Revisiting the Nature of Information Systems
The Urgent Need for a Crisis in IS Theoretical Discourse

Dr. Larry Stapleton,

ISOL Research Group

Waterford Institute of Technology

Republic of Ireland

Email: lstapleton@wit.ie

Professor Ciaran Murphy

Department of BIS

University College Cork

Republic of Ireland

Email: cm@ucc.ie

Abstract

This paper suggests that the emergence of large scale integrated business and financial information systems is another aspect of the deconstruction of financial and business realities into a simulacrum. It draws largely upon Baudrillard's theory of modern society and how this society processes and exploits information in an ever increasing vortex of non-information. IS and management literature argues that large scale information systems such as ERP systems and supply chain integration systems are an important step forward for financial information processing because they integrate the disparate units of business information into a coherent whole. However, whilst this is a very tantalising vision, the reality on the ground seems to be different. This paper posits a theoretical position which adopts neither the traditional positivist, decision theory approach nor the social constructivist theories in which the IS is seen as a primarily social system. Instead the work of French Deconstructivists is used to interpret empirical data gathered by the researcher in a new way suggesting radical new trajectories for information systems research.

1. Introduction: Empty Mythologies and Hollow Dreams

Recently, researchers have begun to question the exact nature of large scale information systems. Some have argued that they are not, primarily, technical systems but instead constitute a new type of social system (Stapleton (2001a & 2001b)). Many have identified pressing problems associated with new forms of work associated with advanced information technology, including the loss of management control (Byrne, Ryan & Stapleton (2000a)), regional economic risks (Byrne, Ryan & Stapleton (2000b)) and psychological dysfunction (Alferoff & Knights (2001)). On the other hand, the mainstream management and accounting literature has seen ERP (for example) as the latest stage in an ongoing progression towards systems, which provide greater control of, and visibility into, the corporate firm. This literature argues that they provide greater 'integration' of business activity (Davenport (1998),

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Scapens et. al. (1999)). They enable effective distributed organisational activity creating a 'network nirvana' (Savage (1992), Grenier and Metes (1992)). As regards MRP II and CIM (the forerunners of ERP) the management and IT literature tells us that all aspects of an organisations manufacturing activities can be integrated. 'The essence is the use of IT to provide integration through communications effectiveness and efficiency' (ACCA (1996) p.522).

This paper attempts to delineate a path between two perspectives, positivist on the one hand and the social constructivist perspective on the other, in order to provide some alternative theoretical trajectories for researchers concerned with the problems associated with modern, large-scale business information systems. In doing this, it draws upon recent work of French philosophy into the role of information technology in society. The paper outlines the implications of these arguments and suggests that, rather than providing a higher level of business integration for financial staff, there is evidence to suggest that these developments actually reflect a growing fragmentation of societal communication and activity. In short, the integration promised by systems like ERP in many cases is an empty mythology, and communications effectiveness is a hollow dream.

2. Theoretical Background

In this section we briefly review the theory of deconstruction and simulacra that applies to this review of information systems research. We find that this theory can explain the experiences of organisations and that modern large scale information systems seem to fit into the model of simulacra i.e. the shadowy non-reality that replaces 'real' human life.

2.1. French Philosophy, Deconstruction and 'Network Nirvana'

'Network nirvana' is a phrase coined by Grenier & Metes (1992) and similar concepts are developed in literature on the promise of 'Fifth Generation' management and technologies (Savage (1990), see also Hamelink (1983) & Cleary (1998)). These ideas were mapped out in the early nineteen-nineties and provided the basis for many of the subsequent developments in business information systems. More recently, these ideas have been questioned and authors have suggested that the modern information system is a social system first and foremost. It is argued in this view that the primary outcome of information systems development in the case of ERP (for example) is a new organisational process with new relationships and communications paths, rather than a primarily technical artefact (Stapleton (2001)). In this thematic scheme researchers are very concerned with the organisational and social impact of ISD, management rationalities and so on (Boland (1985), Hirschheim & Newman (1991), Checkland & Scholes (1991), Robey (1995), Orvik et. al. (1999)).

Simultaneously with these two opposing positions an important theme of philosophical enquiry was developing in France (as well as the USA – see Ihde (1998)), which sees society as an arena for 'deconstruction'. The origins of 'deconstructionism' are generally attributed to Jacques Derrida who is sceptical of the possibility of coherent meaning (Derrida (1995), Collins & Mayblin (1996), Johnson (2000)). Applied to an information system, deconstruction suggests that system content can be interpreted in a myriad of ways and is the opportunity, or an arena, for the continuous interpretation and creation of fresh commentary. Essentially, Derrida argues that we cannot 'escape the world of our own ideas' (Blackburn (1994) p. 95)). Baudrillard builds on many of these concepts arguing that the constant

creation and recreation of meaning has sent society into an 'ecstasy of communication' in which so much is being said and yet, nothing is being communicated (Baudrillard (1988)).

2.2. Simulation & Simulacra

For many years a number of philosophers have continued to see society entering into a 'simulacra' i.e. a non-reality consisting only of signs and images (Horricks & Jevtic (1997), Eco (1994), Baudrillard (1998b)). In his infamous deathblow to reality he argues that

'it is no longer relevant to say that the real world "exists". No system of representation or analysis can refer to the reality' (Baudrillard (1981)).

This includes information technology systems which seek to represent the world in terms of data fragments (whether it be a financial world, a production world, a HR world etc.).

Baudrillard states that people exist as 'terminals of multiple networks' in which our lives become, or are subsumed into, simulations. He sees the world becoming homogenised into a system in which an uncountable number of signs and symbols circulate endlessly. It is these signs and symbols that have 'value' in an economic or production sense. Money is just another symbol, a simulation of what was once real i.e. it does not really 'exist' in any objective, solid or detached way. In his view of the world, communications networks have created a society (social space) which is simply saturated with information, something he calls 'an endless harassment, the extermination of interstitial space' (Baudrillard (1988) p. 24, Baudrillard (1983) & (1998a)). This social space is so saturated, the pressure to be heard/be seen/see so strong, that the individual is no longer capable of knowing what he wants. In this world people are lost. As Baudrillard puts it himself 'to disappear is to disperse in appearances'. This is deconstruction.

Baudrillard argues that there is an 'ecstasy of information'. He uses the term ecstasy to denote a removal from reality: we have reached and exceed an escape velocity from reality and are now off into metaphorical outer space. This ecstasy he terms 'simulation'. In this ecstasy the information is more important, more 'real' as it were, than the real. In this space

'our all too-beautiful strategies of.. knowledge… are erasing themselves. It is not because they have failed (they have, perhaps, succeeded too well) but because they devoured themselves, giving way to a pure and empty, or crazy and ecstatic, form'. (Baudrillard (1988) p. 86, and expounded in Baudrillard (1990)).

In order to explain this further, let us examine a story from Baudrillard (1994). There is an ancient fable in which cartographers of an empire drew up a map so detailed that it ended up covering the territory exactly. The subsequent decline of the empire is witnessed by a fraying of the edges of the map until it has disappeared except for a few fragments in the deserts scattered here and there. The simulacra is a situation in which the map precedes the territory, the generation of the 'real' from models of the real. And as Baudrillard puts it 'today it is the territory whose shreds slowly rot across the extent of the map' (p.1). In the present day, systems of information attempt to make the real coincide with their models of simulation. In some ways it is no longer a situation of maps and territories. Something has disappeared i.e. the difference between one and the other. The real is substituted by signs of the real.

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Things only exist as a simulation in the grip of our technology. Control over reality is lost and everything that is real disappears. Instead of acting as a mode of production, control and management, information systems are a 'mode of disappearance'. This poses a question: If information no longer had anything to do with an event, is it therefore only concerned with promoting itself as the event?

This is the central question of this research paper i.e. is there evidence to suggest that, in modern businesses, information itself has become the event, and has reached an escape velocity in which the tables are turned and reality on the ground has become subservient to the information system. Furthermore, is the promised highly integrated world of ERP a myth? Do we have increased integration or, as Baudrillard would argue, increased dispersion and fragmentation? If the latter is true then, in some cases at least, the Information System is a simulacra i.e. a shadowy, deceptive substitute for the real.

3. Research Approach

The research presented here is part of a larger study into the impact of advanced information technology upon the organisation. The study was carried out between 1996 and 2000 across nine organisations in Irish manufacturing business. A profile of these firms is presented in table 1.

Table 1

Participating Firms by Industry

	Number of Firms
Mechanical Engineering	1
Packaging	1
Retail Electronics & Supplies	1
Pharmaceuticals	1
Electrical Engineering	3
Building Products	1
Luxury Goods	1

The task of selecting an appropriate research method that can empirically test the research issues in large, complex organisations is vitally important. This study adopted a field research approach that gathered data by way of semi-structured interviews based on a questionnaire. This section will provide a rationale for the research design and outline the basic principles which guided this design process.

3.1 Field Research

Field research requires the researcher to process and arrange large amounts of data from multiple sites in order to answer a particular research question (Miller (1991)). It includes the

real-life context of the phenomenon under scrutiny and has a number of different applications. According to Yin (1989) it can help

1.   explain causal links in very complex areas of study

2.   describe real-life situations, including the context in which they exist

3.   evaluate what is happening within these situations

4.   provide a means by which a situation can be explored where evaluation had resulted in no clear set of results

Field research is a means by which current theories and their underlying assumptions can be challenged. This made field research an attractive option for an exploratory study such as the one presented here. It enables the generation of hypotheses to which rigorous empirical testing can be applied at a later stage (Fahy (1995)). It can also be used to construct descriptions of the nature and form of existing practices as well as examining these practices in the light of existing theories. Kaplan (1983) argues that these descriptions must be developed before theories can be constructed and it is field research that can provide such descriptions. A variety of research methods can be employed to triangulate results and validate conclusions (Young & Selto (1993)). A combination of qualitative and quantitative techniques provides a rich source of data and some sense of the generalisability of findings. Researchers have used the interview questionnaire to structure interviews in order to ensure that the interviewees address the same issues. This ensures that the research method focuses attention on the central issues of the study because all interviewees in the study address all the same issues (Fontana & Frey (1994)).

Kaplan (1983) argues that IS research needs to employ field research extensively in order to bridge the gap between theories and practice. Indeed, there has been an increase in the use of field research techniques amongst IS researchers since Kaplan's paper. The IS discipline deals with human activity in a social setting and field research can help researchers understand and appreciate the context in which observations occur. In this way field research is very suited to capturing the richness of a complex organisational setting in which the information technology is located.

Field research was ideally suited to the present study. Firstly, information systems deployment activities are not clearly distinguishable from the context in which they occur. This implies that the research issues identified above cannot be neatly isolated and examined in a vacuum. The technology deployment and application process cannot be isolated from its setting in organisational space. Field research allows the researcher to examine, in detail, information systems related activity as it occurs in its real-life context.

To date, a great deal of related research on information technology concentrates upon the ways in which elements and issues associated with organisational life can be formally described, rather than understanding exactly how these issues and elements emerge and are discovered. Consequently, the research literature rarely addresses the wider context in which the information technology is posited. This leaves a gap in explanatory theory regarding information systems deployment. A field research approach which combines interviews and a questionnaire helps to overcome this by allowing the researcher to gather and assimilate a large amount of data from a number of sites. Experiments, postal surveys and other methods

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would not cater for the complex braiding of issues that influence, and are part of, the organisational activity in this space. Field research permits a more holistic approach. It addresses the complexity and ambiguity inherent in the ways in which people in organisations use information, construct meaning and perceive the world around them.

3.2 Studying a Complex and Ambiguous Organisational Space

Some concepts in grounded theory were also very relevant for the study (Glaser & Strauss (1967)). The researcher recognised that the inherent complexity and ambiguity of organisational life was likely to be an important facet of the research (March (1999)). However, complexity and ambiguity have received little attention in the information systems or accounting literature. It is therefore important to determine whether the research issues are applicable at all. If more research had been done in this area prior to the present study, and stronger theoretical frameworks had been available, this researcher would have had more confidence in the proposed research framework. In the circumstances at the time of the field research, it was very important to test and review the theory in an initial study and then broaden the work to a number of organisations. It was also difficult to know whether the individual research issues constituted in the framework were actually relevant. In order to address these difficulties some ideas embodied in grounded theory are included in the research method adopted by this study. Consequently, a preliminary study was undertaken in one firm utilising an adapted grounded theory approach as utilised elsewhere (for example see Miller & Dunn (1999)).

4. Findings

In the study 48 people were interviewed (including the pilot study) from a wide range of functions and management levels. This section provides a brief overview of findings and discusses the implications of these findings for future research. It tells the stories of people in organisations in the south-east of Ireland.

The following tale from Company A shows how the notion that things were under control was managed. Interviewees in company A described how the formally espoused objectives were not necessarily those that determined the perceived success of the project in the eyes of the local organisation. The project investigated in this firm was a SAP implementation which required a massive financial investment amounting to millions of euros locally and tens of millions corporately. Given this level of investment it was important to discover that there was significant divergence between the perceived success factors and the success factors that formally justified such a major investment. Interviewees explained how the divergence between success factors they believed to be important and the success factors that formally justified the project investment to corporate executives meant that it was very important to manage corporate perceptions of the implementation. They described how the local organisation was obliged to show the formal success of the project in terms of a significant and tangible return on investment because of the levels of investment involved. However, respondents believed that most of the real benefits would only accrue when the corporation was using the system globally[1]. Thus, for the local site, the old system that SAP replaced was

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[1] This idea is not conclusively borne out in firms investigated where the system was operational over multiple sites

'probably better'… because people… 'got better information because the legacy systems were developed over a period of ten years and provided a great service. The new system was thrust upon us, it was a monster'   Interviewee 1

The sense was that corporate were thrusting the 'monster' upon the local site and often people described the situation as completely unreal and traumatic. The tension between local site objectives (i.e. the objectives that would ensure the effective use of the new system in operation) and corporate objectives, was quite apparent and meant that, in order to make the project 'successful', corporate perceptions of the project outcome had to be 'managed'. Corporate had to be given the sense that everything was under control and that they had their fingers on the 'pulse' of what was happening as regards this massive project.

The new system constituted an enormous change in business practices because the new system embodied a completely new corporate model of business operations: the 'Global Model'. This model was largely derived from concepts embodied in the SAP system itself. It is true to say that the SAP system had a great influence upon the Global Model, and this model was then 'thrust' upon local organisations in order to provide one homogenous business operation at a corporate level. Such homogeneity is central to the vision of the Enterprise Resource Planning (ERP) approach. There was some evidence that this type of process resulted in high levels of technical determinism and, consequently, stress for the organisation. It was difficult to ascertain the source of this technical determinism, but the evidence suggests that the strict adherence to deadlines as laid down by corporate was influential upon the extent of technical determinism in the organisation. The following extract illustrates the ways in which technical determinism emerged in the firms:

There was a lot of pressure to make the deadline, to make sure the system ran on the 7th of July. But when it went live we experienced no end of trouble getting data for the shop floor, entering information for the item master and so on. BPCS was simply capturing too much data − it was crazy. It was as if the vendor had developed BPCS by looking across all of industry and come up with a single system that would work for every firm. It was trying to get us to enter information that was pretty irrelevant for our industry. But it forced us to do it − it wouldn't work if we didn't put in the data. This really increased workloads. Everyone had to fill in all the [data] fields….. we had to work to the system, we couldn't change the system to work for us'   Interviewee 4 Company B.

In company B the core objective of the IS project was to introduce a year 2000 (Y2K) and Euro compliant system whilst minimising impact to the business processes in the manufacturing plant. Whilst it seems, on the surface, self evident that the system should have been changed to fit work-practices in a firm where change was to be minimised, there were very good reasons why the organisation was forced to work to the system. The primary reason was that customisation of BPCS made it very difficult to install upgrades, or future generations of BPCS technology. Each customisation would have to be reprogrammed into all future upgrades. The only people who could make these changes were the vendors of the system, and this was extremely expensive and sometimes even technically impossible. Consequently, BPCS was put in as it was, with few changes to the functionality. This also ensured that the system could be integrated at a corporate level. However, as is evident in the data, the costs at an organisational level for this decision was high across seven of the nine firms studied, and many interviewees questioned the need for such a high level of integration.

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As one manager in company C put it 'why don't we just post the information on the companies web page? Why do we have to be completely integrated – it just doesn't make sense'. The lack of sense he referred to was the traumatic impact of these highly integrated systems upon the business of the local site. The evidence gathered herein illustrated how integrated systems such as SAP and BPCS actually distanced corporate from the realities on the ground like the introduction of the telegraph in the British Empire (Sproull & Kiesler (1991) p. 116). The management of corporate realities was evident in a number of the firms studied. It usually had something to do with 'creating' a return on the high levels of investment involved, as quickly as possible. For example, in one firm canny local management achieved this by focussing on Year 2000 compliance, an objective that was satisfied in the project implementation *de facto*, because the new system was Year 2000 compliant. By estimating the cost of making the pre-existing systems Year 2000 compliant and presenting this cost as an immediate term return on investment (ROI), the site achieved a high level of justification for the project in the eyes of corporate. Interviewees described how this gave the local site time to adjust to working with the new system by alleviating corporate pressure to register significant short term ROI. However, on the ground people described the implementation as a monster which invoked a chaotic and traumatic situation in which the organisations effectiveness was extremely hampered and costs ran high.

The coping mechanisms utilised by local sites were ingenious political manoeuvres which attempted to alleviate direct pressure for corporate. In order to place this into some kind of local context, the factory in which this field study was conducted in Company A, in the period immediately prior to implementation of the new system, had, month on month, significantly ramped up production levels. Orders were flowing in, people were working '11 hours per day' and interviewees told how operational staff simply did not pay attention to, or actively avoided, the impending reality of a new system and its concomitant new order.

As was indicated earlier, in company B Year 2000 compliance was an overriding concern and change was to be minimal. Compliance was to be introduced with negligible impact upon the business. However, the findings of this study indicated that advanced IT projects were, by their nature, fundamentally destabilising for the organisation in which they occurred. Therefore, if changes to work practices were not recognised as a key outcome, important issues were overlooked until they created major problems and came into stark relief. This was very evident in the findings across all firms. In Company B, for example, management did not want to change work practices and this was an explicit objective for the systems development project. However, the project caused changes to work practices, for which the organisation was completely unprepared. The project team came under extreme pressure as more and more problems arose as a result of the system not reflecting the working environment. The evidence from all firms indicates that the introduction of new information technology at this level is fundamentally destabilising. However, not all firms recognised this, and many problems resulted.

It was readily apparent from the findings that local site perceived corporate to be out of touch with what was going on in the firm at an operational level. In some cases people told how corporate headquarters thought that they were in control, when the reality on the ground was that organisations were suffering trauma as a result of their decisions. As has already been shown, senior management in local sites managed corporate perceptions of advanced technology projects and recognised that the particular political realities associated with these

projects meant that the local organisation had to plough on regardless. Sometimes the consultants were blamed for this. Quoting one senior manager from Company G

'The (corporate) plan was the most cosmetic plan you could imagine – it had no substance. I couldn't believe the plan when I saw it! They hadn't considered [so many things]. They hadn't even thought of creating a manual! The plan was "We'll put in SAP having prototyped it" – end of plan!! The point is who carries the can when it all goes wrong. [Local site] Management carry the can. Consultants drove this process and corporate bought it, hook line and sinker. The consultants are 100% exonerated and charge a fortune! They have massive influence over the decisions but are not accountable. I suppose if corporate are gullible enough to listen to [the consultants] then they deserved to be charged the earth for it.'

Again, to put this into context, the SAP implementation investigated in company G was part of a project to implement a single, integrated SAP systems across 13 factories in Italy, Germany, the UK, Turkey and Ireland. These efforts represent massive information systems investment with an enormous impact upon local sites. Furthermore, the company was replacing an Oracle system that had only been installed 18 months earlier. Since then the firm had been merged with a larger company, and the larger company that used SAP required that the smaller firm install SAP, and jettison Oracle. This was to ensure that the systems of the newly merged firms were integrated at a corporate level. One interviewee described how she had could not cope with the continuous changes and the problems that accompanied it. For example, she told how she could process invoices very quickly in the pre-existing system. When the new system came in it took her five minutes to process each invoice. She had to stay in work till 10.15 at night in order to type in 100 invoices in a single batch. She told how

'it was so slow – it drove me demented. I had to go home and come back later, it was driving me mad… it would be different if you could shut down the place while these systems are being installed and adjusted. But you can't – you have to keep working… we didn't have much say locally as to what happened. We got the system and had to work with it… there was little in the way of support'

In company G there was a technical support team but interviewees said that they didn't understand business realities and so couldn't help the users with their problems. Interviewees said they simply had to get on with it. Indeed, even the technical support team were off-site working in Germany in the immediate period after implementation of SAP at the Irish site. Consequently, the support team were very difficult to contact.

These stories reveal the results of the illusions that corporate knew and understood what was going on. The sense of unreality and disconnection with reality was felt in the local organisation where interviewees told how they 'had to get on with it'. The interviewee from whom the last quote was taken also told how she suffered a nervous trauma and was out of work for a period. In another case a manager asked that the interview be stopped, saying that recounting the entire experience of the ERP project was too 'traumatic' for him. Evidence of trauma and stress inflicted by these technologies and the associated processes were all too common.

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It is evident that often things were presented as being in control to the organisation at large, and particularly to head offices of the firms studied here. However, at the local site the situation was quite different. Often, this surfaced in discussions of what was meant by the 'success' of an advanced technology project. Corporate notions of success versus the success factors that ensured the successful and effective use of the system at an operational level, were often very, very different. Interviewees told stories of how their firm advertised the great success of a project on the corporate web-site, whilst the very people working with the system were under terrible duress and pressure. Due to the ineffectiveness of the self-same system people described a strong sense of unreality and further told how the situation was like the story of the emperors new clothes, with everybody afraid to 'blow the whistle' on the 'disaster' that was unfolding. This sense of 'unreality' was associated with attempts at matching what was going on 'on the ground' with what was happening in the system. For example, in Company A the Director of Finance questioned the extent to which the 'business realities' were reflected in the new SAP system. It was critical to head office that the system gave a 'real-time' view of the local site operational reality, but it was simultaneously impossible to deliver on this requirement. The Managing Director of the same firm told how Head Office had to be 'managed' in order to ensure that the 'heat' was kept off the local site. This was achieved by deflecting head office so that they looked at issues which were not necessarily relevant to the business reality in site operations, but would 'keep head office happy'.

4.1 Summary of Findings

In five of the nine firms there was substantial evidence that the new systems did not reflect operational reality. Indeed, such was the difficulty associated with managing these diverging realities that some respondents described serious depression or psychological anxiety associated with these processes.

5. Overall Interpretation of Findings

There is evidence to support Baudrillard's theories as applied to IS deployment in large firms. People spoke of how the system drove how people worked. Whilst senior management often saw this as an important part of change instigation, the inflexibility and sheer scale of the system meant that often the company could not include important work practises in the functionality of information processing. More than this, managers often spoke of managing 'corporate perceptions' of what was going on. It was impossible for the system to reflect reality on the ground and, in order to ensure that corporate financial concerns did not result in problems for the local site, perceptions had to be managed politically.

It is not difficult to see how the scenarios presented in the findings lead to a situation where operational reality diverged from system reality. What has become important to corporate finance in these firms are the events 'on the system', not on the ground. It is the system that has become, and perhaps circumvented, the 'real'. In this way the financial and business realities in corporate (and perhaps local) minds are constituted by the system, not necessarily the work processes and accompanying operational controls. We are left staring at the computer screen and asking ourselves 'what is real?'

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5.1 Implications for IS Theory

These stories indicate the need for an escape route from the Plato's Cave that IS has become (Plato/Jowett (1999), Morgan (1986), Stapleton (2001b)). Like Foucault's madmen, we find ourselves hemmed in on all sides by the assumptions of IS which no longer hold true for so many of the systems we seek to understand (Foucault (1965)). How do we escape?

IS research must construct a new discourse which takes us from our existing assumptions and, step by step, embarks upon entirely new journeys. This discourse must include Foucauldian plays of reason and unreason, in order to create new realities and new structures. To this end we need theoretical elements whose gradual affirmation will come to contest the entire system of our discipline. It can be argued here, according to Baudrillard's estimation of other visual technologies and their associated processes, that information systems technology, methodology and practice has become part of the societal structure of manufactured consent and passivity, the folding of the 'real' and the 'unreal' until both disappear in an ecstasy of communication (Baudrillard (1988), Herman & Chomsky (1988), Chomsky (1994)). Furthermore, if Information Systems is to continue as a truly international discipline these primarily western rationalities and structures must be torn down, as others have already hinted (Bannerjee (2000), Hersh (2000)). We are now touching upon the deep consequences of information systems development, consequences encoded in the methodologies we have created and the theories we espouse.

This paper is not the first to argue for this new discourse either implicitly or explicitly (Ciborra (1997), Stapleton (2001), Kendall & Kendall (1994)). But, this new discourse must be constructed in order to bring IS research and theory to a crisis, a crisis by which we will jettison basic assumptions where they no longer hold sway, a crisis by which we will revisit the basic tenets of information theory. This author argues that this will re-invigorate our discipline, creating a Kuhnian revolution which, perhaps, is already underway (Kuhn (1996)).

This crisis may have already begun. Recent events in major global corporations in which major audit systems were shown to dramatically diverge from what was actually going on the operational life of the organisation have created a crisis of confidence on some of the major stock markets. Western business practice is under siege in some quarters and heated debates have begun as to what could have happened, how did the trusted controls breakdown[2].

6. Conclusion

Whilst it is possible to interpret this data in terms of organisational trauma in response to change processes, there is evidence that other processes are at work. These processes are described here in terms of 'simulacra' and 'simulation'. This paper argues that stresses associated with IT deployment may be due to the growing tensions and divergence between working realities 'on the ground' and the increasingly important 'unreality' represented in the information system. As corporations place more control in central head office (a 1990's trend

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[2] According to the financial press, early investigations into the crises at Exxon, WorldCom and other companies indicated a major divergence between information presented in company accounts and the financial realities faced by the boards of these companies. However, the reader should note that more detailed investigations are underway at the time of writing.

identified by Coombs & Richards (1993)) and we move to an ever more technologically-integrated organisational space, the result may be dispersion and fragmentation. Rather than the more effective communications processes promised by mainstream accounting literature, the opposite is the case as corporate information processing wheels away into a simulacra.

Financial controllers feel less in control than ever, accountants cannot account for what is going on in their business and managers find it increasingly difficult to manage. There is also evidence that accounting information systems need to improve their 'organisational fit' but the impact of these systems remains poorly understood (Healy (1999)). What possible routes can organisations take to alleviate and address these difficulties? We can apply two strategies from Baudrillard to counter these trajectories. Firstly, managers need to find, or create, inertia and slowness in the firm. At the same time (and to some extent in an opposite direction) challenges to the processual norms and assumptions must be actively sought. Debate and argument regarding very basic assumptions must grow. So, on the one hand we have a move towards inertia and silence, whilst on the other we must create discourse, enter duels with the assumptions which underpin modern IS trajectories. How can these things come about? The answer to that lies in more research and further study.

Undoubtedly the processes described here are extremely complex and the interpretation provided by the philosophical theories employed here are only one avenue of thought that could be applied. However, given the incredible scale and impact of modern IS and IT, it is critical for researchers to give their attention to these issues and provide fundamentally new theories which can help managers navigate the increasingly blurred realities of corporate business life.

7. Acknowledgements

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