Moments that Matter: Discourse, Design, and Detail in the Creation of Socio-Technical Order

Neil Ramiller
Portland State University

Follow this and additional works at: http://aisel.aisnet.org/icis2007

Recommended Citation
http://aisel.aisnet.org/icis2007/31

This material is brought to you by the International Conference on Information Systems (ICIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in ICIS 2007 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.
**MOMENTS THAT MATTER:**
**DISCOURSE, DESIGN, AND DETAIL IN THE CREATION OF SOCIO-TECHNICAL ORDER**

Neil C. Ramiller  
School of Business Administration  
Portland State University  
P.O. Box 751  
Portland, Oregon 97207-0751  
neilr@sba.pdx.edu

**Abstract**

This essay explores how detailed design issues that emerge in connection with certain “defining moments” in an information system project can both illuminate and shape the project’s broader network of actors. Of particular interest here is how language use, in both its representational and performative roles, helps to make these things happen. A pair of incidents from a recent system initiative illustrates how local project events involving the negotiated design of system features can vary in the degree to which they draw upon, and reciprocally affect, the project’s larger actor network. Implications are drawn for the enduring and yet problematic concept of “levels” in socio-technical analyses of organizational IT initiatives.

**Keywords:** Actor networks, representation, rhetoric, system design, information systems projects, levels of analysis

**Introduction**

To see a world in a grain of sand  
And a heaven in a wild flower,  
Hold infinity in the palm of your hand  
And eternity in an hour.  

William Blake, "Auguries of Innocence"

In a recent essay, Karl Weick revisits the familiar Mann Gulch disaster story¹ to explore the wealth of insight that can be gained about organizing, when researchers focus closely on the “moments that matter” (Weick, 2007: 14). While calamities – or calamities heroically averted – certainly qualify as moments that matter, in this essay we want to consider the potential significance that less dramatic events may hold. In an information systems project, the moments that matter are not necessarily just those that portend disaster or even those that are blatantly of immediate and weighty consequence. Rather, they are more broadly those occasions that prompt reflection on actors’ commitments and interdependencies, and what these may suggest in turn about the possible choices for action to deal with the matters at hand.

Elsewhere, Weick and colleagues remark on this broader significance of the local and momentary both for understanding and for shaping what we, as researchers, may come to regard as the larger structures and processes of organizing (Weick et al., 2005: 410):

¹ A classic account of a failure in organizational sensemaking, the Mann Gulch disaster involved the tragic loss of life in a wildland firefighting incident in 1949 (Maclean, 1992; Weick, 1993).
… the order in organizational life comes just as much from the subtle, the small, the relational, the oral, the particular, and the momentary as it does from the conspicuous, the large, the substantive, the written, the general, and the sustained. To work with the idea of sensemaking is to appreciate that smallness does not equate with insignificance. Small structures and short moments can have large consequences.

The current paper explores the potential significance of local events for the larger understanding of system projects. The theoretical and methodological framing for the discussion is actor-network theory (ANT). The use of ANT, and notably its lack of commitment to a priori sociological levels (Latour, 2005), helps foster a perspective in which the study of events that seem confined in space and time can be seen to open out on to a larger domain of structure and process. In particular, we will see that details that emerge in connection with certain defining moments in a system project can help both to illuminate and to shape the project’s larger actor network. In this way, the specific is linked to the general, the local to the global, and action-in-context to the larger sweep of project history.

Attention to language will be indispensable to our efforts, since texts are “resonating participants in the enactment of the realities that they describe” (Law, 2004: 148). Or, as Weick suggests, engagement with the local and momentary is a matter of creating “plausible stories” (Weick et al, 2005: 410) that can both help make sense of on-going experience and lay the basis for future action. In asserting that defining moments are invitations to interpretations that both illuminate and shape, we are necessarily calling attention to two principal functions of language in accomplishing the kind of organizational innovation that is realized in and through systems projects: representation and persuasion. In regard to representation, language is the means by which participants discursively position themselves and other actors in ways intended to model emergent and future realities. But apropos persuasion, language is also illocutionary in function, that is, a force for accomplishing those realities.

This essay proceeds by developing further the concept of the defining moment in IT-related projects and situating it within the framework of ANT. We then consider more closely the role that representation and rhetoric play in crucial episodes where the construction of a project’s actor-networks takes place. To make matters more concrete, two illustrations of defining moments in a recent system project are described and analyzed. The essay concludes by entertaining the larger implications for research and practice of focused actor-network analyses.

**Defining Moments**

*Le bon Dieu est dans le detail.*

**Attributed to Gustave Flaubert**

**The Defining Moment: A Working Definition**

Kipfer suggests that a defining moment is “an occurrence that typifies or determines all related events that follow” (Kipfer, 2005). In the context of a systems project, then, what would make an occurrence defining is that it does at least one of the following: (1) It illuminates many of the forces working at large in the project (and hence “typifies”); (2) it helps to shape in a significant way the direction and outcomes of the project (and hence “determines”).

The phrase “all related events” in the preceding definition calls for some scrutiny. As there actually may be many or few related events, depending on circumstances, “defining” will be a matter of degree. At the upper end, there will be critical events where path-dependent outcomes can subsequently lead a project in very different directions, with potentially profound effects on many of the interests engaged in the project. More modestly, there will be other events that illuminate only a small set of the interests involved, and that have at most minor and highly local effects on certain participants. At both extremes the events in question can be said to “define”; it is just that the scope and scale of what they define is different.

Invoking participants and their interests suggests that defining moments are necessarily personal and subjective in nature, and that different events could well be identified as “defining” when attending to different actors. That defining moments are necessarily in the eye of the beholder (for all involved, including the researcher) is undeniable. But it is also important to recognize that defining moments are also commonly inter-subjective. That

---

2 I am grateful to a reviewer for raising this important point.
is, what one person concludes about their identification, meaning, and significance often gets decided in reference to others’ perceptions, and sometimes as part of a collective negotiation.

It is also important to note that defining moments will often be related to extrinsic barriers and constraints. For example, an “enabling” technology simply won’t do what is wanted of it; consulting services required in developing a highly innovative practice are scarce or do not yet exist; system design runs up against a governmental agency that demands a particular set of reports; and so on.

In short, defining moments will typically depend for their existence both on their perception as such, and on a variety of social, material, and institutional conditions. Accordingly, the personal, inter-subjective, and material are all things the researcher hoping to understand defining moments must take into account. This is where actor-network theory enters our discussion. Actor-network theory’s particular strength in tracing, through time, the associations among diverse elements makes it a promising approach for exposing what makes the defining moment what it is. Many publications are now available in the information-systems literature and allied fields that introduce the rationale and methods of actor-network theory. (The reader new to ANT would do well to start with Walsham & Sahay, 1999.) Here a brief summary will serve to clarify its usefulness for investigating defining moments.

The Defining Moment and Actor Network Theory

ANT provides a strategy for tracing the history of a project and producing an account of the action that takes place. It is, therefore, intrinsically a process-oriented approach. ANT calls in particular for viewing the project as an undertaking that involves the assembly of a network of diverse actors with heterogeneous interests and objectives. There are, of course, challenges in accomplishing this, and success is not a foregone conclusion. Actors who are attempting to shape the direction of the project must enroll other actors, a task that involves, among other things, achieving alignment between the course of the project and the interests of those who must be persuaded to participate. Accomplishing alignment (or translation) can therefore have both material and rhetorical aspects: Even as the project may have to be configured so that it delivers something of real value to problematic actors, those actors must also be convinced that this is true. The ultimate goal, then, is to achieve a kind of irreversibility in network arrangements, so that the commitments of the various actors achieve a taken-for-granted status. The attainment of this goal, however, is constantly under threat from the possibility of defections by key actors, who may remain (or subsequently become) unconvinced.

Implicit in actor-network theory is a critique of the pervasive operating assumption in sociological studies of a priori levels (e.g., individual, group, organization, society). Since networks of actors emerge through processes of association, and can themselves come to function as actors in their own right, the particular associations, aggregations, and “levels” that emerge in connection with information-technology initiatives become a matter for empirical discovery, rather than mere stipulation.

Our reflection on defining moments (above) suggests that they stand out from the ordinary moments that make up the stream of on-going experience in part because of their reach and connectedness. ANT provides a ready-made approach for following up those connections that give defining moments their special character, for revealing how such events incorporate elements of what we might conventionally call the “macro,” and for exposing how they might contribute in turn to transformations on a larger scale. Where IT projects are concerned, of particular interest are events that arise where system designs come into conflict with expectations, often as these are connected to existing or desired work practices. Such events can be significant in their reach, especially where they threaten to undermine the participation of key actors and hence to destabilize the project’s actor-network.

This particular application of ANT is largely new, but a modest assortment of research in information systems foreshadows aspects of it. Holmstrom and Robey’s (2005) discussion of the “episodic character” of issues in systems projects flirts with the concept of defining moments their special character, for revealing how such events incorporate elements of what we might conventionally call the “macro,” and for exposing how they might contribute in turn to transformations on a larger scale. Where IT projects are concerned, of particular interest are events that arise where system designs come into conflict with expectations, often as these are connected to existing or desired work practices. Such events can be significant in their reach, especially where they threaten to undermine the participation of key actors and hence to destabilize the project’s actor-network.

This particular application of ANT is largely new, but a modest assortment of research in information systems foreshadows aspects of it. Holmstrom and Robey’s (2005) discussion of the “episodic character” of issues in systems projects flirts with the concept of defining moments, although the idea of an episode does not specifically have the same prominence, scope, and drama. Klischewski (2002), in pointing to project networks’ requirements for timely and well-placed actor commitments, speaks to an important aspect of defining moments. In a similar vein, Scott and Wagner’s “temporal turn,” in their ANT-based study of ERP, traces “the timing and nature of… participation” (Scott & Wagner, 2003: 288) over the course of a project. In this way, they also hint at the

3 Indeed, Latour has asserted that actor-network theory is more properly called the “sociology of translation” (Latour, 2005).
importance of punctuated events where the enrollment of particular actors becomes pivotal. Finally, Aanestad and Hanseth (2000), in their study of the implementation of broadband multimedia technology in a hospital setting, exemplify the tracing of connections from the particular event to larger structures, as localized occasions-of-use and their complex sets of associated actors get linked to the institutional level (associated with the required infrastructural investments) and to the problematic constitution of a stable collective.

Language and Defining Moments

If a defining moment in an information systems project is an occasion where the commitments of a key set of actors are at stake, then how those actors are positioned to contribute to the project, and how they are persuaded to do so, both become crucial. As foreshadowed in the introduction, this is where the consideration of language becomes essential. We will consider, in turn, the roles of representation and rhetoric.

Representation in the systems project appears in three significant and interrelated guises. These play upon the complex meaning of “representation” and, in particular, the dual semantics that embraces both the idea of re-presenting reality in textual form and the notion of speaking on behalf of other interests.

Re-presentation in the Creation of the Future

One form of representation involves the discursive construction, through texts (project documents, formal presentations, conversations, and so on), of the world-to-be. An information systems project invariably entails intent, and often complex intentions that engage multiple interests. The intentions in question point in various ways toward the reconstitution of the organization and, commonly enough, toward changes in how the organization will be positioned in its larger environment. In typical practice, this engages parties in creating “re-presentations” of the organization as it is now (in its problematic condition), and re-presentations of how it might be once the new information system is in place (Ramiller, 2007a).

The latter entails the creation of imaginaries (Fairclough 2003; Law 2004), discursive constructions that transcend mere fantasy and wishful thinking to encode the willful and directed efforts of participants to compose realities in language out ahead of the facts of current existence. Imaginaries are a realization of Bachelard’s view of imagination as a constituting force in the world: “I propose… to consider the imagination as a major power of human nature. … By the swiftness of its actions, the imagination separates us from the past as well as from reality; it faces the future” (Bachelard, 1994: xxxiv).

Representation as Speaking-on-Behalf

As ANT scholars explain, however, representation enters in another way. Construction of the network of actors needed to further the aims of the project calls, at various times, for certain actors to speak on behalf of the interests of others who are not (yet) actively engaged. This is commonly a step along the way during the process of translation. However, enrollment of those actors who have been spoken for cannot be regarded as truly secure until the phase in translation that Callon (1986) has characterized as mobilisation. Mobilisation occurs when the actor network moves beyond the limitations of representation, so that those spoken for begin to participate in fact, and according to the roles that have been specified. The difficulty, here, is that they may not do so. As Latour remarks (1991: 127), the outcome of mobilisation

… obviously depends on how well an actor’s conception of others corresponds to their conceptions of themselves or of the said actor. If this convergence is weak, the actor will populate his world with other beings; but these beings will behave in an unpredictable fashion, attaching or detaching themselves to the program from version to version. If, on the other hand, this convergence is strong, the actor can begin to make predictions – or, in any case, to guarantee the consistent behaviour of the beings constituting his world.

---

4 In invoking Orlikowski and Tyre’s (1994) “windows of opportunity,” Scott and Wagner also point in this direction.
5 Think representative democracy.
Consider, for example, how users on a prototyping team may be called on to represent the interests of their respective departments. The challenge of mobilisation arises here because the point will eventually be reached where members of the larger group must be induced to make their own commitments to the resulting system. This can be a perilous juncture for an IT project, because actors heretofore merely spoken for can surface new issues, act unpredictably, and head off in unexpected directions. This is one way in which the problem of defection, noted earlier, can arise.

**Representation through Inscription**

The third way in which representation enters into the systems project is through *inscriptions*. Technologies, by virtue of their design, are said to inscribe the interests of certain actors. Such *inscriptions* also tend to dictate, or at least to constrain, the actions that may be taken by other actors. As Klischewski remarks, a “machine… tells or prescribes the roles that it… expects other elements in the network to play” (Klischewski 2002: 312). In this respect, a technology itself can become an actor.6

The particulars of design in an industrial machine, it is well known, can limit human options in this way (Noble, 1984). However, where computer-enabled information systems are concerned, we have the added element that the technology produces information – further inscriptions – about the work it performs (Zuboff, 1984). In the form of delegates (Walsham & Sahay, 1999: 42), such as documents, these second-order inscriptions tend to take on a life of their own, roaming the organizational environment and potentially threatening identities, demanding responses, and otherwise dictating further the actions that other actors must take.

Inscriptions, which as representations of reality can be subtle and cryptic, are nonetheless related to more overt efforts in re-presentation and speaking-on-behalf. Like re-presentations, their design entails an effort to recast the future. But rather than speaking aloud to visions of organizational transformation, they embed within the medium of the information technology itself (plus its delegates) *de facto* proposals for changing the work practices of the new system’s users. Like speaking-on-behalf, inscriptions seek to make good on the claims of project leaders to translate the interests of users, but they do so by mobilizing those users through technical means.

However, even as the users may reject or rebel against the control being asserted via the inscriptions, the inscriptions themselves may fail and the technologies bearing those inscriptions become defectors. This can be a consequence, for example, of poor design, the failure of enabling technology to support the functional capabilities being sought, or the appearance of unintended side effects that give the inscriptions’ sponsors “more than they bargained for.”

**Rhetoric**

If representation involves positioning various actors in configurations intended first to foreshadow the future, and then to build it in reality, then language must also be marshaled in persuading those actors “to participate in particular ways of thinking and acting that maintain the network” (Walsham and Sahay 1999: 42). Hence, the language of mobilization must be not only representational but also performative or illocutionary (Austin 1962; Searle 1969). In short, rhetoric matters (Bloomfield et al. 1992).

Rhetoric – notwithstanding the usual pejorative connotations associated with the term – is the indispensable art of convincing others (and, sometimes, oneself) on significant matters through the use of trope, narrative, and logical argumentation. Those who would champion a system project must heed the rhetorical side and, most notably the need to persuade the human participants to commit to, and act consistently with, the roles into which the champions’ imaginaries have cast them (Klischewski, 2002).

To summarize the issue of language, the project leader (or other actor seeking to influence the project) is much like an *author* attempting to script a particular actor network through representation and rhetoric, but struggling against circumstances that threaten to expose his/her account as flawed. A defining moment, then, is an event that poses an especially *punctuated challenge to such authorship.*

---

6 This apparent equating of human and non-human actors is a controversial point of ANT, and has led some of its proponents to refer to the larger category embracing both humans and non-humans actors as “actants.”
In the next section, we entertain a pair of illustrations from a recent system initiative. These illustrations will serve to suggest how project events associated with system design activity can vary in the degree to which they draw upon, and reciprocally affect, the larger actor network that carries the project forward. Representation and rhetoric will play a role in both.

Two Illustrations

The examples described here come from a field study of a system project in a large not-for-profit firm in the behavioral healthcare and social work arena. A detailed account of the organizational context, project history, and research methodology is provided elsewhere (Ramiller, 2005). The second of the two events was previously explored in some depth in connection with the theme of safety in IT-related healthcare management (Ramiller, 2007b).

The project involved the design, development, and implementation of the first major IT-based information system to address the core clinical operations of the organization. The impetus for having such a system arose, in great part, from increasing institutional pressures to meet the reporting requirements of outside agencies empowered to license, fund, and conduct oversight. The new system was created using an evolutionary development strategy under the leadership of an independent consultant with limited in-staff IT help and the services of an outside contract programming firm. Notwithstanding the challenges involved – including an extraordinarily unsophisticated user base (clinical staff, management, and administrative personnel) – the delivered system has overall been a significant success.

Data collection focused on multiple conversations with the project leader and extended interviews with major management and staff participants; these were supplemented by observation at joint user-developer design sessions, observation of training sessions and system demonstrations, review of project documents, and study of written communications (mainly email messages). Data analysis proceeded while field activities were still underway, on an interpretive and hermeneutic basis (Boland 1985; Walsham 1993, 1995). Actor network theory was adopted in due course as a basic interpretive framework. Hence, observation and analysis eventually came to be structured around the identification of actors, the associated interests engaged, crucial events and developments, and the actions taken by participants.

The Client Intake Process

As noted, a central motivation for the system was to capture client-related data in order to respond more effectively to the escalating expectations of outside entities. (“Clients” in this context refers to the children and youth involved in the firm’s programs and services.) Accomplishing this larger objective depended on the staff to participate in the recording of crucial data. In many cases, the system’s screens were designed at the bidding of managers to compel staff to enter certain data during work tasks. But employees often balked at such constraint. Lack of comfort with the technology was one reason for this – the organization was populated by large numbers of employees who had never before worked with computers. Also, clinical staff commonly greeted such “data entry work” as discordant with professional identity.

While the system, acting according to its embedded inscriptions, worked to reshape employees’ tasks, employee acts of incompetence, resistance, and subversion threatened the operational viability of the fledgling system. The crucial issue in this regard was data quality: The system’s legitimacy with managers and outside agencies depended on its accuracy in representing organizational affairs. An examination of one particular event illustrates the role of system as actor, the reciprocal user response, the moment of crisis, and its resolution through activities in representation and rhetoric.

A staff analyst in charge of performance-quality assessment, who was working with a set of new system-generated reports required by an outside agency, discovered that certain crucial data fields were consistently empty. Administrative personnel in charge of admission processing (client intake) were, it seems, systematically leaving these fields blank. In a meeting with the project leader, the staff analyst lobbied for making the fields required. This, in effect, constituted a call for building new inscriptions into the technology that would forcibly change the behavior of the intake personnel. The project leader engaged the intake staff on the issue, who counter-argued that the information needed was not available at the point in time when admission took place. A process of negotiation ensued, adjudicated by the project leader, in which issues of organizational requirements, role responsibilities, work-
process change, and system redesign all entered into the rhetorical mix. Further analysis of the work process revealed that the intake staff’s claim was partially factual – timing was indeed problematic for certain pieces of data. On the other hand, the staff could obtain some of the needed information with extra effort. In the end, the resolution turned on getting concessions from the intake staff, combined with a restructuring of the work process and associated screen re-designs. The staff analyst also had to change his expectations about timing in his own work process.

In this case, rhetoric on multiple participants’ parts led to a mutual translation of local interests and a successful episode of incremental socio-technical design. This event represents a defining moment in the project, albeit one relatively local in scope. Nonetheless, the importance of satisfying external reporting requirements loomed over the proceedings, bounding the set of possible resolutions. The incident was, in some ways, typical of the numerous “spot fires” that the project leader had to put out, as she expanded translation and enrollment during the rollout of system components. Our second example, by contrast, entailed a defining moment of considerably greater scope.

**Tracking Special Procedures**

Clients in the residential units sometimes act in ways that threaten injury to themselves or others. In these circumstances staff members can use what are known as “special procedures.” There are two major categories of special procedures: physical holds and seclusion. The new system included capabilities for recording the application of special procedures and for routing these reports to supervisory personnel for review and signoff. This documentation was required by State rules stipulating the appropriate uses of special procedures, and was also subject to scrutiny by accreditation agencies like the Joint Commission on Accreditation of Health Organizations (JCAHO).

The system’s special procedures feature, as initially rolled out, directed staff members involved in an incident to match, by means of pull-down menus, a specific hold (or an seclusion) and a precipitating client behavior. The list of client behaviors, developed in consultation with residential-unit supervisors, was extensive, and included severe disruption to milieu, physical aggression (weapon), physical aggression (no weapon), suicidal ideation, aggressive gesturing, incitement, exposure to bodily fluids, elopement attempt, climbing, attempt to exit safe room, sexualized behaviors, property destruction, and self harm. Categories of staff responses included seclusion, staff-directed isolation, protective hold (general), and five specific types of protective holds.

Shortly after the feature’s rollout, the system began producing summary reports that showed a very high number of special procedures in the four residential units for boys. More importantly, the reports revealed that staff members had been using special procedures in circumstances that were not authorized under the state administrative rules. Because the unit supervisors did not, in fact, know the state administrative rules, the pull-down list of client behaviors had been designed to include items for which special procedures were not actually appropriate. The staff, poorly trained in proper procedure, were briskly and naively documenting their own violations of State standards.

The staff analyst who discovered the problem alerted a variety of actors, many of whom had essentially been inactive in the project up to that point. Now suddenly engaged, in addition to the project leader, technical project staff, and key informants, were the project’s executive sponsor, the supervisors of the boys’ and girls’ units, their immediate manager, and the head of the nursing staff. In this way direct participation expanded, but so too did the scope of representation. In a series of communications and meetings, the actors now directly involved spoke on behalf of additional parties, rhetorically linking the interests of the latter to the newly-surfaced issue. Spoken for were the clients, their families, the unit staff, the administrative staff, management, the system, the firm itself, outside agencies, the courts, and the relevant professional disciplines (psychology, social work, nursing). Among the diverse interests invoked were the safety of the clients and the staff, staff retention, clinical professionalism, regulatory compliance, the system’s own viability, and the legitimacy of the organization itself.

In ANT terms, the special procedures system module, as an actor in its own right, had begun to generate its own set of independent actors – the reports. In contrast to earlier practice, which had involved the rather haphazard use of paper forms, the new system provided grimly superior capabilities for keeping a complete, irreversible, and auditable record of what was, in this case, malpractice. This unprecedented capability for textualizing details of conduct within the firm created the prospect that sensitive texts would be unleashed that were durable, highly mobile, and freighted with implications for a variety of interests.
This, of course, helps to explain the sudden engagement in system design by actors, and especially managers, only spoken for before. Their subsequent acts of representation outlined what was, in effect, a virtual actor-network that would become very real, if the reports began to make their way into the world and mobilize the wide-ranging interests now being spoken for.

Proposals for dealing with the crisis varied, and they differed in the boundaries they re-drew around the actor-network connected to this system feature. One proposal was to remove the Client Behaviors field and its pull-down menu altogether; this would disable the system’s ability to capture any rationale for special procedures and thereby cut off the external stakeholders. A second proposal called for reducing the list of Client Behaviors to the three that were understood to be legitimate reasons for holds and seclusions (Physical Aggression with a Weapon, Physical Aggression without a Weapon, and Imminent Self-Harm). This approach would retain the appearance of connecting the firm’s information management policy to wider constituents, but eliminate the information that would expose the firm’s real practices to outside scrutiny. A third proposal called for leaving the menus in place, and making substantive changes to the special-procedures practices themselves through management engagement in training, incentives, operational oversight, and interventions in the organizational culture.

This defining moment was brought to a culmination over the course of three days, when the system’s executive sponsor finally announced in favor of the second solution. In justifying the decision, she cited the merits of the redesigned menu as a “training vehicle” that would teach the unit staff proper procedure. Of course, the practical effect could easily be otherwise: The system and its reports could become parties to a systematic pattern of misrepresentation, as the staff would not change their practices at all, but simply pick one of the three available Client Behaviors in order to get access to the Response list and then complete the required documentation.

As remarked earlier, inscriptions sometimes fail, and the actors who are targeted subsequently evade the intended control. Recalling the earlier quote from Klischewski, we do tend to create the world that the available technology allows us to represent. On the other hand, technological design, in however unintentionally admitting latitude for alternative representations, also opens up possibilities for alternative courses of action.

Discussion

If it cannot see the entire Tigris in a drop and the whole in a part,
Such an eye would merely be a child’s game, not the eye of a wise man.

Mirza Ghalib (from an untitled ghazal)

Defining moments in a systems project are those that “light up” a significant portion of the actor network, for the consideration of participants and researchers alike. A defining moment is also a contest over what will count, that is, what will be deemed legitimate to take into account. And it produces, via a discursive process, a narrative resolution that brings into presence some things and by forceful omission suppresses other things (Law, 2004). The irony, accordingly, is that even as a defining moment illuminates and shapes, the resolution it demands leads in due course to putting away into a “black box” (Latour 1987) the inquiry, debate, and negotiation that produced that resolution. It can also hide away the operation of power, an outcome we can readily envision for the second story given here. The fact-like quality that results may be transitory, however, with actors new or merely spoken-for before entering the scene, in new defining moments, to challenge what is now being taken for granted (Latour 2004).

The illumination that the defining moment casts is not simply holographic. That is, the institutional and “macro” is not a straightforward aggregation or summation of the local – the specific writ large, so to speak. The relationship between the small and the large, the local and the global, is more complex; moreover, it is not even dichotomous, as these pairings of terms might suggest, but instead continuous and indeterminately extendable. Comparing the two stories offered here, we can see that discourse in moments of socio-technical design can include varying sets of participants, and draw to varying degrees upon understandings and representations of larger and more durable social and institutional networks. Reciprocally, the resulting design can become in turn a significant component of such networks, affecting and transforming them with varying results and in ways that get worked out through time. When it comes to our conventional units of analysis, then, we are well advised to exercise “greater caution when apportioning the world into inherited categories” (Czarniawska and Hernes, 2005: 13).

With more portentous moments, like the special procedures incident, the shifts they threaten to bring to alliances and commitments that constitute larger actor networks can cause participation and representation to expand dramatically. Indeed, such expansion in system-design discourse can embrace not only a heterogeneous range of organizational
and extra-organizational interests, but also normative and regulatory institutional factors (Scott, 2000). In such circumstances, important aspects of the social and cultural context plainly cease to be mere context (Latour, 2005), but are discursively enfolded within the network itself. Accordingly, much as our a priori levels dissolve under an actor-network perspective, so too does the idea of context tend to deconstruct itself.

The application of ANT in information systems research has come under some fire for having a predominantly “micro” focus which, it is argued, tends to neglect the dependence of local action on larger structures and institutions (Allen, 2004). However, the lesson of the defining moment is that it depends on where the “microscope” of ANT is directed. The moments that matter matter precisely because of their inherent extensibility. The implication for research methodology, then, is relatively straightforward: The historical-process perspective that is inherent to ANT analyses can be amplified by careful and deliberate attention to critical events that have significant reflective and formative capacity.

On the side of practice, the defining moment’s challenge to authorship puts in perspective the fact that project champions do not erect an actor network according to some grand, god-like design for socio-technical engineering. Instead, building the actor network is worked out from day to day through a myriad of real, organizationally-situated events. The potential reach of micro processes therefore points to the value of “sweating the small stuff.” The seemingly local may not be so local, after all. “Moments of crisis” (Boland, 2004), especially, can offer learning opportunities that both bring expressions of the institutional into the local (Avgerou and Madon, 2004) and enable movement from the particulars of on-going action to the larger accomplishments of grand design (Aanestad and Hanseth, 2000).

As a practical matter, defining moments in IT initiatives are mainly recognized in retrospect. Nevertheless, elevating management practice may be possible through a more explicit awareness that such occasions exist, and through knowing that their interpretation can be furthered by tracing the networks of participants that assemble around them. Of instrumental value, too, is the recognition that defining moments are preeminently political occasions, in which diverse interests may contend around seemingly small issues of design, and in which cryptic relations of power may express themselves suddenly. In short, an improved practical grasp of the defining moment may help actors, for better or worse, “seize the moment.”

Defining moments, accordingly, can help researchers and practitioners alike get beyond blanket nostrums about “user involvement,” “top management leadership,” and similar “success factors.” Generalizations of these kinds lack acknowledgement of how local actions constitute the events that are seen, in due course and retrospectively, as a project’s historical sweep. As the project actually proceeds, the factors that make for success are not in practice vague, generalized principles. Instead, they are realized in a thousand-and-one highly specific tests of commitment in a thousand-and-one actual moments.

References


7 Thanks are due to an anonymous reviewer for making this observation.


