

**Exploring the Dimensions of New
Work Organisation: Setting a New Agenda**

By

**Maeve Gallagher and Gillian Shapiro
Centre for Research in Innovation Management (CENTRIM)
University of Brighton**

Introduction

This paper seeks to explore the relations between new forms of work organisation, new management philosophies that support innovation and the role of human resources in achieving competitiveness.

CENTRIM¹ has an established history in conducting research on issues centred around the management of innovation. Over the past ten years this has included research on supply chain management, Total Quality Management (TQM), Continuous Improvement (CI) and Agile Manufacturing. More recently it has been engaged in specific research on the implementation of innovative forms of work organisation within firms. This research has highlighted the important links between the theme of work organisation and the forms of innovation management referred to above. Whilst these links appear to be emerging from the research, they have not been explored comprehensively within the literature. This paper, therefore, aims to bring to the fore the relevant literature around work organisation, management philosophies and the management of human resources in order to try and highlight some important links and establish some questions and areas that require further research.

The Evolution of Work Organisation²

The early roots of work reform emerged following the Second World War, a period in which the routines of mass production became well established. However, the effectiveness and social implications of "the machine bureaucracy" were not considered and it took many years before work reform issues became embedded in management curricula or public policies and programmes.

The pioneering research and programmes of work reform emerging in the early 1960's and 70's (e.g. Emery, 1964; Trist, 1978) signalled the adoption of more humanitarian approaches to work organisation against a backdrop of rapid growth, increased demands on production systems and tight labour markets. Development programmes such as the Norwegian Industrial Democracy programme (1963-1969) and company level schemes, such as those introduced at Phillips³ demonstrated that alternative approaches to production lines were possible and could offer real opportunities for job enrichment and personal development. The approach, which became widely known as Quality of Working Life drew much interest. However, enthusiasm faded by the early 1980s, which signalled a change in the climate of work reform in Europe. Emphasis shifted towards issues such as "head count" and cost cutting, as a response to increased competition from Japan, rather than Quality of Working Life. During this period Japanese Practices such as JIT, KAIZEN and TQM became the new industrial standards for companies.

In the late 80's and 90's it became clear that the development of flexible workers at all levels could contribute to the achievement of competitive advantage: In fact "the organisational practices of the late 80s were now being placed in a new context: that of rapid technological change, flexibility, continuous improvement and a strive for higher added value" (The European Work and Technology Consortium, 1997). Indeed, much discussion has focused in the 80s and 90s on how to raise the effectiveness of these flexible

¹ The Centre for Research in Innovation Management (CENTRIM) at the University of Brighton

² This section draws heavily on a report produced by the UK Work and Technology Consortium (1997).

³ An internal inventory in 1973 counted more than 55 job reforms in the Dutch part of the Phillips company

employees through greater integration of them into management systems for continuous development (White, 1996).

Thus, the concept of work reform seems to have evolved over the last fifty years from the traditional rather mechanistic approach to managing people, processes and systems in order to increase productivity towards a more 'people oriented' interpretation. Whilst the interest in Quality of Working Life of the 1960s and '70s faded by the 1980s, with the rise of employee involvement in the 1990s, which developed with practices such as TQM, interest in issues of Quality of Working Life rose again. For example, in 1991 the ACAS Work Research Unit again began to write about the importance of a QWL culture to achieving the aims and objectives of organisational improvement through strategies of employee involvement (James, 1991):

“The aim of a QWL culture is to create a fear-free organisation in which employee involvement is vigorously pursued. It generates a high degree of reciprocal commitment, the individual to the goals and development of the organisation, and the organisation to the goals and development of the individual.” (p16)

However, today's approach to employee involvement and human resource management is set within an environment of increased competition and rapid changes in technology and markets which presents new challenges for policy makers, practitioners and researchers alike.

The concept of employee involvement has in many ways become pivotal to the achievement of competitive success for those firms following the guidance of new management philosophies such as CI, TQM and Agile Manufacturing. Employee involvement is also a concept that links strategic organisational issues with those of the role of human resources. Given its apparent key role, the following sections explore the interpretation and development of employee involvement in more depth.

The Role of Employee Involvement

Research has increasingly identified the importance of harnessing human resources as a means of achieving competitive advantage for companies (e.g. Bessant & Caffyn, 1996). "What makes a firm competitive is not so much the equipment, location, building, etc. which it possesses, but what it knows about and how it behaves" (Bessant et al, forthcoming, 1999).

The continued high take up by companies of activities such as employee involvement programmes, quality circles and problem solving teams is well documented (Dumaine, 1994). This indicates that interest in such programmes and wider management approaches such as TQM and CI, continues as organisations search for ways to decrease costs and improve productivity, quality and competitive position while enhancing employee performance and job satisfaction (Allen, Lucero & Van Norman, 1997).

In order to learn and accumulate firm specific capabilities as a means of gaining competitive advantage (Mintzberg, 1994, Teece et al, 1992) companies approaches to

change management programmes is greatly dependent on high levels of employee participation and commitment (Miller & Pritchard, 1992), Distinctive capabilities which distinguish firms from competitors can include the ability to manage complex products (Hobday, 1994), the ability to collaborate strategically (Dodgson, 1993) or the ability to network effectively and thus overcome the traditional resource shortages of smaller firms (Kaplinsky et al, 1995).

The Development of Employee Involvement.

Given the apparent dependency that achieving competitive success with new management philosophies has on employee involvement it is interesting to trace how approaches to employee involvement have developed over time. Traditionally, employees have been involved in decision-making processes through indirect participation.

That is, employees' interests are represented by democratically elected representatives who negotiate with employers on their behalf on issues which concern the terms and conditions of work. Negotiation is carried out either through collective bargaining with trade unions or, in some European countries (e.g. Germany) through works councils. At the same time, the unions have pushed for greater direct participation for their members which they view as a way to enhance the quality of working life.

Recent developments indicate that there has been an increase in the growth of direct employee involvement across Europe (Geary and Sisson, 1994). Furthermore, there has been a shift from indirect communication with employees through collective channels (union or works council structures) to direct communication with employees as individuals, for example, through newsletters and team briefing sessions. Of the European Union (EU) countries, the highest increase in direct communication with employees has been in Denmark, Spain, Ireland, Portugal, UK and France (Brewster and Bournois, 1991; Mahoney and Deckop, 1986).

Although there have been past experiments with direct employee involvement within organisations, there are differences in the characteristics of this current wave of direct involvement. Significantly, the motivation is different: previous direct participation initiatives were largely concerned with improving the quality of working life, in order to combat problems such as labour turnover, absenteeism, recruitment and retention. In contrast, current employee involvement developments are primarily concerned with enhancing business performance and are linked to strategic goals such as innovation, customer satisfaction and flexibility (Geary and Sisson, 1994). This link with strategy indicates that the impetus is now coming from management rather than trade unions (Marchington et al, 1992). Geary & Sisson (1994) argue that economic pressures, due to a lack of market stability and the erosion of firms' competitive position, have led to this increase in management interest in employee involvement. In the search for competitive advantage, management has focused on employee contribution to business performance and therefore on the need to gain consent and commitment rather than just compliance (Ketchum and Trist, 1992), finally perceiving employees as brains as well as hands. In line with the importance being placed on gaining consent and commitment for employee involvement, management literature has focused on moving the approach of managers away from one of command and control and towards facilitating, enabling and

empowering staff (Lawler et al, 1992; Lawler, 1993; Ripley and Ripley, 1992; Johnson, 1993).

Continuous Improvement and Agile Manufacturing are two management approaches which stress the role and importance of employee involvement. The following sections describe both these approaches and their impact on work organisation practices.

Continuous Improvement

Continuous Improvement (CI) is one example of a distinctive capability which places emphasis on the importance of employee involvement and enabling management approaches in attaining quality improvement through incremental rather than radical change (Jha et al, 1996). CI can be used as a means of implementing new working practices and driving organisational change. In fact the concept of work organisation can be understood through some of the elements of CI; which has been described as having the following objectives (Jha et al, 1996).

- Analysis and simplification of work processes and performance measurement.
- Application of problem solving tools for the purpose of quality improvement.
- Facilitating the implementation of more capital intensive radical improvements, such as technology, through work simplification, or optimise technology use, in the context of stable, proven technologies.
- Promotion of corporate values and the implementation of corporate strategies.
- Enable employees to apply themselves to process improvement and encourage motivation and job satisfaction, possibly through the use of HR strategies, such as training provision and redesign of reward and recognition systems.
- To ensure congruence and synergy with other organisational initiatives and elements to produce high levels of employee involvement and effectiveness in CI programmes.

The authors continue to expand on CI as a concept and how it is applied in practice; for example they point out that CI is strongly linked to and associated with quality (e.g. Imai 1986, Deming, 1986) and CI activities in manufacturing chiefly refer to the simplification of the production process, such as Just-in Time or lean production in order to reduce waste (e.g. Priestman, 1985). In the public sector and service industries CI objectives often refer to simplification and improvement of customer service as a result of reduced bureaucracy and increased employee empowerment (e.g. McLaughlin & Kaluzny, 1990, Moore, 1993).

Agile Manufacturing

The requirements to move towards more flexible and innovative ways of working, which requires levels of collaboration across intra and inter firm boundaries, are to some extent being addressed by some of the more recent concepts, such as Agile manufacturing. The Agile Manufacturing concept, which has emerged over the last decade, has been described (Goldman & Nagel, 1993) as the successor to mass production manufacturing. The Agile enterprise requires the assimilation and integration of flexible production technologies with management practices (e.g. JIT, TQM) and other resources in order to achieve speed and flexibility in both the functioning of the organisation and the management of technology (Goldman et al, 1993). The aims of agility are to "thrive in an environment of continuous and unanticipated change" (Plonka, 1997). Agile manufacturing can be accomplished by integrating the following three resources; technology, management and workforce into a

co-ordinated, interdependent system (Goldman et al, 1993) which requires a high degree of flexibility, innovation and responsiveness from the workforce.

The characteristics of the agile manufacturing enterprise requires a "knowledgeable workforce" which dictates different attitudes for managing the workforce than those prevailing in mass production environments and leads to the development of "a workplace [which is] safe [and] positively attractive to intelligent and creative people at every level" (Goldman et al, 1993).

The increased demands of lean and agile manufacturing in terms of time pressures to maintain production will put increased pressure on companies and workforces (Plonka, 1997). Against the backdrop of an older workforce, nearing retirement age, and an emerging younger workforce (Johnston and Packer, 1989) companies will face the challenge of designing tasks more ergonomically due to the increased cognitive demands and time pressures placed on the workers. Developing and leveraging the new workforce capabilities will require the workforce to make a greater contribution to the design and improvement of their own work places (Plonka, 1997). Plonka (1997) puts forward the case for human factors practitioners to play a role in developing workforce capabilities and improving human performance to meet the requirements of lean and agile environments. The issues dealt with are, worker selection, continuous skill development, workplace design, equipment maintenance, process improvement, mistake proofing, and process reconfiguration for new products.

Critique of New Management Philosophies

Can they produce long term capabilities?

Despite the widespread achievement of management practices, such as CI and Agile Manufacturing approaches, it has been argued that, "despite their professed cultural intentions [they] do not form a change programme that will produce long-term capabilities in organisations" (Close et al 1996). The authors also observe that much of the literature on transformational change, Drucker (1996), Hamel (1995), Hayes & Pisano (1995) tends to assume that manufacturing organisations are already at a reasonably high level of development in relation to the capability oriented models (e.g. Hayes-Wheelwright, 1988 model) "and only need a slight nudge to put them into full capability-led mode". This kind of literature could be seen as holding unrealistic expectations for small and medium sized enterprises (SMEs) in particular (Close et al, 1996) who are at the less advanced stages of development against capability defined models. Bearing in mind the increasingly global nature of competition and move towards more virtual and networking forms of operating (Lundvall & Borrás, 1997), perhaps existing philosophies and practices are too internally focused on tangible results at the organisational level, and as a result such practices, on their own, can not adequately contribute to a paradigm for 'work organisation'.

Have New Management Philosophies Achieved Employee Involvement?

Evidence began to grow in the 1990s indicating that many organisations, had not achieved their objectives for CI or TQM fully (Wilkinson et al, 1993). Two major factors identified as attributable for this lack of success were an overemphasis on process and not enough on results and a failure to achieve changed attitudes and culture (Plowman, 1990). That is, TQM and other related processes, it is suggested, were often conceived in a partial manner,

as a set of tools and techniques without examining the critical human resources variable. As Wilkinson (1994) stated:

“The concentration on processes without an awareness of the actual aim of the processes leads to a tick box mentality, confusing means and ends.”
(p274)

Wilkinson (1994) highlights the distinction between the soft and hard side of improvement processes - the former involving a range of tools and techniques and the soft side being concerned with creating customer awareness. He describes the softer side as carrying the message that ‘quality’ is everyone’s business and firms are urged to move away from supervisory approaches to quality control towards a situation where employees themselves take responsibility for quality. The soft side therefore puts the emphasis on management of human resources, and involvement.

Despite the importance Ishikawa (1985) placed on teamwork and involvement, it has been suggested that many writers within the TQM and CI fields tend to have a rather unitary view of the firm and underplay some barriers to change (Wilkinson and Witcher, 1991). There is little acknowledgement that there may be tensions between the production-oriented, ‘hard’ aspects of TQM and CI, which tend to emphasise working within prescribed procedures and the ‘soft’ aspects which emphasise employee involvement and commitment. Seddon, 1989 argues that the waning of employee support for TQM and CI can be attributed to management’s focus on the ‘hard’ measurable aspects such as costs and production performance and the relative neglect of the soft aspects. Such underplay of the soft aspects result, Seddon suggests, in a failure to achieve the culture change which is necessary if the approach to continuous improvement is to be successfully implemented.

In particular, despite the rhetoric highlighting the importance of employee involvement, studies have shown how several company quality and improvement programmes have failed or have not reached their full potential due, in part, to problems in gaining and sustaining employee involvement (Wilkinson and Witcher, 1991; Lengnick, Hall Teal, 1993; Godfrey et al, 1996; Wilkinson, 1990; Wilkinson, et al, 1993; Hill and Wilkinson, 1995; Pfeffer, 1994]). Wilkinson (1994) notes that the human resource side of TQM in particular is relatively neglected in the literature and that there is little systematic discussion of the conditions necessary for the approach to be successful. He observes how the literature often implies that implementation of new forms of work organisation is unproblematic for management and unitarism remains unquestioned. Implementation, is often described in the literature as a matter of motivation with the correct attitudes being instilled by simple training programmes and education. Possible conflicts of interest within organisations tend not to be addressed within the literature and are often little understood within organisations.

Similarly, more recent research conducted by CENTRIM on the human resource implications of new forms of work organisation have confirmed the view that organisations often fail to consider the strategic links, human resource system changes, management competencies and cultural factors required to fully support the successful implementation of new forms of work organisation. Yet the call for further implementation of new forms of work organisation do appear to be increasing, be it in the strategic form of continuous improvement or TQM or in terms of structural changes such as moves to teamworking and flexible working. Indeed, the European Green Paper, ‘Partnerships for a new organisation

of work' (Bulletin of the European Union, Supplement 4/97) highlights the potential of new work organisation for enabling increased productivity and prosperity within Europe. However, it also highlights that the majority of firms and public authorities are still in the traditional form of work organisation. The new working time directive is an additional pressure on firms to reconsider the way in which work is carried out.

New Forms of Work Organisation and the Role of Human Resources

Driven by the challenges of competition, the need for innovation and to meet Directives and legislative requirements increasing attention is being paid to new forms of work organisation. However, as LITTEK and CHARLES (1995) note, whilst technology has an important role to play in facilitating new forms of work organisation, meeting the challenges posed relies heavily on the potential and creativity of human resources. Although it should be said that the motivation to make use of labour's tacit skills, energy and creativity is largely to enhance productivity and retain and improve a competitive position in the market, rather than from quests for the humanisation of work or quality of working life.

LITTEK and CHARLES (1995) also note that the ways in which new forms of work organisation are designed and implemented rely heavily on collaboration between all workers in the enterprise and between employees in different firms if they are to be successful.

This changed relationship between organisations and their employees is further influenced by social and labour market changes. Unlike some other European Union Member States, the UK workforce is expected to remain fairly stable in size over the next decade. Indeed it is expected to grow slightly from 28.1m in 1997 to 28.7 million in 2007 due partly to a growth in population of working age and partly to a growth in participation rates. However, the UK workforce is ageing with fewer workers aged under 35 being balanced by rising numbers of older workers. People from ethnic minorities are, on average, younger than the population as a whole and therefore their share of the workforce is likely to grow. In addition, women's participation rates continue to grow and their share of the workforce is predicted to reach 50% (DfEE, 1998).

Thus, to summarise, firms appear to face the challenge of implementing new forms of work organisation that exploit their full potential for innovation in order to remain competitive. The literature suggests that achieving success with new forms of work organisation is highly dependent on engaging the full contribution and potential of the workforce. In addition, this challenge is set against a changing demographic and social background. Organisations therefore appear more bound to seek out an approach to work organisation that can satisfy both employee and employer needs.

The European Work and Technology Consortium (1997) Report comments on two types of strategy for new types of work organisation. The first focuses on high productivity, cost cutting and decreased demand for labour, e.g. "job enlargement without job enrichment" (the low road of innovation). The second, the high road of innovation, seeks to "create organisational spaces that liberate human creativity, and achieve a dynamic balance between product and process innovations." The report goes on to say that enterprises have to become learning organisations heavily oriented towards innovation. The 'high road' is marked by a complete break with traditional practices of bureaucratic organisations towards a situation in which all employees are involved in the continuous improvement of

both products and processes in a mutually influential hierarchical structure in which decisions flow in both directions rather than just from top to bottom.

Summary and Conclusion

Our literature review has shown that there does not appear to be a comprehensive body of work which deals with work organisation as a distinct category. The term 'work organisation' can refer to a broad range of philosophies and practices, for example Continuous Improvement and Agile Manufacturing which contain elements of quality improvement and employee involvement. However, the problem with a number of 'best practice' methods is that they can be interpreted as “a bundle of actions which do not provide the underlying cultural framework to facilitate organisational change and produce long term capabilities “(Close et al, 1996) and may be operational only within the context of the internal organisational environment.

It is clear that the environment in which companies are operating is becoming increasingly competitive, requiring speedy responses to customer demands, changing markets and increased global competition. Responses to these challenges are largely being seen through a combination of increased innovation, flexibility and cost cutting - all of which have important implications for the role and impact of human resources. Indeed, much of the new management philosophy literature highlights the need of the approach to draw on the knowledge, skills and abilities of employees in order to improve quality and productivity. Despite this reliance many organisations experience so far indicate that this important area is the very one which has been found lacking in focus and success. Certainly, achieving employee involvement and commitment in practice appears more complex than the literature seems to suggest. This issue is further complicated by simultaneous changes in demographics, social trends and organisation's need for flexibility, innovation and agility to remain competitive.

At the same time, the ways in which organisations respond to competitive challenges is having an enormous impact on the quality of working lives of employees. Increased flexibility, productivity and involvement are being demanded of them. Whilst the new management philosophies and approaches to work organisation do appear to offer opportunities for increased skill development, employability and job enrichment – the 'high road of innovation' - it is so far unclear the extent to which these opportunities are being exploited by firms. A number of questions, therefore are raised by the literature which could usefully be pursued in future research on new work organisation. These include:

- What is the relationship between competitive management philosophies and work organisation?
- What is the impact of new work organisation on firms competitiveness and employee's quality of working life?
- How is new work organisation designed and managed?
- How can the design and implementation of new work organisation be influenced?

REFERENCES:

- Allen, R.E.; Lucero, M.A. & Van Norman, K.L., 1994, 'Group and Organisational Management', Vol 22, No 1, pp 117-143.
- Bessant, J. & Caffyn, S., 1996, 'High Involvement through Continuous Improvement', *International Journal of Technology Management*, Vol 14, No 1.
- Bessant, J.; Caffyn, S. & Gallagher, M., 'An Evolutionary Model of Continuous Improvement Behaviour', (forthcoming 1999). *International Journal of Operations and Productions Management*.
- Brewster, C. and Bournois, F., 1991, 'Human Resource management: A European Perspective', *Personnel Review*, Volume 20, Issue 6, pp 4-13.
- Close, P.; Cassell, C.; Johnson, P. & Duberley, J., 1996, 'The Analysis of Performance Evaluation and Control in Manufacturing, Literature Review' for EPSRC Project (GR/L03569), *The Analysis of Performance Evaluation and Control Systems in Manufacturing*, July.
- Deming, W.E., 1986, 'Out of the Crisis', MIT Centre for Advanced Engineering Studies, Cambridge MA.
- Department for Education and Employment, 1998, 'Labour Market and Skill Trends'.
- Dodgeson, M., 1993, 'Technological Collaboration in Industry', Routledge, London.
- Dumaine, B., 1994, 'The Trouble with Teams', *Fortune* pp 86-92
- Drucker, P. (1994) *The Theory of The Business*. *Harvard Business Review*. November-December, pp 109-118.
- Emery, F., 1964, 'Report on the Hunfoss Project', Tavistock Document Series, London: Tavistock.
- Emery, F., 1976, 'Futures We Are In', Leiden, the Netherlands: Martinus Nijhoff.
- Geary, J. and Sisson, K., 1994, 'Conceptualising Direct Participation', Background Paper for Proposal Submitted to European Foundation for the Improvement of Living and Working Conditions.
- Godfrey, G., Wilkinson, A.; Marchington, M. and Dale, B., 1996, 'Competitive advantage through people? Human resource policies in firms introducing total quality management'. paper presented at HRM - the inside story conference, Open University Business School.
- Goldman, S.L. & Nagel, R.N., 1993, 'Management, Technology and Agility: The Emergence of a New Era In Manufacturing', *International Journal of Technology Management*, Special Issue on "New Technological Foundations of Strategic Management", Vol.8, No's 1/2, pp.18-38.
- Hamel, G. (1996) *Strategy as Revolution*. *Harvard Business Review*. July-August, pp 64-75.
- Hayes, R.H. and Pisano, G.P. (1994) *Beyond World Class. The New Manufacturing Strategy*. *Harvard Business Review*, January-February, pp 77-86.
- Hayes, R.H. and Wheelwright, S.C. and Clark, K.B. (1988), *Dynamic Manufacturing*, The Free Press New York.
- Hill, S. and Wilkinson, A., 1995, 'In search of TQM', *Employee Relations*. Vol. 17. no. 3. pp. 9-26.
- Hobday, M., 1994 'Complex System Versus Mass Production Industries, The Need for a Research Field', Science Policy Research Unit, University of Sussex, Brighton.
- Imai, M., 1986 'Kaizen The Key to Japan's Competitive Success', Random House, New York.
- Ishikawa, K., 1985, 'What is total quality control? The Japanese way', trans. D. J. Lu. Englewood Cliffs: Prentice Hall.

- James, G., 1991, 'Quality of working life and total quality management'. Occasional Paper. No. 50. ACAS Work Research Unit.
- Jha, S.; Noori, H. & Michela, J.L., 1996, 'The Dynamics of Continuous Improvement - Aligning Organisational Attitudes and Activities for Quality and Productivity', *International Journal of Quality Science*, Vol. 1, No 1 pp 19-47 MCB University Press.
- Johnson, R., 1993, 'TQM: "Leadership for the Quality Transformation (Part 4)"', *Quality Progress*, Volume 26, Issue 4, April, pp 47-49.
- Johnston, W.B. & Packer, A.H., 1989, 'Work Force 2000' (Hudson Institute).
- Kaplinsky, R.; Den Hertog, F. & Coriat, B. 1995, 'Europe's Next Step', Frank Cass, London.
- Ketchum, L. and Trist, E., 1992, 'All Teams Are Not Created Equal: How Employee Empowerment Really Works', Sage.
- Lawler, E., 1993, 'Managing Employee Involvement' in Christopher & Thor (eds), *Handbook for Productivity Measurement and Improvement*, pp10-1.3 to 1.13. Cambridge, Massachusetts: Productivity Press.
- Lawler, E.; Mohrman, S. and Ledford, G., Jr, 1992, 'Employee Involvement and Total Quality Management: Practices and Results in Fortune 1000 Companies'. San Francisco: Jossey-Bass.
- Lengnick-Hall, M.; Heinrich, G. and Middleton, E., 1993, 'Employee involvement makes TQM work'. *Personnel Journal*. Vol. 72. no. 10., pp. 108.
- Littek, W. and Charles, T. (eds), 1995, 'The New Division of Labour: Emerging Forms of Work Organisation in International Perspective', Walter de Gruyter.
- Lundvall, B.A. and Borrás, S. (1997) *the Global Learning Economy: Implications for Innovation Policy*, Report Based on Contributions From 7 Projects Under The TSER Programme, DGXII, Commission of the European Union.
- Mahoney, T. and Deckop, J., 1986, 'Evolution of Concept and Practice in Personnel Management', *Journal of Management*, Volume 12, Issue 2, pp 223-241.
- Marchington, M.; Goodman, J.; Wilkinson, A. and Ackers, P., 1992, 'New Developments in Employee Involvement', *Employee Department Research Series*. Number 2, May.
- McLaughlin, C.P. & Kaluzny, A.D., 1990, 'Total Quality Management in Health: Making it Work', *Health Care Management Review*, Vol. 15, No 3, pp 7-14.
- Miller, R.W. & Pritchard, F.N., 1992 'Factors Associated with Workers Inclination to Participate in an Employee Involvement Program', *Group and Organization Management*, 17, pp 414-430.
- Mintzberg, H., 1994, 'The Rise and Fall of Strategic Planning', Free Press New York.
- Moore, E.R., 1993, 'Prudential Reinforces its Business Values', *Personnel Journal* Vol. 72, No 1, pp 84-189.
- Nagel, D., 1991, '21st Century Manufacturing Enterprise Strategy', Lehigh University
- Pfeffer, J., 1994, 'Competitive Advantage Through People', Harvard Business School Press, 1994.
- Plonka, F.E., 1997, 'Developing a Lean and Agile Work Force, Human Factors and Ergonomics in Manufacturing', Vol. 7 (1) pp11-20, Jon Wiley & Sons, Inc
- Plowman, B., 1990, 'Management Behaviour', *TQM Magazine*, Volume 2, Issue 4, p217-219.
- Press Inc., Bethlehem PA, September 5.
- Priestman, S., 1985, 'SQC and JIT Partnership in Quality', *Quality Progress*, Vol 18, No 5 pp 31-34.
- Ripley, R. and Ripley, M., 1992, 'Empowerment, the Cornerstone of Quality: Empowering Management in Innovative Organizations in the 1990s', *Management Decision*, Volume 30, Issue 4, pp 20-43.

Teece, D.; Pisano, G. & Shuen, A., 1992, 'Dynamic Capabilities and Strategic Management', University of California, Berkeley, CA.

The European Work and Technology Consortium Report, (1997) 'Work Organisation, Competitiveness, Employment: The European Approach', Volume II, funded by DG-V, European Commission.

Trist, E., 1978, 'Adapting to a Changing World', Labour Gazette, 78, pp14-20, January.

White, G.P. (1996), A Survey and Taxonomy of Strategy -Related Performance Measures for Manufacturing. International Journal of Operations and Production Management, Vol. 16, No 3, pp 42-61.

Wilkinson, A. and Witcher, B., 1991, 'Fitness for use? Barriers to full TQM in the UK'. paper presented at British Academy of Management 5th Annual Conference, University of Bath.

Wilkinson, A., 1990, 'Managing Human Resources for Quality', in B. Dale., Managing Quality, Prentice Hall International.

Wilkinson, A., 1994, 'Managing Human Resources for Quality' in Dale, B. (ed), Managing Quality, Prentice Hall, pp273-291.

Wilkinson, A.; Redman, T. and Snape, E., 1993, 'Quality and the Manager', Institute of Management Report, Institute of Management, London.