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Some 'real' problems of 'virtual' teamwork

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ABSTRACT

One of the organisational concepts which is currently receiving considerable attention is that of the 'virtual organisation' (Dividow and Malone, 1992) and associated notions such as 'virtual teamwork'. Although admittedly replete with conceptual confusions and clearly accompanied by considerable 'hype' such organisational forms, it is claimed, address major transformations in the social, economic and technological environment in which organisations operate. These 'virtual' organisational arrangements consist of networks of workers and organisational units, linked by information technology in order to give coordination to their activities, combining their skills and resources to achieve common goals. Such teamworking, "less fettered by the constraints of traditional hierarchies and speres of responsibility, engenders a heightened sense of empowerment, commitment and collective responsibility" (Casey 1995:45). This sort of analysis clearly impacts on the various debates on 'skill' but such diagnoses of organisational change need to be subjected to close empirical examination since other views are considerably less sanguine about the consequences of technological change and more sceptical about the likelihood of such a transformation in teamworking, skill, identification and empowerment (Kunda 1992).

This paper attempts just such an empirical investigation by reporting on a long term ethnographic study of the implementation of 'virtual teamworking' (and the associated issues of organisational change, skill, empowerment and IT use) within a 'High Street' Bank. Financal insitutions have long been in the forefront of the use of distributed computer systems and recently have begun to explore, in conjunction with major organisational changes, the increased use of IT to support decision-making, quality control and customer services. These systems are intended to incorporate a much greater support for *shared* work across the organisational divide - that is, 'virtual teamwork' in which organisational function or process is more important than organisational location. 'Virtual teams' are an organisational form established in the various specialised centres of the bank and designed to replace the more traditional hierarchical administrative work organisation. The organisational objective was to replace the permanence of administrative structures with the flexibility of task oriented teams which bring skills and expertise together as and when required, and promote the development amongst workers and managers of a new variety of skills, competences and responsibilities.

The implementation of 'virtual teamwork' is not, however, unproblemmatic and the ethnographic research reported here attempts an in-depth understanding of the interactions between the 'virtual' and the 'real', between organisational change, performance and skill by focussing on the ways in which such strategic plans as 'virtual teamwork' are instantiated in day-to-day working practices. The ethnographic research highlights a number of real organisational problems that have emerged with the movement towards virtual teamworking.

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Introduction: the 'virtual team'.
One of the organisational concepts which has been receiving considerable attention is that of the 'virtual organisation' (Dividow and Malone, 1992) and associated notions such as 'virtual teamwork'. Although admittedly replete with conceptual confusions and clearly accompanied by considerable 'hype' such organisational forms, it is claimed, address major transformations in the social, economic and technological environment in which organisations operate. These 'virtual' organisational arrangements consist of networks of workers and organisational units, linked by information technology in order to give coordination to their activities, combining their skills and resources to achieve common goals.

Just as organisations are perceived to have changed in response to technological developments so, too, have the associated skill requirements. Zuboff, for example, writes of new forms of organisational behaviour "in which relationships are more intricate, collaborative and bound by mutual responsibilities of colleagues" (Zuboff 1988:6). In a similar fashion Casey (1995) detects the development of new forms of teamwork, "in which people share knowledge, skills and resources and work cooperatively in the manufacture of their products... Relationship to a product, to team family members and to the company displaces identification with occupation and its historic repository of skills, knowledges and allegiances." (Casey 1995: 109). Such teamworking, "less fettered by the constraints of traditional hierarchies and speres of responsibility, engenders a heightened sense of empowerment, commitment and collective responsibility" (Casey 1995:45). This sort of analysis clearly impacts on various debates on 'skill' but such diagnoses of organisational change need to be subjected to close empirical examination. Other views are considerably less sanguine about the consequences of technological change and more sceptical about the likelihood of such a transformation in teamworking, skill, identification and empowerment (Kunda 1992). As Ducatel (1992) writes; The absence of an a priori direction in which the technology will take organisations makes the empirical investigation of how computer network technology is being implemented of the utmost importance and urgency." [Ducatel 1992:166]

This paper attempts just such an empirical investigation by reporting on a long term ethnographic study of the implementation of 'virtual teamworking' (and the associated issues of organisational change, skill, empowerment and IT use) within a 'High Street' Bank. Financal insitutions have long been in the forefront of the use of distributed computer systems and recently have begun to explore, in conjunction with major organisational changes, the increased use of IT to support decision-making, quality control and customer services. These systems are intended to incorporate a much greater support for *shared* work across the organisational divide - that is, 'virtual teamwork' in which organisational function or process is more important than organisational location. 'Virtual teams' are an organisational form established in the various specialised centres of the bank and designed to replace the more traditional hierarchical administrative work organisation. The organisational objective was to replace the permanence of administrative structures with the flexibility of task oriented teams which bring skills and expertise together as and when required, and promote the development amongst workers and managers of a new variety of skills, competences and responsibilities.

Like many other financial institutions in the UK, and elsewhere, the Bank implemented a transformation of the 'traditional' organisation of banking services primarily to enable the organisation to become more competitive but also to align it with perceived developments in managerial philosophies, technological infrastructure, modern working practices, and increasing competition in the financial markets. To meet this competitive challenge, the Bank saw a need to change the culture of the organisation from its traditional, predominantly 'administrative culture' to what was regarded as a modern 'service and selling culture'. This strategic plan was implemented in various ways; through general and comprehensive restructuring involving the centralisation and standardisation of processes; and through more experimental and radical modes of business. The most significant organisational development involved the centralisation of 'back office' processing and the creation of specialist centres, such as Lending Centres, Service Centres, and Securities Centres, all servicing 'high street' Customer Service Branches.

Method: ethnomethodologically informed ethnography - 'hanging around' while work gets done.

The central feature of the method deployed in this study - ethnomethodologically informed ethnography - is the immersion of the researcher in the work setting under investigation in order to uncover features of the sociality of work and its organisation; how the work 'gets done'; the conversations, gossip and asides; the interruptions and mistakes; the details of the how the paperwork and computer work are practically accomplished as part of routine, ordinary, taken-for-granted, 'real world' work activities. The understanding of the accomplishment of work is consequently closely tied to, 'grounded in', the detailed observations and data derived from the work setting itself. The justification for the use of the method in the study of work lies in the recognition and explication of the variety of tacit skills and cooperative activities through which work is accomplished and in making these processes and practices 'visible'. Its focus is to understand the situated character of work, that is, the work seen as a practical production by social actors performing their activities within all the contingencies of local circumstances. The method seeks to preserve and portray the variety of activities and interactions that comprise the 'workaday' of working life and the ways in which these are understood and accomplished by those who do that work. Consequently, while ethnography is frequently caricatured as simply 'hanging around' and much of ethnography does indeed involve 'hanging around' a worksite, this is not its point but a means of achieving the objective of uncovering the sociality of work.

This paper presents some initial findings from long term ethnographic research on a retail bank which has been undergoing major organisational change, a key aspect of which is reputedly the creation and use of 'virtual teams' for the flexible organisation of routine work. As collaborative work is increasingly computer supported, 'virtual teamwork' across the organisational divide supposedly replaces more traditional, hierarchical, work organisation. We subject this idealised diagnosis of organisational change to close empirical examination. This ethnomethodologically informed ethnographic study provides then an in-depth understanding of the interactions between the 'virtual' and the 'real', by focussing on the ways in which strategic plans are instantiated in the day-to-day working practices.

Managing Virtual Teams: from management by 'walking about' to management information systems.

As the Bank began its process of redistribution and centralisation of functionality - first through 'Delivery Strategy' and then through 'Building the New Retail Bank' - issues of management control and management information became paramount, particularly the identification and calculation of labour costs and requirements. This management information served a variety of purposes and was collected in a variety of ways - indeed the issue of identifying and measuring various outcomes was a major topic in management meetings - but beginning with paper based, personally generated measures the system rapidly evolved towards electronically produced reports. In the early stages, as a result of a management consultancy report, the Bank instituted the Personnel Management Programme (PMP) designed to realise a number of benefits including the measurement of productivity and efficiency, and to assist management in the allocation of staff to work tasks.

Every day, the Assistant Managers completed a PMP sheet of work pending and then calculated, using the PMP and Work Tally Sheet[i], how much work there was to be done. Each staff member completed a Daily Work Management sheet which detailed what they accomplished the day before and how much time each activity took. These documents were then used - in theory at least - to allocate work, identify backlogs and bottlenecks. However, PMP was very time consuming. Even in those units involved in routine, machine driven work, such as Entry Handling, a number of calculations and document entries had to be done by hand; tallying the work, using a formula (and calculator) to calculate the amount of time required to complete it, and examining each section member's Work Management sheet to see how much of the work had been done.[ii] The 'Assignment Planner' used PMP and the Work Management Sheet (and sometimes the 'Customer Volume Tally Sheet') to work out how much work

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[i]   The Assignment Planner sheet is a tally sheet of different kinds of work each of which has a time allocation attached to it as a 'reasonable expectancy'.

[ii]   As mentioned earlier, each job has a work sheet on which the staff member records the work done and the time taken. As might be anticipated, there are some problems in accepting the accuracy of these calculations, as indicated in this excerpt from the fieldnotes, "*Went through worksheet with X..and calculated that 12 hours work done yesterday. Only in for 9 hours so had to rework it.*".

was accomplished 'yesterday' and was thereby supposed to form the basis for the allocation of work tasks.

As an early manifestation of an obvious cultural change within the Bank - from a service and administrative culture to a cost-conscious selling culture - there was little enthusiasm for this early attempt at 'scientific management'; what little support there was being couched in terms of what it indicated about productivity - that the staff were 'working hard'. However, this judgement was somewhat muted by comments to the fact that "in an office of this size", management could see when someone is "slacking" without the need for PMP. It was also suggested that PMP was really only of much use to 'poor' management by enabling them to make decisions about the allocation of work tasks; a judgement which 'good' management could make by being familiar and involved with their work force. To 'good' management, PMP was seen as time consuming, telling them little that they do not already know by 'walking about'.

As the process of centralisation has progressed and the functional allocation of tasks has resulted both in the increasing geographical distribution of activity and an increase in unit size, various forms of electronic monitoring have become increasingly important. One example of this is the varied reports available via sophisticated monitoring software used in the various telephone 'call centres' in the Bank. The monitoring kit, positioned on the Manager's desk, provides a real-time display of inbound, outbound, available and unavailable phones (with times attached to each). Each 'operative' is represented on screen by a block - the colour of the block indicates their present status - inbound, outbound, unavailable etc whilst on the manager's screen a series of calculations and indicators appear - change in accordance with state of the service eg, grade of service (a calculation based on speed of response, waiting times; calls abandoned etc) queuing time (in secs); calls abandoned; total calls abandoned; calls recorded; answering speed (average). Each indicator can be examined in more detail eg calls abandoned can be examined - equipment will show how long the caller was waiting before they abandoned - 5 secs; 10 secs and so on - and can tell whether the call was abandoned before or after hearing queuing message. On the walls of the office an electronic message board continuously displays the current status of the phone team - the grade of service; how many calls are waiting; the average response time in seconds[iii]. Management information is initially provided in the form of a number of computer generated reports; for example an 'agent report' provides details of what individuals are doing throughout the day in terms of whether they are available or unavailable for calls; how many calls they took; average time of calls and so on[iv] These reports are then used to create Excel spreadsheets, as part of a management information pack, which effectively summarise the information for those higher in the management hierarchy. This process is outlined in the simplified fieldwork extract below:

> X & Y have gone upstairs to the 12th floor to 'get some quiet' and avoid interruptions whilst they devise a 'Management Information Pack' that can be used by the Manager of the Lending Centre at a meeting at Regional Office next week. The manager has already, in a previous managers' meeting, forcefully emphasised the importance of this information and of the time frame within which it has to be produced (*"Can you produce it by Monday?" "Well,.."""No, I said can you produce it by Monday?" "Yes"*).
> Y is talking about what management information is required and looking at a handwritten outline of the kinds of categories and calculations he thinks they should include. On one sheet of paper he has written a number of ideas; 'non-utilisation periods', R/E (reasonable expectancy) how many calls could we have taken?', 'what does the productivity gap equate to in man hours', speed/quality/control', industry comparisons' and so on. On another he has divided the sheet into columns as the precursor for producing a spreadsheet. Heading the columns are categories such as 'calls offered', 'staff required for 100% calls handled', 'staff required for 90% calls handled'. A series of comments are written down the side - these are later to form the basis of their discussion - 'figures as at certain date with customer base of X'; 'do subsequent charts/spreads for take-on of Centres for rest of year multiplying calls offered by factor of X (customer base in future divided by customer base now'; 'when new 'actuals are obtained

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iii   'Management' views of the information generated generally emphasised its importance in terms of training or dealing with complaints rather than as a mode of surveillance. One manager, for example, gave an example of a customer who wrote in complaining about a particular operative and how long they had been kept waiting - the software provided the means whereby were able to check and prove that the complaint was unjustified - whereas in the past the operative would *"simply have got bollocked"*. Others suggested that system could be used to 'help' the team enabling them go to their managers/supervisors to argue for more help, for the release of team members and so on.

iv   In some sections these reports are then displayed on the walls of the office.

from future ACD information revise figures for comparisons and compare to model'; 'do we want to put in model numbers of staff to see divergence?'. A final sheet has a complicated calculation by which they might obtain a measure of effectiveness.

Whilst this is going on X is looking at the BBS (Balanced Business Scorecard) as it will be important that the measures reflect elements of the BBS both for the section and him personally and at a basic set of management information spreadsheets that they produced last week for the managers' meeting which forms the basis for this current MI pack.

Y uses the computer to get an Excel spreadsheet on screen - 'AOBT accuracy' (advice of borrowing terms) - they then chat about the layout of the spreadsheet. The talk centres on how much information they need to display and how to present it; the emphasis is on 'totals', totalling columns because "... all he'll (the Centre Manager) be interested in is that (pointing at total)". They then work together setting up the various 'macros' (calculations) for the various parts of the spreadsheet, talking about its use for making predictions with the suggestion that *"that would be good for 'Hours by Design'"*(a new initiative on hourly working within the Bank). They then turn to the MI figures they produced last week - *"these are great . . . but I think we need the graphs and a comments box . . . he (the Manager) doesnt need all that (the detailed figures)"*. They then use the computer to access the spreadsheets they produced last week - unfortunately they do not appear to be in the folder and drive they expected - *"where are they?...its a bit of a bugger when you cant remember where you kept it..".*

The point about this rather lengthy, even if simplified, extract - although it actually covers only a small amount of the time spent on producing a Management Information Pack - is the recognition of the 'work' and decisionmaking involved in this 'accomplishment' of management information. Despite the use of relatively sophisticated monitoring software the bald figures produced need considerable interpretation before they can have any value as 'management information'. So, for example, one manager (in a different centre but using the same call-monitoring software) pointed to some of the figures produced and said; *"his % time was low because he kept wandering round the office..I came in with a ball of string and tied him to his chair...his times are better now"; "her time on the phone was low because she came in and then went out to work with another team"*, or commenting on the figures for grade of service, *" we try to keep it above 90% .. last Monday it fell to 72% - ... - three staff were on holiday and three were sick .. we could'nt answer the phones any quicker ... last week I promised them cakes if they got the GOS up to 94%..".* Above all, the main point to make about the decisionmaking process and the usage of information (whether on paper or computer) is concerned with appreciating the careful consideration of the information. That is, it is not a question, as Harper (1989) points out in his ethnography of accounting, of 'just any old numbers' but that interpretation of the information, and decisionmaking from the information is dependent on certain, 'nuanced' expectations - nuanced expectations that are themselves still very much a product of 'management by walking about'. In this way the manager, in the management of a 'virtual team' is compelled to negotiate between the virtual and the real; between the team represented 'in the machine' and the team encountered in everyday work.

Human relations, technology & organisational change: 'buck passing' and the development of a 'blame culture'

"Have we got time to piss about with this?"
"I think I'll put a note saying 'please put something because we're not psychic'
The organisational and geographical dispersal that has accompanied 'Delivery Strategy' has had some unfortunate side effects within the Bank, most notably the potential for the emergence of a `blame culture', a culture of 'passing the buck', with poor communications leading to the lack of a consistent, customer-centred approach and impacting on teamworking across the organisational divide. Collocation creates and encourages particular, often very fierce, group loyalties, loyalties to the unit rather than to 'the Bank' as a whole, and the development of a 'them and us' attitude, (where 'them' is any other organisational unit) in which 'they don't understand the pressure/procedures we're working under' or 'we do it right but they do it wrong' becomes a common, if not constant, refrain, and at management level in can result in the creation of 'functional baronies'

Our observations in the Bank and elsewhere have consistently identified the extent to which the accomplishment of work tasks is associated with informal teamwork, or 'constellations of assistance', which sometimes depend on various forms of 'local knowledge'. Observations in a Lending Centre show how close teamwork and team discussions resulted in a commonly accepted 'view of the world' and facilitated the rapid exchange of information about particular cases or correct procedure. Amongst the usual office banter, which in itself plays some part in the development of 'teamwork'; advice and training is dispensed in an informal fashion. In this example the Lending Officer (ZZ) is preparing an

interview brief for the branch concerning a takeaway restaurant. The Lending Officer discusses the brief with the Assistant Manager, a discussion which soon involves other members of the team as they consider issues of insurance and security.

> *ZZ talking to Assistant Manager.."do you think this comment is fair enough?..(reading from brief) .. on the issues for the proposition... 'whilst we note comments on last report that business may be seasonal previous owners of the business did not make a success of the business, account at IDRD, and conduct of the account since opened gives great deal of cause for concern.."*
> *AM "yeah.. certainly not give .. the OD"*
> *ZZ: " I've put that on there..I think they're going to have to consolidate it but on strict credit working and full security"*
> *AM: " concerned at the lack of turnover through the account... I dont think you've got a cat in hells chance of turning it around.."*
> *ZZ: " I dont"*
> later..
> *ZZ ..I think..it ought to be consolidated on a secured BDL..*
> *AM: get a charge on the lease.. even if its of minimal value.. it will save him flogging it on and disappearing.... just put lease question mark.. tie him into the business if nothing else... question terms of lease.. we've lost money on that business once I've no intention of losing it again..*
> *ZZ: I think we've already lost it quite honestly*
> *AM: well, no more then shall we say..*

The 'them and us' culture thus developed had an obvious organisational relevance in the early stages of 'Delivery strategy', through the effective development of two 'cultures of lending' within the bank. Observations of differences in the treatment of lending between the branches and the Lending Centre suggested that, particularly within the branches, decision-making, despite the range of sophisticated computer support, often came down to 'gut feeling' or as one Lending Officer put it; *"in the end do you trust him to pay the money back?.."* or another *"for a one man band like that you either lend him a couple of grand because you trust him .. they're (computer generated Risk Grades) fairly meaningless.."*. Lending on 'gut feeling' clearly benefits from the kind of detailed 'local' knowledge of the customer commonly found in the branches; *".. we know him quite well..its not a bad account but we've been bouncing on him like nobody's business..the Lending Centre.. they take the view that they're a control situation ..one letter then they bounce. As a branch we take a more practical view - tend to be a little more sympathetic..of that (£ZZ)excess...... he's only about £100 over his limit.. he's brought it on himself really..he should've phoned. The Lending centre..(are) much more rule driven.."*and perhaps explains some of the differences in lending practise between the Lending Centre and the Branch, with the Lending Centre being much less free and much less likely to take an idiosyncratic view of lending proposals.

It is in this context that 'awareness' becomes a 'skill'. By 'awareness of work' we mean the way in which work tasks are made available to others and the important role that this plays in the 'real world real time' social organisation of work. The various ways in which 'awareness' is developed, in which work is made public and available to others, are essential ingredients in 'doing the work' as part of a socially distributed division of labour. This approach to skill is informed by debates on skill as a form of knowledge; knowledge which is often partly informal, tacit and the product of the acquisition of the culture in which a particular work activity is accomplished (Collins 1987). As Anderson et al (1989) note: *"From the point of view of an actor in a division of labour, working through the endless stream, getting things done, means doing-what-I-do and passing tasks on to others so they can do what they do."* (1989: 161) What this notion draws attention to is the fact that, from the individual worker's point of view, the practical accomplishment of the work requires learning and knowing how to use, the information, artefacts, files, etc., relevant to her work, as well as knowing those which are not and the way in which her work meshes with others. What this points to, and it is connected to the idea of 'local knowledge', are the subtle but essential competencies involved in making sense of, and thereby being able to make it available to others, what is 'going on'. These could be described as competencies required for 'mutual intelligibility' on the part of the members of a work team and the ways in which, to put it generally, 'X's problem' can be seen as 'something I know about'. As has been shown in other contexts (Harper and Hughes, 1993), this kind of competence is essential to a whole range informalities involved in performing work activities, including 'knowing where others are in their work', 'getting round the inadequacies of the system', 'knowing who to rely upon to get things done', and more.

What thus emerged from this extensive fieldwork on teamwork within the bank is the inadequacy of any simplistic, unidimensional and context free accounts of 'skill', linking, for example, deskilling,

degradation and routinisation of work with increases technology[v]. While clearly work can be analysed in terms of skill and skill requirements such an approach tends to ignore the interweaving of skills in work; the variety of approaches and skills used for task completion as well as the context in which skills are exercised. Skill requirements are constructed through a social process and in a particular social context and, in many ways, it is this process and this context that it is important to describe and understand. Work context influences and shapes both the opportunity and the motivation workers have to exercise skills that may be regarded as important. It is, perhaps, for this very reason that the creation of a 'selling' culture within the bank has proved difficult; turning, "tellers into sellers" requires rather more than executive mission statements, 'visions' or slogans - it requires an organisational context in which selling skills become relevant to the work.

Virtual teamworking, 'organisational nostalgia' and morale
"X says morale is if you can go home at the end of the day and say you've done a good job...but 90% of the staff can't....and you can't say anything, can you, cos you feel a bit negative..."
Given this major reorganisation of the Bank towards forms of 'virtual working' and the uncertainties, particularly, over jobs, that such changes tended to generate it is hardly surprising that there was aconsiderable interest in staff 'morale'. However, while there was talk of low morale this seemed to have little impact on the work itself in terms of time wasting, slipshod work, or in resentful attitudes toward management.[vi] Indeed, there was a noticeable professional pride and commitment to the work, facilitated by the 'avuncular' management style. However, there is an aspect to this issue of morale which is of interest from the point of view of how the staff saw themselves, and their fate, in relation to the Bank as an organisation[vii]. Above all the specific changes induced by 'Delivery Strategy', and acknowledged as central to them, was the perception of a change in the 'culture' of the Bank involving a movement away from its traditional function of 'administering accounts' toward an emphasis on selling; a change that clearly many of the staff in the branch felt uncomfortable with or inadequately prepared for. While it may be, perhaps, a little exaggerated to suggest that there seemed to be almost a collective sense of loss about the Bank, it was certainly the case - especially in the early stages of 'Delivery strategy' - that there was a great deal of concern and uncertainty, as well as a sense of what Gabriel (1993) calls 'organisational nostalgia" - reflecting not necessarily a longing to return to some mythical past but discontent with the present and the perceived direction of the future. Unlike that noted by Fearful (1992), this mood was not associated with the movement towards, or introduction of,

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[v]   Rajan (1988) argues, for example, that IT has not brought about universal deskilling but has resulted in the work of middle managers and clerks becoming more skilled. Similarly, Bertrand and Noyelle (1987) suggest the emergence of new set of competencies in banking, the development of new skills - 'reskilling' or 'compensatory skilling' (Penn, 1990) - associated with changing market conditions. Austrin (1988) states: "to argue the teller's job or the bank manager's job has been deskilled by technology is simply absurd."

[vi]   Despite many years of research into the effects of morale on work performance in a variety of work settings, no general consistent relationship has been found. It is probably misleading to treat morale as a unitary concept but, rather, one which alludes to or draws upon a diffuse collection of terms which describe the affective responses to work. Their relationship to work activities and their performance, however, remains an open and empirical question.

[vii]   What we are pointing to here is a major theoretical issue within organisational theory but intend only to allude to some aspects of it here. Despite the plethora of 'images of organisations' (Morgan, 1986; Burrell and Morgan, 1979), organisation theory tends to be dominated by a 'container' conception of organisation (Coulter, 1982) in which the organisational structure is seen as an *external* frame 'determining' the actions of organisational members. Such a conception, apart from the dangers of reification, pays scant attention to the obvious but important point that it is through the actions of organisational personnel that organisationally relevant activities are done. As Bittner (1965) argues, it is not only the analysts of organisations who hold conceptions about the character of organisations, but also the members of organisations who, in and through their understandings, produce and reproduce the sense of their activities as activities-relevant-to-the-organisation's-affairs, whatever these may be. In other words, the organisation is not some "ghostly presence *outside* of organisational life" (Bowers, 1994) but exists in and through the conceptions held of the organisation by its members. The upshot of the methodological move to place the organisational member at the centre of the analysis is to prevent appeal to some conception of the 'organisation as a whole'. It is not that members do not have such a sense or, indeed, fail to see their actions as constrained by organisational rules and stipulations. Rather, it draws attention to the ways in which members perform their actions in order to accountably 'conform to', 'sustain', 'follow procedures', 'carry out', etc., organisational requirements to provide for their sense as organisational actions.

computerisation but seemed to be linked more to the movement away from the historical administrative function of the Bank towards a new emphasis on selling and standard procedure. In this view 'standard procedure' was little better than 'red tape' in which the routines of paperwork become not only the visible and tangible representations of the work but an end in themselves. However, as the following comment suggests, there are other aspects to this:

> *"I've found in the Bank its best not to make your own decisions - if you follow what's in the action sheets you cant go wrong...you question things but then just do as you're told."*

In other words, routine can mean that workers become 'bystanders' in their own working life (Latané and Darley, 1970) and become reluctant to intervene beyond the routines because this is seen as 'bringing trouble'[viii].

Given the awesome and commendable intensity with which people worked, it is interesting that 'low morale' when it did manifest itself seemed less associated with the prospect of redundancy in the future than with the backlog of work (a product of staff reductions) and the inability to keep up with the pressure of work. In other words, morale seemed more closely responsive to local circumstance than it did to the Bank as a national institution. That is, for the members of the branch, it was 'local relevances' which framed the issue of morale for them, and manifested in what it meant for their day-today work. There was also an 'occasioned sense' of what 'the Bank' is and what it meant to them. For example, what might be termed the 'avuncular' management style of the branch - friendly, 'walk around', supportive, 'concerned' - was often seen as 'their management' which could and would protect them from the "worst excesses" of Bank policy which was seen as formulated and handed down from 'on high'. In other words, a divide was drawn - though not always and not systematically - between the Bank as represented in the local branch, and the Bank as a remote, distant and somewhat detached body to which, in some vague fashion, the branch belonged. What we are trying to draw attention to here is the 'local' character of organisational life, especially within large and, in effect, federated organisations, or what some might term 'virtual teams'.

Virtual teams and managing customers: getting to know the 'customer in the machine'.

> *"The classical model of bank work involved customers and staff in face to face trust relations. Banking was thus far from an exclusively impersonal set of accounting calculations and ledger entries. It was, and to a declining extent still is, based on intensive and often long standing personal relations."(Smith & Wield 1988)*

A number of writers have pointed to the growing importance of the 'consumer' or the 'customer'; of the arrival of 'new times' with an emphasis on consumer choice and a movement towards post-Fordist, individualised consumption.

> "consumption rather than production is dominant as consumer expenditure further increases as a proportion of national income; new forms of credit permitting consumer expenditure to rise, ... and the ....reaction of consumers against being part of a 'mass' and the need for producers to be much more consumer driven, especially in the case of service industries and those publicly owned; the development of many more products each of which has a shorter life...." (Urry 1990: 277)

Whether post-Fordist consumption and consumer sovereignty actually exist is a matter of some considerable debate, however Burton (1994) argues that financial service producers have gone to considerable lengths to retain existing and attract new customers;

> "There has evidently been a shift from organisational cultures which were conservative, reactive and cautious, and where the main element of the job was administration. Contemporary financial service personnel are required to be proactive, entrepreneurial and possess a high level of interpersonal skills and marketing expertise." (Burton 1994:5)

This section is concerned with the impact of this 'new consumerism' on teamworking within a highly distributed organisation. As the bank began 'Delivery Strategy' and the process of centralisation, there was a recognition of some of the tensions that would develop between a policy of centralisation to promote cost reduction and a desire to continue to appear as a local 'high street' bank and some of the problems this conflict might subsequently create for its avowed policy of customer service. This

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[viii]   An extreme illustration of this sentiment was a staff member who suggested that even if she saw someone taking money out of the till she would not do anything about it because it would involve her in 'too much trouble'. It is not that she is condoning stealing since it would be discovered through the routine workings of the system, but by then it would be 'someone else's problem'. Her job is not to check the till.

tension manifested itself in a number of interesting ways in terms of the working of 'virtual teams' most notably in the conflict between 'relationship management' (in the sense of managing accounts according to what was 'known' about the customer as the product of a longstanding relationship) and management according to expert risk grading and assessment packages; and in the tension between responding to the customer and what might be seen as 're-configuring the customer'. To some extent (but not absolutely) this was resolved at the level of the account with accounts deemed 'mass market' being largely managed 'by the machine'; as one manager said of the increasing reliance on technology:
"(lending is) ...a lot more process driven...the machine will give you a recommendation..Assistant Managers can override the machine, Controllers can't...if the machine says 'No' and that decision is overridden its 90% likely to go down the pan...loans 'down the pan ' have reduced considerably since the introduction of machines". However, even important business accounts were subjected both to various expert risk grading packages and to a formal process of report; and similarly even customers in the mass market were liable to make complaints that demanded a personalised, managerial response.

One of the effects of the centralisation process was the attempt to ensure standardisation and consistency in decisionmaking and procedure not only through increasing reliance on the technology but through an attempt to re-configure customers and staff. This involved developing a set of expectations as to how accounts should be handled; a set of expectations that emphasised the application of standard procedure as opposed to the more personalised approaches of the past.
".. we have'nt got time to write those kinds of letter .. becuase of volume and we are process driven .. we havent got the time to make exceptions.. we know the Bank will stand by us .. because its rule driven.. it works because we're dealing with sheer volume.. we're not being asked to get involved deeply with every customer who comes on the phone.."
So, for example, a standard set of templated letters were developed to send to accounts that were 'out of order', accompanied by a 'script' to be used whenever customers complained;
"complaint.. she wants to know why we bounced the same day she paid in..." "..did we not write back and say same day was too late?..take the normal line with her and see how it goes.."
Of course this did not guarantee that customers would respond to what were effectively computer generated letters informing customers of the state of their account in the same impersonal way;
"Might I enquire as to what particular charm school gave you your wonderful way with sarcasm and barefaced cheek! You were bloody rude... I demand, by return an apology. Your failure to do this will rsult in my solicitor writing to your head office to take the matter further. May I remind you, the Bank is in business to make money, not high handed moral judgements. You have overstepped the mark in a most appalling way and in your position cannot be excused.."

It is evident that such an approach to customers is far from unproblematic. Consequently one aspect of 'skill' and of team working that appeared of particular importance and was regularly manifested in the fieldwork observations was that of 'demeanour work' and 'emotional teamwork' (Randall and Hughes, 1994). While traditionally considerations of 'emotion' have been missing from accounts of organisational life, with its emphasis on the 'rational', and by implication 'non-emotional', actor. And while equally clearly banks are not supposed to be emotional hothouses, 'emotion work' - the managing, control and occasioned display of appropriate emotion - was also clearly part of 'doing the work'. Individuals working in the various sections of the bank are expected, and sometimes have no alternative, as members of a team to embark on various forms of demeanour work or emotional control. This is not simply a feature of Bank policy, reflected in "smile, your next customer may be the mystery shopper" or the comment 'a complaint is a sales opportunity'. Demeanour work - often translated or interpreted as 'smiling down the telephone' - was a regularly observed feature of the customer contact even when this was infrequent;

1. On phone - re: charges - and Bank policy;
Demeanour work.."I'm sorry that you;re disappointed with our service...if I can be of any further help..
2. Using screen while on phone...giving details of acc over phone...
"I will pass on your comments to my manager....its not so personal as in a Branch...I'm sorry about that..if I can be of any assistance.."
3. Call ends - says to colleagues - "You cant get a word in edgeways with him.."
4. Goes to find and talk with Supervisor..
.......later
Discussion with X about charges - man had phoned from Australia re charges to complain about charges - Bank charges likened to buying underwear (?) - "its like Marks & Spencers or Jaegers...you make your choice"

Despite the emphasis on routine that attends the implementation of 'Delivery Strategy', as Suchman (1986) notes, routines are not slavishly adhered to and generally and typically involve the use of judgement. Specifically the circumstances under which the routine is to be strictly followed and the circumstances under which modifications or 'short-cuts' may be employed through the utilisation of informal teamwork or 'local knowledge' is a matter for 'occasioned determination' in the course of the work. Such 'local knowledge' is seen as providing short-cuts to task completion and containing customer dissatisfaction. 'Local knowledge' also often incorporates ideas about methods for short-cutting or facilitating tiresome and time-consuming routines comprising what Bittner (1965) calls 'gambits of compliance'; that is, techniques that enable workers to 'get the work done' whilst giving the appearance of complying with the formal rules.

Centralisation, whether explicitly or not, in effect designed the jobs so that they would need to depend less and less on local knowledge partly due to the increase in the number of accounts with which a worker was expected to deal, and partly due to the introduction of more procedural formalities in dealing with accounts. However, and perhaps surprisingly, the use of local knowledge remained a regularly observed feature of the work. The important point is that in each case local knowledge about the customer and his/her situation was used for the customer's benefit to meet the substance of the customers requests even though it involved negotiating or overcoming standard procedures. So, for example, 'even' in the Securities Centre, where the work was most closely driven by software and most divorced from customer contact, the use of local knowledge was evident in 'doing the work'. Thus from the fieldnotes;

> *Senior Securities Adviser- - goes through the ledger with detailed knowledge of different transactions - "this is an interesting one; he's a fishmonger...he's buying his fish on credit....we've got a couple of fruit importers too.."*

What comes across, and contra many of the tales in the literature about the evils of Taylorism, is that local knowledge is still used, and used with judgement and skill, to expedite the subtleties of the work which 'following procedure to the letter' would ignore and, possibly, create even further problems. Although one might see this as a reconfiguration of local knowledge, the important point to make is that it remains local and derived directly from the experience and knowledge of the work itself and, importantly, it remains a resource by which the procedures are made to work more smoothly than they might otherwise in avoiding problems that might arise through a strict use of procedure.

This tension between the customer as a person and the customer as an account number, the customer in the machine, is most clearly seen in the work of the Business Managers. A number of managers would commonly describe their jobs as 'relationship management'. A great deal of time is spent in face-to-face interaction with customers, balancing their needs with the needs of the bank, trying to evolve and maintain a relationship between them. This relationship is not between abstract organisations, but between the manager and the owners of the business and involves meshing his sense of 'the work that they do' with 'the work that I do'. Much of this is achieved through ordinary everyday practices in interaction, through locating his own set of relevances within the work that they do (be it turnover, profit margins, plans or whatever) and making them subject to ordinary everyday work in their conversations. But his work is also about building and preserving a personal bond between himself and his customers. This too is achieved through orderly interaction; swapping stories and jokes, discussing leisure activities and mutual friends, developing a sense of 'investment' in each other.

Yet managers are members of an organisation that has professedly bought into the 'virtual' ideal. Notions of distributed co-ordination mediated through IT, of empowerment, of product loyalty are are an integral part of the plans and procedures that inform his work. A whole range of technological support and decision-making packages become a resource that he is expected to draw upon in his interaction day-by-day. Whilst the manager is clearly aware of, and makes reference to, this organisational backdrop, in practice most of his decisions come to be based upon his personal knowledge of the customer. Having said all this, the manager also spends a great deal of his time working with and using the technology, most notably by completing forms which in turn become a resource through which he seeks to justify to the 'virtual organisation' the real decisions, based on real interaction, that he has made. In that way, then, he is effectively a locus through which the 'virtual' ideal and the need to practically achieve the 'real' work with 'real' customers gets negotiated. While he must engage with his customers and arrive at practical

decisions, he must account also for those decisions in the terms (or the 'style') of the organisation within which he resides, as it is made manifest within the forms and procedures, the edicts and notions of 'best practice' that his workaday environment provides. This is illustrated in the following extract where a Business Manager is making lending judgements supported by the kind of local and informed knowledge of the customer that might be regarded as being 'in the spirit 'of rather than being 'by the letter' of 'campari and ice' - a mnemonic that was intended to guide lending decisions. Here the Business Manager is considering a very small increase in lending to a doctors' practice which is 'in trouble' and under Regional sanction and exercising 'managerial discretion' to make a judgement in favour of granting the loan and writing a report in a style and a format that will ensure Regional sanction.

Next.
1. Been to see some Drs who have business account with the Bank. Asked for an additional £XXXX for computer - ...asked to sanction purchase. Outside DP (discretionary power) (since under Regional Sanction - Agreed - because business is entirely satisfactory - GPs with turnover £XXXk - profit £XXXK - not reasonable to tell them to wait for such a paltry sum;
"I've worked in Regional Lending for 6 years and I know how it works....you've got to put into context my background, the amount of the loan..."
2. Looking at report to Region - checking for spellings etc - report phrased to support decisions
3. Sales - product - appropriate to needs.
4. 'Face sheet' - NWB 1258 face sheet - WP template
Application form (Advances) - trying to give customer service
- dealing with advances is time consuming - it needs to be screen based
- paperwork goes to Assistant - to do all the connected acc forms.
5. Form for security - for loan - writing to Drs to get informal deposit of security for loans (for surgery)??
6. Going through forms in file - looking at letters re: insurance; life policies - (this is a part of a process whereby the request for a loan - for the computer seems to lead to an appraisal of the entire account)
7. Dictating - looking at letter - master and copy of Insurance doc; and other docs in file.tells secretary - copy of early letter - tells her which paras to include.
8. Goes to get front sheets for typing - to put on typing of letters and sent downstairs to secretaries. Other letters - have to be tailored slightly because different.
9. Dictating - another letter re: securities and loan
10. Interr - phone - takes message
11. Back to dictating - adds names to correspondence form - to be sent with tape to secretaries for typing
12. Going to put note on ISS - (gets card of acc No) - using screen - puts in password.
- Interview Notes - enters details of letters - deposit of policies as security (personal pension plans)

In the context of the bank, it is very often the managers who have effectively become the locus of change. They are the ones who have to implement the new proposals. They are the ones who have to negotiate, day in day out, ways of making changes work in the context of their ongoing routines. They are the ones who have to balance and resolve at a practical level the tensions involved in reconciling the centralisation of processes with the decentralisation of customer service; the centralisation of administration and record keeping with the decentralisation of 'selling'. As one CSB manager commented;

"If you take out the non-customers and you take out the business customers, and you take out the runners... if you take out that lot, then you take out the customers of other branches, I'm actually seeing very, very few of my own... customers. So then we got to say 'where are the rest of them?' because I can produce a printout that says I've got fourteen thousand customers. And that was the answer to it: 'How well do you know your customers>' 'Not very well". Some of them have credit balances of twenty, thirty thousand pounds. And we never see them. We've never even heard of them..."

This CSB manager can see - 'in the machine' - that he has 14,000 names, 14,000 customers on a computer printout, but most of them he never sees. Yet the computer tells him that they are his customers so they must be there. The problem then becomes how do you sell your products to someone you never see?.

For the bank one answer to this problem is 'Managing Local markets' (MLM) a sales approach focused within the bank's CSBs and Business Centres where face-to-face customer contact has been retained. All of the CSBs and Business Centres have been involved in progressing through a number of distinct phases in the setting up of MLM. Initially all of the staff were asked to play a part in an 'Analysis' exercise. This was partly a matter of sensitisation as to what it actually was they needed to know about customers. However, for the staff in question a great measure of it amounted to going out and finding what lay 'beyond the walls' of the bank. Employees literally went out in the streets on walkabouts and drivearounds, trying to assess the character of particular areas and gain some measure of the competition and what it was like.

At the point of application MLM is computer driven with customers being categorised into 5 basic categories - A+, A, B, C and D - with the A+'s being the "super accounts" and the Ds being the ones that "cost money to run". These categories are based upon a thorough knowledge of the customer's dealings with the bank, the nature of their credit balances, the running of their account, credit cards, investments, mortgages, insurance etc. In practice it was found that there were large numbers in the B and C categories, so further classifications are now being applied. Customers are variously listed as being: 'Retireds'; FIYAs (Financially Independent Young Adults); YSs (Young Singles); and Mid-Markets, BOFs (Better Off Financially) and WOEs (Well Off Establisheds) who are all aged 31 to 5 with the classification being based on the amount of money that passes through their accounts.

The target products in MLM - insurance, pensions or whatever - tend to be ones that are currently in focus throughout the bank, and a complimentary sales drive operates under the banner of 'Business as Usual' where they attempt to sell the same products to the people they <u>do</u> see regularly. To establish the ones they <u>don't</u> see they use computer screens such as the ISS Customer Notes to discover their normal mode of contact with the bank. Beyond this they will engage in other considerations such as what products customers already hold (there's little point in trying to sell one of your mortgages to someone who's already got one). Where it was once the case that 'Products in Focus' would be the subject of blanket mailshots their aim is now to develop a 'Local Market Tactic' and to specifically target certain customers they don't see and send them a letter, perhaps following up with a telephone call. This process of finally deciding just who is going to be sent a letter is referred to as 'hygiening'.

In the actual context of the workplace it becomes quickly apparent that MLM has a number of important implications for the achievement of computer supported co-operative work since computer derived models of market segments are being used to devise a whole set of organisational and marketing rationales which underlie an increasing number of management activities and decisions and the way these are achieved. Additionally there are efforts underway to arrive at ever better depictions of customers <u>within the machine</u>, a 'virtual customer' one might say. And there are at least two important aspects to this. One of these is the representational issue of the nature of such virtual customers and how they are arrived at and engaged with from day to day. The other is the question of how managers (and others) negotiate some sort of 'fit' between 'virtual customers' and the 'real' customers they see over the counter or talk to on the phone.

Virtual Teamwork: working to make routine work routine.

One final aspect of virtual teamwork consists in the consideration of the 'work' to make routine work 'routine' - that is the fact that people are able to respond quickly to customer requests, to process or present information in organisationally relevant ways is itself a product of the work of others. This is perhaps most obvious in the work of someone like the Technology Coordinator in one of the large centres whose work largely consists of ensuring that people's machines are working adequately, that they can log on, that the relevant applications are functioning adequately and so on. It is also apparent in other people's work. The Transmission Officer, for example, is involved in a range of tasks administering, cooperating with and coordinating the work of others in the Business Centre; monitoring 'activity through the account', the turnover in the year and the facilities used; thereby shaping the negotiations over pricing policy and attempting to ensure, in a delicate balancing process, that neither does the Bank make a loss nor is the customer overcharged for the use of the Bank's facilities. This process, that precedes, for example, the annual interview for small business customers, involves the perusal and careful consideration of a range of

printouts and forms.This monitoring and coordinating work also includes supervision of some aspects of the sales process as illustrated in the following fieldwork extracts;

Next.
1. Looking at sales figures from Wirral BMA (sales figures have come from Region) - each manager has sales targets. Business Centre gets them all because they monitor them.
2. Separates docs - highlights all branches in the BMA.
3. Looking at figures on sales performance - columns on 'plan' 'allocated'' 'potential'
4. Gets blank form (template on secretary's machine downstairs - Word for Windows) - writes in what has been achieved
5. (Tape) - does calculation on commercial savings - uses calculator to check figures - entered manually on sheet/form.
6. Has achieved 'Q' (half target) in most areas - has to write in when 'Q' will be achieved.
7. Phones -X - comes up to explain how to calculate on the form - forms given to Manager to monitor them.
8. Continues completing form - getting figures from past Sales Performance Form and new figures from Region.

and later, doing sales figures and priorities;

Next.
1. Looking at graphical representation of targets and achieved.
2. Will go and get typed up to give to Boss.
3. Highlights 'interesting' bits.
4. Looking at figures - to analyse - those interesting for the Boss to look at - looks at what XXX has done in the past - decides to just highlight rather than analyse.
5. Finds mistake in figures - between sales performance data and that on sales.
6. Checks another set of figures - "I'll phone Regional Office and find out if there's a reason why"

The various forms of paperwork also act to facilitate the coordination of work but the actual process of 'doing the paperwork' itself requires various coordinating activities, involving the 'meshing' and 'modal transformation' (Anderson et al 1989) of other paper and computer information. One example of this is the 'Interview Notepad' which, designed to be used as part of the annual review and for lending interviews, involves the Business Manager's Assistant in the lengthy perusal of other records, the 'scorecard', records of past reviews, the computer 836 printout and so on; and then using a range of information to 'GAPP' the account. In this next and the following extracts the Assistant is talking about this process of accumulating information in preparation for the customer's annual review;

".... its the annual review on Thursday, ...(getting things ready for the interview) 'I did it yesterday, but I just had to GAPP it, thats ready apart from up-to-date balances which I've put on there,.. (whats there?),.. there 's a standard ...now ..brief that we have to fill in, like an interview note pad, then you get the customer brief off the computer printout one, and then thats it basically, (pointing at printout) GAPP graded, ...we only do GAPP grading if we've got more up-to-date financial information.. (where did the information come from?) got data from machine and from reading through the file "- (first time she's dealt with this account)

As the Assistant works through the different sections of the 'Interview Notepad' the processes of administration and control of the account, relationship building and the sales process are linked. One section of the 'Interview Notepad' is devoted to 'Sales Opportunities' and the Assistant, by an examination of the account, its working, facilities, and the various printouts, is supposed to identify opportunities for selling Bank products. The Assistant also needs to consider the temporal dimension of the records, in particular, to ensure that the Manager goes to the review with the latest balance of the account; the way in which the records may have consequences, in this case that the level of the facilities on this and linked accounts may take it outside the Business Manager's 'discretionary power'; and consider how the information she is compiling may actually be used or not in the actual review;

"There's nowhere on this interview notepad for putting down all the balances, so I tend to put the balances on a separate sheet, they come up on the customer brief (computer printout) but I tend to get the briefs out a couple of days before (the computer ones) so I try to get the balances out the following day (So that they are up to date). ... if any of the partners or directors have got private accounts we need to get that information out as well, because again its ..if its got any facilities in their own name it could take it outside .... discretionary powers, . this is within, ..,.it depends what facilities their asking for but the facilities as they are at present ...can extend for a further year without having to go on up to Region. .. something else to look out on the brief as well, .. we get the latest account, always bring it

to the fore,.. these forms are relatively new this interview notepad, its only happened within the past month, so the balance sheet assessment form we have to do, cos they replace the old balance sheet carding, so we can see, got ratios to compare ... always got to put at least two years on this, if we've got two years accounts, although we may have carded them on the old format we've still got to fill them in on that , and usually, ... (we'll ask ... to look at the Transmission activity) ... and then .XXXs... got that as well to speak to .. customers about. And sometimes all the points that I might raise ... at a first meeting .. doesnt always cover everything, because it sometimes feels as though you're bombarding them with different things, so ... might not offer them everything that I suggest, or might not talk about charges. .. just put it in writing,..."

Conclusion:

This paper suggests some of the varied tension involved in attempting to implement a form of 'virtual teamwork'. 'Virtual teamwork' is clearly not unproblemmatic and the ethnographic research reported here attempts an in-depth understanding of the interactions between the 'virtual' and the 'real', between organisational change, performance and skill by focussing on the ways in which such strategic plans as 'virtual teamwork' are instantiated in day-to-day working practices. The ethnographic research highlights a number of real organisational problems that have emerged with the movement towards virtual teamworking. Virtual teamwork, it is suggested, places a particular emphasis on communication and the development of 'awareness' skills such that each worker is encouraged and enabled to complete their task in a fashion which enables other workers at others sites to complete theirs. With increased geographical dispersal of the specialised centres, however, a culture of 'passing the buck' has emerged, with poor communications impacting on teamworking across the organisational divide. Co-location by task in itself creates and encourages particular, often very fierce, group loyalties and the development of a 'them and us' attitude, (where 'them' is effectively any other organisational unit). Clearly one of the major problems facing any virtual team 'communication'; ensuring that work proceeds smoothly from one phase of activity to the next, that it is passed on in a timely and coherent fashion, that plans and procedures with their associated paperwork and records are understood and adhered to and so on. However implementing such improved communications is hardly straightforward and raises a number of other issues connected to 'standardisation' and software development.

Ethnographic fieldwork also reveals how 'virtual' teamwork creates managerial problems in the form of monitoring and control. Despite the prevalence of various management information systems for monitoring organisational activity the value of these systems and their impact on the work itself can be poorly understood. In this instance the introduction of monitoring and targeting systems has proved of dubious value, with the systems becoming ends in themselves, often to the detriment of effective working. The development of forms of 'virtual' teamwork also places a heavy responsibility on middle and lower level managers to manage the concurrent changes in the practical day-to-day work of the teams. Our research suggests that managing innovation of this kind is a complex and difficult business since 'virtual' teamwork involves 'real' workers and 'real' customers and managers are placed at this interface between the 'virtual' and the 'real', attempting to manage the 'real' problems of 'virtual' teams.

Bibliography

Anderson, R. J., (1994), 'Representations and Requirements: The Value of Ethnography in System Design.' Human-Computer Interaction, Vol. 9 pp. 151-182.

Anderson, R. J., Hughes, J.A., and Sharrock, W. W. (1989) Working for profit, ; The Social Organisation of Calculation in an Entrepreneurial Firm. Aldershot, Avebury.

Atkinson, J. (1986), Changing Work Patterns: How Companies Achieve Flexibility to Meet New Needs, London: National Economic Development Office.

Bagguley, P., Mark-Lawson, J., Shapiro, D., Urry, J., Walby, S., and Warde, A. (1990), Restructuring: Place, Class and Gender, London: Sage.

Bittner, E. (1965), 'The concept of organisation', Social Research, 23, pp. 239-255.

Bowers, J. (1994), Understanding Organisation Performatively', COMIC Working Paper, MAN-1-4, Department of Computing, Lancaster University

Burton, D. (1994) Financial Services and the Consumer, Routledge, London

Button, G. and King, V., (1992) Hanging around is not the point, workshop paper, CSCW '92, Toronto.

Casey, C. (1995) Work, Self and Society After Industrialism. London. Routledge.

Ducatel, K 'Computer Networks in Britain: communication technologies or technologies of control?' in Robins, K (ed) Understanding Information: Business, Technology and Geography (London: Belhaven Press, 1992)

Garfinkel, Harold, (1967), Studies in Ethnomethodology, Polity Press, Cambridge

Gergen, J 'Organiation theory in the Postmodern Era' in Reed M and M Hughes (eds), Rethinking Organisation (London:Sage, 1992)

Grudin, J - 'The Computer Reaches Out: The Historical Continuity of Interface design', in Proceedings of ACM CHI '90 Conference of Human Factors in Computing Systems (New York: ACM Press, 1990)

Hammer, M., and Champy, J. (1993) Re-engineering the Corporation: A Manifesto for Business Revolution. Nicholas Brierley Publishing.

Hughes, J. A., King, V., Rodden, T., and Andersen, H. (1994) "Moving out from the control room: Ethnography in system design". In Proceedings of CSCW '94, Chapel Hill, North Carolina.

King, Val, and Randall, Dave, (1994), Trying to keep the customer satisfied, Proceedings of the 5th IFIP Conference on Women, Work, and Computerisation, July 2-5th, Manchester, England.

Kunda, G. (1992) Engineering Culture: Control and Commitment in a High-Tech Corporation. Philadelphia. Temple University Press.

Lash, S. and Urry, J. (1987) The End of Organised Capitalism. Madison, Wisconsin. University of Wisconsin Press.

Nonaka, I. and Takeuchi, H. (1995) The knowledge-creating company : how Japanese companies create the dynamics of innovation. New York : Oxford U.P.

Pycock, J., Calvey, D., Sharrock, W., King, V., and Hughes, J., "Present in the plan: Process models and ethnography, Comic Document MAN-1-7

Randall, D. and Hughes, J. A. (1994) "Sociology, CSCW and Working with Customers", in Thomas, P (ed) Social and Interaction Dimensions of System Design. Cambridge University Press Cambridge.

Randall, D., Hughes, J. A., and Shapiro, D. (1992) "Using Ethnography to Inform Systems Design". Journal of Intelligent Systems, Vol. 4, Nos 1-2.

Reed, M (1992)The Sociology of Organisations; Themes, Perspectives and Prospects Hemel Hempstead: Harvester Wheatsheaf,

Rheingold, H Virtual Reality, (1992) London: Mandarin.

Scott Morton, M. ed. (1991), The Corporation of the 1990s: Information Technology and Organizational Transformation, New York: Oxford University Press.

Suchman, L., (1987) Plans and Situated Action: The Problem of Human-Machine Communication. Cambridge University Press. Cambridge.

Webster, F. (1995) Theories of the Information Society. London. Routledge.

Zuboff, S. (1988) In the age of the smart machine. Oxford: Heinemann.