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A Rural Tale: A Cautionary Allegory for IS Researchers

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A Rural Tale:
A Cautionary Allegory For IS Researchers

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ABSTRACT

We present a fragment of text which describes the introduction of a water delivery system to a rural village that is comprehensively rejected by a group of women. We use the story allegorically, examining the contributions from different research traditions to make sense of the rural tale and apply the lessons to the study of Information Systems. We briefly examine how hermeneutics, management change theories, a more critical approach and information systems studies can individually help us to make sense of the text. This shows that no one research tradition gives any more than a partial view of the events in the text but that some are more insightful than others. We discuss the findings including a sideways look at several IS issues (such as the complexity of success and failure, and escalation of commitment).

Keywords: Management theories, Information Systems Development, Success and Failure, User Involvement

INTRODUCTION AND THE RURAL TALE

Consider the following description of a series of events at a rural village:

> "A story was recently told[1] concerning a certain village in a developing country[S1]. The villagers were approached by foreign aid workers with a view to making their lives easier[S2]. One of the features of village life that the experts noticed was the considerable time the women spent going quite long distances together to bring back water in jars to their huts[S3].
>
> The experts considered this problem and came up with a fairly low-tech solution to ease the women's burden: they provided a pump and water pipe from the water supply and taps for each hut[S4]. Then, instead of walking several times a day to pick up the water, the women could fill up their jars as often as they wished at their huts[S5]. The experts, waiting perhaps for the accolades of the villagers were astounded instead by their hostile reaction: collectively, the women decided not to use the taps[S6]".

Ostensibly it seems straightforward as a tale. A group of aid workers (experts) enter a village and attempt to make the women's lives easier by removing what they saw as the drudgery of collecting water in jars from some distant water hole and replacing this with a water delivery system (WDS) consisting of a pump, pipe and individual taps. A worthy goal you might think, demonstrating altruistic values and behaviour. However, without consulting the women (or anybody so it seems) the experts go ahead and design, build and hand over the system to the women. Contrary to the experts' expectations the women reject the taps (and therefore the WDS) and make their feelings known to them ("their hostile reaction"). We are not told how this rejection was handled by the experts or what they did subsequently.

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[1] I am obliged to one of the MBA students at the Rotterdam School of Management for this story.

There is a popular formula in the management change literature that "user" involvement is a *sine qua non* of successful implementation (Newman and Robey, 1992; Robey and Farrow,1982; Gallivan and Keil, 2003). Success without user involvement is impossible to achieve. User Involvement of course may range from consulting the users to allowing the users to participate fully in the systems' design (Damodaran, 1996). You have to have the users' "buy-in" to increase their commitment to the system and thereby increase your chance of delivering a workable, acceptable system. The tale supports this: the lack of user involvement in this case brings rejection of the WDS by refusing to use it. But was it as simple as this? Were there deeper reasons why the WDS was rejected? For example, did the system violate the values of collectivism as apparently practiced by the women? Could it be that the women liked to spend time together? The individual taps undermined and challenged this value and removed a perfectly reasonable excuse to meet and "network" at the waterhole while performing the socially useful task of water gathering. Moreover, this could also be an issue of status in the village. In this scenario water gathering is a recognised, high status role in the village. Take this away and the women's role and status would be threatened by the WDS, a more than enough reason to reject the system[2]. Alternatively, it could be that the women were concerned about the quality of the water supply: could water be polluted in its transit through the pipes or could its transit violate religious ideals? And who would repair the pump if it broke down? There also appears to be no effort spent training the women in using the WDS and educating them as to its advantages. The WDS was just handed over as if education and training were someone else's job. In summary, the experts seem to have violated all the generally-accepted rules in building this system.

But you might say that we are getting ahead of ourselves. All we know from the description above is the reporting of the events and behaviors of the participants. The rest is largely speculative. Moreover, many of the above comments betray the same tendency of the experts in the story. Are we making (too?) many assumptions about other peoples' world views and values: their attitudes, beliefs, traditions and assumptions? Who are we to act as the arbiters of truth as we look at the text?

Nonetheless, the description raises many questions. For example, where is the village? Where do the aid workers come from? Why did the aid workers choose the village for their work? Were they invited into the village? What was the gender mix of the aid workers? What was the motivation of the aid workers? What was the significance of the women's work prior to the WDS? Why did the village women reject the new water gathering arrangement? What happened to the taps and delivery system afterwards? And, because we are interested in information systems (IS) and developing IS (ISD), how might it inform us as IS researchers about the building and using Information Systems?

Clearly, some questions are easier to answer than others. The need to walk to collect water and the use of the word "hut" twice provides clues and we learn from the respondent that the village is located in rural Africa. We also learn that the aid workers are from Scandinavia and that the aid granting body has some history of similar aid work[3]. Many of the other questions we have to make assumptions about and analyse in a deeper fashion. But the tale is about water supply not about Information Technology. In order to make sense of it for that purpose we use the tale as an allegorical device. Table 1 summarises what we know, what we might want to speculate about and what it implies.

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[2] Someone has commented that it would be like asking believers to pray at home rather than attending church/ mosque and performing a collective act of worship.
[3] The MBA student who provided the story as part of an assignment was one of the aid workers and therefore had direct experience of the work and resulting outcomes

What we know	What we speculate about	What the general implications are
Where: A village in developing country in Africa consisting of huts	The water hole is a significant distance from the village.	There was a plausible reason for the innovation in the eyes of the experts.
Stakeholders: Foreign Aid workers (Experts) from Scandinavia Local village Women Writer is one of the aid workers	There were other stakeholders in the village (men) and the Government and other donors.	Experts should involve stakeholders in design.
Task: Gathering water by jars. Going quite long distances together, several times a day, walking to the water supply	The "meaning" and status of water gathering in the village.	It is easy to miss important issues. "Simple" tasks may be rich in detail and highly complex.
People: The hostility of the women towards the innovation. Women act as a group	Possible reasons for their hostility: • Violation of Collectivism • Hygiene problems with pipes and taps • Religious beliefs • Loss of status in the village • Unreliability of Technology	Handing over your solution is not the end of the project. Some issues are inviolable for stakeholders.
Technology of water supply: Pump, pipes and taps	Expertise of designers was sufficient to produce a workable system	Technical competence of experts is rarely in question. But the lack of a broader perspective is a common problem.
Outcome: Collectively, the women decided not to use the taps	Afterwards, the experts walked away from the problem. Events form part of village history, coloring their future attitudes.	Lack of involvement and other issues are reasonable grounds for rejecting the innovation. Success and failure are complex concepts.

Table 1: What we know, what we speculate about and the implications

An Allegory

"Allegory: a work in which the characters and events are to be understood as representing other things and symbolically expressing a deeper, often spiritual, moral, or political meaning[4]". In our paper we use the rural tale as the allegory which is used to reflect on the way we develop and adopt Information Systems in Organizations. Consequently, the objective of this paper is *to use the rural tale as an allegory to reveal the different disciplines we could use to study Information Systems Development (ISD) and to show what each brings to our understanding of ISD.*

The paper begins by examining the contributions from different research traditions in making sense of the rural tale. In this section we briefly examine how hermeneutics, management change theories, a more critical approach and information systems studies can individually help us to make sense of the text. This shows that no one research tradition gives any more than a partial view of the events in the text but that some are more insightful than others[5]. Discussion of the findings follows

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[4] Encarta UK Dictionary
[5] We realize that this is only partial list of research traditions. Space does not permit us to extend the lenses to include for example ANT, TAM, Gender etc.

from this including a sideways look at several IS issues (such as the complexity of success and failure, escalation of commitment, etc.).

CONTRIBUTIONS FROM DIFFERENT RESEARCH TRADITIONS

Hermeneutics – the discipline of making sense of texts

In our case, the fragment of text is pretty much what we have so a good place to begin our investigation is the text itself and interpreting the text. Hermeneutics is the "classical discipline concerned with the art of interpreting texts," (Gadamer, 1984, p. 146) and it originated with the study of religious texts, especially biblical analysis (Brown, 1968). The hermeneutic experience has been likened to translation in that the original language of a text is replaced with another that yields a new understanding (Gadamer, 1976, p. 19; 1984, pp. 345-351).

We also employ the principle of the "hermeneutic circle" as a way of discussing how one might enter into an interpretive process and keep it open and ongoing (Klein and Myers, 1999). "Hermeneutic circle" is the term used to describe the structure of an interpretive act. It refers to the way in which any act of interpretation is a simultaneous consideration of some detail (e.g. a word) in light of a larger sense of the whole (theory). The hermeneutic circle involves a tacking back and forth between detail and whole, in which the two stand in a relation of reciprocal validation. Each depends on the other for plausibility. A detail (word) is understood in a particular way and is worthy of being attended to because of the sense of whole (theory) with which it is approached, and the sense of whole (theory) is believable and deemed appropriate because of the way the details (words) are being attended to. The hermeneutic circle of interpretation as a "tacking" back and forth between detail and whole, alternately challenges the appropriateness and plausibility of each, and opens the text for further questioning (Newman and Boland, 2007). For example, we do this by first focusing on words or phrases and then we try to explain them from the context in which they are situated.

Different hermeneutic traditions approach interpretation as either a process of <u>recovering</u> the author's original meaning, <u>uncovering</u> a hidden meaning operating behind the author, or <u>discovering</u> a meaning beyond its author's intent or outside the context of creation (Gibbons, 1987). The hermeneutical approaches we will consider are:

•Textual analysis: establishing an accurate version of the original text for subsequent analysis.
•Linguistic analysis: establishing the accepted meaning of words and phrases in the community in which the text was produced at the time of its production.
•Literary analysis: 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 analysis: establishing how the historical context at the time of writing affects the meaning, and what the historical meanings were.

Textual analysis

In a textual analysis the objective is to establish the veracity of the text, a real problem when analysing ancient texts where the original may have been lost or damaged and all we have is a copy of the original or a fragment of the whole. Our problem is minor compared with theirs. In this case the text fragment was originally a hand-written assignment for an MBA assignment written in the early 1990s and given to the author. It has subsequently been used as a didactic device to show in a concise manner what can go wrong when change is mishandled and to draw parallels with designing and implementing information systems. It has also been used to critically examine some of the cornerstones of ISD research (user involvement, culture, success and failure, de-skilling)[6].

Linguistic analysis

This form of analysis establishes the accepted meaning of the words and phrases in the text. In some instances the text will contain jargon or slang and this must be "uncovered".

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[6] It is instructive to see how quickly the students in the classroom make major assumptions about the case and to offer all kinds of solutions without any further research and analysis. In many ways the students reproduce the experts' behavior.

S2[7] "foreign aid workers" and S3, "the experts" are taken as synonymous. Furthermore, given their eventual solution they would have possessed some engineering skills to construct the water delivery arrangement. "Low-tech" is an abbreviation for low technology where the low implies simple or lacking complexity[8]. This interpretation accords with the description of the technology employed. "Accolades" (S6) may also have to be defined (praise, thanks, public appreciation). Textual and linguistic analyses can be referred to as operating in the textual "world", whereas our next two analyses are located in the "social" realm (Newman and Boland, 2007).

Literary analysis

Literary analysis includes elements of genre analysis, for example, and how this shapes peoples' understanding. Is it a piece of fiction or poetry as these and all genres would influence our interpretation? In S1 the text describes itself as a "story" which is probably an accurate description. It reads like an unfolding sequence of events: entering the village, scoping the water gathering "problem", designing and building a relatively simple solution and handing the solution to the women, which they reject before the experts leave the village (although this latter event is assumed and is not part of the text).

S3 "Considerable time" and "quite long distances" are probably literary devices to express understatement. It is likely that the effort spent on these activities was considerable and therefore the savings in effort and time were extensive adding to the compelling argument of the aid workers in providing a solution. If the water hole was just a short distance from the village, the arguments for building the new delivery service would lose their credibility.

There is also evidence that the women acted collectively. In S3, for example, the "women spent going quite long distances together" and in S6, "collectively, the women decided not to use the taps". The women went to collect water together: it was a group activity and probably this did not involve the males. When it came to assessing the worth of the water delivery system, the women collectively boycotted it.

Historical analysis

Part of textual analysis is to explicate the historical dimension of the text. Where did it come from, who wrote it and more specifically what was the history of this group in delivering aid in similar circumstances? We know that the record of failure to deliver changes in a timely fashion that offer value to major commercial and public organizations is legendary (see below). But we often seem to overlook an obvious: what is there to learn from historical patterns? One approach is to assume that past negative patterns of change will tend to repeat themselves (Newman, Pan and Pan, 2006). Here we see an example of the hermeneutic circle: we link the failure to deliver the WDS (detail) with the historical pattern of failure (a theory of pattern reproduction), using each feature to make sense of the other.

The text writer was one of the cohort of MBA students at RSM. But the student (a male) was also one of the aid workers described in the text. What we do not know is the history of delivering projects successfully by this aid agency. We therefore assume that there was a mixed level of success in this regard. What we can know with some certainty is that the women at this particular village will be less than enthusiastic in the future about such projects. As well as the failure to deliver an acceptable water delivery system to the women, the negative history created will be difficult to overturn. Indeed the events may subsequently evolve into the realm of a saga in the village: stories may circulate and become embellished in the telling and re-telling about the time the "crazy foreigners" wasted their money and messed up in the village and how the heroic women folk put the experts in their place. We take our histories into the future even if those histories become distorted over time.

THEORIES OF MANAGEMENT CHANGE

Hermeneutics takes us a long way in understanding the text and making sense of the events represented therein. It provides us with the "guts" of the story and the social influences on the writer at the time. However, it does not give us insights about process. In this section we look at some popular social change models which have been used by management researchers to describe and explain change and to see what added value they bring to our understanding. In this case we focus on the content

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[7] Sn refers to the superscript inserted at the end of each sentence.
[8] This phrase may be derived from low church (c.f. high church) where the rituals in a low church are basic and lacking embellishments.

of the change, not just the text describing behaviour. Our basic question is: how can our management theories help us in explaining the behaviour described? We start with one of the simplest.

The Leavitt diamond

The socio-technical movement (e.g. Leavitt, 1972; Mumford, 1993, and the Tavistock Institute[9]) has provided us with many insights into the relationship between the technical and the social. Undue emphasis on the technical has resulted in many inappropriate unbalanced designs and failures. The work of Mumford (1993), for example, tried to rebalance this by emphasising the importance of context and human agency. Her ETHICS method operationalized and codified the users' role in designing IS. We represent this movement by the work of Harold Leavitt and in particular his well-known diamond (figure 1).

The principal advantage of this simple model is to demonstrate the interactions between the major "variables". Normally, change involves some form of new technology (software, hardware, communication technology) or in our case, the introduction of a WDS. The diamond formation shows that changing technology will perturb the other "variables": a change of technology is portrayed as impacting people, what people do (tasks) and the relationships between people (structure). Tasks may be deskilled, people may be made redundant, decentralised organisations may be centralised or organisations de-layered. It also shows that because of the complex socio-technical (s-t) couplings and human agency, change is likely to be unpredictable and result in unintended consequences. This would indicate that because of the experimental nature of such changes, we can see why techniques such as prototyping, pilot testing, and modularization are important in the armoury of the change agent.

However there are several limitations to the change model. First, the model is static and a-processual: it does little to help us understand how we arrived at our current s-t state (it is also a-historical) or what will happen subsequently. Second, the "variables" are not really variables: they have elements of process and other complexities. "Task" for example is processual and difficult to reduce to a single variable. Third, the model is a-contextual, containing only elements of the immediate[10]. Lastly, there are many other issues not considered by the model which nevertheless may be vital to our understanding. These might include accounting, power, politics, and culture among others.

These limitations somewhat reduce the model's usefulness. Its major contribution to making sense of the case is to see that the technology of water supply (WDS) cannot be designed and implemented in isolation from the social. The technology clearly had an impact on the women (people) inducing hostility towards the aid workers; the womens' task (thereby simplifying the task of water gathering and effectively making them redundant), and possible their loss of role in the village (structure). It is silent about other issues. Indeed, it looks more suited to small-scale changes[11].

The s-t model of Leavitt takes us further in our understanding because it reveals some of the relationships[12] between the s-t elements and suggests that not only do changes to one element perturb others, but they do so in unpredictable ways. In our case, radically changing the WDS produced consequences unintended by the experts, indicated by their surprise at the womens' reactions.

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[9] For example, Trist and Bamford (1951).

[10] In his book, *Managerial Psychology*, Leavitt modified the model to introduce the concept of the environment (p. 264).

[11] It is not clear how the model would handle large-scale, complex changes conducted over many months.

[12] Some relationships will be more "tightly coupled" than others and are thereby more vulnerable to perturbations.
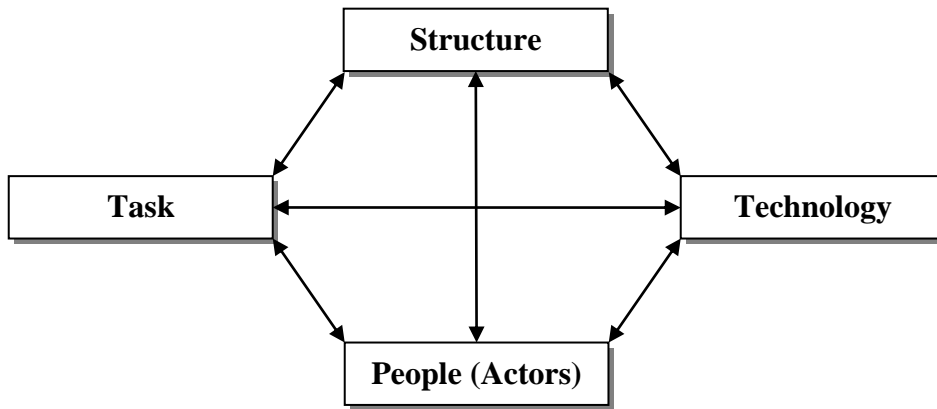
Figure 1: Leavitt's Diamond (Adapted from Leavitt, 1972)

Lewin-Schein force field model

This model emerges from a context of change agents working with organisational groups in a laboratory setting in order to enable changes to the group members' attitudes (Lewin, 1947). Kurt Lewin found that in order to induce changes to peoples' attitude and behavior you first have to "unfreeze" the participants, motivating them to make the change and to assist them in letting go of old practices (e.g. through involving the participants, highlighting the advantages of the new practices and the weaknesses of the old ones, getting the users' "buy-in" to the change). After the change has been made, it is also important to re-freeze the change so that the new attitudes and behaviours become routine or institutionalised (e.g. training, removing alternatives). So in essence the force field model is a three-stage processual model that partially recognises the history of practices (figure 2).
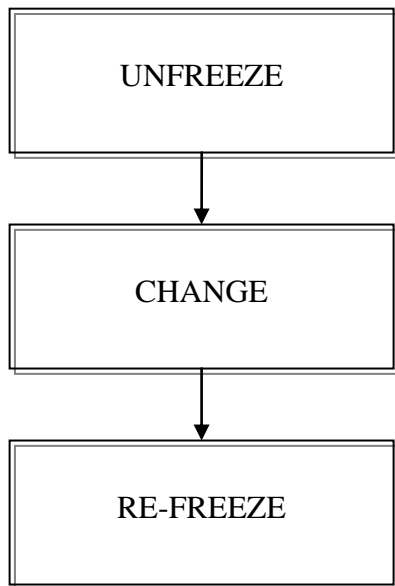

Figure 2: The Lewin-Schein Model

While the Leavitt model is descriptive in essence, the Lewin model and subsequent variants (e.g. Lewin-Schein (Schein and Benis, 1965) and Kolb and Frohman, 1970) is more analytical and prescriptive. The model implies that all three stages are required for successful changes. Change without unfreezing fails to motivate the participants. Unfreezing and change without re-freezing would not habituate the change and people may slip back to old ways of working. In the rural tale, the experts (the

change agents in the Lewin-Schein model) failed to either unfreeze **or** refreeze the participants. The result was predictable using this model: the women were never motivated (lack of unfreezing), the technology was handed over but never used (no real change), and no attempt was made to institutionalise the change (not re-frozen). In summary, the Lewin-Schein model, though very simple, does help to describe and explain the behaviour in the rural tale. As a group the women were able to resist the technology that they saw as having no benefits. The experts could surely have done a lot better if they had understood and used the model in conducting their work. They spent no effort on motivating the women or involving them in the project: i.e. they were never "unfrozen". It is possible that if the women were genuinely involved in the project, they may have come up with an alternative solution. For example, instead of taps at each hut (supporting individualism) an alternative design would be a single tap near the village which would be more in harmony with their collectivism. The single tap could replace the water hole as a place to meet and socialise. The other issues mentioned above (power, politics and culture for example) could easily be incorporated into the model. For instance, the type of collectivism practiced by the women could be exploited by the change agents in the unfreezing stage. Identifying the leaders of the group and focusing on them may help to diffuse the change and make it more acceptable. If the leaders can be unfrozen it is likely that the others will follow.

In summary, the Lewin-Schein model of change offers a simple processual analysis, a major advance on the Leavitt model. What it lacks is an historical and contextual element although this could be incorporated straightforwardly (see figure 3). However, the language used in the literature to describe the model does hint of imperialism and domination by the management change agents. Management is portrayed as manipulating reluctant employees to make desired changes by "unfreezing" and "refreezing" them, pejorative terms at best. The power differences are all too apparent. Ironically, it was not the women that needed "unfreezing" but the experts who seemed trapped in a model that says experts inform clients as to what is important for them and impose solutions.
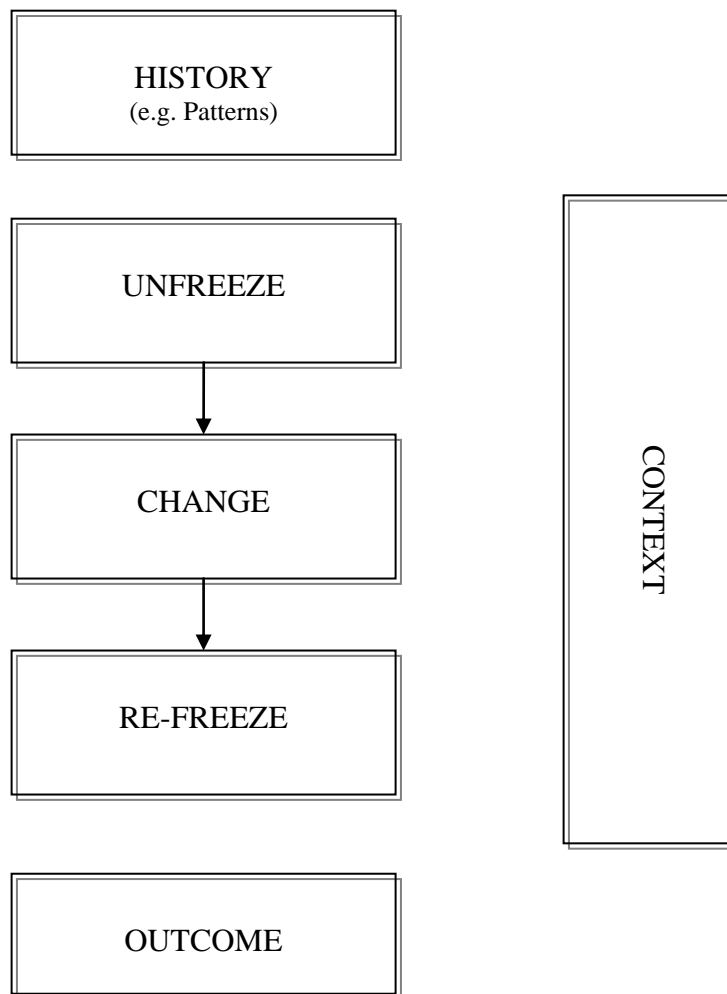

Figure 3: Modified Lewin-Schein Model

A More Critical Approach

With a critical approach a study looks beyond the obvious influences to those that may not be so obvious[13]. These may arise from the social, political, financial and cultural contexts. For example, with a bit more investigation, the researcher discovered[14] that the aid agency was nearing the end of its financial year and had to spend its budget. Before that they had to persuade the head of the village to allow them to access to the village using suitable gifts. Seen from the aid agency's perspective, the system is a technical success (it worked) and an administrative success (even if the women did not use it, the budget was spent on a "worthwhile" project) and a political success as the future budget could be preserved or even enhanced. In this rather oblique view of the construction of the WDS, the village and the "users" are small players in a bigger game that the aid agency experts are engaged in. In the annual submission to the agency's sponsors one could see that the money was spent on good causes. The fact that the women never accepted or used the system would most likely never be detected. Thus critical theory provides a very different and insightful view of success and failure (see below).

INFORMATION SYSTEMS ISSUES

Until now we have treated the rural tale at face value. If we now focus on the information systems (IS) issues we can use the rural tale as an allegorical vehicle to reveal insights in some important areas of IS. Here we look at a stakeholder analysis, success and failure, escalation theory and the use-designer gap. First, table 2 shows the basic parallels between the rural tale and IS actors and concepts.

Rural Tale	**Information Systems**
The group of women	Clients or Users
Aid workers (experts)	System Designers/ Project leaders
Water Delivery System	Information and Communication Technology (custom or packaged)
Water gathering task	Informational equivalent (clerical, financial, manufacturing tasks etc.)
Ignoring the women	No User Involvement
Non-use of WDS	Resistance, misuse, workarounds, abandonment and failure
Lack of cultural sensitivity (e.g. ignoring collectivism)	Context ignored
History ignored	Past pattern of IS success and failure ignored
No choice (e.g. individual taps)	Vanilla design
Loss of status	De-skilling

Table 2: Allegorical equivalent

Stakeholder analysis

SA attempts to identify those individuals or groups who have a stake in a project and their relative importance. Ignoring important stakeholders can bring the project grinding to a halt or even lead it to be abandoned. For example, the NHS's Choose and Book system[15] recently ran into major acceptance problems as it was rolled out. The use of the booking system by the general practitioners was less than 1% of the expected volume. It emerged that as a group GPs were not seriously considered in the design and which they never "bought into" even though they were a major stakeholder. The Minister of Health eventually had to make special payments totalling £60m to the doctors to motivate them to use the system (referred to as a bribe in the popular press).

Applying a similar analysis to the rural tale produces similar if not identical insights. By the experts ignoring the women, their resulting hostile reaction was predictable: they ignored and rejected the technology. Clearly the women could claim to

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[13] Here we use "critical" in the sense of influences and objectives beyond the surface ones. In which case, influences may external and contextual: objectives may be hidden or unknown even by the subject.

[14] A fictitious example.

[15] http://news.bbc.co.uk/1/hi/health/5028762.stm [Accessed 7.11.2007]

be a major stakeholder group. The difference between the NHS experience and the rural tale is that their rejection of the system did not produce further interventions from the experts. They seemed to just walk away from the result, reflecting the relative importance of the projects. The Choose and Book project is vital part of a multi-billion pound project, Connecting for Health (CfH), and cannot be allowed to fail.

The experts and the aid agency were other stakeholders that we can identify. The other, male villagers may have also been stakeholders but the case is silent on this matter. We do not know what relationship the men had with the experts. Perhaps they were offered sweeteners by the experts to allow them to build their WDS. The governments, organisations and individuals making donations to the agency would also be background stakeholders although they may be unaware of the detail of events in any particular project such as this one. A full analysis would try to identify all such groups.

Application 1: Success and failure

Success and failure of information systems has been a topic of interest for both researchers and practitioners (Lyytinen and Hirschheim, 1987; Larsen and Myers, 1999; Drummond, 1996; Sauer, 1993; Newman and Robey, 1992; Fitzgerald and Russo, 2005).

For example, Lyytinen and Hirschheim (1987) identified four types of failure revealing some of the richness of debate in this area:

- *correspondence failure* means a lack of correspondence between objectives and outcomes of the IS
- *process failure* - this type of failure usually refers to one of two types of failure – failure to produce a working system or producing one that is significantly over-budget or delayed.
- *interaction failure* – a gap between the requirements and the system .
- *expectation failure* – this is the inability of an IS to meet a specific stakeholder group's expectations while others may enjoy benefits from the system.

In the rural tale, it looks a clear cut case of poor practice leading to full rejection by a relatively powerful stakeholder group, a form of expectation failure. The women in this case seemed to have the option to use or reject the WDS. In some IS projects that option is absent and no alternative is available. Indeed some designers, recognising the importance of removing alternatives, have been known to remove any choices the users, left to themselves, might want to retain (e.g. banning spreadsheets, burning manual stock records). This was not part of the experts' armoury in the village. Even if they had tried to ban the women from walking to the water hole (e.g. building a fence around the water supply) it is clear that the women would not have accepted this restriction.

Other forms of failure are possible such as system misuse, use of workarounds, time and budget overruns (e.g. the second type of process failure: SNCF's Socrate – Eglizeau, Frey and Newman, 1996). Other systems are never completed (e.g. the first type of process failure: The London Stock Exchange's Taurus - Drummond, 1996).

However, the discussion in the section on critical approaches shows that it is possible for both major stakeholder groups to walk away relatively happy: the women in that they successfully resisted an unwanted system and the experts in that they spent their budget and could expect a similar or enhanced amount next financial year. Of course there may be other groups such as governments and individual donors who would be extremely unhappy with such goings-on if the events ever came to light in a post-implementation audit. The parallels with ISD are obvious.

Application 2: User-designer gap / Escalation theory

In other IS studies, the user-designer gap has been commented on. By gap we mean major, and multi-dimensional differences between the designers and the clients (users) they are building systems for. For example, Hirschheim and Newman (1991) noted that a metaphorical "wall" sometimes was reported between the users and the designers, a term that explains succinctly the gap. The metaphor does not do justice to the evidence presented in the case. Rather than a gap it is more like a gulf. In an IS allegorical context the stakeholders barely have any points of intersection until the hand-over of the system. The wall metaphor is useful in that it describes part of the problem but is not particularly useful in showing us what we can do about it. In a similar vein, escalation theory talks about piling more resources into a "failing" project and this has found strong support in studying developing IS (e.g. Keil, 1995). The rural case silent about many of the relevant issues in escalation theory: it is a

small project, we do not know about budget overruns, and the experts, far from pursuing a failing project, seemed to walk away when the WDS was rejected.

DISCUSSION AND LESSONS LEARNED

You will recall that the purpose of this paper was to use the rural tale as an allegory to reveal the different disciplines we could use to study Information Systems Development (ISD) and to show what each brings to our understanding of ISD. The paper began with analyzing the text as a story of developing and implementing a water delivery system (WDS) in a remote rural village. We use four well-known textual analytic methods to make sense of the text. This revealed two types of issues, textual and social, which together are used to *recover* the author's original meaning, *uncover* a hidden meaning operating behind the author, or *discover* a meaning beyond its author or context of creation (Gibbons, 1987). The hermeneutical techniques helped us to recover the author's story about the WDS and the rural village. In the critical approach section, we speculated on a possible hidden agenda (accounting, budgets and game playing) to uncover a hidden meaning. In our use of allegory, we discover new meanings and lessons for the realm of IS.

In applying well-known management change theories (Leavitt and Lewin) we move beyond the text to the dynamics of change although of course it is through the language of the text that we draw inferences about change. Both the Leavitt model and the Lewin model add something to our analysis. The Leavitt diamond though limited and somewhat static is powerful in representing relationships (everything triggers everything) and we show that even simple socio-technical arrangements result in unpredictable patterns and unintended consequences. The Lewin model introduces sequenced processes and is prescriptive. Nonetheless, both models take us further in our understanding of the rural tale.

In our section on Information Systems, we drew the parallels between the features of the rural tale and those in a typical IS project. The women become the clients or users, the experts are the IS designers/ project leaders etc. We then attempted to appropriate the story allegorically and apply it to some well-known IS issues such as stakeholder analysis, success and failure, the user-designer gap and escalation theory. We show how each issue mutually informs our understanding of the rural tale. There are typically deeper values operating here so that no one theory or approach can provide the definitive picture. These values might only surface under stressful circumstances, as in our case. For example, on the question of success and failure, a superficial analysis indicates an unequivocal failure: a change project that was successfully rejected by the women and subsequently abandoned. However, further analysis uncovered a "darker" understanding of events as a success for both parties, one party for resisting a bad system (the women) and another for maintaining their resource base for future projects (the experts). Although this is speculative, even a simple story points to the highly complex and messy nature of social life, IS development and research into these issues: a cautionary tale indeed for IS researchers and practitioners.

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