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Surfing the Third Wave: Experiential reflections on new working practices.

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Abstract

This paper deals with issues and presents changes in practices relating to the new working as realised in the developing e-working world. The paper begins by reviewing my own experience. This is expressed as anecdote from my diary. Following this, the downside of e-work is argued to be characterised by atomisation and fragmentation and is depicted under four headings of: <u>Being</u> an e-worker, <u>Engaging</u> with work as an e-worker, <u>Contextualising</u> experience as an e-worker and <u>Managing</u> self and work as an e-worker. This section is followed by a brief review of how this downside has been achieved.
The paper then goes on to discuss two models for developing the e-work process beyond the current debacle. The first model is one based on conventional practices and is concentrated on relieving the pressure. This conventional approach is also referred to as the 'Provision for .. ' model. The model deals with providing technologies and inducements and meeting expenses of e-workers as fragmented elements of the workforce. It is a patchwork quilt of piecemeal planning. The second model, arising from the research behind the paper involves thinking again – where might we be? The process develops an 'invitation to join .. ' model, focusing on relationships. The paper goes on to describe a process for developing a systemic approach to e-work and non-e-work for large organisations and a means for applying the systemic development of e-work in full and not just gesture. The paper concludes with an overview of the key learning points emergent from the research to-date.
Concerning the style of the paper, it is set out in the form of a Kolb learning cycle – this is the overarching methodology applied to the enquiry as a whole.

1. Reflecting on e-work as an experienced reality

The work vocabulary now abounds with loosely considered terms relating to the phenomena referred to variously as information economy, knowledge working, e-business and telework. To my understanding there is not yet an agreed definition for the various terms but they all relate to the expanding uses of computer-based technologies in order to reduce costs and develop opportunities for business and government on the one hand whilst offering workers greater freedom and autonomy over their work experience on the other. To date the literature in the area which I will refer to under the general heading of e-work (developed from telework which has the literal definition: working over a distance, working away from the usual office environment) has tended to be characterised as either poorly conceived or lacking conceptual clarity. The field has taken some time in orientating itself after Tofler's prophetic announcement of the 'Third Wave' (Tofler, 1983).There is a lot of material which is frankly utopian, depressingly pessimistic or overtly managerialist. Some research papers, books and articles have

appeared which attempt a more scholarly and empirically based review of the territory (Daniel, Standen, & Lamond, 2000; Huws, 1996a, 1996b; Huws, 1999; Huws, Korte, & Robinson, 1996; Jackson, 1999; Jackson & Van der Wielen, 1998; Kompast & Wagner, 1998; Korte, Robinson, & Steinle, 1998; Nilles, 1998) but by and large the situation seems to me to remain clouded in obscure motives, technologies and ideologies whilst repetition of obvious benefits and downsides proliferate. Further, even with the gradual empirical study of the domain increasing, there is little evidence of authors engaging with the highly personal as well as social implications and outcomes of the e-work phenomenon.

My question in 1996 when I began the research of which this essay is an outcome, was personal, social and academic:

"Can I be an e-worker and what will it mean for my practice, my colleagues and my organisation?".

My interest therefore is in e-work for professionals (although I believe my experience indicates lessons for other types of e-work) and how organisations can manage and benefit from more flexible forms of work – including all shades of grey between the full-time e-worker and the full-time office worker. In what follows, building off previous articles (Bell, 1997, 1999, 2000), I will show how this question has evolved and how my thinking and practice over the last six years or so has resulted in guidelines for scoping how far e-working can be effective and what additional issues and concerns need to be addressed in assembling a systemic approach to a more viable and autonomous livelihood.

A key theme behind this paper is that for e-work to work well (in a full-time or part-time manner) as arguably the most ecologically friendly and economically viable form of work in large organisations it needs to be developed in such a way as to promote the holistic re-integration of the work community taking into account the enabling and disabling features of various technologies. An observation arising from the research relates to the potential impoverishment of relationship which can arise if e-work is not seen as an element of a total work strategy (with deep and metaphoric antecedence) which needs planning within the organisation as a whole. It cannot be achieved in a piece-meal fashion - or not in a way which provides stakeholders in the enterprise (both those e-working and those not) with an enriched life experience.

Before progressing it is appropriate to explain the style and format of this paper. The content arises from review of my experience and learning as maintained in my personal records or 'learning album' (for more information on the method of use and value of the learning album see Bell et al., 1999, Hereafter I will reference this work by its Open University acronym - 'T306'). This record is linked to the reflections of work colleagues and family as well as my own reflections on the processes. So, this paper sets out to produce an account of an experiential learning process (see Heron, 1990, 1996; Reason, 1994; Reason & Heron, 1996). My adopted approach throughout has been to apply the Kolb action learning cycle to understanding my experiences. As this paper progresses it

will become apparent that the application of the four stages of - reflection on current principles, connecting with related themes and ideas, modelling possible formats for development and acting with the model recur. The cycle as applied here is both recursive and of the nature of an enquiry into how things are done and how to do better things. In the spirit of action research of all varieties this task is not reducible to a conventional, objective or reductionist focus on elements of experience recounted as generalisable fact. The experience is too personal and too dependent upon variable and sometimes conflicting perceptions.

To set the scene I include here a reflective essay jotted in my learning album in 1998. This indicates some of the positive aspects of e-working:

The current task I am wresting with is probably one of the most difficult for an e-worker – managing relationships. I am working with a team of colleagues at the Open University upon a new course in holistic thinking and managing complexity. We are having some hiccups in production and scheduling. Part of my task as Course Team Chair is to try to facilitate colleagues and help them to produce the best which they can given the constraints of money and time. Sipping coffee and looking out of the window I have to consider how best to manage my facilitation. I need inspiration and I need to know how to engage without being experienced as being mangerialist or bullying. Its at times like this that the garden, orchard and field really help. I have a wander, do some dead heading, maybe some grass cutting. All these activities help to disengage my mind from my work. I often find that it is when I am not thinking about a problem that the way forward comes. Twenty minutes away from the desk and I have a plan. Returning to my office I pour more coffee (lukewarm but drinkable), make two phone calls and then send out three emails. Following this I have to wait. There is little I can do until my ideas have been noted by colleagues and I have some responses to work with.

Management issues progressed I settle down to read and write. I am working on a couple of papers as well as the course. My main focus today is a paper on intelligent transport systems. I think long and hard about intelligent uses of transport so that lives can be enhanced and not blighted by our need to move around. My focus today is strategies for e-working in organisations and considering possibilities for car/trains, a fascinating idea - cars intelligently linking together under computer guidance to form organised trains of vehicles. Could be a winner but it needs a lot more thought and research.

I also have several academic papers which I need to read. In the old days I used to spend hours in libraries finding them. I have now found that I can get most of the materials I need off the Web but there is a cost in terms of searching and getting distracted down the endless interesting byways which the web encourages by pandering to our proclivity for associational thinking (scatological thinking!). This is a great lesson for any home-worker – self-discipline. The ability to stay focused and self-driven avoiding distraction. Most of the time this works for me now but it has been a hard lesson and I still fail miserably at times.

Back to tasks in hand. I like to work in intense bites and then wander off to refresh my thinking. Sometimes I walk abstractly round the house which is quiet at present (both kids at school). Sometimes I venture out again into the garden which is now dizzyingly hot.

The day passes between bouts of writing, reading and stretching my legs. Generally I am at my most productive and creative early in the day (I like to start at 7 o'clock). By four o'clock I am ready to leave the office and help out in the kitchen with supper for the children. A major benefit of e-working for people like me with a young family is the privilege of seeing and sharing more of my children's lives – including the end of day chat about school days over supper.

Evening comes. At last silence descends and night settles in. I return to the office to read students email and some responses from colleagues following my emails earlier in the day. I think we can make progress. Finally I review some of my writing.

My reflection from 1998 indicates to me now positives and negatives. Positives in terms of a lifestyle (maybe), negatives in terms of attempting to make a technological form of work mediation in the sustaining of relationships at distance. My point of departure here

is to review how e-work is more widely experienced. Are my personal reflections of more general relevance?

2. Connecting with the downside

In review of my practice as an e-worker I can summarise some key processes in vignettes taken from my own and other people's practice. The vignette is a useful device to develop processes as a story, in this case to illustrate what can go wrong with e-working. Basing my analysis upon the outcomes of reflective practice and making use again of the format developed in T306, I will present these vignettes under four labels - being, engaging, contextualising and managing. These can be seen as mapping onto the Kolb cycle as follows:

<div align="center">

Being – Reflecting
Engaging – Connecting
Contextualising – Modelling
Managing – Acting

</div>

2.1 Being an e-worker.

Being an e-worker involves me in understanding what it is not to be an e-worker. Not being an e-worker involves my colleagues in understanding what it is to be one. Being and not being are highly inter-linked.

'Jane told me one day, by means of an unsolicited email that her work was becoming ungovernable, undoable but mostly unbearable. When I asked what the problem was she told me that the problems were not technology ('although people at the ISPs can be such w*******!'). She felt that she was becoming paranoid and depressive. Although she enjoyed her work she felt that her lack of contact with colleagues was producing some very uncomfortable consequences. She was questioning whether her contribution to her organisation was appreciated or even noticed. Out of site, out of mind? The question was 'Am I appreciated for what I am? (conversation with an e-worker).

Another side of being is *being with* technology:
'But I am perplexed. By remote communications, that is. This morning .. I wanted to start the day bright and early by replicating my Lotus Notes messages. I connected successfully at first … but Notes couldn't find my server. Rebooted. Dialled up again. The modem hissed, quavered, yelped, barked, twanged and made a few sounds I don't remember ever hearing before, but never settled down and got quiet the way it's supposed to. I tried a few more times. By that time, I realized that I had spent 40 minutes doing all this, and it was no longer bright and early'. (Davenport, 2000).

2.2 Engaging with work as an e-worker.

E-workers tend to be the sort to 'get up and go' in my experience. Maybe it is because of the advertising hype showing insufferably smug people getting out of bed and slipping seamlessly into their study with their art house PC, or maybe it is because we just *can* but in my experience and conversations with fellow e-workers I find that the majority wake in the morning and are looking at email while they read their post and drink there first cup of tea. It is also my experience that the last person out (so to speak) at night is also the e-worker. Sending some emails at 9 or 10 p.m., it is invariably the e-worker who replies the same evening.

'When you're in the office, no one ever doubts whether you're working or not. You could be balancing your checkbook, but the fact that you're there is a reassurance. When you work at home, people don't really believe that you're working. So a common reaction is to say "I will respond to every email within 30 seconds. I will be on my computer again at the end of the evening, so that when people come in they will see stuff waiting for them". It becomes another source of stress.

Another source of anxiety is that there's no independent way for a manager to assess whether or not you're doing a good job. "Being there when I need you" is pretty much still the standard. I know managers who actually up the productivity ante for people who work from home.

At the same time, how do you establish an appropriate boundary between home and work? Most people have no idea when they should start and end the workday. Their day turns into this incredibly frantic, highly insecure, fast paced mode where all time is work time and every day is a workshop. There's no such thing as vacation anymore.'.(Reingold, 2000).

2.3 Contextualising experience as an e-worker.

The problem is not one of finding usable working practices. Rather it is of agreeing the sharing of usable working practices. My interface into my organisation is the computer conferencing software package called 'FirstClass'. My colleagues make use of this in a highly variable manner. Some seem as dependent upon it as me. Others see it as problematic for many forms of communication, whilst a small number seem to treat it with disdain and dislike. My problem is knowing who is willing to share my interface and draw from it the same form and quality of inferences as well as more formalised 'facts' as me. Contextualising seems to have two aspects: My contextualising of my processes to meet the knowledge needs of my colleagues and conversely, my colleagues contextualising their processes to meet my needs of them.

'We just keep missing each other. I have colleagues who will not make any allowances for me and for my work. It's a bit like the current discussion about providing resources like crèche's for employees with children. You know, the childless employee says: 'why should I subsidise your lifestyle?'. In this case it is 'why should I make allowances for your workstyle?'. Really, I have colleagues who know that I am only available down the ISDN line but insist that all work is done in meetings. I also have colleagues who refuse to use the telephone or email! How the hell am I supposed to work with them?' (Conversation with an e-worker).

2.4 Managing self and work as an e-worker

My experience indicates that managing to the e-worker is more than managing as usually considered. In my previous experience of office work a great deal of management can be considered under headings of relationships. operations. and events. These are usually best managed consciously but often they become items of habit and are managed automatically and unconsciously. The main concerns for the office manager in dealing with these factors are optimising timing and outcomes. For the e-worker managing involves consciously managing all these points but with the added complications of needing to be as precise as possible in terms of the content, preferred media and clarity of message. Of course these are issues of concern to most professionals irrespective of their work preferences but to the e-worker they are fundamental and sloppy or careless attitudes in dealing with the selected content of a given communication, the selection of the right media for the right recipient and the clarity of the message results in various levels of disaster.

'Ongoing, face to face connections foster trust and personal integrity in people's business dealings. This is so because people involved in multifaceted relationships – particularly those that are visible across the various spheres of their lives – pay a high price when they fail to behave in an ethical manner. Statements like "We never had a written contract, He shook my hand, looked me in the eye, and gave his word" speak of a relationship that can only exist in an environment in which reputations extend beyond a single transaction, and clearly beyond anonymity'. (Nie, 1999).

My experience indicates that the functionality of e-work at the levels of:
- Being an e-worker,
- Engaging with work as an e-worker,
- Contextualising work under the rigours of an e-worker,
- And managing the e-work world,
Are fraught with problems.

This experience is reflected in the statistics. A couple of recent surveys (Huws, Jagger, & O'Reagan, 1999; Weston, 1999) indicated that despite:
- 41% of workers would like to spend 50% of working time at home
- 77% of tele-workers believe that tele-working is more productive than working solely from a company office
Yet:
- Only 5% of the UK workforce is defined by Huws et al as tele-working (Huws et al., 1999).
- Only 54% of tele-workers think that their companies manage them well
- Less than 15% of tele-workers receive advice on mortgage, tax, insurance and health and safety
- Remote worker's suggestions for improvements include a better home working environment and better support from the office.
 (Weston, 1999, page 2.)
In the following section I will explore some of the processes and forces which were instrumental in determining how this situation arose.

3. Modelling how we got to the downside

The experiences set out anecdotally above, which resonate with my own experience of the e-work phenomena seem to arise from multiple causes. Again I will set out here some of these causative factors which have led to a situation where e-work as a panacea is seen to be less viable than might otherwise be the case. Figure 1 sets out an early multiple cause diagram which I developed in the first year of my own work practice.

The diagram indicates a number of themes:
- The push for e-working arises from different but aligned aspirations from individuals, companies and overarching matters of concern (e.g. the current crisis concerning transportation).
- The process of e-work appears to bet the outcome of a largely experimental model
- The downside seems to be closely linked to a lack of consideration of potential alternatives and systemic planning

The following sections will further explore these issues.

Figure 1. Multiple Cause diagram – Modelling how we got to the downside of e-work

INSERT FIGURE 1 HERE

4. Acting to manifest the 'Provision for…' model

This section develops a picture of the piecemeal development of coping strategies for e-workers. The section sets these out as improvements but also indicates in the process that these improvements are only Paracetamol and Band-Aid masking effects. Such measures do not address the fundamentals, the deep seated causes of the problems for new work forms alluded to in brief in section 2.

Almost all e-working processes developed by organisations for their workforce conform to a 'provision for the e-worker' format. By 'provision for' I mean that the organisation provides means (generally technologies, sometimes inducements, often meeting expenses) to enable e-workers to set up and function as atomic elements of the organisation. Some examples follow:

Technologies provided
- Computers
- Modems and routers
- Additional telephone lines and set
- ISDN line and set
- Cell phone
- Lap-top or hand held PC

Inducements provided
- Office equipment
- Flexible hours for work
- Financial inducement to free up office space
- Home insurance
- Company car for limited office use
- Rail and or car costs

Expenses met
- Cost of office set up
- Cost of travel
- Cost of heating and light
- Cost of training in technologies
- Subsistence for travel

Although these provisions are not mutually exclusive (for example, inducements to cover costs are also expenses met) and may seem valuable and attractive to individual e-workers, they do not combine to meet the needs of the problems indicated in Figure 1. Most companies that have e-working policies in place use some or all of these provisions in order to make e-work attractive and /or bearable to the workers involved. A root definition to define an e-working system based upon provision might read as follows:

'An organisation owned e-working system, developed by the management of the organisation for the remote workers in order to allow them to function adequately as organisation members whilst working remotely. The system is devised under the assumption that e-workers will mediate the processes of work and take responsibility for the functional good performance of work related tasks and under constraints of potential conflicts in terms of: motivation, communication, shared perception and common identity'.

Under such a system the physical requisites of e-working are provided but the personal and social requisites are either assumed or left as potential constraints if not managed independently by the e-worker her or him self.

'I felt left to my own devices. Success or failure were in my own hands (at one level) but at another level I was highly exposed to the caprice of colleagues and organisational 'others''. (Conversation with an e-worker).

Such a system, whilst providing autonomy and implicit viability at the level of the organisation, provides for highly limited forms of autonomy as a recursive function at the level of teams and individuals. Rather, as the organisation is explored at the micro level of the individual employee, the viability of the autonomy of the individual is left as a matter of chance or individual motivation.

5. Reflecting again - where might we be? The 'Invitation to join..' model, - relationships.

In this section alternatives are provided to the bleak prospect outlined in section 2, however, as the narrative develops it is seen that this does not arise from applying the fixes supplied in section 4, something fundamental has happened, a more holistic, personally and socially empowering (and therefore systemic) planning and development process is indicated, more in tune with the natural development of human faculties than the forcing of much current change literature. The themes of being, engaging, contextualising and managing are again used as headings for exploration.

In setting out some of the main themes of e-work experience in terms of being, engaging, contextualising and managing in section 1 I have attempted to draw out some of my main learning points. These learning points arise from what I prefer to refer to as the psychic influence of the information economy. Each learning point will be shown to be self-reflective and internally cyclic (in terms of dealing with the downside of e-work).

- Being an e-worker involves me in understanding what it is not to be an e-worker. Not being an e-worker involves my colleagues in understanding what it is to be one.
- Engaging as an e-worker involves me in working in ways which are divergent from those who are not e-workers. Engaging when not an e-worker involves my colleagues in assuming others, who are e-workers, are convergent with their engaging.
- Contextualising of my working processes is required to meet the knowledge needs of my colleagues and conversely, my colleagues are most successful in meeting my needs when they contextualise their processes to meet these needs.
- Managing with precision the selected content of our given communication, the selection of the right media for the recipient and the clarity of the message helps my colleagues and me to successfully manage our mutual relationships. operations. and events.

Each of the four learning points is cyclic, reciprocal and, if appropriately reacted to, an invitation to respond. The key to the four is that e and non-e working are seen and experienced as mutually inclusive and, mutually unable to operate effectively if the other is ignored or negated.

This is the key to the current thesis. E-working, as an atomised and fragmented response to 21st Century working practice is a tactical provision. E-working as an integrated element of systemic thinking, relating to the whole organisation is experienced as an invitation to join more deeply in a strategic change.

A root definition for this approach to e-work might read as follows:

'A mutually formed work system, developed and implemented by the organisations management, e and non-e workers, devised to allow for the integrative functioning of the whole organisation, irrespective of distance and location of individual employee and providing for these employees the necessary resources to work together at organisational, team and individual level. However, the system operates under an assumption of shared responsibility and under constraints of veiled cynicism and doubt'.

In the following section I will set out some practical details for developing this policy change.

6. Connecting in a process for developing a systemic approach to e-work for large organisations.

The key to a move from provision of e-working function to the invitation to join is in the unpacking of the implications of being, engaging, contextualising and managing. For this to take effect the need is for the organisation as a whole to engage with integrative information sharing

The overarching impression of e-work experience from literature, web sites and personal conversation is of policy developed from the potential of what technology can do. This technology driven opportunity (evident from Tofler onwards) is then included in policy as a 'good' for the evident reasons provided in the multiple cause diagram set out in section 3. The strategy is made tactical by the provision model and then one of two processes ensue. If the provision is seen to be effective and good feedback drowns out bad, a process of benign neglect follows. E and non-e workers are left to work out the detail. However, if the provision is not effective, negative feedback drowns out good, risks (e.g. lack of control, accountability, enforceable sanctions, envy, cynical manipulation, etc.) are seen to outweigh benefits (e.g. productivity, satisfaction, better integration of work and life, etc.) then management models revert to a claw-back mentality, very reminiscent of putting the genie back in the bottle.

This essay is concerned with developing an activity set which, rather than working from a technological imperative, works from a linked organisation wide social and personal imperative.
This latter, *invitation to join in*, or *relationship* activity set , involves the <u>entire organisation in a re-think of its strategic position</u> in the market, it's use of resources and it's valuation of it's own employees contribution to success
Secondly, the *relationship* model is concerned with the development of <u>purposeful activity</u> by actors in the work situation. This replaces the purposive[1] *provision* model.
Thirdly, the *relationship* model assumes an implicit understanding that employees once engaged and reasonably assessed in probation, are to be trusted and provided with opportunities to develop and enhance their work practice in an <u>open learning environment.</u>
Finally, the *relationship* model is both <u>reflective</u> and open to change in the reassessment of progress towards improved organisational integration.
The activity set for the development of the *systemic* model can be set out as in the conceptual model below:

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[1] My use of purposeful and purposive reflects their use in T306. Simply put they relate to autonomous and self directed activity on the one hand and controlled, directed activity on the other.

Figure 2. Conceptual Model of the activity set to develop the systemic model of e-working

INSERT FIGURE 2 HERE

In the next section this eight stage model is further fleshed out in terms of means to apply the activity set.

7. Modelling the means for applying the systemic development of e-work in full and not just gesture.

The emphasis of the previous section has been to describe a process for engaging in diverse work forms such as e-work in a systemic fashion involving organisation wide engagement and change. This systemic model has been proposed in contrast to models of neglect or denial on the one hand or provision for an atomised technology driven process on the other.

Below, the eight elements of the transformation process involved in the relationship model are developed in terms of a fourfold control model[2]

The basic control model is set out below in Figure 3.

Figure 3. The control model

INSERT FIGURE 3 HERE

In the model each of the eight elements of the conceptual model now manifested as 'goals', requires an output to be evident within the organisation. The output is required for the goal and this output then becomes the necessary input for the next of the eight elements. If any of the outputs is missing or not achieved then the systemic nature of the relationship model as a whole fails in it's overall goal, systemic and integrated working practices. In this manner the control model becomes a means to assess if the necessary conditions for effective systemic working practice has been met. The transformation of each of the eight elements needs to be evident for the process to be seen to be effective.

In the context of this paper it is not possible to develop the details of the systemic model in full. At this stage the presentation is reduced to an overview of the input, transformation and output conditions for each of the eight.

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[2] I am indebted to the work of Bob Zimmer in Block 2 of T306 Bell, S., Armson, R., Ison, R., Zimmer, R., Paton, G., Chapman, J., & Blackmore, C. 1999. Managing Complexity: A systems approach. Milton Keynes: Open University. for insights in the development of the model contained in overview in this section.

One limitation of this presentation is the manner in which the process now becomes rather linear. This is unavoidable using the control model. However, it is not intended that the eight fold roll out described below be definitive. Rather this model provides the potential for evaluation of the process (e.g. not to proceed to later stages without measurable achievement of previous outputs). It is intended to develop this model in terms of the multiple links between each of the eight stages as shown in Figure 2.

Table 1. The eight goals

INSERT TABLE 1 HERE

The control loops demonstrated in Table 1 needs to be seen in terms of methods, tools and techniques to facilitate the transformation in each case. This extension of the matrix is the subject of a book currently under development. At the time of writing the second Kolb cycle remains uncompleted - the eight fold model is not yet fully acted upon. Potential locations for developing it further are still being considered.

8. Final Reflections and key learning points, summary and conclusion

In the previous sections I have set out some why, what and how responses to the e-working phenomena.

The why of e-work relates to why is the experience of so many practitioners negative in terms of being, engaging, contextualising and managing as an e-worker? This why is all the more puzzling given the continuing popularity of e-working as suggested by statistics. I suggest that the why arises from the new work opportunities arising from the technical capacity to do it rather than organisations seeing as something useful or desirable to do.

The what of e-work is what can be done to improve the current situation. I describe this situation largely in terms of a 'provision', purposive model. I suggest that the what can be counteracted by means of a 'relationship', purposeful, organisation, team and individual driven model.

The how of e-working is how is it done right now? I describe this in terms of the technologies, inducements, and expenses met of the provision model and compare this to the eight-fold progression of the relationship model.

In overview, the progression of this paper is to underline the inherent weaknesses of the management of effects as compared to the strengths of a model based upon proactive management of relationships as the primary input to any knowledge-based working process.

The further elaboration of the eight fold model into a systemic action/ planning approach, capable of roll out in diverse organisations is currently in process and is undergoing testing and refining in work environments.

In summary, this paper has addressed some of the most intrinsic problems of e-work and has provided a systemic assessment of both the problem and a major innovation in harmonising working behaviours. It is at this point that it becomes evident to me that the model which I am describing is not only applicable to e-working and non e-working

communities seeking to work together, rather it could be explored as a process for the integration of work types in any organisation seeking to meet the diversity and challenge of the changing face of work in the 21st century.

Brief details about the author

Simon Bell is an e-working academic in Systems Discipline in the Centre for Complexity and Change at The Open University in the UK. He has successfully published three books on the use of holistic and systemic approaches in the fields of information systems and sustainability measurement to-date.

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Figure 1. Multiple Cause diagram – Modelling how we got to the downside of e-work
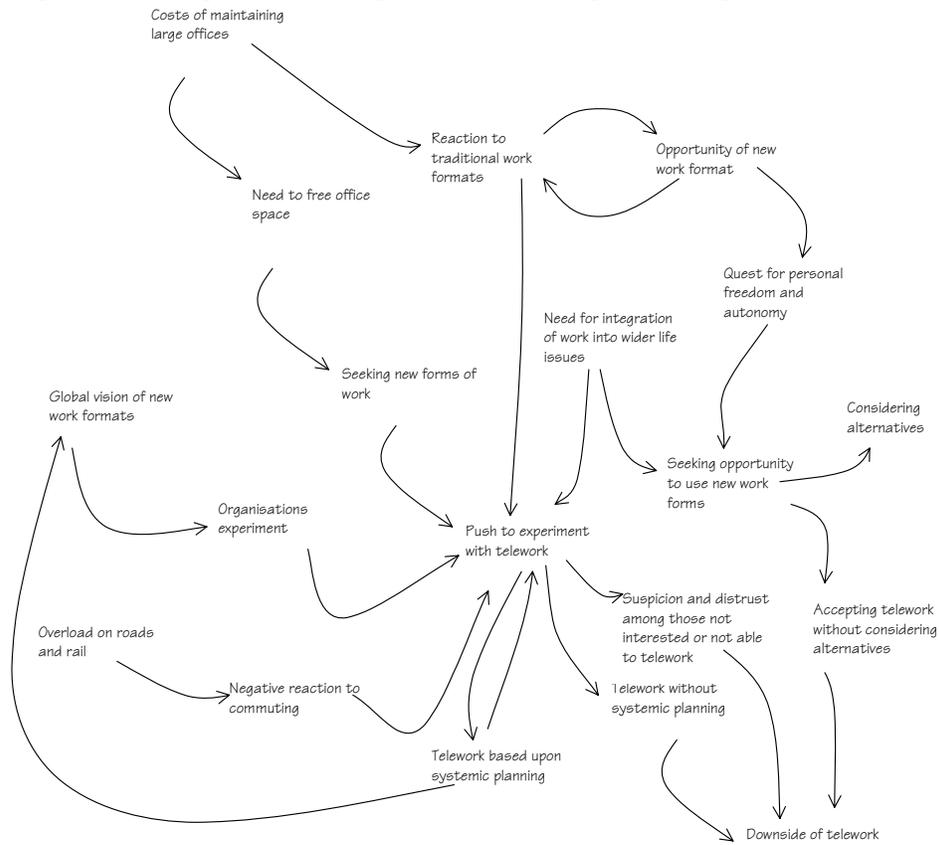
Costs of maintaining
large offices

Reaction to
traditional work
formats

Opportunity of new
work format

Need to free office
space

Quest for personal
freedom and
autonomy

Seeking new forms of
work

Need for integration
of work into wider life
issues

Global vision of new
work formats

Considering
alternatives

Organisations
experiment

Seeking opportunity
to use new work
forms

Push to experiment
with telework

Overload on roads
and rail

Suspicion and distrust
among those not
interested or not able
to telework

Accepting telework
without considering
alternatives

Negative reaction to
commuting

Telework without
systemic planning

Telework based upon
systemic planning

Downside of telework

Figure 2. Conceptual Model of the activity set to develop the systemic model of e-working

Being and not being a teleworker. Reflecting on experience

Reflecting on and learning from change

Rethinking strategic position

Managing processes within an organisation both as teleworker and as non teleworker. Acting and learning

Engaging within the organisation both as a teleworker and as a non teleworker. Connecting with alternative forms

Providing a continuous learning environment for individual and collaborative working

Contextualising work processes within an organisation for both teleworkers and non teleworkers. Modelling new outcomes

Providing a purposeful environment in which to develop personal, team and organisational autonomy

Figure 3. The control model

Input

Transformation
process

Output/
input for
next loop

Goal

Does the output
match the goal?

Table 1. The eight goals

1. Goal: Accepting being and not being an e-worker	• Input: Expectations of both types of worker	• [3]Transformation: Reconciliation of expectations via 'horse trading'	• Output Mutual acceptance of expectations
2. Goal: Rethinking strategic position	• Input: Mutual acceptance of expectations	• Transformation Concretising acceptance to agreed policy	• Output Shared strategic vision of working methods
3. Goal: Engaging within the organisation both as an e-worker and as a non e-worker	• Input: Shared strategic vision of working methods	• Transformation Agreeing resource requirements[4] for work formats	• Output Alignment of technologies and relationships
4. Goal: Providing a purposeful environment in which to develop personal, team and organisational autonomy	• Input: Alignment of technologies and relationships	• Transformation Agreeing best fit of team and task	• Output Alignment of individuals, and teams in tasks
5. Goal: Contextualising work processes within an organisation for both e-workers and non e-workers	• Input: Alignment of individuals, and teams in tasks	• Transformation Agreeing best technologies for team and task	• Output Team agreement on forms and uses of technology and non –technology interface needed to fulfil tasks
6. Goal: Providing a continuous learning environment for individual and collaborative working	• Input: Team agreement on forms and uses of technology and non –technology interface needed to fulfil tasks	• Transformation Establishing shared reflective practice	• Output Learning within task processes
7. Goal: Managing processes within an organisation both as e-worker and as non e-worker	• Input: Learning within task processes	• Transformation Learning fed into emerging task processes	• Output Adequately resourced, learning task groups
8. Goal: Reflecting on and learning from change	• Input Adequately resourced, learning task groups	• Transformation Reflection on change during processes	• Output Multiplex, adaptive learning communities

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[3] The transformation column is enabled by a toolkit of systemic approaches and methods not dealt with in this essay

[4] Resources = people, technologies, enabling mechanisms e.g. training and mentoring