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Unusual Routines: Organizational (Non)Sensemaking

Abstract

Unusual routines are contradictory and frustrating subprocesses that inherently generate negative consequences for some organizations, system users, organizational representatives, customers and clients, while generating completely sensible and even effective outcomes for others. They embroil both customers as well as organizational members in work, delay, error and blame subroutines. They may be caused by conflicting goals, poor feedback, symbolic uses and manipulation, and barriers to perception. They may be difficult to identify, overcome or resolve through feedback due to inherent problems in communication and organizational feedback processes.

Unusual Routines: Organizational (Non)Sensemaking

We operate within, because of, in spite of, and in opposition to a pervasive environment of unusual routines. The primary goal of this article is to introduce a concept and related terminology that may help to identify the existence and nature of unusual routines and reduce their frequency and severity.

Unusual routines are dysfunctional or incomplete processes that are inherent in the design (whether initial or through reinvention), implementation, application, boundaries and understanding of some task, process, system or procedure. They are processes that involve deviation-amplifying loops, prevent feedback and learning, and generate wasteful and costly subroutines – but only for some stakeholders.

The term “unusual routines” is intentionally oxymoronic. They are “unusual” because the negative outcomes are generally unintended, may be infrequent, and are often dysfunctional and unexpected. What should be conceptualized as unusual takes on both the appearance, and the procedural and consequential reality, of the routine, thus becoming invisible to organizational developers and managers, as well as difficult for users and clients to identify, much less resolve. The essential dysfunction of the unusual routine is that attempting to resolve the initial problem generates subsequent related consequences for different actors. The consequences are generally negative (but may be positive), may be intended or unintended (the more subtle and difficult case), short-term or long-term, within the same process level or at different levels, with different temporal feedback loops.

They are “routines” because they persist, are reinforced, or at least unrecognized until they become routine aspects of organizational life. Indeed, they are themselves generated through and become embedded in ongoing routines and processes. Because they become embedded and often central to accomplishing some kinds of work, they also become routinized – specific procedures, understandings, and patterns accrete around the initial unusual situation. Significantly, unusual routines are rarely identified as systemic processes or ongoing problems. When they are noted at all, they are often defended as “the way things are”, caused by someone's “mistake” (usually the client's, sometimes the user's), justified as normal procedures, or dismissed as an “exception”. They become internally justified, even invisible, whether implicitly or explicitly, and bureaucratized. The unusual becomes the routinized routine.

In most organizations (whether corporations, academic departments, retail stores, government agencies), different members or clients are trying to improve, suffering from, attempting to avoid, or complaining about, different aspects of the organization or particular system. Unfortunately, the improving, suffering, avoiding and the complaining are rarely linked. After a while, complaints disappear as people develop “work-arounds”, or ways of overcoming the problems, or avoiding them, or disengaging. But the tension and frustration percolates throughout the organization and its environment, and different people who have to interact with the system (employees, customers, technical support, administrators) continue to pay in varying psychological, professional, pedagogical, or just operational ways. As these unusual routines continue to generate problems, those people learn to live with, adapt to, “workaround”, or simply “exit” the system (Gasser, 1986; Markus, 1984). Further, there are often no explicit organizational or system processes for learning about such routines, or for communicating solutions to implementers, system designers, users, customers.

An early framework for identifying and assessing unusual routines is what Singer (1980) called crazy systems and Kafka circuits. Briefly, Singer proposed that organizations suffer from psychotic and pathological behaviors as much as do people, but are rarely diagnosed, critiqued,

or treated as such. These often take the form of "crazy systems" that generate "confusion, error, and ambiguity", and even "inscrutability and unaccountability, involving harm to the victim and often to the system itself, [breeding] a new kind of organizational trap" called Kafka circuits. One does not have to agree with Singer that organizations or systems can be in any way psychologically "crazy" in order to readily recall such interactions with systems. Other terms such as wasteful, silly, dangerous or foolish, while indicative of some of the characteristics and consequences of these systems, do not capture the sense of dysfunctionality reinforced, of processes seemingly taking on a life of their own, diverging from the goals of even the best-intentioned designer, employee, or client.

Because of the pervasiveness of the underlying phenomenon of dysfunctional feedback throughout individual, group, organizational, technical and social relations, there are, of course, many related concepts (such as "normal accidents," Perrow, 1984), but they are beyond the scope of this article (a list of references is available from the author).

Unusual Routines Impose Negative SubRoutines from Attempting to Resolve the Unusual Routine

This section identifies four subroutines (the first three discussed by Singer) activated by attempting to resolve the initial problem, and which may become more costly and dysfunctional than the initial problem:

- work (trying to solve the problem generates more work or costs, quickly becoming greater than the worth of the original goal or its resolution)
- delay (users and clients obtain only silence or are actively stalled, made to go through endless "channels", or forced to exit the system in order to escape the subroutine)
- error (users get caught up in a series of linked and accumulating errors when attempting to resolve the initial error)
- blame (people, structures and processes respond to identification of problems by allocating and creating blame, which diverts time and resources to recriminations and further debate and fault-finding; Cooper, 2000; Cooper, & Rice, 2001).

These subroutines may be consciously devised by organizational representatives, unintentional consequences of impermeable organizational boundaries and inconsistent or uncoupled response patterns, or even embedded in a specific procedural or technical system itself.

Some Causes of Unusual Routines

Conflicting Goals

James March and Karl Weick, among others, have argued that a plethora of goals – even inherent paradoxes (Putnam, 1986) -- not only represents the ordinary state of organizations, but both the presence of conflicting goals and the awareness of them are salutary for organizational learning and performance. Eisenberg (1984), for instance, argues that ambiguity (such as in the meaning of organizational mission statements and logos) helps achieve strategic goals such as commitment, by allowing individuals to invest some of their own meaning into shared words. Here, however, we focus on goals of different subsystems, operating on the same or different levels, that conflict with or mitigate against, whether intentionally or not, goals of other subsystems or even a common organizational goal, creating dysfunctional routines, at least as experienced by some users or clients. It is not always obvious whether goals that conflict necessarily preceded a system, and thus generated the subroutines through attempts to reconcile or achieve both of them, or they are symptoms and consequences of system aspects (from design through features to use) and unusual routines themselves.

Symbolic Uses and Manipulation

One factor that seems to contribute to the development and maintenance of unusual routines is what Feldman and March (1981) call the symbolic value of information. Briefly, traditional models of organizational decision-making assume that before decisions are made, organizational members conduct a rational systems analysis until they obtain relevant and sufficient information, and then use that information as criteria for a reasoned decision. However, there are many instances where irrelevant information is collected, information continues to be collected after the decision is made, the decision may be made before any information is collected, and people demand more information even when they are surrounded by relevant information which they continue to ignore. Feldman and March's theoretical solution to this apparent contradiction is to argue that information in organizations serves two conceptually quite different purposes. Information is used as a *denotative signal*, representing the "facts" or the results of system analysis, as well as *connotative symbol*, representing various values and images necessary to the maintenance of organizational roles, sub-unit goals, and public accountability.

However, it is not simply the symbolic nature of information that fosters manipulation, deception or fraud. Bureaucracies may, by their very nature, foster dysfunctional behavior (Mieczkowski, 1991). Zmud (1990) argues that the very nature of organizational information systems makes some functions especially vulnerable to "strategic information behaviors" such as manipulation or distortion. This may happen in two primary ways (in the content of a message that a system transmits/stores/distributes, or in how a message directs operations of the system itself) and in a variety of system nodes (sensor, filter, router, carrier, interpreter, learner and modifier). Zmud argues that it's not the technological complexity of computer systems *per se* that facilitates manipulation, but the pace, abstraction, and distancing possible in communicating through such systems.

Barriers to Perception

Unusual routines and their subroutines often become invisible or impervious to critique due to what Singer (1980) calls "barriers to perception". These include (a) inherent organizational incentives to maintaining components of these systems, (b) mechanization and bureaucratization of processes, (c) ascribing normalcy to otherwise bizarre procedures simply because they occur in familiar situations, (d) projecting an air of rationality onto technological and rationalized processes, (e) perceiving legitimation cues in organizational and authority activities no matter how inconsistent, and (f) fragmenting both perceptions and routines so that it becomes difficult to even identify a pattern of craziness or to allocate blame.

It often seems impossible, not worth it personally, or actually discouraged, for individuals to try to resolve problems that are systemic. So specific organizational procedures (or lack of them) or decisions (or lack of them) that might seem to any particular individual as crazy or bureaucratic or unreasonable or just wasteful, yet not caused by an exceptional or radical action on the part of the individual, continue to haunt and hamper everyone who comes up against them.

"Common sense" and "sense-making" may well be another barrier to perception of unusual routines. In Weick's terms (1979), double-loop learning (learning how to learn by both the system and its users) can be prevented, constrained or manipulated at points of single-loop learning -- perhaps without it even being noticed! Perhaps more subtle is that the persistence of unusual routines indicates that the outcomes of "sense-making" -- that is, the reduction of equivocality through interactions that enact the environment and make "sense" of the

phenomenon, and then the retention of this sense in organizational routines -- are not necessarily self-reflexive, insightful, or even healthy for an organization and its members. The very drive to "make sense" of a situation, in ways that satisfy and reinforce habit and limited understanding, may also institutionalize unusual routines.

Poor Feedback

Unusual routines develop and persist if feedback mechanisms are not built into organizational processes that allow users to communicate information with regard to error or malfunction. This lack of feedback, whether intentional or due to oversight, misleads users about the proper procedures or goals, makes it difficult to point out the problem to someone, or, in the long run, even interact with the organization. Subroutines that prevent, delay and distort feedback within and about systems are not only significant in their own right, but also as a pervasive symptom of a larger social problem (Singer, 1973, p. 4). Kerr (1995), for example, critiques the very frequent but unacknowledged organizational "folly" of generating rewards and positive feedback for certain behaviors, when, in fact, quite different behaviors are the actual desired goals. It should be no surprise that the desired goals are not met -- or, in many cases, actually subverted or prevented. More abstractly, if feedback or control is inaccurate, delayed, repressed, misinterpreted, or if the range through which organizational parameters can safely vary is too narrow, then external variations can lead to chaos and deviation amplification (Mees, 1986).

Interactions

Finally, unusual routines and other dysfunctional processes may well be largely a result of interactions among individuals, systems, and organizations. Table 1 portrays the primary influences, intermediate process effects, and outcomes associated with unusual routines.

--- Table 1 Goes About Here ---

Communication Problems with Feedback

A seemingly straightforward solution to preventing, avoiding or resolving unusual routines would be to seek and institutionalize feedback from users and participants, both internal and external to the organization, which would then be analyzed and used to adapt or correct the problem. Apart from issues of practicality and cost (which total quality management, organizational learning, and customer relationship management theories all argue would be well-justified long-term investments), this approach vibrates with difficulties, especially if the feedback processes themselves are flawed or dysfunctional. These two sections describe a variety of communication and organizational processes that end up making attempts to resolve unusual routines through feedback processes higher-level unusual routines themselves.

Learning by Doing Rather than by Learning

Relying on client feedback seems to assume that relevant information is not already available -- that is, problems in use are due to information unavailability in design. But von Hippel and Tyre's (1994) study found that two thirds of the problems encountered in using new process machines (that attached integrated circuits to large circuit boards) could have been solved with information that was in fact already available at development time (and two thirds of that was actually known by developers but not used). But the relevance of specific information can change during, and after, the design process. Indeed, the other third of the problems involved information that became available from the environment only after introduction of the system (and a quarter of that came from people working on other aspects and systems affected by the initial system). Thus a major source of problem identification is what they call *interference finding*, where using a new system in the field actually precipitates symptoms that did not, or

could not, occur in the development lab. Sometimes this is due to assumptions of developers and test users as to what might present sources of problems, and what is not relevant. Usually, however, identifying such problems is much more likely in the actual using/doing, because many complex interactions only occur then, and they would be difficult to predict or even conceptualize during design. The use environment itself may change in the context of use, so the appropriate design solution would then also be different, especially when problem solvers are autonomous or the use context has great variance.

Desperately Seeking Feedback

Research has shifted from considering feedback as something a recipient receives passively to two forms of active feedback seeking: eliciting (direct) and monitoring (indirect) (Fedor, Rensvold, & Adams, 1992). These provide different forms of information, and may be differentially appropriate, such as when high-skill training depends on informed, formal feedback. Eliciting gets only what others want to share. Monitoring acquires other information, but requires making inferences about that information and its source from nonverbal cues and others' comments. It would seem more likely when the costs (perceived and actual) of asking directly are high, such as in public situations or low-trust climates. Also, feedback itself may generate uncertainty about its meaning, contingencies, etc. So monitoring may precede eliciting, to determine costs and appropriateness of eliciting. Characteristics of the feedback source will also influence elicitation of feedback, such as a less confrontational communication style, greater credibility, and a more favorable personal relationship with the feedback seeker.

Contextualizing Meaning by Layers

Bateson and others (Bateson, 1972; Watzlawick, Beavin, & Jackson, 1967) proposed two primary levels of communication meaning: *relational* (command) level communication forms the hierarchical context for interpreting *content* (report) level communication (though Bateson implied other levels of cognition). The theory of Coordinated Management of Meaning (Cronen, Pearce, & Snavely, 1979) extended this hierarchy of meaning, and helps to frame some concepts that are useful in understanding the communication aspects of feedback about unusual routines. According to this theory, communication and human action are managed through rules to achieve proactive goals rather than through reactive consequences of environmental events. Thus, rules vary across time and across people. But these "intrapersonal rule systems come together to create interpersonal (consensual) rules that guide production and interpretation of communicative behavior" [in communication episodes] (Brenders, 1987, p. 331) Thus people can transcend the cultural repertoire of episodes, and make sense of a particular interaction episode that may differ from each participating person's cultural or personal episodes.

An episode exists within a hierarchy of meanings contextualized by constitutive rules (which make sense across levels of abstraction) and constrained by regulative rules (which limit allowable variations in response within levels of meaning). The general hierarchy includes archetypes, life script, relationships master contract, episode (with different "logical force", such as "enigmatic episodes" or "undesired repetitive pattern"), contracts, speech acts (threat, promise, inform, advice, insult, compliment, etc.), propositions (reference and predication), and stream of behavior (the significance of that speaker making a particular statement to that listener at a specific time, such as "insult", "asking", etc.). The hierarchy of meaning contextualizes lower-level meanings by constitutively relating them to more and more abstract meanings. Some people have less well-organized hierarchies; some may use all or fewer of the levels. Communication, then, is the nonsummative meshing of the individuals' (and groups' and organization's) rules -- maybe even unknown to the participants.

One implication for attempting to resolve unusual routines is that participants may either not know, or be unable to know, which level of meaning best represents either the intended process or the unusual routine, and may have insufficient or ill-matched expertise in communicating these with others, especially those elsewhere in or outside of the organization.

Reflexive Loops, Paradoxes, and Undesired Repetitive Patterns

Not all meaning systems or situations may follow strict hierarchies, however, leading to reflexive loops and paradoxes (Cronen, Johnson, & Lannamann, 1982). Each is simultaneously the context for and within the context of the other. There are one-stage loops (the content is the relation) and two-(or more)-stage loops (where content or relation redefines or discounts the other). There may be a reciprocal influence between the levels even when a clear hierarchy exists, especially in iterative interpretations where the accumulated content redefines the context. A change in the higher-order concept can change subordinate units of meaning, but higher-order concepts are not immune from changes in lower-level of meanings. A contextual force that cannot change in response to changes in the next lower level "could be symptomatic of an unhealthy system incapable of renegotiation of growth" (p. 97). A particular content may emerge as the context to interpret a whole pattern of interaction (as, divorce, aging, organizational crisis) in which all the other's prior and subsequent actions are recontextualized based on a single episode. The development of context may begin as a fully reflexive loop, and then clarified through a sequence of lower-order messages. So, initially, confusion among participants would reign as to context, and thus as to acceptable content, but this is not simply a mistake. Indeed, in situations that allow and foster emergent context, reflexive loops are endemic. Conversely, reflexive loops may be ignored precisely because the situation is presumed by some of the participants to be non-emergent.

Social action, then, involves tacking back and forth between levels involving a weaker force (upward implicative) and a stronger force (downward contextual force). One implication of this argument is that three or more levels of meaning are required to analyze reflexive relationships, because the higher-order level must be contextualized itself (Cronen et al., 1982). If meaning is "transitive", either of the social perceptions can be the context for another, and it still makes sense (for example, a committed relationship and a confirming response during conversation). Thus, metarules may exist that define which social perceptions can be the context of which others (i.e., which are transitive and which are intransitive). Higher-level social organization and personal experience provide information on metarules on how two levels of social perception can be related. Thus "a reflexive loop that is problematic for one person [or in one organizational context or one cultural form of task accomplishment] may not be for another" (p. 104). In the case of an unusual routine, the evolved procedure makes good sense to the internal unit, and is rewarded, but generates negative subroutines and sanctions for other units, who seem to the first unit only to be jealously complaining about the reward structure.

Indeed, this "reflexivity is a natural and necessary feature of human systems of meaning" (p. 91), but some reflexive loops are problematic. There may be "strange" loops -- those that cause problems -- and "charmed" loops -- those that do not. Paradox, or the confusion of hierarchically ordered levels of meaning, fosters schizophrenia, as the individual cannot comment on discrepant messages so as to resolve the inconsistency, and goes on to see other parts of world in double-bind patterns. As Stohl and Schell warn, "negative and dysfunctional communication patterns have far-ranging effects on the quality of work life, the quality of production, and the quality of organizing" (1991, p. 109).

Resolving such paradoxes requires asking the meaning of the message in order to clarify other levels of the relationship. This may or may not be available in the individual's repertoire, or acceptable to the other participant. Effects of strange loops (especially double-binds) are more limited if the strange loops can be sealed off from higher-order levels, to avoid higher-level strange loops. If unable to do this, the "individual possesses no stable point of focus from which the "I" ... can consider that pattern of interpretations and actions that constitutes the "me"" (p. 107). So, for instance, it seems crucial not to question the identity or purpose of the organizational representative in attempting to identify or resolve a unusual routine.

Confusions will persist when the participants have no strategy for resolving intransitive loops, and when significant others block efforts to resolve or seal off these intransitive loops. Individuals may then attempt to separate levels of meaning or convert strange to charmed loops according to their own hierarchies of meaning independent of the others' hierarchies, cementing in misunderstandings, and enmeshing higher levels of meaning in these unresolved strange loops. Clearly this is one recipe for unusual routines.

One problematic episode that both represents an unusual routine itself as well as reinforces unusual routines is the "unwanted repetitive pattern" (URP) (Cronen, Pearce, & Snavely, 1979; Stohl & Schell, 1991). An example is when both participants want a friendly conversation, but usually end up in recurrent, hostile, polarizing duels, patterned in ways that the participants can identify, and that are stable across topics. Walton (1969) noted the existence of these repeated, patterned disruptive communication episodes in organizations. According to Cronen et al., four primary contexts affect the nature of messages and speech acts in episodes: hierarchical contexts (relationship of part to whole, but not vice versa), temporally antecedent conditions (certain message types follow others), temporally consequent conditions (expectation or desire of eliciting particular response), and the history of relationships (perceptions or rules that constrain subsequent action). Not all people use all components: some may (re)act only in relation to antecedents, unaware of consequent conditions; psychologically disturbed people often ignore antecedent conditions on speech acts. In organizational settings, there may not be a good fit between individuals and the system's rules; thus they are not, or cannot be, competent (Walton, 1969).

Three examples of possible episodes relevant to unusual routines include the "enigmatic episode" (weak links of life-script, antecedents or consequents to possible speech acts; range of responses is unknown, valence toward the consequence is likely negative), "value expressive rituals" (strong links of antecedents, life-script, episode, consequents, with positive valence, range is low) and "perfunctory ritual" (weak link to life-script, neutral valence of consequent). So an unusual routine may be obscured or unresolved if an enigmatic episode of a client meets with an organizational representative's value expressive ritual, or a perfunctory ritual if the job is not personally significant.

Skilled Incompetence and the Contradictions of Competence

The concepts of the two-level communication hierarchy -- relational and content -- may help explain some unusual communication routines. For example, the valued norm of getting along with others (the relational meaning of an episode) may not always be an asset, because it may suppress conflict and resolution (the content meaning of an episode). Argyris (1986, p. 74) calls this "skilled incompetence", where "managers use practiced routine behavior (skill) to produce what they do not intend (incompetence)" (for a more general, related process, see Spitzberg, 1993). This skill can become institutionalized, such as in the form of constant meetings where no difficult decisions are made, leading to an organizational culture that cannot

abide straightforward content, to despair and attributions by others of failure, and even to disasters. Or following relentlessly pleasant scripts for responding to client frustrations, making the unusual a routine "service encounter". The higher-level relational norm converts the content of personal exchanges into "organizational defensive routines" that are intended to avoid embarrassment, threat or surprise, but in the end suppress learning and resolving the source problem.

Sometimes this is due to contradictions in messages, such as a formally espoused organizational vision of decentralization and trust, but, when really important issues are at stake, an actual practice of centralized concern and monitoring. Subordinates learn to live with mixed messages, and even generate meaning from them, but these explanations are never validated. This situation leads to double binds on the part of both management and subordinates. If subordinates accept centralized intrusion on important matters, they lose their autonomy, and their own subordinates will evaluate them as having little influence, given the context of decentralized decision-making. But if they reject it, this may be seen as disloyal, generating justification for further intrusion. If the managers raise the issue of doubt about mixed messages, this will generate negative reaction, because of the relational context of decentralization. But if they accept the discussion, this fosters a false sense of agreement. To maintain good relations, both parties hide the double bind in the least conflictful way. But, in the long run, this generates schizophrenic relations, as subordinates interpret the vision of decentralization as a way to obscure management's actual intent to mask decentralized influence. This mutual double bind generates mistrust and suppresses communication, creating self-fulfilling processes attributed by the other side (Argyris, 1986). Thus both superiors and subordinates hold good and bad feelings toward each other. The implication is that to overcome what they do not like, people must be able to discuss it, but this violates the undiscussability rule which is part of organizational defensive routines -- a form of skilled incompetence.

Organizational Problems with Feedback

Were the difficulties in individual meaning management and competence not obstacles enough to even identifying, much less resolving, unusual routines, organizational settings provide yet more challenges and complexities.

Learning from Feedback or Memorizing Responses?

Organizational memory plays a crucial role in how organizations learn (Huber, 1991), thus contributing to the resolution, but also creation, of unusual routines. Citing earlier research (Cyert, & March, 1963), Levitt and March (1995) propose that behavior in organizations is usually driven by routines. Organizational members seek to match tasks with currently existing practices and procedures rather than make new choices about how a task should be completed. These routines evolve from past experiences rather than from anticipated future events (this process is similar to Weick's sense-making). With this routinization of tasks and processes as a primary form of organizational memory, organizations become "history-dependent" (Levitt, & March, 1995). Thus, unusual routines may be the repository of, or the symptom of, incomplete, mismatched, incorrect, or biased organizational memories.

Organizational memory is information about prior decision stimuli and responses that bear on present decisions, and is "preserved in particular retention bins that have behavioral consequences when retrieved" (Walsh, & Ungson, 1991, p. 61). Although individuals actively construct memory via cognitions, the understandability of problems and solutions is constructed through sharing interpretations (as Weick would argue, through double-interacts negotiating

shared understanding). Thus the interpretation system transcends the individual level, embedding organizational memory in artifacts and systems, as well as in individual memories.

Thus one difficulty with organizational memory is that information about the triggering stimulus is typically retained only by individuals, even if the organization's response to this stimulus is retained as a set of formal procedures, even designed (routinized) into a system. While subsequent interpretations constitute organizational memory, they may not include the initial context, or the causal "why" of interpretation. These partial sources of information may be too equivocal or may even overload short-term memory, and thus not become part of organizational memory. In these instances, individuals use personal biases/heuristics derived to compensate for limited cognitive capacities. Even at the organizational level, there is much filtering via interpretative schemes or frames. Both of these processes may "block, obscure, simplify, or misrepresent some of the attributes of the decisional stimuli and responses" (pp. 62-63).

The resulting organizational memory is distributed through six "retention bins": individuals, culture, transformations, structure (roles, rules and norms), ecology (physical environment and layout), and external archives (former employees, competitors, government, financial service firms, media, historians). How things are transformed (training, budgeting, planning, administration, manufacturing, etc.) also represents remembered information. One form of transformation, standard operating procedures (routines), represents schemas that both facilitate and constrain interpretation and behavior, making it difficult to question the system as to how to correct the problem.

Further, some retrieval processes are largely automatic, such as from transformation, structures, or ecology bins, and not easily managed consciously. This speeds problem solving, but decreases the consideration of exceptions, and disregards some information. Controlled retrieval is conscious, making analogies to past decisions, and limited by participation in the organization (such as through socialization, decision-making, other activities. In the language of reflexive loops, this creates a paradox, as the content becomes the context for the relational-level communication. Thus one source of unusual routines is automatic retrieval when controlled retrieval would be appropriate.

While organizational memory typically fosters single-loop learning and the status quo, adaptive processes can be embedded in standard operating procedures. Double-loop learning can be formalized, thus reducing transaction costs for routine transactions. However, such changes would be more robust if they are embedded in and legitimized by tradition, and facilitated by support networks. The point here is that often the content level of organizational memory must be critiqued, not retention bins or retrieval processes themselves (relational level).

Of course, individuals may misuse organizational memory, though this may be motivated by automatic retrieval processes inherent in transformation, structures, and ecology bins. So successful awareness and change may require that current retention bins be filled with new decision stimuli and behavioral responses, through, say, training, simulations, crises, redesign. The organization's culture may be a source of information misuse, by imposing automatic retrieval and unassessed memory. But nonroutine responses are not inherently preferable. They may replace appropriate automatic retrieval when the risk of automatic retrieval is overestimated. And cognitive limits, personal heuristics, overgeneralizing past experience, inappropriate analogies and simply poor procedures can generate incompetent uses of organizational memory. Finally, organizational memory can be intentionally or ideologically abused. The potential for political control and dependency makes organizational memory a "tempting tool" (p. 77).

Structural position and transformations in turn can control the acquisition, retention and retrieval of memory (Pettigrew, 1972). Thus intentional redesigns of transformation processes will also affect, perhaps even prevent, acquisition and retention of certain types or sources of memory.

Because organizational representatives are a crucial source of organizational inputs, trained assessment of decision stimuli is especially crucial there. But those positions must also have access to power to alter internal retention bins and processes, and have considerable tenure in order to be able to contextualize organizational memory, or see new things in an old light. These positions should also include newcomers and visitors, who can see completely new things, see old things in a new light, and question automatic retrieval processes.

Please Hold, We Value Your Comments: Feedback through, from, and about Information Systems

Media in general, and information systems in particular, can facilitate (and constrain) feedback about organizational services, products, and systems. Because technological advantages are short-lived, ongoing service enabled by generating customer feedback is becoming more important. Customers may initiate contact with organizations on a wide array of topics and problems, so external feedback may be highly equivocal, both in form and meaning. Therefore, organizations need to structure potential feedback dialogues that do not constrain content but are matched to the attributes of the produce or service stimulating the feedback, to enable distribution to and response from vertical and horizontal levels in the organization (Culnan, 1989). Organizational media and information systems represent a recursive occasion for both stimulating unusual routines as well as transmitting feedback about them (Zmud, 1990).

Culnan makes the point that all transaction processing systems are actually organizational message systems. This means that embedded transaction systems (part of what Walsh, & Ungson, 1991, called transformations) both generate messages to the client and organization that may or may not be recognized or intentional, and may also foster, collect, and even analyze messages as feedback. While Culnan focuses on feedback from customers, we would generalize this point to include internal users' and implementers' feedback as well.

In general, insufficient or ineffective upward communication between customer contact personnel and top management suppresses an organization's understanding of consumer expectations and satisfaction (Culnan, 1989). Culnan notes studies showing consumers are highly dissatisfied with how their complaints are handled, and that only a small percent of top executives refer to customer complaints as a basis for assessing quality of products and service. Yet complaints and other inputs represent significant sources of corporate intelligence, early warning, and environmental scanning.

The Uninformed Providing Feedback to the Unresponsive

Even providing multiple media and systems to stimulate and distribute feedback presumes that organizational members and clients are in some way technically knowledgeable enough both about the unusual routine, as well as about the systems used to support feedback. In a world that depends on technical knowledge and flow of information, most consumers are, in fact, technically ignorant (not "dumb") -- far more, relatively, about their world than were pre-industrial peasants about theirs (Blumberg, 1989, p. 60). Thus, everybody is vulnerable to the expert knowledge of others, fostering the exploitation of ignorance, through deception or intentional or unintentional manipulation. Indeed, the value systems, loyalties, social controls, and competition in some professions generate forms and acceptance of "professional deceit" or "normal lying" in the form of outright falsifications, omission, equivocation, or disclaimers (Ruane, Cerulo, & Gerson, 1994). Whereas a deviant lie is a socially unacceptable practice, a

normal lie is a known falsehood rationalized and legitimated as means to good end. Thus, a paradox develops: we learn that lying is bad, but also learn how to lie, and in what contexts those lies are acceptable. Further, socialization provides us with appropriate responses to normal lies – it may best to ignore the lying part, in order to maintain social order and get the job done.

This lack of technical knowledge is probably most extreme in the consumer electronics industry because there are few moving or even visible parts, upgrades and new technologies make current understanding quickly obsolete, the systems are easy-to-use without having to understand the technology, and back-office technical repairs are invisible to the consumer while pleasant service demeanor provides the basis for customer satisfaction (Blumberg, 1989, p. 75). The paradox here is that pleasant over-the-counter service generates positive client behaviors, which rewards the individual fronting the unusual routine of bad technical service, while also generating client attributions of service competence and return business.

Rational But Unreasonable Systems

Designing organizations and services to reduce apparent complexity for both organizational representatives and clients may foster unusual routines elsewhere. Following Weber, Ritzer critiques the "McDonaldization of society" because "rational systems inevitably spawn a series of irrationalities that serve to limit, ultimately compromise, and perhaps even undermine, their rationality" (1993, p. 121). "Just-in-time" manufacturing, for example, requires more frequent deliveries, wasting fuel, generating pollution, cluttering roads with trucks, making other people late or pressured -- all instances of externalizing the costs of internal rationalization.

Organizations may attempt to respond to feedback by changing their response to problematic behaviors, but this creates new behaviors that generate new information (both environmental and internal). This new, additional information must now be processed and interpreted, creating much more sources, kinds, and content of feedback, generating even more choices for change. Under such equivocal conditions, organizations may rely on automatic retrieval or organizational memory from a few, formal retention bins in an attempt to make sense of the new (as noted above), depending on their retrieval capabilities and strategies, leading to conflicts and tensions between different perspectives.

Organizations may attempt to manage complexity and crises through linear routines. Organizations will naturally strive to re-establish stability, but that does not necessarily require internal change. Homeostasis can be achieved through suppressing or avoiding certain environmental information (such as behaviors from "irate" clients) through buffering and transformational shields (Miner, Amburgey, & Stearns, 1990), strategic manipulation and catatonic nonresponsiveness. This in turn may generate later external deviations and stronger instabilities (higher complaints and product returns, product recalls, software incompatibilities, consumer boycotts, liability litigation). It may also reduce an organization's ability to adapt, especially second-loop learning about possible ways to respond, adapt and innovate (Nonaka, 1988). In schizophrenic systems, homeostasis is possible only by prohibiting any defining of the nature of the relationship (Palazzoli et al., 1978, p. 38). So organizational representatives, when confronted by a client with an unusual routine, will likely deny their location in this new relationship, preferring to externalize the unusual routine. One form of disconfirmation is to pick one particular word and manipulate it to disqualify or avoid defining the relationship ("that's not part of my job"), or use one of the words out of context to reduce its meaning ("full service doesn't mean we do everything!").

Discussion

So how can these unusual routines be prevented, identified, uncloaked, fixed? Given the problems of invisibility and habituation, mixed with twisted logics, we must find ways of uncovering the underlying systemic problems, make the systemic nature explicit, and prevent people from suffering individually and disengaging from attempting to resolve things. This section considers some possible implementation policies implied or noted above.

First, each organizational newcomer or new system user should be asked to identify problems (of any kind, such as work, error, delay or blame subroutines) and suggest solutions (of any kind, such as reducing barriers to perceptions) during their first months. Newcomers have novel, near-anthropological experiences trying to understand and survive the new tribe, before they've been habituated or have figured out ways to cope and impose acceptable sensemaking. Second, whenever any one leaves, they should be asked to participate in an exit interview, again identifying any problems and solutions that they care to offer (such as routinized work-arounds or instances of conflicting goals or simple exiting behavior). Departers have considerable experience and frustration in trying to make the system work and may be able to suggest changes without concern for personal consequences should they stay. In both cases, all comments should be about roles, procedures, resources, norms, expectations, scheduling, whatever -- and not personal comments. That way, identification of problems and discussion of possible solutions might more likely be considered as ways of improving the system, rather than as personal attacks against individuals.

Third, systems should be designed in ways that the various participants can learn more about the system and provide feedback about the system, through the system at the interface, as well as through complementary media. For example, Griffith (1993) shows that although managers frequently use systems to monitor subordinates' work in order to improve their "performance" or "quality", there is no technological reason such work monitoring features cannot be designed to be useful for and adaptable to the users themselves, thus including the system as part of the "team".

Fourth, "users" should be widely defined, to include designers, managers, complaints operators and external clients as well as those organizational members who directly "use" a system. Fifth, all of these should be involved in not only the design and implementation, but ongoing evaluation of a system, job or procedures. These last two suggestions are, of course, explicit aspects of socio-technical systems approaches that aim to optimize the fit between technical and social systems (Hirschheim, 1985; Johnson, & Rice, 1987).

Sixth would be to emphasize the communicative and informational aspect of systems. The form and value of symbols used in reference to systems both reinforce and hide underlying influences on the development of unusual routines (such as notions of computer accuracy, user-friendly interfaces, accounting criteria, or access to large amounts of information).

Seventh, analysts of unusual routines must become inaccessible to reactions of pleasure or anger; i.e., they cannot become "involved" (either actually or by labeling), or they will immediately become part of the game, the unusual routine, at a higher level. Further, it would seem useful to understand and positively evaluate the system's tendency toward homeostasis, and not critique members' tendency toward it (Palazzoli et al., 1978, p. 149).

On the scale of communication interactions, the unusual becomes the embedded routine, the skilled response becomes the awareness blindfold. On the scale of organizational design, the innovative becomes the ineffective procedure, the reasonable becomes the irrational. Sense-making is in the eye of the routine.

References

- Argyris, C. (1986). Skilled incompetence. *Harvard Business Review*, 64, 74-79.
- Bateson, G. (1972). *Steps to an ecology of mind*. NY: Ballantine.
- Blumberg, P. (1989). Ignorance in the "knowledge" society: The technically uninformed customer. Chapter 4 in *The predatory society: Deception in the American marketplace* (pp. 59-84). NY: Oxford U. Press.
- Brenders, D. (1987). Fallacies in the coordinated management of meaning: A philosophy of language critique of the hierarchical organization of coherent conversation and related theory. *Quarterly Journal of Speech*, August, 329-348.
- Cooper, S. D. (2000). *Unusual routines and computer mediated communication systems*. Unpublished dissertation. New Brunswick, NJ: Graduate School, Rutgers, The State University of New Jersey.
- Cooper, S. D., & Rice, R. E. (2001). Unusual routines and computer-mediated communication systems. Paper presented at International Communication Association Conference, Washington, D.C., May.
- Cronen, V., Johnson, K., & Lannamann, J. (1982). Paradoxes, double binds, and reflexive loops: An alternative theoretical perspective. *Family Process*, 20, 91-112.
- Cronen, V., Pearce, W. Barnett, & Snavely, L. (1979). A theory of rule-structure and types of episodes and a study of perceived enmeshment in undesired repetitive patterns (URPs). *Communication yearbook*, vol. 3 (pp. 225-240). New Brunswick, NJ: Transaction Press.
- Culnan, M. (1989). Designing information systems to support customer feedback: An organizational message system perspective. In J. DeGross, J. Henderson, & B. Konsynski (Eds.), *Proceedings of the tenth international conference on information systems* (pp. 305-313). Boston, MA., December.
- Cyert, R. M., & March, J. G. (1963). *A behavioral theory of the firm*. Englewood Cliffs, NJ: Prentice Hall.
- Eisenberg, E. (1984). Ambiguity as strategy in organizational communication. *Communication Monographs*, 51, 227-242.
- Fedor, D., Rensvold, R., & Adams, S. (1992). An investigation of factors expected to affect feedback seeking: A longitudinal field study. *Personnel Psychology*, 45(4), 779-806.
- Feldman, M., & March, J. G. (1981). Information in organizations as signal and symbol. *Administrative Science Quarterly*, 26, 171-186.
- Gasser, L. (1986). The integration of computing and routine work. *ACM Transactions on Office Information Systems*, 4(3), 205-225.
- Griffith, T. (1993). Teaching big brother to be a team player: Computer monitoring and quality. *Academy of Management Executive*, 7(1), 73-80.
- Hirschheim, R. (1985). *Office automation: A social and organizational perspective*. Chichester, United Kingdom: John Wiley.
- Huber, G. P. (1991). Organizational learning: The contributing processes and the literatures. *Organization Science*, 2(1), 88-115.
- Johnson, B. McD., & Rice, R. E. (1987). *Managing organizational innovation: The case of word processing*. New York: Columbia University Press.
- Kerr, S. (1995). On the folly of rewarding A while hoping for B. *Academy of Management Executive*, 9(1), 7-14.
- Levitt, B. S., & March, J. G. (1995). Organizational learning. In M.D. Cohen, L.S. Sproull (Eds.), *Organizational learning* (pp. 517-540). Thousand Oaks, CA: Sage.

- Markus, M. L. (1984). System design features. Chapter 2 in *Systems in organizations: Bugs and features* (pp. 13-35). Boston, MA: Pitman.
- Mees, A. (1986). Chaos in feedback systems. In A.V. Holden (Ed.), *Chaos* (pp. 99-110). NJ: Manchester U. Press.
- Mieczkowski, B. (1991). *Dysfunctional bureaucracy: A comparative and historical perspective*. Lanham, MD: University Press of America.
- Miner, A., Amburgey, T., & Stearns, T. (1990). Interorganizational linkages and population dynamics: Buffering and transformational shields. *Administrative Science Quarterly*, 36, 689-713.
- Nonaka, I. (1988). Creating organizational order out of chaos: Self-renewal in Japanese firms. *California Management Review*, 30(3), 57-73.
- Palazzoli, M., Boscolo, L., Cecchin, G., & Prata, G. (1978). *Paradox and counterparadox: A new model in the therapy of the family in schizophrenic transaction*. NY: Jason Aronson.
- Perrow, C. (1984). *Normal accidents: Living with high-risk technologies*. NY: Basic Books.
- Pettigrew, A. (1972). Information control as a power resource. *Sociology*, 6(2), 187-204.
- Putnam, L. (1986). Contradictions and paradoxes in organizations. In L. L. Thayer (Ed.), *Organizational communication: Emerging perspectives* (pp. 151-167). Norwood, NJ: Ablex.
- Ritzer, G. (1993). The irrationality of rationality: Traffic jams on those "Happy Trails". Chapter 7 in *The McDonaldization of society: An investigation into the changing character of contemporary social life* (pp. 121-146). Thousand Oaks, CA: Pine Forge Press.
- Ruane, J., Cerulo, K., & Gerson, J. (1994). Professional deceit: Normal lying in an occupational setting. *Sociological Focus*, 27(2), 91-109.
- Singer, B. (1973). *Feedback and society: A study of the uses of mass channels for coping*. Lexington, Mass: Lexington Books.
- Singer, B. (1980). Crazy systems and Kafka circuits. *Social Policy*, 11(2), 46-54.
- Spitzberg, B. (1993). The dialectics of (in)competence. *Journal of Social and Personal Relationships*, 19, 137-158.
- Stohl, C., & Schell, S. (1991). A communication-based model of a small-group dysfunction. *Management Communication Quarterly*, 5(1), 90-110.
- Von Hippel, E., & Tyre, M. (1994). How learning by doing is done: Problem identification in novel process equipment. *Research Policy*, 24, 1-12.
- Walsh, J., & Ungson, G. (1991). Organizational memory. *Academy of Management Review*, 16(1), 57-91.
- Walton, R. (1969). *Interpersonal peacemaking: Confrontations and third-party consultation*. Reading, MA: Addison-Wesley.
- Watzlawick, P., Beavin, J., & Jackson, D. (1967). *Pragmatics of human communication*. NY: Norton.
- Weick, K. E. (1979). *The social psychology of organizing* (2nd ed.). Reading, MA: Addison-Wesley.
- Zmud, R. (1990). Opportunities for strategic information manipulation through new information technology. In J. Fulk, & C. Steinfield (Eds.), *Organizations and communication technology* (pp. 95-116). Newbury Park, CA: Sage.

Table 1.
Preliminary model of unusual routines

Conditions & Influences	In-process Effects	Outcomes
<p>Individual:</p> <ul style="list-style-type: none"> • symbolic use of information, metaphors, discourse • barriers to perception • strategic manipulation of information, system • subsume role and process in individual <p>System:</p> <ul style="list-style-type: none"> • system complexity • poor design • limited conceptualization of "user" • unlinked costs and benefits • poor feedback • aura of rationality <p>Organization:</p> <ul style="list-style-type: none"> • conflicting goals • changing uses, contexts, conditions • organizational culture and socialization • impermeable intra-, inter-organizational boundaries • inherent paradoxes <p>Interactions among:</p> <ul style="list-style-type: none"> • individuals' habits and relations • job and system features • organizational context 	<p>Subroutines:</p> <ul style="list-style-type: none"> • work • delay • error • blame 	<p>Short-term:</p> <ul style="list-style-type: none"> • client frustration, • stress, • problems for organizational representatives, clients, stakeholders • confusion, inscrutability <p>Intermediate:</p> <ul style="list-style-type: none"> • client exit • loss of worker/user motivation • embedded workarounds • turnover • unaccountability • organization learns wrong lessons • employee sabotage <p>Long-term:</p> <ul style="list-style-type: none"> • organization does not learn, adapt • harm to the system/organization itself • harm to external stakeholders • litigation • crisis • failure

Note: Cooper (2000; Cooper, & Rice, 2001) has significantly extended both the theoretical arguments and the specific components of a model of unusual routines, which are not represented here.