


Communication, Trust and Privacy

Discord and Harmony in eBusiness and Knowledge Management




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Communication, Trust and Privacy

Discord and Harmony in eBusiness and Knowledge Management

*Knowledge management and eBusiness in all their various guises have a significant level of overlap, not only in their technologies, but also in associated hype and unfulfilled promise. Although it may not be obvious, its overall tenor is optimistic although it focuses on problems and failures. The reason for this comes from one of the key learnings achieved in knowledge management, namely the rejection of best practice in favour of lessons learnt. With the exception of the more mechanistic processes and practices of the modern organisation defining best practice has tended to ossification and consequential lack of adaptability; **best practice** is mostly **past practice**.*

Conceptual Problems

Previous initiatives such as ERP, Quality Management, CRM etc were all clear opportunities against established business objectives. The very general nature of our two subject areas means that there is much excitement and little clarity or focus, the consequences of which are three fold:

1. A bandwagon effect emerges in which organisations feel the need to be doing something in the 'area'. The subject chosen may or may not be appropriate; all too frequently skilled political players in the organisation will re-badge pet projects, or create projects with the *E* or *K* words attached to gain status and visibility.
2. There is a focus on 'low hanging fruit' at the expense of strategy. Within knowledge management the areas we should focus on first are inefficient processes, highly dependent on a knowledge asset to which we are vulnerable to loss. This sounds like common sense, but the majority of knowledge projects are not rooted in the pragmatic here and now, but attempt more generic projects on communities of practice and the like without sufficient understanding of what is known. In eBusiness we see the same pattern with web sites rapidly created without sufficient attention to possible use and consequence for customer relationships or awareness of the very different relationships that take place in electronic environments.
3. Both eBusiness and Knowledge Management came into existence as a direct result of the increasing capabilities of technology. While technology has *enabled* the creation of demand, the demand itself is nothing to do with technology per se, but is about the way in which human beings constituted individually and as communities communicate, build trust and respect privacy. However, because both movements originated in technology there is a tendency not to treat the technology as an enabling *tool* but as a *fetish*. Instead of combining human and machine intelligence, there is a lemming like attempt to force everything into the more structured and superficially predictable domain provided by engineered technology.

Fĕt'ish, -ch(e) (-sb), n. Inanimate object worshipped by savages for its magical powers or as being inhabited by a spirit; principle etc. irrationally revered. Hence or cogn. ~EER', ~ER¹, ~ISM(3) ~IST(2), nn., ~is'tic a. [f. F *fétiche* f.Port. *feitico* charm, orig. adj. = FACTITIOUS]

It is important to understand that these three conceptual problems relate to the way we perceive and describe situations, they are part of the accepted and acceptable language of an organisation. Once understood, then it is possible to make more informed

decisions and the tactical problems become easier to manage; more importantly the focus on projects of real benefit becomes more likely.

Tolerance of ambiguity is becoming a key skill for managers. Unfortunately most have been trained in the disciplines of scientific management and are, in consequence intolerant. Just as Newtonian Physics reached its bounded limits with the greater understanding achieved through Quantum Mechanics and Heisenberg's Uncertainty Principle, so our increasing understanding that the organisation is a complex and highly interdependent ecology has bounded the mechanical metaphor of Taylor and his disciples. To quote Peter Drucker, speaking at the IKMS Congress in San Diego 1998 "In the Knowledge Economy everyone is a volunteer, but we have trained our managers to manage conscripts".

The single major problem for organisations in the emerging knowledge economy is to break the mechanical mould of their management thinking. The organisational forms, planning and resource allocation principles of a volunteer organisation are radically different to those of a conscript society. Attempts to follow the principles and styles associated with business process improvement and quality management while valid for those practices inhibit progress when we move to eBusiness and Knowledge Management. In many cases it is necessary for *unlearning* to take place in traditionally trained managers before *learning* can commence.

Execution Problems

Aside from the conceptual confusions described above we also have some deeply pragmatic problems that are common to both areas. All the points that follow need to be qualified by stating that they are general observations to which there are particular exceptions.

Investment in content or participation?

Both eBusiness and Knowledge Management assume that universality of content is an achievable goal and their business models are dependent on that achievement. This problem is heightened by the raised expectations set in funding proposals and in the first flush enthusiasm of the design team. In Knowledge Management we see the over hyped growth of Intellectual Capital Management Systems (ICMS), Many of the early adopters are starting to realise that it is not possible to fully populate these systems at an acceptable cost.

In any eBusiness a similar problem emerges. For example, in a B2C environment the consumer assumes full access to all reasonable expectations and efficient, safe procurement and delivery. Amazon.com works because virtually any request for a book can be satisfied, the processing of credit cards is secure and delivery efficient and prompt. This comes at a high cost. In contrast other sites are set up to satisfy demand but fail to invest in population of their sites. A frustrating hour on poorly populated web sites produced nothing; a call to the local tourist office produced an immediate and suitable location. The lack of content resulted in an alternative approach being adopted and a low probability of any return to the sites in question.

In an ICMS acquisition of content is dependent on participation, in eBusiness participation is dependent on achieving a critical mass of content. Failure to invest appropriately can result in failure. In eBusiness we see investment in participation through mass marketing campaigns etc in the hope that this will lead to participation. In Knowledge Management we see investment in content on an assumption of participation. In a sense both have got it wrong. For Knowledge Management there is a need to invest in marketing **and** selling the ICMS to the participants so that they will voluntary participate. In eBusiness the content, procedures and processes need to be in place before investing in marketing.

Recognition of the persistence of existing channels

Historically much knowledge exchange in organisations has taken place informally, through mutual project work, common obligations, shared values and the like. The vulnerability to loss of knowledge that walks out of the door each evening was one of the early drivers of investment in knowledge management. Unfortunately much, if not most of the investment in Knowledge Management systems was made on the presumption that the formal systems being built would overcome this problem through the creation of databases containing project reports, procedures, experiences and the like.

Just in Time Knowledge Management in contrast creates an environment in which the informal knowledge will self organise and focuses on moving that knowledge on a just in time basis into the formal environment. Just as firms started to realise that the cost of maintaining stock on the factory floor was excessive and the cost should be pushed back to suppliers, so it is now possible to reduce the excessive cost of formal knowledge management systems by creating self organising environments for the bulk of the organisations knowledge, acknowledging the privacy issues associated with informal networks; management time is then investing in boundary movements such that the informal knowledge becomes formal on a just in time basis to the formal communities, stimulated by need or opportunity. As in the case of JIT in manufacturing these means that commodity knowledge can be bought in on an as needed basis from the cheapest supplier to satisfy quality standards. However with key suppliers/staff long-term stable relationships need to be built.

In eBusiness many firms setting up B2C trading environments have spent significant sums in setting up their electronic trading areas and find it difficult to make money. For existing suppliers there is the cost of maintaining multiple channels in which new demand is not significant, existing demand just shifts around with an increased cost base. For new suppliers there is the constant 'will they' or 'won't they' questions about long-term profitability. Channel integration and substitution are key areas in the future of eBusiness. In B2B and B2I the problems are very close to those of Knowledge management. The new efficient trading environments will not replace the informal face-to-face contacts of most business relationships and trusted links that build up through the resolution of problems. There are wide ranges of social and other contacts that are the essential oil of any business relationship and investments in this area need to avoid the errors of knowledge management and make some hard choices about the real level of efficiency that can be maintained. The more we automate, the more we optimise for the circumstances known or knowable at the time of automation. The more social contact and reliance and social obligation we build into the system, the more that system can adapt to change and evolve to meet changing circumstances. It is a balance, and loss of balance has been all too prevalent in technology driven solutions in both domains

Some web sites are starting to recognise the need to balance human and machine intelligence. Lands End, originally a catalogue company for clothes, have advertised a service by which one can interact with a human being who will manipulate the web site catalogue on your computer for you. The human processor is able to understand and interpret greater ambiguity than the computer, which can capture and represent measurements of body size, but cannot answer the 'What should I wear tonight?' question in any meaningful way. I may have little colour or fashion sense, or be unfamiliar with the operation of a web site; a variety of motivations can mean that access to a human being will be more value to me than a soulless interaction with a screen. I want the intimacy of the corner shop, with the stock profile, price and availability of the hypermarket. With a well-constructed web site that respects the roles of human and machine intelligence this is achievable.

The ability of humans to interpret complexity, ambiguity and incompleteness is a key skill that needs to be retained in both knowledge management and eBusiness. One of the great ironies of both Knowledge Management and eBusiness is that have increased the awareness of value that resides in social networks. In Knowledge Management

'Social Capital' is a hot topic. In the general market place the impersonal nature of the eEnvironments has also created a new market for old style personal service. Humans have an ability to surprise that cannot be engineered.

The Hawthorn Effect: use it or be used by it!

The Hawthorn experiments will be familiar to any student of management science. Conducted in the early 1900s attempts were made to identify optimal working conditions for productivity. To grossly over simplify a profound piece of work: lighting levels were increased and productivity improved; lighting levels were then decreased and (pause), productivity improved. Paying attention to something created awareness and produced a positive outcome, which then declined overtime.

We see the impact of this time and time again in management initiatives and in commerce of any nature. The first time we create a knowledge management initiative, it creates awareness, interest and enthusiasm. People participate and positive results obtained. We then assume that this participation and enthusiasm will scale **as is**. In practice we are seeing a Hawthorn impact that will die out if it is not constantly renewed. If anything attention spans are decreasing. It behoves practitioners in both disciplines to use Hawthorn effect by a series of small scale and incremental interventions, rather than be deceived by transient impacts.

Moving Forwards

Knowledge Management and eBusiness offer massive opportunity, not only for efficiency, but also for an increased and necessary humanisation of the business and social environments in which we work and play. We can identify some basic design principles for both that are *necessary*, if not *sufficient* conditions for success in the virtual world of the new economy.

1. Trust is one of the most important words in any form of communication. There are a variety of forms of trust. I trust individuals based on common experiences and proof. I trust men in white coats if they appear at my side in a hospital, because I have trust in the institutions of the medical profession. I trust anyone who appears to know what they are doing in the middle of a hotel fire because I have little alternative. Different types of trust exist in different circumstances. The key issue is that trust is gained over months or years and lost in seconds. Loss of trust in a brand through some product fault; lost of trust in leadership through a hypocritical call for self sacrifice which does not apply equally: it is very, very easy to loose trust. The reactivity and rapid response of a virtual environment heightens the opportunities and the risks. Any organization entering into knowledge management or eBusiness should have a strategy for Trust, including mandatory rules for those in power to prevent an accidental and superficially expedient decision from creating long term damage. In Knowledge Management you may not be aware that trust has broken down as knowledge just moves out of the formal domain. In eBusiness the results are immediate and visible. In both cases the impact is destructive.
2. Privacy is the second word that also requires a formal policy. A virtual environment means that everything is constantly available to everyone else, or at least potentially so. In eBusiness I do not want my personal credit card details published on the web site by accident as happened with the customers of a UK Utility company in July 2000. In Knowledge Management, I will share real learnings and significant mistakes with trusted individuals in a knowledge management system if I can be assured of privacy, if that privacy is breeched, or if I feel in any way that it might be breeched, then that learning and exchange will take place outside, rather than inside the system and the asset remains my personal property rather than that of the organization for which I work. Increasingly organizations are focusing on building boundaries to define spaces in which privacy can be assured. Rigid

adherence to boundaries and a paranoid attention to respect for privacy are key survival characteristics for organizations.

3. We need to recognize the different functions and qualities of human and machine. The Lands End example quoted earlier has wider application in its underlying concept. In building a knowledge system, inclusion of human processors **within** the system means that we can achieve 80% of the benefit for 20% of the cost, because we can allow for ambiguity in the design. The humans concerned are called librarians and IT professionals have insufficient respect for the disciplines and abilities of these professional cataloguers and categorizers who can be the difference between success and failure in a holistic system. Key is that access to the human entities is through the system, rather than around the system.
4. Self-organization is better than directive organization. The general conditions of an ecological system in which we manage a complex environment by maintaining boundaries and intervening only to protect or encourage, are more conducive to communication than the mechanical and engineering metaphor in which everything is designed to a pseudo rational model. To take a simple example, if I plant an open area with grass and wait to see where people walk, before I invest in building paths, I will spend less money and achieve more benefit than if I engage in mass simulations and excessive design. There is a place for design in advance of use, but we need to redress and restore the balance.

An underlying theme of this paper has been the need for a more natural and organic approach to the opportunities provided by Knowledge Management and eBusiness in all its forms. To illustrate this and conclude the paper I offer the example of the feeding behaviour of ants. An individual ant goes looking for food on a random walk basis, when it finds food it returns to the nest by the most direct route. As it walks it leaves a scent trace that decays over time. This means that the direct route back to the nest has the stronger scent; other ants then follow this path and reinforce the scent trace until the food supply is exhausted. This model has now been applied to network traffic. Each signal in a complex network leaves a trace of its passing which decays over time. Subsequent messages then do the opposite of the ants: they take the path with the weakest signal traces, and the system is optimised as a result.

The lesson from this is clear: The system as whole is optimal, because sub-optimal behaviour is permitted and even encouraged for the individual elements of the system. The same applies to Knowledge Management and eBusiness. By allowing sub-optimal performance for the individual components we introduce sufficient variety to allow the system as a whole to be optimised. To date too much management has been based on the principle that if you optimise each component following a reductionist analysis, then the system as a whole can be optimised against strategic goals. In practice an ecology is more complex than a machine and this mechanical model does not provide the adaptability that is now a survival necessity for organisations in the new economy.