that phase today. Increasingly, however, there are signs of a new phase which, though it has not yet progressed very far, is bound to grow in importance. This phase can be characterised as one of *divergence*, or even *explosion*: development proceeds in a number of directions at once, and is no longer centred on a few general principles. This aspect is manifest, for instance, in the growing flexibility of the latest technologies. Buying a computer does not in itself change very much: since the same computer can be used in a number of different production systems, it is only when the operational procedures have been determined that the computer has a structuring effect. Furthermore, the choice of technology for any given function is widening. An example is internal transport in factories where today a broad range of options exists, from conveyor belts to shuttle systems and computer-operated carriers. Each system has different effects on work organisation. The main point is that *the number of options is increasing*. There have, of course, always been options: there was no absolute need, for example, to adopt the assembly lines of phase two. However, the costs of breaking away from the dominant pattern would probably have been prohibitively high for any enterprise that was so inclined because it would have received little support from mainstream engineering development and would have had to bear most of the costs itself. [4]

These new circumstances impose several types of adjustments on an enterprise seeking to perform efficiently. For one thing, it has to change from a uniform to a mixed pattern of organisation. Under rapidly changing technological conditions, no enterprise of any size can rely on the same organisational principles for all of its operations. Instead, it must find patterns that are optimal for each type; hence it ceases to be a "monolith" and becomes an organisational "conglomerate". The inadvisability of applying the same ideas of organisation to a research and development (R and D) department as to an accounts department is fairly well recognised. Not quite so well recognised is the need to apply multiple organisational patterns also to *the same people* since each organisational unit will often have to deal with different types of tasks.

Moreover, even where a variety of organisational patterns is used, frequent changes need to be made in order to be able to exploit constantly evolving technological possibilities. In other words, there is a permanent need for innovation, for the continuous creation of new patterns. The changes must necessarily be decentralised because the different processes may obey a different logic and require different measures.

When speaking of innovation, it is perhaps still product innovation that comes most readily to mind, rather than innovation in organisation and production processes. Consequently, product innovation will be our point of departure here.

Innovation and enterprise organisation

When the pressure for innovation began to make itself felt more insistently – as happened in the electromechanical industry as far back as the 1950s – the usual response was to set up an R and D department staffed by specialised personnel and organisationally isolated from the rest of the enterprise. However, as the age of micro-electronics succeeded the age of electromechanics and the pace of technological change accelerated, the demand for R and D also increased. R and D at the enterprise level could no longer be dealt with by separate units working in isolation. Instead, it was incorporated into the enterprise organisation as a whole and more and more people were taken on to perform this function. However, it was soon discovered that staff organisation along the traditional lines was ill-suited to R and D activities.[5] Accordingly a new type of organisation was devised, the so-called *project organisation* which, starting with ad hoc teams or groups set up to carry out specific projects, often evolved into a large-scale matrix system with interlocking project groups. The result was that the organisational structure of the typical innovative enterprise came to resemble the traditional hierarchical pyramid but with a system of project groups added, along the lines shown in figure 1.

Traditionally, innovation has meant thinking up new products. However, new products – and new versions of old products – have also made new demands on production systems, which have gradually become so responsive to innovation that the borderline between products and production processes has been blurred. Moreover, production systems are increasingly designed to permit flexibility, that is rapid adjustments to changes in products and production methods. The growing use of easily programmable numerically controlled machines, flexible production cells, etc., should enable production workers to take a more active part in the processes of change. Otherwise the advantages of the new production systems will be largely lost since their potential flexibility cannot be exploited to the full.

As the dividing line between the innovation and production processes tends to vanish – partly under the influence of the various reform movements discussed later – the phase two pyramid is gradually eroded from below: the "diamond" (figure 2) is often used to illustrate this point. In other words, as jobs are upgraded in content, the organisation starts to swell in the middle. The "diamond" is, so to say, superimposed on the "hierarchy-cum-project-group" matrix pattern shown in figure 1.

The transformation of enterprise organisation for reasons of innovation will inevitably continue, one pressing reason being the need to overcome the

Figure 1. The "hierarchy-cum-project-group" (matrix) pattern
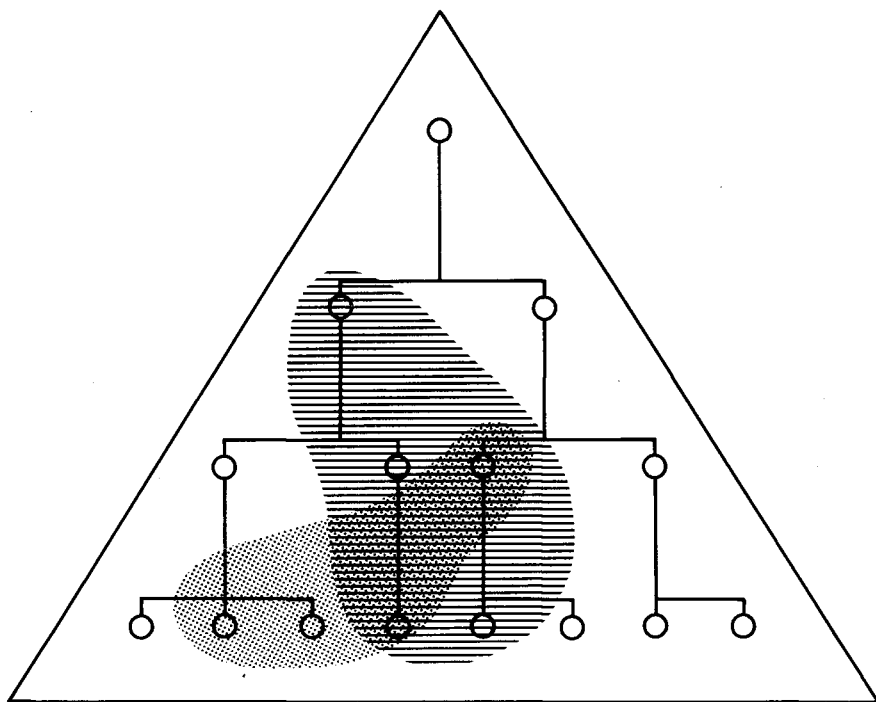
problems inherent in the matrix pattern. These problems – which are increasingly acute in large, complex enterprises dependent on innovations – appear in the border zone between the hierarchy and the project pattern. To derive the full benefits from project organisation enterprises will need, for instance, to keep reshuffling and reorganising their project groups. Within a traditional hierarchy organisational changes are often difficult and costly because of their repercussions on pay, status, authority and the like. The purpose of project organisation is precisely to avoid these constraints on flexibility. It has hardly ever been possible, however, to avoid interference in the changes by the various levels of the hierarchy, which inevitably slows their introduction and makes them much more complicated than is desirable. The result is what might be termed "spaghetti organisation", since the mix of a conventional line organisation and a project organisation produces organisational knots which it is often hard to untangle. Furthermore, large-scale matrix patterns often imply maintaining a high degree of organisational complexity, which is not in itself a good thing. There is a need to move beyond the matrix to create patterns where flexibility and innovative potential are combined with organisational *simplicity*. Before we turn to this point, however, the work reform movements need to be brought into the picture.

Figure 2. The "diamond"
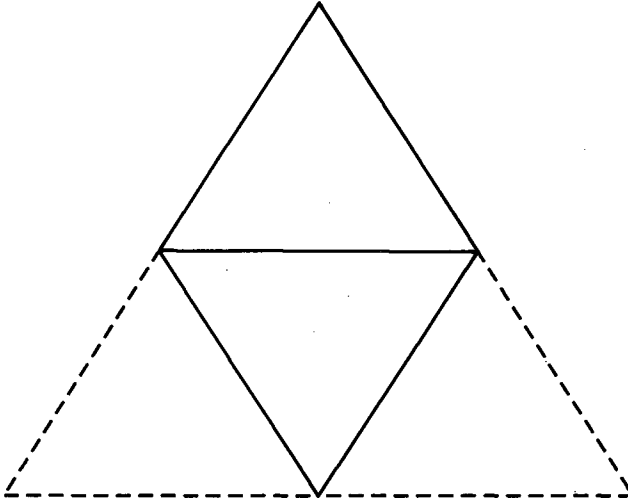
Note: The broken lines denote the part of the enterprise organisation that disappears.

The work reform movements

The "quality of working life" has been on the political agenda in most industrialised countries, although rarely as a high-priority item. Efforts to improve the quality of working life have touched on some of the issues mentioned above since the organisational implications of innovation and change have constituted one of the major arguments for reform. However, other considerations have also been emphasised, such as the need for greater job satisfaction, participation and democracy and a better working environment.

In the Western market economy countries the work reform movements were at first strongly linked to humanist psychology and the subjective experience of work.[6] The basic premise was that where something is wrong with work it will find expression in worker dissatisfaction. By demonstrating that such dissatisfaction was a dominant characteristic of the workforce, social research was expected to become the spearhead of the reform movement. In practice, this did not happen. Surveys have generally shown that relatively few people are dissatisfied with their work situation. The dissatisfied constitute what Wilensky calls "pockets of alienation", which do not demand a general reform of working life but can be dealt with locally.[7] Later analyses[8] have demonstrated that the concept of job satisfaction/ dissatisfaction suffers from some major defects as a test of working life conditions. Studies, at least of the survey variety, are generally unable to penetrate more than the most superficial layers of the respondents'

consciousness; deep-seated structural problems of society cannot be expected to come to light so easily.

To the superficiality of job satisfaction studies can be added a related problem: measuring satisfaction does not help us to understand how workers themselves can actively *contribute* to improving their situation, for example by taking part in workplace development programmes. A person who is satisfied has little motive to strive for change.

Shortcomings in the concept of job satisfaction have led researchers, at least in the Scandinavian countries, to look to other concepts, particularly to what have been termed *autonomy* and *control*.[9] Autonomy and control mean the ability of people to do something about their own situation – individually and collectively. However, if autonomy is the key issue, the researcher – or indeed anyone else who seeks to initiate reform and change in working life – is then bound to ask whether the people in the workplace should not also decide what *theory* is to be applied there, i.e. whether the workers themselves should not determine the principles of organisation. During the 1970s researchers who were engaged in developing new forms of organisation had to grapple with this fundamental question and its far-reaching implications for the approach to change. Prior to this, when the work reform movements first got under way in the 1960s and early 1970s, efforts were concentrated on introducing changes in specific, clearly delimited work areas, often involving group work, and were based on general theories about what was wrong with working life as well as what was needed to set it right. In those circumstances, research necessarily played a leading role: this resulted from the reliance upon general theory since only the researcher could act as the "local representative" of the theory and ensure its application. It was assumed that "model solutions" could be devised and subsequently applied to other workplaces.

While some reasonably successful field experiments were carried out in a number of countries, the problems began when an attempt was made to extend them on a broader scale. In country after country the field experiments were followed by setbacks. A number of explanations have been advanced for these "diffusion" problems.[10] What matters here, however, is the way in which research responded to those problems.

The standard response when problems arise in putting a theory into practice is to revise the theory or, if need be, to scrap it and look for another. However, the problem confronting researchers did not seem to be merely a question of finding the "best" theory in a conventional sense.[11] The chief stumbling-block proved to be the difficulty of eliciting *commitment from those concerned*: unless workers and managers believe in the theory it cannot be converted into reality. Rather than continue looking for new theories, it seemed more to the point to ask in what circumstances commitment might be obtained to *any* theory.

From posing the problem in these terms it was only a short step to recognising that a theory, if it is to have a practical impact, must be developed *together* with those whose behaviour and situation it is intended to influence.

This led, in turn, to a shift in the strategy pursued towards so-called participative approaches, where it is accepted that work reform must be the outcome of shared influence and collaboration with those directly concerned. Today, changes are generally organised in the following way.

The unit chosen for the reform is seldom a single production area. Instead, higher-level units are selected: the factory, the parent enterprise, a group of enterprises. This is done not with a view to applying uniform ideas about change on a broad scale, but because the lack of a clear blueprint for change makes it necessary to *construct* an approach specifically geared to each workplace or enterprise, and to do this it is necessary to pool as many "building materials" as possible, i.e. to share the ideas and experience of different workplaces or enterprises. Less reliance is placed on general theory for understanding the problems of working life and finding solutions to them, while concepts like "local theory" are becoming more and more widely used.[12] The diminishing confidence in general theory means that there is also less reliance on research. Insights are created through exchanges between all the parties concerned. The basis of this collaboration is complementarity, the knowledge and experience of each party being recognised as of equal importance. Research has an important part to play but not a dominant one. The distinction between "pilot projects" and "dissemination" becomes blurred, and often tends to disappear altogether. Each change builds on previous experience but also creates new experience. Change is seen as (re)construction. Dissemination is limited to diffusing some of the elements or building blocks that go into new local processes of understanding and construction.

This new strategy contributed in no small part to the re-emergence in the mid-1970s of the work reform movement, particularly in Norway. About that time a panel on job design started to function efficiently as an initiator of change projects.[13] When the new Work Environment Act was promulgated in 1977, it contained a section on the organisation of work.[14] Although efforts to reform the working environment again ran into problems,[15] they nevertheless helped to popularise the new approach to work organisation and to promote its application in practice. In 1982 the Norwegian Employers' Confederation and the Federation of Trade Unions signed an agreement on workplace and enterprise development.[16] That agreement led to a further increase in the number of projects and other innovations in this field, and today it is estimated that about 20 per cent of the total workforce in Norway is affected in one way or another by deliberate efforts to create work roles allowing more scope for learning and decision-making.[17]

The enterprise of the future

The enterprise of the future will probably be a conglomerate of continuously changing organisational patterns. Specific patterns will be of a transient and temporary nature. The concept of organisation will cease to be

associated with uniformity and stability and will become much more fluid, much less definable. The actual form of organisation adopted will lose much of its traditional significance. What will matter more is how the organisational patterns are *created* (or "generated") – what mechanism goes into operation each time the need is felt to develop new patterns. Not only must the mechanism have a great capacity to generate new patterns, it must also be able to infuse them with a *motivating force*. Although human motivation has played a role in the past, it is bound to loom much larger in the future.

What sort of generative mechanism is best suited to the purpose? Traditionally it was the job of top management to decide questions of organisation and to implement the decisions made. Over the years a vast body of literature bringing out the problems and limitations of this top-down strategy has accumulated[18] and a gradual shift has occurred towards other mechanisms that open up possibilities for involvement and influence to other people than top management. The delegation and decentralisation of certain decision-making powers, for instance, increasingly tend to include at least some organisational issues.

Among alternative ways of generating new organisational patterns, however, a more radical approach has recently attracted increasing attention – an alternative that can be called *democratic dialogue*[19] because it requires discussion between all concerned about how issues should be defined and settled. As regards its application to issues at the workplace and enterprise level, the following criteria have been proposed:[20]

– Dialogue is a process of exchange: there must be a two-way flow of ideas and arguments between the participants.
– The entire workforce – including workers on the bottom rung of the hierarchical ladder – must have an opportunity to participate.
– Opportunity is not enough: everyone should take an active part in the discussion.
– All participants must be considered equal.
– Work experience is the basis of participation and at least some of the experience which each participant brings to the discussion must be taken into account.
– The issues under discussion must be so presented that everyone can understand them.
– All arguments relating to these issues must be considered.
– The dialogue must result in agreements that can serve as a platform for practical action.

Discussions between workers and management according to these criteria are not common today. The traditional hierarchy with its top-down approach to virtually every problem is still predominant. However, this does not mean that management may not find it worth while to encourage such discussions, especially if patterns of organisation generated through demo-

cratic dialogue can be shown to offer better solutions to the problems confronting the enterprise of the future.

It is particularly with regard to the issue of motivation that the arguments for a democratic procedure are strongest. That there is a close relationship between motivation and participation seems reasonably well established.[21] For a solution to carry weight among the workforce, they must take part in working it out. General acceptance of organisational solutions will depend largely on the way the process of generating change is organised. That this will be difficult should be seen as a challenge rather than as an argument for maintaining the traditional pattern. However, let us turn now to what is happening in practice.

This is by no means clear. Not only do we lack full knowledge of the facts, but different developments may be open to different interpretations. At all events, one of the major factors contributing to the emergence of democratic dialogue as a means of improving working life is clearly the move towards broader and more skill-demanding work roles.[22] However, democratic dialogue can become a reality only if other conditions are fulfilled as well. Since the relationship between work roles and participation has been dealt with at length by other writers,[23] we shall confine ourselves here to other issues, taking as our point of departure some features of enterprise organisation that have recently been coming to the fore:

–   an integration of functions on the shop-floor;
–   a drastic reduction in the control and supervisory tasks of managers;
–   a halt to – and increasingly a reversal of – the proliferation of new levels of authority (which has been going on for decades);
–   a shift – from supervision to support – in the tasks of people remaining at the intermediate levels;
–   an enlargement of top management to make it more collective;
–   a strengthening of local worker representation;
–   decisions on important questions of enterprise policy through direct dialogue between management and workers.

In Norway these organisational features first took shape at Skotfos,[24] a paper factory belonging to a larger industrial group. Some years ago the group's management decided to close down the factory. The decision was met with resistance not only from the employees but also from the factory's management and the local community. The local union and management worked out a plan to save the enterprise and secured sufficient political support to persuade the group's management to go back on its decision. Under the plan the workers took over the day-to-day running of the factory, thereby saving on middle and lower management costs, work roles were broadened and worker motivation was increased. In a fairly short time the factory was out of the red.

This type of work organisation corresponds to the "clothes-hanger" shape described by Mintzberg[25] and illustrated in figure 3: the top expands while the middle levels are slimmed down. Division of work is reduced and all operative functions tend to be brought together on a one-level "production floor".

An important feature of this pattern of organisation in Scandinavia lies in the role played by the unions. In the Skotfos factory the union takes part in "joint management". Although the ultimate aim is to move towards a system of direct rather than representative democracy, there is no question of dispensing with the unions. For direct democracy to be possible in an enterprise there must be a structure that links the rank-and-file workers with each other. Democratic dialogue is not only a discussion between those who exercise power and those who do not, it is also a discussion *between* the rank and file. The existence of a union therefore tends to reinforce a democratic structure.

However, there are also cases in Scandinavia where active union participation is lacking. In Norway the highly successful computer firm Norsk Data (which still has a bigger share of the domestic market than IBM, a fairly rare occurrence in Europe) operates with only a very rudimentary managerial structure: it has, for instance, no personnel department and most traditional administrative functions are assigned as additional tasks to people whose main job is production or development. This is a non-union enterprise, however. Another example is the Scandinavian Airlines System (SAS), which has applied a policy of shifting resources from the central office to field offices in order to improve services and reduce "internal bureaucracy". However, while SAS is highly unionised, there seems to be little active union involvement in organisational development.

This organisational pattern can be interpreted in different ways. It implies a further reduction in the importance of the conventional formal hierarchy. There is a growing body of literature describing how management can remain in control of the enterprise without having to resort to a conventional system of splitting up tasks and monitoring performance, and it has a lot to say about "values", "culture" and the like as instruments for managerial control. There is a revival of interest in Selznick's analysis[26] and the argument that the role of leadership is to generate solidarity and joint values rather than serve as "bureaucratic administration". Here, however, we shall offer another interpretation.

The "clothes-hanger" shape can be said to correspond to a *democratic* system in its basic form. Democracy is not a leadership-free system. Indeed, a key issue in democratic theory has always been the relationship between those who govern and those who are governed. The point about democracy is that the people should be able to *influence* their leaders. There are, basically, two channels for this: one is elections, the other the type of discourse which we have called democratic dialogue. In an ideal participative democracy both channels would be fully utilised. The rights of employees to elect the

Figure 3. The "clothes-hanger"
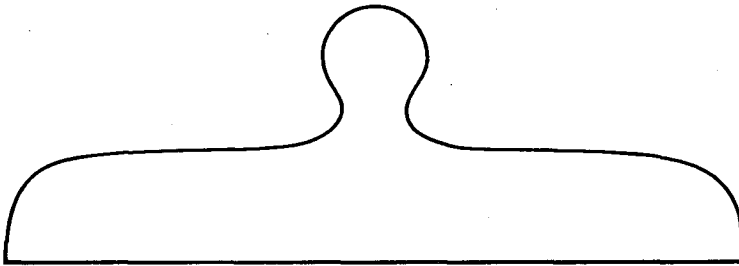
managers of, say, an ordinary industrial enterprise are, even in Scandinavia, limited. There are certain electoral rights, such as the right to elect one-third of the members of the board of directors and a variable proportion of the members of other bodies such as the work environment committee. Electoral rights, however, cannot be relied upon as the sole – or even the main – vehicle for giving the employees influence over enterprise decisions.[27] It is here that the issue of dialogue comes into focus.

If such criteria for dialogue as those listed are to be observed in practice, certain conditions must be fulfilled. First of all, the rank and file must be equipped to engage in democratic participation: they must be able to acquire work experience and that experience must be relevant to the discussions. The flat base of the clothes-hanger indicates that the best way of achieving this is to develop broad work roles for everyone, where primary production is integrated with planning, co-ordination and the like. Since democratic dialogue means discussion between managers and the managed, there must be a common meeting ground – a forum where the discussions can be conducted. This can imply several things. A slimming down of buffer roles and other middle-level functions is clearly one major requisite, which is illustrated by the narrow neck of the clothes-hanger. Top management – here defined as those who exercise broad managerial authority – must, for their part, have a capacity for dialogue. There must be a sufficiently large number of people with general managerial authority to enable them to devote time to the necessary discussions. "Management by walking around" is an expression that has been used to describe a discourse-oriented type of management.[28] But management must be *able* to walk around: the pyramidal structure, where general managerial authority is vested in one or a few persons, does not leave much scope for such activities. The walking around will, in that case, be left to our old friend the foreman who, since the Hawthorne experiments, has usually been landed with that task.

The clothes-hanger "model" has not yet emerged as a clear-cut pattern with a set of easily observable characteristics. Generally speaking, it will become increasingly important to look at an enterprise from two perspec-

tives: on the one hand, it must be seen as a system of work roles, work relationships and the like; on the other, it must be seen as a mechanism for *generating* specific organisational patterns. As the specific patterns become more and more transient and temporary, what will matter in the end is the generative mechanism.

In so far as society has an interest in supporting organisational development, experience has shown that its support must be directed at the generative ability of enterprises rather than at the diffusion of any particular organisational pattern, be it autonomous groups, quality circles, matrix organisation, or any of the other alternatives to Taylorism that have been suggested.

Change and infrastructure

In recent years the importance of systematically creating an *infrastructure for change* has been recognised, at least among people who look at organisational development from a joint worker-management perspective. Few, if any, enterprises go it alone in this field, not so much because of lack of resources – in the sense in which the word is used here, all enterprises have resources since all have people – but because change in an enterprise is a complex process interwoven with a number of processes taking place in society as a whole.

Changes within a particular enterprise must be anchored in some kind of base or foundation, what we call infrastructure for lack of a better word. Indeed, the need to develop an adequate infrastructure for change – by which we mean a system or network of relationships rather than a "new organisation" – can be said to be the most critical issue in work reform. In some societies where this need is increasingly recognised, such a network is slowly growing out of commitments to change by managers, trade unionists, researchers and others. It is possible to specify some of the things that such an infrastructure should be able to do.[29]

– It should be able to monitor new trends and developments in working life in order to be able to single out good examples to be followed, to establish contacts with people interested in experimenting with new ideas, etc.

– It should be able to organise meetings and related activities in order to bring people together to explore possibilities for joint efforts to find new solutions.

– It should be able to initiate and support a reasonable number of experimental projects to explore new fields.

– Even though conventional training is not a key element in this strategy, it should be able to create educational opportunities backed up by written and audio-visual materials, etc.

– It should be able to establish and maintain a system of open communication and democratic dialogue based on exchange of experience. For a

network whose ultimate aim is to turn enterprises into forums for democratic dialogue it is of paramount importance that democratic dialogue should be its own generative mechanism.

– It should be able to perform some policy functions, since not even the most democratic of networks can do without some decisions about priorities, selection of key areas for development, etc.

Other functions can no doubt be added, some functions will be more important than others at certain times, and so on, but these are matters that fall outside the scope of this article.

None of the Western market economy countries has, to the best of this author's knowledge, a fully developed system of this sort today. In Sweden and Norway elements of such an infrastructure are slowly being created, particularly as a result of the agreements on enterprise development concluded in both countries in 1982.[30] Among the measures being systematically applied to develop the networks are conferences, enterprise projects and other types of support for people and enterprises that engage in development initiatives, such as the "fellowships system" in Norway under which worker and management representatives can have part of their wages or salaries paid out of a joint fund in return for carrying out certain tasks in connection with development projects.[31]

New demands on the industrial relations system

Most of the industrial relations systems in the Western world were born at a time when enterprise organisation was extremely stable; consequently, they are highly institutionalised. They establish clearly defined procedures for dealing with labour demands, aimed mainly at setting limits to management rights and prerogatives, as well as machinery for the settlement of wage issues. In recent years the existing framework has been found wanting in a number of countries, largely as a result of the faster pace of technological development which has given such issues as adaptation and flexibility new dimensions and a new urgency.

Today both unions and management are faced with new problems. Management must come to terms with employees on such issues as flexibility and high-quality production. The unions must be able to make their influence felt without relying exclusively – or perhaps even mainly – on established institutional procedures. The pressure for new arrangements exists and has existed for some time. The responses, however, are not always constructive. In enterprises, and to some extent even in entire societies, forces are being mobilised to reduce the influence of the unions, sometimes, it seems, to do away with them altogether, so as to give management the freedom it feels it needs. However, when the unions are gone – or are reduced to a mere formality – there will be no one with whom management can make agreements that are binding and have a motivating effect. Oddly enough, the

attacks on the unions coincide with an appeal to the social partners to face up to the new developments in the world of work and devise adequate responses. The social partners can only act, however, if they exist. If the unions were to disappear, there would be little need for employers' associations, and in those circumstances politicians could hardly expect that working life could be geared to the national interest in a responsible way. It would be much more constructive for employers and managers to accept the unions and discuss the need for flexibility and adaptation in an open democratic debate with them. The unions, for their part, should recognise that organisational flexibility is a legitimate managerial concern. If they are to remain forceful organisations, the unions must develop strategies to meet their members' needs by exerting responsible influence over development processes that are too far-reaching and complex to be regulated through the traditional channels. The slowness of many unions to develop a new type of strategy has provided powerful ammunition for those politicians, employers and managers who would gladly do without a strong trade union movement.

Concluding remarks

We have tried here briefly to trace some of the main changes now occurring in working life. These are not the only ones of importance to its future course. Nor is it yet clear exactly where they will take us. But they deserve to be discussed because they point to the need for developing joint labour-management solutions to problems of productivity and participation.

In moving towards more flexible and innovative enterprises, the main problem today is how to develop an adequate infrastructure. So far few Western market economy countries have laid any groundwork for changes in work organisation, although the idea of developing new patterns has fared somewhat better in some, especially Norway and Sweden. Governments generally have tended to regard this issue as one of minor importance or as a technical matter to be decided by labour and management. There has been no strong support for change and little in the way of political initiatives, allocation of resources or even interest. It may well be, however, that all this will soon change. For a society to perform well economically it must do more than design and develop advanced products; it must also see that they are produced in a way that meets constantly rising quality standards. The point is amply demonstrated by the car market. People who buy an old-fashioned Volvo or a nondescript Toyota rather than what passes for a more sophisticated model do so because these cars run and keep on running. As politicians discover that the economic foundations of entire societies are slowly but steadily being eroded by an inability to meet quality standards in production and services, the issue of enterprise organisation will loom much larger. Society can no longer afford to look upon it as a trivial issue outside the public domain.

Notes

¹ Descriptions of new forms of work organisation from a "democratic" perspective can be found in, for instance, F. Emery and E. Thorsrud: *Democracy at work* (Leiden, Martinus Nijhoff, 1976); and in B. Gustavsen and P. H. Engelstad: "The design of conferences and the evolving role of democratic dialogue in changing working life", in *Human Relations* (London), Feb. 1986. A well-known study from a "managerial" perspective is T. J. Peters and R. H. Waterman, Jr.: *In search of excellence* (New York, Harper and Row, 1982).

² D. M. Gordon, R. Edwards and M. Reich: *Segmented work, divided workers* (Cambridge, Cambridge University Press, 1982).

³ See, for instance, G. H. Amber and P. S. Amber: *Anatomy of automation* (Englewood Cliffs, New Jersey, Prentice Hall, 1962); and J. R. Bright: *Automation and management* (Cambridge, Massachusetts, Harvard University Press, 1958).

⁴ The idea that particular technologies require particular organisational structures is hardly defended by anybody today, and in fact there is a very broad consensus concerning the non-deterministic character of technology from an organisational perspective. See, for instance, Projektgruppe Automation und Qualifikation: *Theorien über Automationsarbeit* (Hamburg, Argument-Verlag, 1978); and P. Brödner: *Fabrik 2000. Alternative Entwicklungspfade in die Zukunft der Fabrik* (Berlin, Edition Sigma, 1985).

⁵ The "classical" study here is T. Burns and G. M. Stalker: *The management of innovations* (London, Tavistock Publications, 1961).

⁶ The best known example of humanist psychology applied to working life is that developed by Maslow. See, for instance, A. H. Maslow: "A theory of human motivation", in *Psychological Review* (Washington, DC), 1943, Vol. 50; and idem: *Motivation and personality* (New York, Harper and Row, 1954).

⁷ H. Wilensky: "Family life cycle, work and the quality of life: Reflections on the roots of happiness, despair and indifference in modern society", in B. Gardell and G. Johansson (eds.): *Working life: A social science contribution to work reform* (Chichester, John Wiley, 1981).

⁸ J. E. Thurman: "Job satisfaction: An international overview", in *International Labour Review*, Nov.-Dec. 1977, pp. 249-267; J. C. Taylor: "Job satisfaction and quality of working life: A reassessment", in *Journal of Occupational Psychology* (Leicester), 1977, Vol. 50; B. Gustavsen: "From satisfaction to collective action: Trends in the development of research and reform in working life", in *Economic and Industrial Democracy* (London), 1980, Vol. 1, No. 2.

⁹ Examples of studies where autonomy and control are treated are J. Gulowsen: *Selvstyrte arbeidsgrupper* (Oslo, Tanum, 1971); Emery and Thorsrud, op. cit.; B. Gardell: *Arbetsinnehåll och livskvalitet* (Stockholm, Prisma, 1976); R. Karasek: "Job socialisation and job strain. The implications of two related psycho-social mechanisms for job design", in Gardell and Johansson, op. cit.; B. Gustavsen and G. Hunnius: *New patterns of reform: The case of Norway* (Oslo, Universitetsforlaget, 1981). An overview of Scandinavian research emphasising control and autonomy can be found in B. Gustavsen: *Some aspects of social science work research in Scandinavia* (Berlin, International Institute for Comparative Social Research/Labor Policy, 1983), doc. IIVG/dp 83-209.

¹⁰ See, for instance, J. F. Bolweg: *Job design and industrial democracy: The case of Norway* (Leiden, Martinus Nijhoff, 1976); Emery and Thorsrud, op. cit.; Gustavsen and Hunnius, op. cit.; T. Sandberg: *Work organisation and autonomous groups* (Lund, CWK Gleerup, 1981).

¹¹ A number of efforts have been made over the years to change working life in the light of social or psychological theory. None has been completely successful: there is no known case of a "linear" application of such theory devoid of problems. Of course, not all theory dealing with questions of organisation in working life has been social or psychological. Technological approaches have, in fact, been much more broadly applied; numerous examples can be found, ranging from Taylor and scientific management to modern, technologically oriented systems theory. Such theory is not considered here, as its claim to validity rests on other foundations than its ability to deal with human and social issues.

¹² M. Elden: "Democratisation and participative research in developing local theory", in *Journal of Occupational Behaviour* (Chichester), Jan. 1983.

[13] P. H. Engelstad and L. A. Odegaard: "Participative redesign projects in Norway, summarising the first five years of a strategy to democratise the design process in work organisation", in *Working on the quality of working life* (Leiden, Martinus Nijhoff, 1979).

[14] B. Gustavsen: "A legislative approach to job reform in Norway", in *International Labour Review*, May-June 1977, pp. 263-276.

[15] idem: "Regulating organisation of work: The Norwegian example", in International Institute for Labour Studies: *Changing perceptions of work in industrialised countries: Their effect on and implications for industrial relations*, Research Series No. 77 (Geneva, 1983).

[16] idem: "Technology and collective agreements: Some recent Scandinavian developments", in *Industrial Relations Journal* (London), 1985, Vol. 16, No. 3.

[17] To assess the degree to which new forms of work organisation have actually been implemented at the level of society – even a small one like Norway – is not easy. Complete and conclusive data will seldom, if ever, be available, to which it may be added that "facts" can often be given different interpretations. The figure of 20 per cent is an estimate, constructed on the basis of several sources, particularly evaluative studies of the work environment reform, data on the application of the 1982 agreement on enterprise development and some survey data. On the work environment reform, see Gustavsen: "Regulating organisation of work . . .", op. cit.; the agreement on enterprise development is dealt with in idem: "Technology and collective agreements . . .", op. cit.; for an example of survey data on developments in Norwegian working life, see W. M. Lafferty: "Workplace democratisation in Norway: Current status and future prospects with special emphasis on the public sector", in *Acta Sociologica* (Oslo), 1984, Vol. 27, No. 2.

[18] In social research there is a long tradition of critical analysis of the highly structured, hierarchical type of enterprise organisation. Some "classical" contributions are: R. K. Merton: "Bureaucratic structure and personality", in *Social Forces* (Chapel Hill, North Carolina), 1940, Vol. 18, pp. 560-568; A. W. Gouldner: *Patterns of industrial bureaucracy* (Glencoe, Illinois, The Free Press, 1954); S. Lysgaard: *Arbeiderkollektivet* (Oslo, Universitetsforlaget, 1960).

[19] B. Gustavsen: "Workplace reform and democratic dialogue", in *Economic and Industrial Democracy*, 1985, Vol. 6, No. 4.

[20] ibid.

[21] See, for instance, F. Herzberg, B. Mausner and B. B. Snyderman: *The motivation to work* (New York, John Wiley, 1959); Emery and Thorsrud, op. cit.

[22] C. Pateman: *Participation and democratic theory* (Cambridge, Cambridge University Press, 1970); Gardell, op. cit.; M. Elden: *Political efficacy at work: More autonomous forms of workplace organisation link to more participatory politics*, Paper presented to the Seminar on Social Change and Organisation Development, Inter-University Centre, Dubrovnik, 1977; R. Karasek: *Job socialisation: A longitudinal study of work, political and leisure activity in Sweden*, Paper presented to the Research Committee on Sociology, Ninth World Congress of Sociology, Uppsala, Sweden, 1978.

[23] Some examples are Emery and Thorsrud, op. cit.; P. Bernstein: *Workplace democratisation: Its internal dynamics* (Kent, Ohio, Kent State University Press, 1976); Gustavsen and Hunnius, op. cit.; B. Gardell and L. Svensson: *Medbestämmande och självstyre* (Stockholm, Prisma, 1981).

[24] P. H. Engelstad: *Skotfos mot strömmen* (Skien, Skien Naeringsråd, 1983).

[25] H. Mintzberg: *Structure in fives: Designing effective organisation* (Englewood Cliffs, New Jersey, Prentice Hall, 1983).

[26] P. Selznick: *Leadership in administration* (New York, Harper and Row, 1957).

[27] F. Emery and E. Thorsrud: *Form and content in industrial democracy* (London, Tavistock, 1969); B. Gustavsen: "A decade of employee representation on company boards: Experiences and prospects for the future", in B. O. Gustavsson et al. (eds.): *Work in the 1980s* (Aldershot, Gower, 1985).

[28] Peters and Waterman, op. cit.

[29] Gustavsen: "Technology and collective agreements . . .", op. cit.

[30] ibid.

[31] ibid.