Association for Information Systems AIS Electronic Library (AISeL)

ECIS 2010 Proceedings

European Conference on Information Systems (ECIS)

2010

Textual Fragments, Openness of Enquiry and Information Systems: An Example from an ERP Implementation

Michael Newman *University of Manchester*, mike.newman@manchester.ac.uk

Brian Pentland

Michigan State University, pentland@bus.msu.edu

Follow this and additional works at: http://aisel.aisnet.org/ecis2010

Recommended Citation

Newman, Michael and Pentland, Brian, "Textual Fragments, Openness of Enquiry and Information Systems: An Example from an ERP Implementation" (2010). ECIS 2010 Proceedings. 168.

http://aisel.aisnet.org/ecis2010/168

This material is brought to you by the European Conference on Information Systems (ECIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in ECIS 2010 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

Association for Information Systems AIS Electronic Library (AISeL)

ECIS 2010 Proceedings

European Conference on Information Systems (ECIS)

1-1-2010

extual Fragments, Openness Of Enquiry And Information Systems: An Example From An ERP Implementation

Michael Newman *University of Manchester*, mike.newman@manchester.ac.uk

Brian Pentland Michigan State University, pentland@bus.msu.edu



TEXTUAL FRAGMENTS, OPENNESS OF ENQUIRY AND INFORMATION SYSTEMS: AN EXAMPLE FROM AN ERP IMPLEMENTATION

Journal:	18th European Conference on Information Systems
Manuscript ID:	ECIS2010-0102.R1
Submission Type:	Research Paper
Keyword:	Information system development, Research methods/methodology, IS implementation, Socio-technical approach



TEXTUAL FRAGMENTS, OPENNESS OF ENQUIRY AND INFORMATION SYSTEMS: AN EXAMPLE FROM AN ERP IMPLEMENTATION

Newman, Michael, Manchester University - Accounting and Finance, Crawford House (M29), Manchester M139PL, United Kingdom, mike.newman@manchester.ac.uk

Pentland, Brian, Michigan State University, East Lancing, Michigan, United States, pentland@bus.msu.edu

Abstract

In this paper, we will use this textual fragment from an interview to demonstrate a set of approaches that allow us to critique the initial reading of events. In doing so, we come to a deeper view of the development process. We will see interpretations of the project from a variety of perspectives and in the process shed light on the conundrum of success and failure in Information Systems projects. Our primary goal is to increase our understanding of the Information Systems Development (ISD) change process and at the same time maintain openness of inquiry. Additionally, we use the textual analysis to illustrate the use of the hermeneutical circle. Finally, many research projects in information systems (IS) employ interviews of subjects and develop large corpuses of data transcripts. We believe that our approach adds an additional weapon to the armory of the IS researcher in making sense of such textual "databases" and producing more interesting and insightful readings.

Keywords: Information Systems Development, Research methods, Textual analysis, Success and failure

1 INTRODUCTION

The following is a fragment of text from a recent case study exploring the implementation of a complex ERP system in a university¹.

"s1PeopleSoft were involved already in the North American and Australasian higher education market, with products and services that had a good and well-proven track record. s2PeopleSoft kept abreast with changes in the computing environment, and also issues like student funding etc, and they had an idea of the sort of issues that might arise in years to come with regards and coupled with their deep knowledge in the area of higher education, they were the best choice. s3There was already an existing partnership with Oracle in place at the University of [Vulcan].....s4The president of the University of [Cornfield] came from the right environment and had experience of the implementation of large I.T systems. s5He was the Vice Chancellor of the University of [Elsewhere], where they implemented a similar system. s6Therefore, he was aware of all the issues, pitfalls and expectations, which he was able to share and disseminate throughout the business. s7There was ample support from the board of governors also. s8The project was agreed at the highest level and was sensibly costed and resourced. s9Top management support is arguably a critical success factor for the overall success of the project."

(Registrar (Vice Principal) (03/05/07, p. 1).

What kind of process does this describe? On the surface the registrar describes a positive experience particularly for those at the top of his organization. Board support and top management support are both evidenced by the resources devoted to the project. It seems perfectly straightforward, the picture of a well-run implementation. But the question we ask here is: is that the best interpretation of this text? What approaches can we use to learn more and uncover alternative or new meanings?

In this paper, we will use this textual fragment to demonstrate a set of approaches that allow us to critique the straightforward interpretation. In doing so, we come to a deeper view of the development process. We will see the project from a variety of perspectives and in the process shed light on the conundrum of success and failure in Information Systems projects. Our primary goal is to increase our understanding of the ISD process and at the same time maintain openness of inquiry. Additionally, we use the textual analysis to illustrate the use of the hermeneutical circle. Finally, many research projects in information systems (IS) employ interviews of subjects and develop large corpuses of data transcripts. We believe that our approach adds an additional weapon to the armory of the IS researcher in making sense of such textual "databases" and producing more interesting and insightful readings.

The paper proceeds by detailing the main previous research, focusing on the textual and social realms for interpreting organizational texts. We then present and analyze the above textual fragment using these textual and social approaches showing what each can contribute to our understanding of the text. In doing so, we draw on other sections of text and other background material (such as the University web site), which help inform our interpretation of the target fragment. The paper ends with a discussion of the findings showing how other case studies might benefit from a similar analysis.

¹ The names have been changed. Anonymity was a condition of access. I am grateful to Brian Bob-Jones and Chrysa Tzoga for their invaluable assistance in data collection.

2 PREVIOUS RESEARCH

Different hermeneutic traditions approach interpretation as either a process of <u>recovering</u> the author's original, intended meaning, <u>uncovering</u> a hidden meaning operating behind the author's intentions, shaping the true meanings, or <u>discovering</u> a meaning beyond its author or context of creation: as soon as the text is produced, it becomes distant from its author and available for its readers to appropriate meaning as they see fit (Gibbons, 1987). The six approaches we use are presented below (Boland *et al.*, 2010):

- Textual criticism: establishing an accurate version of the original text for subsequent analysis.
- Linguistic criticism: establishing the accepted meaning of words and phrases in the community in which the text was produced at the time of its production.
- Literary criticism: establishing how the meaning of a text is shaped by genre and literary devices, and how different ideologies used in reading the text yield different meanings.
- Historical criticism: establishing how the historical context at the time of writing affects the meaning, and what the historical meanings were.
- Form criticism: establishing how local social practices and oral traditions up to the time of committing the text to writing affect the meaning.
- Redaction criticism: establishing how the author's personal characteristics and actions in the creative act of writing affect the meaning.

The first three techniques focus on the textual realm within which writing and reading take place. The last three techniques focus on the social realm of a text's production and use. In practice there is no clear separation between text and society, language and culture, myth and history, but posing these distinctions as an analytic device allows us to consider how each of the techniques plays a distinct role in our understanding.

3 SYSTEMS DEVELOPMENT AT THE UNIVERSITY OF CORNFIELD

In the following sections, we offer successive readings (interpretations) of the original text. Our initial reading of the text would be the following:

This was a successful project in the eyes of senior managers at the University of Cornfield (s9). It replaced legacy systems [not referred to] with a state-of-the-art PeopleSoft ERP system (s1-2). The vendor was selected because Cornfield had a positive past experience with them and the President had experience with implementing a similar system in another university (s3-6). There was strong support for the change from the University's board and the top management team and this support was seen as critical to the success of the project (s7-9). The project was well-resourced (s8).

This might be considered the "surface level" reading, which takes the text at face value. In the analysis that follows, we *recover*, *uncover* and *discover* additional readings. We begin with the three textual approaches, followed by the three social ones.

3.1 Textual criticism

The goal of textual criticism is to establish an accurate version of the original text for subsequent analysis. Textual criticism asks, "Is this text correct?" The fragment we analyze here comes from an interview that was recorded in Cornfield's Academic Registrar's office on 3rd May 2007 in a relatively plush office free of too much extraneous noise. The questioning about the ERP project followed generally accepted principles in qualitative interviewing (Myers and Newman, 2007; Rubin and

Rubin, 2005) designed to encourage the subject to reflect on specific events and contexts and to express his story in his words. This fragment is from one interview, but is a part of a larger corpus of digitally recorded interviews that were subsequently transcribed². In our case the interviewer and transcriber was the same person, reducing the danger of misunderstanding. Moreover, the transcripts were sent to the interviewees to confirm their accuracy and no major problems were identified. Thus, we are confident that the text reflects the intended words spoken by the subject.

Textual criticism can also reveal that interviews are not neutral exchange of information between two disinterested parties. Researchers, as sentient human beings (gender, race, personality, appearance, demeanor, etc.) have expectations about each other and the physical setting of the interview can be of great importance to what is revealed (Bryman, 1988; Kvale, 1983, 1996; Rubin and Rubin, 2005; Myers and Newman, 2007). Because the subject knew that the interviewer was studying successful and unsuccessful systems projects and a consultant by training, he may have revealed details which he believed would find an empathetic response (c.f. Boland *et al.*, 2010). Certainly the text (and other texts produced by the subject) shows the open nature of the exchanges between the two. But it is the unique combination of interviewer and interviewee which has produced the current text. Other combinations might have produced other texts and tell other stories.

3.2 Linguistic criticism

Linguistic criticism attempts to clarify the definition in use by a local community for individual words and phrases in the text (Ladd, 1967)³. These definitions may vary between countries and even between regions in the same country. For example, in the USA the pavement is for driving, but in the U.K. the pavement is for pedestrians. When Rolls Royce Motors tried to sell the Silver Mist car model in Germany they were told that the word *mist* means something very different in that country entirely inappropriate as a name for a luxury motor car⁴. Marketing of cars in the UK from Germany are not exempt from similar if not such obvious gaffs (e.g. VW's Touareg and Sharan models, both names that can sound derogatory in colloquial English). Tuckett (1987, p. 47) points out that "tea" is an afternoon event involving cups, tea pots and scones in the South of England but means the major evening meal in the North.

Looking at the phrase "sensibly costed and resourced", we know that all new systems experience problems (pitfalls) and some raise unreasonable expectations. This phrase is probably an understatement of the President's experience during the implementation of a similar system elsewhere where, coincidently, the same person oversaw a merger of two universities as Vice Chancellor (a similar position to President). These experiences were probably significant in his subsequent appointment at Cornfield in 2004. Revealingly, the registrar did not refer to end users, customers or clients in his interview. What people do not mention can be as significant as what they do talk about.

The interviewee is the registrar at Cornfield, part of the senior management team. The chosen fragment contains elements of his understanding of what took place, what meaning he attaches to those events, and reveals some of his mental map. Among those words and phrases he uses, we selected the following for clarification: "PeopleSoft", "Oracle", "Cornfield", "board of governors", "President", "pitfalls and expectations", "large I.T. systems", "sensibly costed and resourced", "Top management support", "critical success factor". Unsurprisingly, he focused on expressions and words

² Overall, we conducted 17 interviews in 2007 with project members, members of the finance office and the wider University community who had direct involvement with the system implementation, its support or use. Four stakeholder groups were covered – users, IT experts, management, and system developers. The interviews lasted between 20 and 66 minutes with a mean time of 45 minutes.

³ The semiotic square technique (Greimas, 1987) was applied by Corea (2006) in his analysis of IT-based customer service organizations and has strong similarities to linguistic criticism.

⁴ In German, "mist" means excrement or manure. The car was subsequently renamed the Silver Shadow.

congruent with senior management's world of Presidents, boards, vendors, budgets and success. We give some examples of definitions below in table 1.

PeopleSoft Large US software specializing in supplying Enterprise Resource Planning (ERP) systems⁵ to

universities internationally. Recently bought by the Oracle Corporation (December, 2004).

Oracle Large US software supplier that bought PeopleSoft. Vulcan had experience of Oracle systems

before it bought the PeopleSoft software and this probably influenced Cornfield's purchase

decision.

Top A small group of senior managers (the Registrar, President and others) that were active in negotiating with the supplier, selecting the software, promoting the systems development and management

providing sufficient resources until the system was delivered. support

critical success It is received wisdom that top management support is believed to be an essential (i.e. critical),

factor if not sufficient factor for the delivery of a successful software system.

Table 1: Linguistic criticism of some example key terms used in the text

These unique elements in the vocabulary of local practice can sometimes only be recognized by a reader who has spent an extended period in this or closely related communities. In our case the interviewer was a practicing consultant before his university experience and was fully aware of most of the terms the subject was using. An English dictionary or even a glossary of standard business terms could result in misinterpretations, or at least lead to partial and less interesting ones.

3.3 Literary criticism

Literary criticism is concerned with such questions as: who wrote a text (the subject), for what purpose, and in what genre? Answers to these questions help locate the text within its author's larger body of work, and within extant narrative forms and styles⁶.

We will treat genre and purpose together as the author's purpose of a piece of writing is often inseparable from its genre (Kermode, 1979). For us as organizational analysts, subjects describing organizational events may also use a variety of literary devices within an interview or a conversation. These could include understatement, humor, irony, exaggeration, metaphor, allegory or sarcasm. We will apply literary criticism by first exploring who the subject is and how the moment of this interview was situated for him. Then we will explore how its genre, the literary devices found in the text and the perspective we take in reading it, affect the kinds of meanings we interpret from it.

In our case the subject was the Academic Registrar at the University of Cornfield⁷, a post he had held since 1997, pre-dating the merger of the old institutions, Vulcan and Umbra, in 2004. He was formerly the Registrar for Vulcan, the larger of the two Universities. He joined Vulcan in 1988, having spent the early part of his career in local government specializing in finance, planning and resource management within an educational context.

What sort of text is it? It reads like a mixture of a highly guarded confessional, sharing insights with an IT expert while at the same time revealing the subject's highly logical approach and top-down understanding of how the ERP system was chosen and implemented successfully at Cornfield. We suggest it portrays his mental map, describing what occurred as if the events were part of a "factor" research study in information systems, relating independent variables (i.e. top management support,

⁵ ERPs are large integrated packaged software solutions based on modules and a common database.

⁶ Literary criticism is also concerned with how different assumptions in approaching a text (e.g., feminist, structuralist, reader-centred) yield different meanings.

⁷ Some of this information was derived from the University's website.

resources, proven technology, Presidential experience and support) to the dependent variable (successful implementation). Pictorially, the "map" could be displayed as follows:

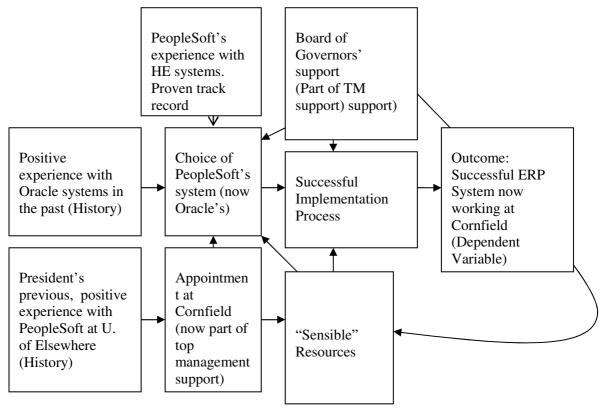


Figure 1: The Registrar's (inferred) mental map

The map could have been extracted from a popular text book of Management Information Systems (e.g. Laudon and Laudon, 2007, pp. 572-575) but with one exception: the map does not include end user involvement which is often thought to be the *sine qua non* of successful projects. As we shall see it is the latter issue that could produce problems in future, emanating from the users who became "angry orphans" in the process (Hanseth and Ciborra, 2007, p39).

3.4 Social realms

We now emphasize the social space of the hermeneutic circle⁸ and follow a tacking from the whole economic and organizational context in which the text was produced (historical criticism), through the social practices of the local community which produced it (form criticism), to the details of its author and situated moment of production (redaction criticism). Data from an organizational field study arise in the historical, cultural, and socio-political contexts of organizational events. These contexts and their importance for interpreting a text are the concern of historical criticism. Organizational analysts will be most familiar with this approach.

Historical criticism

⁸ The hermeneutic circle "refers to the way in which any act of interpretation is a simultaneous consideration of some detail (word) in light of a larger sense of the whole (theory). The hermeneutic circle is a tacking back and forth between detail and whole, in which the two stand in a relation of reciprocal validation" (Boland et al., 2010).

Many elements of historical criticism were mentioned earlier in the paper in our introduction of this text fragment. Much of our interpretive effort so far has relied on that historical context. In light of that brief overview, we can see that features of this text fragment point to landmarks in the trajectory of the project over its life span. The subject reflects on past events (antecedent conditions), describes the successful process and talks about the current situation (a successful system as outcome). We present these major features diagrammatically in figure 2 and map a summary of the text onto the diagram giving links to the key events and dates.

Antecedent conditions:

PeopleSoft have proven up-to-date software used in a variety of markets

Cornfield had experience with Oracle (who bought PeopleSoft)

The President had implemented a similar system elsewhere in a large university

Aware of the problems during such implementations

Cornfield is the product of merging two major universities (Vulcan and Umbra) in 2004

Process of Implementation (2002-07):

Strong board support

Top management support

Sensibly resourced

Outcome (2007):

Perceived as a successful project by top management

Top management support seem as critical for success

Figure 2: Historical criticism map

Text Fragment

'PeopleSoft were involved already in the North American and Australasian higher education market, with products and services that had a good and well-proven track record. PeopleSoft kept abreast with changes in the computing environment, and also issues like student funding etc, and they had an idea of the sort of issues that right arise in years to come with regards and coupled with their deep knowledge in the area of higher education, they were the best choice. There was already an existing partnership with at the **Oracle** in place University [Vulcan].....The President of the University of [Scrnfield] came from the right environment and had experience of the implementation of large I.T systems. He was the Vice Chancellor of The [Elsewhere], University where of implemented a similar system. Therefore, he was aware of all the issues, pitfalls and expectations, which he was able to share and disseminate throughout the business. There was ample of support from the board of governors also. The project was agreed at the highest level and was sensibly cost and resourced. Top management support is arguably a critical success factor for the overall success of the project." (Registrar / Vice Principal, 03/05/07, p. 1).

The senior management believed that the system was successful (s9) and some also saw the way it was impacting the decision making at Cornfield:

"It's having a beneficial effect in that there were lots of areas in [Vulcan] that did not use any kind of centralized system for lots of things and now [the system] is bringing an air of centrality to processes and tasks, which was absent in the past. Therefore, [the system] is steadily driving the culture of change" [IT services, 10.05.2007, p.3].

But these views were contested by users who resorted to work-a-rounds to overcome its limitations:

"...certain work-a-rounds are being used to address the deficiencies of the new system by administration staff for eGTP⁹. The eGTP system process follows a cycle from the point of student information being entered into the new system right through to student's enrolment onto WebCT courses. However there are several 'breaks' in the cycle therefore the work-a-round involves troubleshooting checks to find out what the problem is, where it occurred in the process and highlight potential solutions. There are some processes that require a generic work-a-round to address common problems; but other more specific processes and problems require a manual individual work-a-round." [PG Administration 22.5.07, p.3].

3.4.1 Outside consultants

The implementers (called CIBER) were used to get the PeopleSoft system working at Cornfield and to make the extensive modifications required by management:

"Yes a great deal of trust was given to the [CIBER] specialists who were brought in and as a result, they were given full control of their area of expertise within the University context during implementation. However, they did what was asked of them, it was a partnership". [Project manager, 01.05.07, p.11].

Contrast these comments with the following two observations:

"The only real nightmare was the consultancy firm [CIBER] who were terrible. They lied on numerous occasions especially during the tendering process, made poor decisions and were extremely expensive." [Senior Technical Manager, IT Services 10.05.2007, p.11].

"Bad relationships with the implementation partner CIBER, which required a lot of managerial involvement, time and effort. CIBER were poor, they did not deliver on their promises. The quality of the patches was bad and riddled with errors. General performance from CIBER was unsatisfactory. Oracle have been handed the job of UK localisations" [Programme Manager, 14.5.07, p.6].

The evidence shows that these are clearly contested arenas: differing views of success and failure coexisted as did views of the implementers, CIBER. We see a satisfied management elite who have delivered a system that can effect better management control co-existing alongside unhappy/ angry orphans (users) who were ignored when the system was designed and are now marginalized. Consequently, they resort to work-a-rounds to muddle through and cope with what they see as a cumbersome system.

3.5 Form criticism

In our analysis, we use form criticism to address the way social practices in the local communities of the organization and its environment shape the texts we are interpreting. Form criticism is highly relevant to many organizational studies because of its retrospective element. If one is interviewing

⁹ eGTP: electronic Graduate Training Program

organization members and asking them to recall events from several years past, form criticism may help us to understand what data sources were important to them and what influenced their perspective. Here we are interested in the oral traditions of an organization which our subjects draw upon. For example, there are often organizational stories, anecdotes and myths which are passed orally from one person to another (Boje 1991; Morgan 1986; Hirschheim and Newman, 1991; Newman, 2008; Avison and Banks, 2008).

In the University of Cornfield, a professional bureaucracy (Hardy 1994), there would be a combination of "forms" and media in which the information and understandings about past events were conveyed some of which would be recorded (memoranda, emails, reports) and some transmitted orally (stories, anecdotes, myths, metaphors and sagas). The traces from past experience seemed to coalesce into a mental map of how problems and misunderstandings can arise between technical staff and users.

Through our textual fragment, the Registrar reveals something of the mental map that he employs to understand how the world works and this is likely to relate to current managerial mythology¹⁰ held at Cornfield. As stated before (figure 1), our reading is as follows: through a strong coalition of senior managers and the vendors (Oracle/ PeopleSoft) (s1 and s3), the President's experience and influence (s4-6), top management and the boards' support (s7-9), and sufficient funds (s8), we delivered a successful system (s9) that will provide up-to-date functionality well into the future (s2).

However, through the above historical criticism we see also at Cornfield, several of these issues that are contested by other stakeholders. As with most stories, there is more than one view of events though some may dominate others. Form criticism helps us to begin to understand how an interviewee's reports of events are influenced by the oral traditions and social practices in an organization and the communities of practice they draw upon, opening up possibilities for further interpretations¹¹.

Form criticism says that the oral traditions in ancient times were mechanically recorded in written form. Here we observe a modern-day equivalent: the ERP system in its standard, packaged form would have inscribed the vision of PeopleSoft designers, often employing the so-called best practices in higher education (often US educational practices), also a contested subject (Wagner and Newell, 2004). This implies that the organization would have to comply with the software and where necessary, re-engineer its administrative processes. However, as we shall see below, the managerial elite heavily modified the standard system and this had profound and on-going implications for Cornfield and how the "complex business" of Cornfield would be run. These changes became Cornfield management's "redactions".

Redaction criticism 3.6

In contrast to form criticism, redaction criticism sees the writer as far more creative and active in shaping the text (Perrin, 1969). In the case of the registrar, we see an actor with a developed and sophisticated mental map able to reflect on six or more years of history and make sense of it (see above). He is a creative producer of his story (i.e. the text)¹². He makes light work of the interview offering a plausible explanation of why the project was successful and detailing the critical success factors (s9). This is a reflection of a subtle change in the way the university is to be run in the future as a "complex business".

¹⁰ Mythology is used here in the sense of a commonly held view of causality.

¹¹ Conversation analysis exhibits similarities. See Avison and Banks (2008) for an insightful example from an Offshoring project.

12 It is beyond this study to uncover how this creative process takes place. What we can comment on is the outcome of the

As we noted, Cornfield's managerial elite did not implement the standard package supplied by PeopleSoft as a so-called "vanilla" solution. Instead they spent a significant proportion of their budget on modifying the system to tailor it to their needs. The ERP system, in its modified form (i.e. what we might now call the *redaction*), inscribes senior management's vision of how the university should operate, be managed and controlled i.e. as a top-down, command and control organization (Bob-Jones *et al.*, 2008; Elbana, 2007). This was done by enrolling the technology supplier into a coalition and inscribing the new processes with the help of the ERP system. With the newly modified system, managerialism became a possibility, replacing the outmoded 'fiefdoms' of schools and departments (Bob-Jones *et al.*, 2008; Heiskanen *et al.*, 1998).

Redaction criticism completes our use of each exegetical approach to open up new possibilities for interpretation with this text fragment from Cornfield. We have used them sequentially as a didactic strategy to highlight the unique contribution each exegetic technique can make to an evolving interpretation. In practice, the techniques would more likely be used in combination, intertwined with each other in a mutually informative way.

4 DISCUSSION AND CONCLUSIONS

4.1 Recovering the author's original, intended meaning

Textual criticism, together with linguistic and literary criticisms, focuses on the meaning of the words and phases in our textual fragment. One of the first issues we try to resolve is to establish an accurate version of the original text for subsequent analysis and our analysis confirms that this is not such a major issue in our case compared with examining ancient texts. Returning to our original reading of the text, we would confirm that this seems to *recover* the original, intended meaning of the text.

4.2 Uncovering a hidden meaning operating behind the author, shaping the true meanings

Literary criticism completes the movement from specific words and phrases to a sense of the whole within the textual space of the hermeneutic circle. It is concerned with such questions as: who wrote a text (in our case, the interviewee), for what purpose, and in what genre?

We would propose that the text *uncovers* the Registrar's understanding of the factors that produced what he believed to be a successful project and suggests how those factors are related (Figure 1). It is also possible that he was unaware of this causality.

4.3 Discovering a meaning beyond its author or the context of creation

There are several general issues that arose from our analysis of the text that *discover* new meanings beyond the text's author or the context of creation. Issues such as top management and their roles in major IS projects, user involvement (i.e. the lack of it), resources, etc. etc. could be the subjects of more general application. But as we have a plethora of studies exploring those themes, we want to focus on a less travelled path that we identified in the social realm of exegesis: the meaning of ERP systems.

A modern-day equivalent of form criticism reveals that the ERP system in its standard, packaged form would have inscribed the vision of PeopleSoft designers, often employing the so-called best practices in higher education (often US educational practices) (Wagner and Newell, 2004; Scott and Wagner 2003). This implies that the organization would have to comply with the standard software and where necessary, re-engineer its administrative processes to comply with the systems' template. However, the university decided that this was a change that would be too costly in an administrative sense. Also, the software was "tuned" for another market where HE practices were very different.

The ERP system, in its modified form (what we might now call the redaction), inscribes senior management's vision of how the university should operate, be managed and controlled i.e. as a top-down, command-and-controlled organization (Bob-Jones *et al.*, 2008; Elbana, 2007). The software became, in material form, management's understanding of how the new university should work. New releases of the software could, of course, require extensive modifications for Cornfield to incorporate the benefits from such upgrades, adding to the total cost of ownership.

Enforcing compliance from the users was relatively straightforward. This was done by enrolling the technology supplier into a coalition and paying a small fortune to redact the system. Top-management envisaged the ERP technology as an enabler. With the newly modified system, managerialism became a real possibility, replacing the outmoded 'fiefdoms' of schools and departments (Bob-Jones *et al.*, 2008; Heiskanen *et al.*, 1998). The task of managers is then to "black box" the system so that it becomes the unquestioned way business is conducted (McLaughlin et al., 1999). This is entirely consistent with marginalising the users who would have only slowed the pace of the implementation and demanded all kinds of changes to suit their narrow focus if they had dictated the development process. That the users were trying to open the technology box could be indicative of future problems.

Finally, we would suggest that our original reading could be re-written in the light of our further analysis:

In the eyes of senior managers at the University of Cornfield (s9) this was a successful project but the users are universally unhappy with a system that they see as clumsy to use and lacking essential functionalities, thus requiring many work-a-rounds. It replaced legacy systems well-liked by the users with a state-of-the-art PeopleSoft ERP system (s1-2) that was designed for another educational culture and context and that has had many critics world-wide. The vendor was selected because Cornfield had a positive experience in the past with them. Additionally the new, highly-controversial President had experience with implementing a similar system in another university (s3-6). The president had been involved in a venture that has been described as financially disastrous by academics, politicians and the media at his last university. The choice was also a highly political process with managers from Vulcan and Umbra disagreeing and wanting to promote their particular legacy systems which had recently been updated.

There was strong support for the change from the now streamlined University board and the top management team and this support was seen by both users and management as critical to the success of the project (s7-9). The project was well-resourced (s8) to such extent that it could be seen as management throwing money at the problem. A large proportion of the budget was spent modifying the system extensively to make it conform with local conditions and for to make it easier for senior management to run a more effective "business". The tailored ERP system was the "embodiment" of the new managerialism at Cornfield, enabling a more command-and-control approach to running the university. The consultants who conducted the modifications, CIBER, were considered incompetent by many end users: they did not deliver on their promises and the quality of their patches was bad and riddled with errors. The users were marginalised by management as they would only slow the pace of development and introduce all kinds of changes to reflect their narrow perspectives. But the "angry users" and their various Schools may prove troublesome in the long-term. Also new releases of the ERP system will require extensive and expensive modifications in the future in order for Cornfield to enjoy the benefits of upgrades.

In summary, our approach starts with a textual fragment that conforms to our expectations: it reads like a textbook scenario. Consequently, we are inclined to read it at face value. Our six part analysis, employing the hermeneutic circle, challenges this superficial reading and produces a new reading that is not only surprising but is insightful and challenges the ethos of the management elite. By using the text and context in a mutually informative manner we reach a deeper understanding of events and are able to contrast opposite views of the system as successful (management and IT) and something less than successful (many end users). But if you started with a different textual fragment from the same corpus of data, you would have a whole set of different clues to unravel.... but ultimately, the story

would be the same. Or would it? One of our future challenges is to explore this issue and to analyse other textual fragments from the same data corpus. Additionally, managers, IT experts and end-users may find the analysis both helpful and challenging as it de-privileges mainstream positions and viewpoints while maintaining an openness of inquiry. Finally, we believe that our approach adds an additional weapon to the armory of the IS researcher in making sense of such textual "databases" and producing more interesting and insightful readings.

References

- Avison, D. and Banks, P. (2008). :Cross-cultural (mis)communication in IS offshoring: understanding through conversation analysis," *Journal of Information Technology*, 23 (4), pp. 249-268.
- Bob-Jones, B. Newman, M., and Lyytinen, K. (2008) "Picking Up the Pieces after a "Successful" Implementation: Networks, Coalitions and ERP Systems", *Proceedings of AMCIS 2008*, Toronto, Canada.
- Boje, D. M. (1991). "The Storytelling Organization: A Study of Story Performance in an Office-Supply Firm." *Administrative Science Quarterly*, 36, pp. 106-126.
- Boland, R., Newman, M. and Pentland, B (2010), "Hermeneutical Exegesis in Information Systems Design and Use", *Information and Organization*, 20(1): 1-20.
- Bryman, A. (1988). Quantity and Quality in Social Research. London: Routledge.
- Corea, S., (2006) "Mounting effective IT based customer service operations under emergent conditions: Deconstructing myth as a basis of understanding", *Information and Organization* 16 pp.109–142.
- Damodaran, L. (1996) "User Involvement in the Systems Design Process a Practical Guide for Users", *Behaviour & Information Technology*, 15, 6, 363-377.
- Elbanna, A. R. (2007), "Implementing an integrated system in a socially dis-integrated enterprise: a critical view of ERP enabled integration," *Information Technology and People*, 20, (2): 121-139.
- Gibbons, M. T. (Ed.) (1987). *Interpreting Politics*. New York University Press.
- Hanseth, O. and Ciborra, C., (eds) Risk, Complexity and ICT, Edward Elgar Publishing, 2007.
- Heiskanen, A., Newman, M., and Saarinen, V. (1998), "Innovation In Fiefdoms: Developing A Common Student Information System In Six Finnish Universities", *Proceedings of the IFIP 8.2/8.6 Joint Conference*, Helsinki, Finland, December.
- Hirschheim, R. and Newman, M. (1991). "Symbolism and Information Systems Development: Myth, Metaphor and Magic," *Information Systems Research*, 2(1), pp. 1-34.
- Kermode, F. (1979). *The Genesis of Secrecy: On the Interpretation of Narrative.*, Cambridge, MA: Harvard University Press
- Klein, H., and Myers, M. (1999) "A set of principles for conducting and evaluating interpretive field studies in information systems," *MIS Quarterly* 23:1, p. 67.
- Kvale, S. (1983). "The Qualitative Research Interview." *Journal of Phenomenological Psychology*, 14(2), pp. 171-196.
- Kvale, S. (1996). *Interviews: An Introduction to Qualitative Research Interviewing*. Thousand Oaks: Sage Publications.
- Ladd, G. E. (1967). The New Testament and Criticism. Grand Rapids, MI: Eerdmans.
- Laudon, K. and Laudon J. (2007), *Management Information Systems: Managing the Digital Firm* (10th edition) New Jersey: Prentice Hall.
- McLaughlin, J., Rosen, P., Skinner, D., Webster, A. (1999) Valuing Technology: Organisation, culture and change, New York: Routledge.
- Morgan, G. (1986). Images of Organization. Beverly Hills: Sage.
- Myers, M. and Newman, M. (2007) "The Qualitative Interview in IS Research: Examining the Craft". *Information and Organization.* 17 (1), 2-26.
- Newman, M. (2008) A Rural Tale: A Cautionary Allegory for IS Researchers, *Proceedings of AMCIS* 2008, Toronto, Canada, August 15-17.

- Noble, F. and Newman, M. (1993), "Integrated Systems, Autonomous Departments: Organizational Invalidity and Resistance in a University". *J. Management Studies*, 30 (2): 195-219.
- Perrin, N. (1969). What is Redaction Criticism? Philadelphia, PA: Fortress Press.
- Rubin, H. J., & Rubin, I. S. (2005). *Qualitative interviewing: The art of hearing data* (2nd ed.). Thousand Oaks, CA: Sage.
- Scott, S. V., and Wagner, E. L. (2003), "Networks, Negotiations, and New Times: The implementation of Enterprise Resource Planning into an academic administration," *Information and Organization* 13, 285-313.
- Wagner, E. L. & Newell, S. (2004) 'Best' For Whom?: The Tension Between 'Best Practice' ERP Packages And Diverse Epistemic Cultures In A University Context. *Journal of Strategic Information Systems*, 13, 305-328.
- Wagner, E. L. & Newell, S. (2006) Repairing ERP: Producing Social Order to Create a Working Information System, *Journal of Applied Behavioral Science* 42, 40-57.