

Power and discourse in information systems practice: a narrative research method.

Adam Hart
School of Information Systems
University of Technology, Sydney
Sydney, Australia
Email: adhart81@gmail.com

Jim Underwood
School of Information Systems
University of Technology, Sydney
Sydney, Australia
Email: jim.underwood@uts.edu.au

Abstract

Relationships of authority and control and their effect on information systems actors has interested IS researchers since at least the 1980's. The study of power itself has also troubled organisational and sociological theorists, from which information systems researchers have drawn various lines of attack. Our approach to power rests on an historical synchronic theory that seeks to uncover the places and operation of power through an examination of narrative 'testaments' which are analysed not from the perspective of the giving individual but from the structural elements of discourse that they may represent. This paper compliments previous research methods on the topic of power especially in expert reports and systems development methodologies; provides specific guidance on how to apply the notion of discourse synchronically; and reconstructs the commercial practice of information systems, not as a broad church, but as one of competing and epistemologically incommensurate discourse, where the fates of the powerful are balanced against the fearful and silent disciplined.

Keywords

Power-relations, discourse, narrative analysis, research method, epistemology.

INTRODUCTION

“...and men have less scruple in offending one who is beloved than one who is feared, for love is preserved by the link of obligation which, owing to the baseness of men, is broken at every opportunity for their advantage; but fear preserves you by a dread of punishment which never fails” (The Prince, Chapter XV)

The opening quote from Machiavelli (2006) perhaps speaks to an idea where a relationship of control of an unknown body or realm can be established without familial loving or any pre-requisite shared understanding. This is analogous to an unloving management injecting ‘fear’ into an intuitively unknown or lesser known domain of information systems, and in return that domain, in confusion, trying to maintain organic integrity against unloving and unreasonable demands, responding with a dense set of native rules and behaviours of its own. Conversely, this is also analogous to an unloving technocrat interjecting technological complexity to suffering participants in disdain of their stupidity of not being able to cope with the technological complexity. Either way, one set of necessary imperatives is applied to another set of necessary valid imperatives and, in the spaces and locations where they intersect, power-relations arise between them. While the political context of medieval Florence and the intrigue of the court of the Medici is not currently observable, our research seeks to understand the operation of power in the local practices of information systems by drawing on the experience of practitioners.

A number of information systems researchers have sought a deep understanding of issues of power in information systems, for example in the area of software selection, consultants and expert power. Howcroft and Light (2006) wished to deconstruct issues of covert power and “problematize consensus” which “entails looking beyond observable conflict to consider how power is used to prevent conflict from ever arising.” (ibid. 218). This theme of who is permitted to speak opens the way to conceive of an internalization of power structures residing in individuals and perhaps even groups, and brings to mind the Latin phrase: *qui tacet consentire*

videtur (he who is silent is taken to agree) while fear prohibits *ubi loqui debuit ac potuit* (when he ought to have spoken and was able to). Hence a tacit agreement, passed over in silence, is a place of power.

In their thesis they adopt the theory of Markus and Bjørn-Andersen (1987), where the question of power and information systems was motivated by the possibility of such understanding bringing equality, and hence emancipation (ibid. 503). Power is located by the four ways it can be exercised: technically, structurally, conceptually and symbolically (ibid. 499). The symbolic type of power outlined is related to our chosen notion of power, where, for example:

“Users comments often reveal the subtle force of symbolic power exercise: “How can I be against the computer system. It’s progress, isn’t it?””(ibid. 501).

Further: “Many people may be reluctant even to consider this a type of power exercise because it is so difficult to trace to the behaviors of individuals.” (ibid.). In our research we believe we have overcome this difficulty.

Bloomfield and Vurdubakis (1994) also studied issues of control and domination in information systems, but in a more structural manner. In seeking to argue for the ability of information systems artifacts, specifically consultant’s reports, to socially construct reality, they use a model of mediation provided by Latour (1987), where “texts function as intermediaries in defining and associating heterogeneous entities...and thereby set up the form and function of the relations between them” (ibid. 456). Although they do not address the base of that heterogeneity, which in our approach is decidedly epistemological, their thesis introduces the possible location of any power. For them the location of the expert power of the consultant’s texts (cf. Jones, 2003) in reality construction, is clear, it is at the boundary, the interface:

“Our argument is that IT strategy reports are to be understood to be located at the interface of what are construed as two different realms, the ‘autonomous’ realm of ‘technology’ and the ‘social’ realm of the business or organization...we contend that IT is not known *as such*...rather it relies on various knowledge practices which objectify it as thing-like and therefore render it manipulable...” (ibid. 457)

Interestingly, the converse view of expert power has also been represented, where the business is seen a forcing the IS developer to submit to authority structures, as researched in a financial services organisation (Rowlands, 2007).

This is an interesting cross-decade academic debate, marked by groups arguing for a ‘Mumford-esque’ defense of an amorphous group of *users* (cf. Howcroft and Wilson, 2003), or for a defense of an equally amorphous group of information systems practitioners against possibly forceful *business* representatives. Everyone can be a user, some can be information systems practitioners, but not everyone is the business, who are depicted and known as the parental owners and controllers. Balanced considerations such as those of Bloomfield and Vurdubakis (1994), or Chiasson and Davidson (2012) that lean towards deconstruction are of greater assistance in studying issues of power, since the attempted rearrangement of boundaries from a technological realm to an organisation realm could be conceived of as a power-struggle itself fought across an academic frame. An approach that can neutrally analyse bounded groups and relations without any *a priori* of who or what is subjugating whom or what would be useful, and we believe our discursive approach helps here.

With regard to the discourse of information systems itself, King and Lyytinen (2004) speak of an “anxiety discourse” within information systems, constituting discourse not as a dialogue, but as a collective, a “realm” in the words of Bloomfield and Vurdubakis (1994:457). Discourse here is not an exchange of language amongst like-minded individuals, but a frictional rubbing or bumping of deep epistemological differences, probably interjected without any familial love. They seek to dispel an almost externally injected internalised uncertainty, a fear, that the practice of information systems development is a fake, not a real science. Their argument states that it is fallacious to speak of an essential weakness in the practice of information systems due to the lack of a theoretical core. Hirschheim (1985) has also taken this theme of uncertainty up, arguing for methodological pluralism.

Detailing the landscape and operations of the ‘anxiety’ discourse, where one resists and perhaps fears a partially seen adversary, and identifies with some part of the argument, starts to allow information systems researchers and practitioners to visualise and understand power beyond the sovereign or juridical models, without invoking the psychological, sociological or biological. Since IT practitioners of necessity work across discourses, and IT academics are seeking to attach to various discourses without being able to easily move across them, we hope this paper provides a useful tool for those faced with disentangling situated practices.

The next section will discuss briefly what is discourse and the problem of applying the notion of discourse, suggesting six questions we may ask in describing power interactions among different discourses; after that we use an example interview from our wider research project to illustrate how text can be analysed to discover interacting discourses and their key features; we conclude with commentary on benefits and insights.

THE NOTION OF DISCOURSE

In speaking of our understanding of discourse in the introduction, we drew parallels variously with more descriptive terms, such as: realms, domains, rationalities, even identity. We also noted the role of documented information systems artefacts or even speech as texts, acting as intermediaries. While this brief paper is not the place for a thorough introduction to discourse, we will briefly state three key elements in how we understand and use discourse.

Firstly, discourse for us is not an exchange between dissimilar or like-minded individuals. Discourse for us is a conceptual body, functioning and breathing in part by the operation of a limited cluster of rules known as discursive formations. (Foucault, 2002a). Simplistically, a discursive formation is a set of rules that determine what is permitted to be said, and importantly, what must be passed over in silence. For example, as a knowledgeable information systems practitioner, it is inappropriate to make a statement in a systems meeting with treasury staff on the topic of which funds transfer pricing method should be used in a transfer pricing systems design. Rather we design and implement the system based on their choice, regardless of the system or data sourcing implications. This rule characterises the form of the participation. Commonly, discussion on the merits would occur in smaller IT-only groups after the decision making ‘performance’.

Secondly, the rules of formation do not exist for nor are generated by individuals; they exist at the level of discourse, as systems of associated rules. For this purpose, one must abandon the notion of the cogito, realise that, although a person is speaking, in their statements their individual voice is gone, and in its place is a set of “anonymous rules” (ibid. 231, 131)

Thirdly, the discursive relations that operate these rules are power-relations which are epistemological in nature. The discursive formations not only determine systems which permit or prohibit what is said or not said, per the first point, but are also rules that determine how to know. The rules rest on the distinction in French between *savoir* (how to know, what makes knowing possible) and *connaissance*, which is what is thought of as already known, what is already accepted as knowledge due to the process of *savoir*. (Foucault, 2002a). Such a distinction has also been addressed by Hirschheim (1985): “Knowledge is therefore not infallible but conditional; it is a societal convention and is relative to both time and place.”

The notion of discourse as we have outlined here in brief is appropriate to the study of power because by avoiding the human cogito we can avoid the bias of becoming entangled and indeed espousing relations we are meant to be studying.

Therefore, to understand power-relations in information systems development, we set ourselves the task of locating and understanding the discursive rules, the formations on the landscape of discourse, as the place where power ‘happens’. How can we do this? The literature on Foucauldian discourse provides us with an acceptable description of what a discourse of information systems could be, but unfortunately, little guidance on how to relate that notion to our real world data collected from practitioners.

Our approach starts by looking for structures in the statements of IT practitioners where relations of power could be located. By exploring for rules at the level of concepts and their relations with other concepts (the formations), in the absence of individual psychology, social fashions or biological imperatives, we can start to specify and locate the discourses that are in operation.

As a pre-requisite to this activity, we collected narrative statements from information systems practitioners. These are a textual form of undisturbed testament of the practitioner, and were collected by open ended interviewing techniques, lasting about two hours for each interview, spanning the whole of an individual’s practitioner experience. A more detailed discussion of methods for identifying and locating discourse can be found in Hart and Underwood (2010), but in brief, to locate power-relations in these statements, when we are looking at these texts we can ask ourselves:

1. Where is discourse in this text? Are there any discursive formations?
2. Does this text contain any discursive statements, and from what discourse does it belong? Do they come from the same discourse?
3. Are there one, or many discourses in operation?
4. How are they related, separately and divisively or cohesively and together?
5. Can we name them to relate them to commonly used ideas?
6. What are their boundaries, the limits of presence, and necessary conditions of existence?

These questions have been formulated for reason of establishing plausible evidence for the existence of discourse, but since the methodology is exploratory, act as directional statements. As opposed to asking why, we presently focus on what and where as a pragmatic and evidential mechanism affecting information systems

practice. To examine these questions, in our broader research we have excavated narratives with a multi-discursive hope in mind, with diverse normative roles of engineering, business and technical analysts, developers, managers, sponsors, and surgeon being included. The span of experience of these individuals in information systems ranges from 3 years to 25 years.

APPLYING THE NOTION OF DISCOURSE

As part of our ongoing research, we interviewed J, who works as an IT Analyst in a large financial services organisation and is a university information technology and business bachelor degree graduate. J is 23 years old and has been in the full-time workforce for 2 years. J's narrative is one from a suite of eight information systems practitioner narratives that have been obtained for our ongoing research.

The interview was transcribed by the first author, the transcript read and the audio file revisited to check accuracy and intonation (lines numbers in parentheses refer to the source interview transcript). During this process statements were selected which showed evidence of the operation of discursive rules, sometimes because reasoning did not appear to follow its surface logic, sometimes because epistemological doubts were implicitly stated. As previously stated, a more detailed discussion of methods for identifying discourse can be found in Hart and Underwood (2010). The following numbered paragraphs describe features of J's dominant discourse and its interaction with other relevant discourses.

#1. J expresses a strong degree of pragmatism in his choices that seems to represent a linear and outcome-driven approach:

- a) "So for me it [the question of what career] wasn't a soul searching thing thinking: 'Oh, what am I going to do', it was almost like: 'That's what I'm going to do'. I don't know what, obviously it's quite broad discipline but I knew I was going to find myself in some sort of computer discipline." (1.37-40)
- b) "The work-experience [part of the degree] for me was awesome. I much prefer that than the actual theory, sitting in a lecture itself. So I like meeting new people and stuff in the job, I like learning new things every day. I love work 1000 times better than I did Uni." (1.229-232)
- c) "I went to Uni to get a job pretty much, a good job. So that was for me was really important. Once I finished Uni, like I travelled for 5 weeks but it wasn't a priority for me, it was getting that job, getting my foot in the door to a big organisation that was my priority." (1.289-292)

This extends to conclusions relating to further study.

- d) "To be brutally honest about the whole situation, Uni for me was a means of getting a career, and I didn't enjoy uni as much as I hoped." (1.204-205)
- e) "[I am] Absolutely not [intending to do further study in the near future]. And I was quite grateful in that most of the courses are four years, mine was actually three. Which for me is great cause I didn't want to study anymore. But I don't have any plans at all to study again." (1.237-239)

#2. Perhaps related to the pragmatics seems to be an overt emphasis on form (or process) over substance.

- a) "For me it came down to two things, the content, and second the delivery of the content...for me as soon as you're having a terrible tutor, the subject, I've lost interest in it straight away. It absolutely key to get someone good to deliver the content." (1.266-268)
- b) "Maybe it's the prestige of a corporate environment as well." (1.311)
- c) "I don't distinguish it like that. I think I'm a very organised person, I'm almost anal in some senses around my organisation abilities." (1.94-95)

#3. J's work in computing is overshadowed by the exterior 'brand' of where he works:

- a) "Yeah, I think so. I think it's generally well received in a social situation. Because everyone recognises top brands." (1.316-317)
- b) "I wouldn't go to a small development house of 100 people, or a consultancy firm of 100 people. For me I see that as a career-limiting move at this time. I don't know why I feel like that" (1.318-320)

#4. Coupled with the linear objective of getting into a large corporation, J's resistance to structured education, and a preference of form over substance, his is an insistent need to stay updated with the network, where the information and social network is conflated:

- a) "it almost consumes you. I feel that the internet consumes me. I would say it's somewhat of an addiction to be honest...[I: what are you addicted to?] Continually being up to date with things. So I'm not a massive Facebook buff, I'm not the type to write a status update, but I'm the type to look what other people are saying. For instance I guess it's: when I wake up, check the news, check Facebook. Obviously breakfast, go to work on the train, I'll do it again, when I'm at work it's different, lunch time in there checking again, when I get to the train station after work, check it again, then at night. It's

never-ending really. And I haven't thought about it really but when I'm saying it back [to you] it's Shit! It's a lot of internet access really...you feel out of the loop." (1.186-195)

b) "I have a fear of not being in the loop. In your social life I think it's important to be always up-to-date, in a social situation as well. Like just down the pub and if you don't know something you're kinda out of the conversation." (1.197-199)

c) "All the subjects, everyone went there, past papers. That's one thing I remember everyone went there, regardless of the subject." (1.120-121)

#5. The substance of the network (and there is so much of it anyway) passes fluidly through the form of the right device, and not through the wrong device, affecting J's level of enjoyment in computing:

a) "Not really, to be honest. I get frustrated using (I know it's getting quite specific, but) our work computing environment XP, Windows 6 (sorry) IE 6 [Internet Explorer 6] I think its quite ridiculous. I understand the complexity and all and I understand it's not as simple as just installing a new operating system with active directories and all that kind of stuff. But for me I'm very frustrated in the sense that I have to use a crappy old technology...for me my daily attitude towards the environment was [in the past] much more positive than it is now." (1.364-368)

b) "Back to your connectivity thing, if I get a device now that's not connected I won't use that device. I had my iPad 1 which was wi-fi only. And it frustrated the hell out of me that when I was outside the house, (there's other ways you can do tethering from your phone), but I didn't have instant access to the internet so I sold that when iPad2 came out...So I will not go on a computer, unless it's just an attempt to write a document or just do some calculations on Excel, if I'm not connected to the internet. I'll just view it as redundant." (1.170-175)

#6. We think for J computing was a choice made on the basis of his facility for it in a usage sense which could buy him the status he wished to obtain, not so much his respect or inherent belief or organic identification to the subject matter, which is also borne out by the point made above regarding his pragmatism:

a) "I'm probably not the techie but I understand the windows, the operating system environment very well, but just not a strong programmer" (1.60-61)

b) "They [my teachers] were particularly an older generation and they were fascinated with how much I actually knew about it. In fact, I remember in Year 6 it was, I was almost like the technical support person that they all went to for all their problems" (1.21-23)

c) "I think my interest as I get older is to do more the mainstream stuff that everyone else is doing. But a lot faster than most people. My mum and dad when they watch me on the computer just go: 'This is too much I get nervous when I watch you because you're so quick'. So I'm quite confident in doing things quicker than most..." (1.143-146)

d) "I'm always looking on the blog sites during the day, Apple forums, Google News, Engadget, Gizmodo. To be honest its more around research, now I've got my iPad as well after seeing the transition from me using the desktop a lot less and using tablets and my phone" (1.148-150)

e) "Career? Progressing up the hierarchy is key. Making my own team hopefully at some point. People management." (1.328-329)

#7. Given this virtuosity, this facility in computing, which should have conferred status, which is what J desires, he is angry about the management institutions, which abuse his internally conferred status:

a) "they almost didn't care about me or giving me meaningful work...delivery managers, project managers, implementation managers...I was doing stuff but I felt I could have been doing a lot more and I feel quite awkward when I see the team around the place because I feel that they think I'm pretty shit to be honest" (1.337-340)

b) "'Yeah, he is my assistant' which I obviously didn't like because I wasn't his assistant doing his crap. So I said: 'No mate, I'm not your assistant.' I gave it to him in front of everyone. I did that because I thought it was important to just not take shit" (1.352-354)

#8. His anger has yet to reach expressions of injustice; he aspires to be an institutional member:

a) "Career? Progressing up the hierarchy is key. Making my own team hopefully at some point. People management." (1.328-329)

#9. But J also appears to be at the beginning of his entanglement with the 'counter-logic' of the management institutions:

a) "What frustrates me the most in a place like this but its expected in a big organisation is there is a lot of politics involved, and it's frustrating for me because I'm the type of person that just wants to get on with the job and not get caught up in all the crap." (1.391-393)

b) "Executed those instructions as they were directed, and then that person turns around and changes the direction, saying: 'That's not what we asked for.' Where in fact: 'No, it was, you said it was this,

we've got it in an email'. It shows a lack of, I don't know what it is, just terrible people management."(1.435-438)

c) "The thing with me at the moment I feel like in some situations I'm too young and I'll be viewed as too inexperienced to fight the battle. I can get intimidated by some people depending on the personality. The other story, where I was the assistant, I wasn't scared, but some personalities I wouldn't challenge because I know you can't win some battles. And you don't want to be viewed as the trouble-maker either, so you just get on with it." (1.455-459)

d) "You just get on with it, but. If I meet people outside of work that are like that I won't hang out with them, simple as that." (1.415-416)

#10. Interestingly, J rarely comments on the organisational purpose or outcome for his work in computing, it is still very much a personal aspirational thing for him. And when it was commented on because the organisational object did not accord with the required linear outcome, it was dismissed:

a) "It [the job] hasn't measured up, but in saying that, the work I've been doing which is around the mobile strategy, that's been interesting for me because that's looking at the new and up and coming stuff. But what I feel, it's all talk, strategy, but we're not going to take a leadership position, and I think our competitors will beat us to it."(1.370-374)

Noting J's narrative, and our brief outline on the notion of discourse permits us here to make the following observations:

A. It is a networked, a connected 'me' discourse that J professes interest and engagement with. This 'me' is a collective discourse (which we have called 'generation-me' discourse) that seeks status and brand, and has specific rules related to status and brand which attract it to the latest up-to-date computing devices, yet attracts it also to the hierarchical/organisational discourse. (#9.a-d) A discursive rule is, that if a device is not the latest, it ceases to qualify as a device. (#5.a, #5.b)

B. A discursive formation of the generation-me discourse is that they have to stay up to date, the quality of the new information is not important, it is the quantity, presence and freshness of the information. If the information is not fresh, and delivered from fresh devices, it is not valid. (#4.a, #6.e, #5a, #4b)

C. The immediacy of the style of living necessitates action (#9.a) but the rule is held in abeyance by the need for status and brand (#3.b, #6.e, #4b). J is dominated by a power-relation between organisational memberships that confers status from brand, from an organisational belonging, over a virtual inter-networking belonging with (presumably) like-minded peers that does so but in diminished terms.

D. This generational discourse in seeking status is confused that the rules of competency that are used by itself to confer status are not similarly recognised by the organisational discourse to which it has necessarily become entangled. (#9)

E. The generation-me discourse is subjugated in the face of the other (#9) and struggles to understand this and applies an older set of values, based a rule that associates age with merit(#9), retreating to a position of insular superiority by negatively commenting on the organisation that gives him the status and branding (#10). This retreat is place or context specific (#9)

F. The educational discourse is left behind at the beginning (#1.e). As J progresses his potential retreat into the discourse (professional not political) of knowing may mean this is returned to.

There are not many but few moving parts to what is quite an extensive text. Taking a discursive stance for the narrative illuminates the tension between the discourse of education, status/brand, organisational membership, facility or competence, and knowing itself. Of course other interpretations are feasible, but if our intent of understanding through discourse is deployed across the narrative, we can construct an interpretation where a supposedly rooted and rational information systems practitioner, such as J, is not just inside one practice, but is instead subject to a larger palette of influences (power-relations), and we have demonstrated how these influences could be seen as discursive in form and substance.

The status and/or brand which forms a notable discursive relation of dependence in J's testimony is a deep power structure evolved into an epistemology seeking footing, which says at this time that an action or desire which does not bring status and/or brand is false, and the power relation between status/brand and proficiency (#7.a-b) is a discursive bond stronger or superordinate to that between status/brand and education/knowledge (#1.d-e).

Comparing J's narrative with another similarly aged practitioner Y (not represented at this time due to space) where the co-relation of status/brand with education/knowledge was *not* located, shows irreducibly that the existence of status/brand is a sufficient *and* necessary condition of existence (for J) of not only the

education/knowledge discourse but other discourse (for example IS methodology). That is, there is a power-relation between status/brand and potentially any other discourse J may encounter, bearing in mind the three-prong definition suggested above. Between J and Y there is a deep difference that is not explained by their demographic. J's self 'government' at work, is through the 'judiciary' of status/brand, and what reality is true must be judged through those 'laws'. But there is a schism as the non-work judiciary operates differently (#9.d).

Such a loved bond is not realisable from the peer network (#8.a) or from a place of work without status/brand (#3.b). Status and/or brand is *conferred* by facility in computing action and hence the truth, knowing confers no relation and is nothing of significance, especially in the organisational discourse (#7a, #10a).

The social network is in a power-relation to information that necessitates avoiding datedness (#4.b, #6.e). It is a necessary condition that the information is always new. The discourse of generation-me subjugates old information but subjugates itself for a status/brand it cannot obtain otherwise. When asked would he work for a small software house, the answer was emphatically in the negative. (#3.b)

J is subject to the relative forces of discursive power that are unavoidably embedded in us all, and in fact due to the relations of force has only one choice, or a choice forgotten, of playing the right game and being rewarded by it, which is a form of deep power structure.

CONCLUSIONS

This has not been a social study into the trends and inclinations of the young information systems practitioner. While maybe interesting in itself, rather the purpose of this paper has been to introduce and demonstrate how the notion of discourse in the absence of a human-centric or organisation focussed viewpoint can aid in revealing power structures which otherwise remain less susceptible to analysis, and provide a means to locate information systems relative to other quite dynamic forces and other domains. (As to the origin of this power, we offer no explanation. We are determined to speak of the how and where not the why or who). We also note that discursive analysis of the other broader sample of practitioner narratives not presented herein yields compatible results as regards the operation of discourse in their testament.

Our previous paper (Hart and Underwood, 2010) derived a method for identifying discourse by reference to the text of another interview from this research project. This was to some extent self-verifying, but we have now successfully applied the method to another case, thus reinforcing confidence in the method. We also note the importance of interviewing in this method. Relying on documents such as reports, system specifications and emails carries the risk that these texts will have been tailored to conform to the dominant discourse, requiring the use of deconstruction to reveal the discursive structure (cf. Beath and Orlikowski, 1994). We found that with interviews the actors were able to reflect and reveal the points where different discourses interacted, the points where discourse was visible.

In the case studied in this paper we clearly see the operation of a discourse (the 'generation-me' discourse), which determines the statements of the interviewee (and probably his peers). But the epistemological judgements of this discourse rely partly on other discourses, such as the technological and the organisational. Here we see one of the issues in attempting to apply Foucault's archaeology to an instant in time rather than to a sequence of eras. In the diachronic case (Foucault, 2002b) discursive formations interact at times of transition (such as the beginning of the enlightenment age) and these interactions tend to be interpreted in terms of the discourse of later times. If we consider our postmodern era of co-existing discourses, these interactions are clearly visible, even in texts provided by one individual. Complementary research is needed based on capturing dialogues between those apparently coming from different discourses.

Understanding the interaction of discourses is useful for information systems practice and research. We do not see the commercial practice of information systems as a 'broad church', but as discrete discursive practices located in multiple boundaries and unified through power-relations that subjugate or subordinate one over another. And these practices are multiple and contextual. Our method has supplied an alternative to locating power-relations through the deeply emplaced epistemological rules that our questions have led us to discover. This also locates the concept of 'resistance' to new technology in a new perspective, and emphasises the importance of politics in information systems development. This political perspective is seldom discussed in information systems education nor included in the vast majority of information systems development methodologies.

For information systems research the implications are a little more complex. If, as most practitioners recognise, the politics of competing discourses is ubiquitous in information systems development, then it is obvious that researchers should spend more time studying this issue. On the more fraught issue of the 'foundations' of the discipline, the theory of discursive formations highlights that our differences are not based just on ignorance or personality, but on deeper structural divisions. Whether we should respond to this by keeping to our home

discourse and leaving the discipline as a region of mutual hostility but interdependence, or whether we should try to work across the barriers, raises the fraught question of incommensurability of discourses (Allen and Ellis 1997).

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