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LOST IN TRANSLATION : HOW DESTRUCTIVE INFORMATION GETS INTO BEHAVIORAL AND COGNITIVE ROUTINES, AND HOW TO GET IT OUT**

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How Destructive Information Gets Into Behavioral And Cognitive Routines, And How To Get It Out.

Abstract:

This paper investigates the relationship between information and organizational design. Its main purpose is to try to understand what makes information destructive, or how information can turn to be destructive in high reliability organizations (HRO). The paper unfolds on a series of prescriptions in order to make organization designs adaptive or more or less immune to the emergence of destructive information within its behavioral and cognitive routines. We define "destructive information" as a set of messages, signals and stimuli that mislead cognitive and behavioral routines of an organization, and lead the organization to generate a blind spot in the reliable pursuit of its goals. This paper does not deal with deliberate "destructive information" (Goffman, 1971, p. 141), which is the act of purposefully distorting information to manipulate and mislead individuals or organizations' mental models, also described in the literature as "guilty knowledge" (Fetterman, 1984; Marx, 1984) or "dirty data" (Van Maanen, 1982). Hence, *destructive information* is not an ontological dimension. The same information can reinforce the reliability of an organization, and further leads to its self-destruction. We assume that the destructive information does not lie in its *nature*, but in the effects it has on organizations and individuals perceptual filtering and behavioral programming.

Key-Words:
Information; figuration; organizational design; behavioral programming.

Résumé :
Cet article explore la relation entre information et design organisationnel. Son propos est d'essayer de comprendre comment une information devient destructive pour un design organisationnel. L'article débouche sur une série de recommandations pour rendre les designs organisationnels plus résistants à l'information destructive. Nous définissons par « information destructive » un ensemble de messages, signaux et stimuli qui déroutent les routines cognitives et comportementales d'une organisation, et l'amène à générer des « angles morts » dans la poursuite de ses buts. Cet article ne traite pas des formes délibérées d'information destructive (Goffman, 1971 : 141), qui est l'acte de manipuler délibérément les modèles mentaux des individus, et également décrite dans la littérature comme la « connaissance coupable » (Fetterman, 1984 ; Marx, 1984 rééd) , ou la « connaissance sale » (Van Maanen, 1982). Ainsi, ce que nous entendons par « information destructive » ne relate pas sa nature, mais sa fonction perturbatrice pour le design de l'organisation : l'arrivée d'un progrès exceptionnel peut être une information très destructrice, par exemple, pour une organisation vivant d'un avantage historique. La même information qui renforce ainsi la fiabilité d'une organisation peut soudainement s'avérer être la source même de sa défaillance.

Mots-Clés :
Information ; figuration ; design organisationnel ; programmation comportementale.

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Organizational design has become a highly information intensive activity within organizations. With managers supervising more and more people on longer distances, design activities are likely to involve rules that are turned into informational components, guidelines or computerized processes. Recent findings show that such information is subject to local interpretations, fine-tuning and erroneous sense making that can eventually lead organizations to large-scale disasters (see Starbuck & Miliken, 1988b on the Challenger disaster). This paper investigates the relationship between information and organizational design. Its main purpose is to try to understand what makes information destructive, or how information can turn to be destructive in high reliability organizations (HRO). The paper unfolds on a series of prescriptions in order to make organization designs adaptive or more or less immune to the emergence of destructive information within its behavioral and cognitive routines.

We define "destructive information" as any set of signals, messages, stimuli that leads an organization to adopt misleading behavioral programs or cognitive routines. A misleading behavioral program is a set of repeated behaviors that obey "action generation" (Starbuck, 1983), and leads an organization to unquestioned fine-tuning, and eventually to disaster. A misleading cognitive routine is a set of schemata or mental models that leads managers and operators of an organizational program to oversee dangerous engagement patterns and their consequences.

The core theoretical framework that lies behind the concept of "destructive information" is embedded in the works of Watzlawick, Weakland and Fish (1975), and those of Starbuck (1983) and Starbuck and Miliken (1988). The acknowledged background of this research is that people in organizations follow programs that they themselves generate through commitment to action rationality. As Starbuck puts it, "Most of the time, organizations generate actions unreflectively and nonadaptively.

To justify their actions, organizations create problems, successes, threats and opportunities. These are ideological molecules that mix values, goals, expectations, perceptions, theories, plans, and symbols. The molecules form while people are result watching, guided by the beliefs that they should judge results good or bad, look for the causes of results, and propose needs for action. Because Organizations modify their behavior programs mainly in small increments that make sense to top managers, they change too little and inappropriately, and nearly all organizations disappear within a few years" (Starbuck, 1983: 91).

As we investigate a large failure in a single firm over a period of four years, through case study research and long interviews with decision makers, we try to relate the role of destructive information through changing thoughts and deeds, designs and routines, and its implications in the emergence of inescapable failures. As we walk through the story of local managers struggling to make sense of contradictory stimuli, we discover people "lost in translation", reshaping their organizational designs on erroneous information. After examining the role of destructive information in misleading people and jeopardizing reliable design of the studied organization, this paper unfolds on a series of prescriptions and propositions to "get it out".

Information, programs and routines

People in organizations do not generate destructive information purposefully. Most informational behavior in organizations is somehow "positional", in Hirsch's terms (1977). People seek to gain information that is generally positional. Information superiority is more a theoretical construct than an organizational reality. People do not see information as having absolute superior value, but rather an immediate, practical leverage for their on-going programs. Rather than challenging information being used and articulated to on-going programs, people favor collateral and ad hoc organizations, which would leave their main programs untouched, and their deeds unchallenged (Zand, 1981). Secrecy that can turn banal information into a highly destructive one follows a social psychology that is more embedded into ignorance than malignity (Simmel, 1908). Human inferences are imperfect, and turn genuine interpretations into misleading and contaminating shortcuts (Nisbett and Ross, 1980). Moreover, most information is unconsciously processed by individuals, so that people would generally not be able to identify how they gathered, assimilated and

transformed information that leads their acts and deeds (Lewicki, 1986; Reber, 1993; Nisbett and Wilson, 1977). People in organizations do not discriminate between *genuine* information and its many doubles. Reality is taken for granted, until proven otherwise. Artifacts are as much instrumental as the real itself, for realities are known as genuine only when they get dismantled (Rosset, 1977, 1985).

Thus, there is an "information-generating" behavior, as much as there is an "action-generating" behavior in organizations (Starbuck, 1983). People generate information whilst listening upwards; they document *ex post* an action-generation whose rationale they surely lost; they fine-tune their past commitments with the new criteria for approval; they reuse uncompleted achievements that have bred frustration and translate them into the new set of core beliefs.

Information can be highly destructive when it is simultaneously the source of ratification for maintaining behavioral programs, and the sole exit to their termination. Neither systematically deterministic nor spontaneous, organizations work under sets of *minima* (minimal consistency, minimal faith, minimal contentment, etc.), "weathering the storm," "unlearning yesterday" in order to continue to "fly without flying apart," while "proliferating processes collide, contest, and interact with another to generate wisdom" (Hedberg, Nystrom, Starbuck, 1976).

While struggling to maintain these minima, managers try to make sense of the stimuli they perceive, whilst "those interpretations are generated within the organization in the face of considerable perceptual ambiguity" (March, Olsen, 1976, p. 19). First, as R.D. Laing puts it: "The range of what we think and do is limited by what *we fail to notice*. And because we fail to notice *that* we fail to notice, there is little we can do to change, until we notice, how failing to notice shapes our thoughts and deeds" (quoted by Goleman, 1985, p. 24). Second, to start to notice that we fail to notice, we need to deploy considerable efforts, and to struggle with contradictory stimuli.

In this perspective, "guilty knowledge" (Fetterman, 1984; Marx, 1984), "dirty data" (Van Maanen, 1982), or the Goffmanian "destructive information" (1971:141) do not systematically match unethical behavior or deliberate will to distort reality. Guilt over knowledge is mainly an *ex post* realization in organizations. *Dirt* in data mainly goes

unnoticed, until the misleading nature of data has acted upon organizational settings, and led them to their own destruction.

The same information can reinforce the reliability of an organization, and further leads to its self-destruction (Starbuck and Miliken, 1988a). Hence, one can assume that the destructive *nature* of information does not lie in its ontology, but rather in the effects it has on organizations and individuals perceptual filtering and behavioral programming.

Thus, tolerance for destructive information has been identified as a source of adaptation and survival for organizations. For example, tolerance to ambiguity is strongly corroborated with adaptability of managers when dealing in foreign countries, amongst others' cultures (Marquardt, Engel, 1993). While decision theorists try to improve and rationalize what they would optimistically call the "human thinking system," in real life, "people do not know all of the sources of stimuli, nor do they necessarily know how to distinguish relevant from irrelevant information" (Starbuck, Miliken, 1988b, p. 41). People act according to "criteria" that they view as important, sometimes quite unable to define why these criteria are important, sometimes totally ignoring, or forgetting why they decided that these criteria were important, for individuals have the tendency "to deal with a limited set of problems and a limited set of goals" (March, Cyert, 1963, p. 117).

"Perceptual filtering" (Starbuck, Miliken, 1988b) is as much vital as it can be deadly for individuals in any organizational settings. Simple truths lie behind vital lies (Goleman; 1985). Collective self-deceptions are erected as organizational facades, preserving programs and routines, until a better orchestration of reality would ultimately fine-tune and harmonize programs with reality (Ruddick, 1988). People in organizations, distant or close, loose or tight, deliberate or unaware, need to filter their perceptions, as much as they need to filter air and water when they enjoy a nice or unpleasant dinner. But, "how capable then are organizations to unlearn old behaviors and world views and to relearn when they face new situations?" (Hedberg, 1981, p. 18).

Organizations build ideologies that turn into structures, language, actions or problems, and then become sources for building new ideologies (Meyer & Starbuck, 1993). Past successes are interpreted as criteria for the validity and consistency of current behaviors, as in the case of NCR, where eighty years of success in mechanical cash registers fused beliefs, strategies, structures, and action programs into a self-reinforcing ensemble (Starbuck, 1983). Ideology then blinds the organization to signals of dramatic change (i.e. the computing revolution). When asked about forthcoming technological changes in 1958, NCR's president replied: "I've been hearing about 'saturation of the market' ever since 1912. Make no mistake — mechanical bookkeeping is still going to be around for quite a while!" (Meyer and Starbuck, 1993, p. 106).

Research on decision making in organizations and on the engineering of choice wrongly perceives ambiguity as a sin in such settings (March and Olsen, 1979). On the contrary, rather than being an obstacle to destructive information acceptance, ambiguity fosters flexibility of cognition, when cognitive routines and behavioral programs collide. Managers tend to be less precise about their purposes in bureaucratic environments in order to protect their personal space. Thus, by using loose role definitions or avoiding direct confrontation, they maintain a "blur zone" (Crozier, Hedberg, 1977). A loose role definition, used with accordingly ambiguous language, can be of tactical use when role conflicts arise (Shenkar, Zeira, 1992). Ambiguity may eventually be the wisest choice when dealing with politics (Alesina, Cukierman, 1990). Thus, Gregory (1988) suggested that all human observations are perceptually, and also conceptually, ambiguous. He concludes that elaborating ambiguity is part of our sense making.

When ideologies, preservation of behavioral programs, and the need of securing cognitive routines play in concert, “destructive information” becomes self-resilient. Ideologies produce information in conformity with widely accepted and practiced behavioral programs. In Meyer and Starbuck’s NCR case study, criteria for evaluating salesmen are designed so that performance outcomes reinforce the idea that mechanical bookkeeping is a superior technology than electronics. In return, information that is produced by behavioral programs, such as factory settings, measurements and quality programs will ultimately reflect the dominant logic, by satisfying the expectations and aspirations of management. Cognitive routines

subsequently act as powerful filters, which neglect stimuli contrary to dominant schemata, and amplifying stimuli reinforcing the core beliefs (Starbuck and Miliken, 1988b)

The questionable relationship between information and organizational design

The most successful is the procedural routine, the least questioned and the more distant becomes the net of assumptions, beliefs and superstitions that originally supported the now "taken for granted" behavioral programs. Because success breeds complacency whereas failures encourage reflection, action generation is a blinding and self-reinforcing process that leads organizations to unforeseen disasters. Watzlawick and al. (1975) described this process in more psychological terms, suggesting that people spend most of their time "doing more of the same thing", as they struggle with solutions that embed the very source of increase of their problems.

The source of behavioral programming can be either endogenous or exogenous. As realities are being socially constructed, symbols freely travel through the walls of organizations, societies and groups; local rationales heavily borrowing from large symbolic universes, and vice versa (Berger and Luckmann, 1966).

From an endogenous perspective, resembling that of social and individual psychology, people follow self-programmed habits that make sense of their actions at a very low psychological cost. They develop buffers around themselves, where opacity and uncertainty protect their deeds and acts, whilst casting an uncertainty veil upon their programs and their ratifications (Crozier and Friedberg, 1977). Behavioral routines can be repeated successfully with very few questioning on their foundations, maintaining an illusion of performance, and avoiding the heavy transaction costs that accompany all dialogue of individuals with themselves (Goleman, 1985). Hence, people follow routines that have become artifacts, without feeling the need of questioning their origins, and gaining a secure feeling of self-determination and incremental achievement. Eventually, information becomes "placebic" with the sole role of maintaining the on-going interaction with peers (Langer, Blank and Chanowitz, 1978).

From an exogenous perspective, the “iron cage” is at work (DiMaggio and Powell, 1983) and reinforces the acceptance of people in their communities and organizations. By repeating a behavioral program that match their colleagues and superiors’ expectations, on what society has defined for example as a “good accountant”, a “serious space engineer”, a “good systems designer”, they create a legitimate space for themselves in the organization, and the society. Societal myths turn into rational mythologies; ceremonies celebrate the external borrowing of ideologies (Meyer and Rowan, 1977), and in return, strategies are fine-tuned to match the newly adopted organizational ideology (Meyer and Starbuck, 1993).

Behavioral programs can therefore be completely borrowed from the external world. A good “strategist” is expected to master widely acknowledged analytical techniques. Recipes of “what is right and what is wrong” circulate in industries, and act as filters, rituals, jargons to discriminate who belongs, and who doesn’t (Spender, 1989). Core beliefs and behaviors eventually become homothetic across an industry. For example, unmanned vehicles are introduced as substitutes where environmental conditions make manned missions perilous for human lives. First experiments were led with vehicles crossing rivers during battles. The operations were repeated successfully, and criteria and models for assessing success were fine-tuned accordingly. Rationales for using unmanned vehicles were borrowed from one industry segment to another, as well as the criteria for unmanned vehicle performance. Unexpected and critical accidents with manned vehicles reinforce the belief in the rationale that is borrowed from one context and translated into another. As they produce data, mission programmers borrow the dominant logic that has proven efficient in a different context with different objectives (Starbuck, Miliken, 1988a).

Behavioral and cognitive programming hence reduces the complexity of social relations and keeps people from behaving unpredictably. It improves interoperability and reduces the need for repeated transactions, and subsequently reduces transaction costs. Hence, through the adoption of homothetic behaviors and cognitive routines, managers within their industry improve their ability to communicate with each other, and being acknowledged as peers. Thus, firms do not have to pay excessive attention to singulars, variant demands, and illegitimate demands (Starbuck, 1983; Ruddick, 1988)

Homothetic behavioral programming helps organizations to depersonalize issues and to generate standards. People can be rewarded on external criteria, thus reinforcing managers' legitimacy and the external validity of their local decisions. People in organizations are judged by "industry standards". Their behavioral routines are compared to industry practices. The more an organization relies upon widely spread industry routines, the more it increases its discretionary power over programs and missions that do not fit the dominant logic. As successful firms want to maintain their operating world unchallenged, unusual, creative, disruptive routines can be easily rejected as idiosyncratic.

Thus, "destructive information" can take the form of a highly regarded, acknowledged, and well shared expertise. Information that reinforces the legitimacy of misleading behavioral program that goes unnoticed has a far more destructive power than genuinely truncated information within a successful program (Starbuck, Miliken, 1988b). Our working definition of "destructive information" thus becomes:

- *Information that helps people in organizations maintain unquestioned behavioral programs or cognitive routines*; therefore leading organizations to "do more of the same thing" (Watzlawick and al., 1975), engaging their organization, its design, deeds and actions in a blind spotted escalation of commitments;

- *Information that prevents people to question their learning processes*, either by reinforcing its homothetic "iron caged" acquisition, or by fine-tuning their core beliefs in order to comply to a misleading dominant logic.

- *Information that prevents the generation of new information*; i.e. information which entropy provides a self-sufficient platform for a large number of interpretative variations, which prevent program designers and managers to question their validity.

Research method

The purpose of evidence gathering was to explore the role of “destructive information” in leading a large organization to congeal its ideology, being entrapped in a misleading behavioral program or cognitive routine that led to a large organizational failure. The research was conducted in a single large firm, in the period of 2000-2004, tracking a single large failure over time, and returning to executive and decision makers to trace programs, decisions, beliefs, and information that supported them in creating the pitfall. The case was selected on the basis of several characteristics of interest for the study: a long distance relationship between central designers and local managers; the use of information to describe, transfer and communicate design changes back and forth; and ultimately, a large organizational loss of resources and acknowledged failure of the studied project. Several projects were considered before the “LSP case” was selected. Projects that could not be related to a clearly identified central design body were rejected. The case focuses on the implementation of a new organizational routine and design to manage strategy formulation within this large multidivisional firm. Hence, it mainly deals with an internal change, with a purpose of improving a current design within the organization.

This research is based on insider case study building, with direct and participant observation (Eisenhardt, 1989; Yin, 1994). It combines multiple data collection methods, including long and active interviews with executives, who led strategic change with time constraints and corporate pressure, direct observations of undertaken changes, and archival investigations. Analytical chronologies were collectively discussed with decision-makers to both avoid “data asphyxiation” (Pettigrew, 1990: 281), and benefited from advocacy and deliberation over the changes being discussed and analyzed. Research design combines insider direct observation with retrospective analysis through one to one interviews. This research benefited from an unrestricted access to company files, meetings, projects and key-organizational members. "Reflective practice" is thinking *about* and critically analyzing one’s actions with the goal of improving one’s professional practice (Kottkamp, 1990; Osterman, 1990; Peters, 1991). "Engaging in reflective practice requires individuals to assume the perspective of an external observer in order to identify the assumptions and feelings underlying their practice and then to speculate about how these assumptions and feelings affect practice" (Imel, 1992). Reflective practice finds its roots in the works of Dewey, Lewin and Piaget, "each of whom

advocated that learning is dependent upon the integration of experience with reflection and of theory with practice" (Imel, 1992, p. 1). We were interested in reflective practice as a research method because it fits perfectly with the subjective nature of the studied phenomenon. Moreover, using "reflective practice" as a research tool allows for versatility in the research design. It can be used as people are "knowing in action" (Schon, 1988), or *ad hoc*, with the purpose of asking people to lead a "reflection on their action". Thus, it fits with various research designs, especially those dedicated to qualitative data analysis (Miles, Hubermann, 1984), as in-site, in-process analysis can be required along with ad-hoc and post-data gathering analysis ("reflection in action" versus "reflection on action"). This method gives the opportunity to measure one's own perception gap between what he thinks to be – in action – the legitimate information behind his or her programs, and what he finally discovers it to be *a posteriori*. Kottkamp (1990) uses the terms "off-line" and "on-line" to distinguish between these two modes of reflection (in-action/on-action). By this method, the researcher plays the role of a "catalyst," helping out the interviewees to become aware of the contradictions between what they do and what they believe they do (Osterman, 1990; Schon, 1988). Here the researcher may pay all his attention to many research biases including the great sensitivity of people when they have to examine their own beliefs, values and feelings (Peters, 1991; Rose, 1992). Moreover, Lasley (1989) warns about the limits of reflective practice: it requires both knowledge of practice and awareness of professional and personal philosophy. "Reflection without an understanding of the rules or techniques that constitute good practice may lead to a repetition of mistakes, whereas reflection without philosophical awareness can lead to a preoccupation with technique" (Imel, 1992, p. 2).

Reliability of theory construction relies on a "process that must be designed to highlight relationships, connections, and interdependencies in the phenomenon of interest" because "researchers cannot make deductions from concepts alone" (Weick, 1989, p. 517). Unlike positivistic research, inductive research "lacks of generally accepted model for its central creative process" (Eisenhardt and Bourgeois, 1988). In absence of model, data analysis has been focused on a chronological study of agendas and events, trying to identify for each phase which information played a destructive role in the organization's escalation of commitment or blind spot generation. Motives and opinions for actions and events that were not observable were included in data

sets as to be preserved for further investigation. However, as Schon (1983, p. 51) judiciously noticed, much of the "skillful action reveals a knowing more than we can say," using here Polanyi's words to define *tacit knowledge*: "Knowing more than we can tell" (Polanyi, 1966). Thus, we cannot entirely rely on what managers have to tell us about their perceived informational justification of their actions. First, it may happen that they don't know that they know, or more likely, that they do not know at all.

Multiple sources of evidence were gathered in order to obtain a triangulation of observation methods and to maintain a chain of evidence (Yin, 1984). Letters, memoranda, communiqués, agendas, announcements, administrative documents (proposal, mission reports) were major sources of secondary data. Direct observations were made throughout the field visit, "including those occasions during which other evidence, such as that of interviews, is being collected" (Yin, 1984, p. 91). In-depth interviews were used to ask key-respondents "for the facts of a matter as well as for the respondents' opinions about the events" (Yin, 1984, p. 89). Interviews were of open-end nature, with several recurrence and feedbacks with respondents. Respondents' population was including people involved and not involved in the studied processes, as to measure the awareness of these processes in the organization (behavioral programs, cognitive routines) and to understand the role played by few, recurrent information in maintaining the misleading routines and programs.

Findings: how destructive information gets into behavioral and cognitive routines

ERPRON is a large organization, relying upon long research pipelines, heavy capital investments, and emerging from a historically regulated and controlled environment. ERPRON main offer relies on a technology that is made of series of components, of which ERPRON controls only a slight part. ERPRON is an old and respected organization. In the beginning of the century, the firm shaped the birth of its industry by creating a few architectural innovations that are still being used today. These founding technologies make ERPRON's pride, and its website traces the company's history in parallel with the evolution of the world and society.

ERPRON management is sourced mainly in one engineering school, which was created half a century ago by ERPRON itself. To attend this school, young graduates must undergo a tough selection; hence being recognized as the best of the breed, and later being promised most executive positions. The company has now a few generations of this exceptional kind, and organizational charts often carry sons, fathers and grandfathers at engineering and technical leading positions.

The growth of ERPRON had mainly followed an adhocratic pattern. Every decade, ERPRON engineers produced architectural innovations, which turned into venturing experiments, then into small organizational units. Today, ERPRON is composed of five large units, grouping more than 25,000 thousands employees each, and operating on five continents. For nearly eight decades, EPRON operated on regulated markets, with a dominant position. Competition was scarce or tamed. Customers were called "users", and law imposed rules of usage of ERPRON technologies. Users did not really have any other choice than consuming ERPRON lines of product, with a relative freedom of choosing additional technical components, as far as they were "ERPRON Certified".

Things changed rather radically for ERPRON when domestic States decided to deregulate ERPRON markets. Each layer of ERPRON industry suddenly became a separate competitive market. New entrants started to show up on ERPRON domestic markets, however underperforming, because technical standards and access to key resources where still technically mastered by ERPRON. In order to adapt to the new market condition, ERPRON hired an outsider to become chief executive officer of the firm. This executive did not graduate from ERPRON historical engineering school. He had led most of his career in highly competitive, deregulated market. ERPRON board of directors, alongside with its main national stockholder, welcome this newcomer with great expectations.

Habits of the newcomer were indeed quite idiosyncratic. Instead of rewarding such a warm welcome, the new CEO got rid quickly of the technocratic layer that had been educated in the prestigious school. He found this habit of piling technocratic advisors quite unwise, and decided to reduce to a minimum its corporate staff. A whole new team soon took over ERPRON destiny. The new CEO strongly fought the idea that a

large corporation should have a “vision”. Indeed, he was a bit concerned that this vision would escape its will and control, being himself not quite knowledgeable on ERPRON technical jargon and practices.

The turn of ERPRON into a customer-driven and business-minded organization was soon a success. People in subsidiaries learned to use the word “customer” instead of user. People queuing in outlets were called by their names, and treated with care and respect. Prices were still regulated, and the new “customers” not always satisfied with their little, yet new, degrees of freedom; but change was genuinely welcome, on both sides.

The new executive team paid a lot of attention into disseminating reliable market information to company managers. Education on market measurements, segmentation, and customer evaluation was erected as a priority for the Group. The first initiative was called the “Local Strategy” program. If people were going to face a “market”, they’d better learn quickly how to write their own strategy; and ultimately strategize by themselves. Managers on the field were listening upwards, with a very high level of expectation. They did not really understand how a strategy could be local if prices were centralized, technology fully standardized, brand ruled, and packaging uniformed, but they candidly welcome this “grand initiative”.

The most puzzling elements for local managers is that they did not really notice any change in the information they had to provide to the regional managers; and ultimately, in the information provided by regional headquarters to national ones. Indeed, the criteria they were being judged on were pretty much the same. They started to think that was “an old wine in a new bottle”, and adapted their behaviors accordingly. The first challenge was to change the way they were going to describe their activity to their bosses. For sure, they needed to put the words “Local Strategy” somewhere, somehow. There was a lot of discussion in local teams as to define what could be a local strategy, and what was just the stubborn and plain application of the centralized prescriptions.

“Certainly,” some regional sales managers thought, “price adjustments are local strategies”. But prices could not be adjusted without a central authorization; except

for retroactive discounts. So, they started to do more “retro-discounts”. “In any case”, some iconoclastic local salesmen dared to say, “Our prices are regulated by the Regulation Agency, because with such a market share, we have a dominant position”. “Well,” the regional managers replied, “it’s not just about pricing. Just tell your customers that it’s about service that the competition will never match”.

The “Local Strategy” program was soon a fiasco. Local management was so frustrated that it became intrinsically allergic to any information carrying the stamp “strategy” on it. The name of the program became the object of jokes and practical joking throughout the organization. Unfortunately, local discontent did not pass the upward filtering in the organization. Local supervisors started to produce more information, more documents, and more evidence that would relate operational success with the “Local Strategy” program. Regional managers started compiling informational reports, cross comparing them, building Excel tables and spreadsheets. The conclusion was self-evident: The “Local Strategy” program was clearly a success.

As regional managers started to report to central offices, misunderstanding and frustration grew quite quickly on the ground. However, a new reward program was financially compensating people who had clearly contributed to the “Local Strategy” program. “So,” the salesmen and engineers thought, “we just have to do our own report to work properly, and do a second report for the Local Strategy. It’s just like having two pair of glasses: one for work, one for the bonuses”. And everybody was having a good laugh.

Nobody on the field would have called that a “cognitive routine”. It was just being astute; Being smart. As far as they were concerned, it was making their bosses happy, and it was not that disturbing for their jobs. Indeed, some of their business customers looked smarter as well, being part of the “Local Strategy” program. It made them feel important; and consequently, more inclined to open their wallets in order to buy the latest component of ERPRON.

At the headquarters of ERPRON, some executives were starting to be slightly wary with the so-called “Local Strategy” program. They had the feeling that they had to

justify themselves to the regional managers, which was after all a complete non-sense, given that hierarchies are somehow created so that subordinates listen to their supervisors, instead of relentlessly asking them the foundations of their strategic thoughts. The second puzzling element for senior managers is that they could not question the regional and local managers outside of the program boundaries. If it did not follow the company policy, it's because it was a "local strategy". "For God's sake," some regional managers started to voice out, "they wanted us to think local, and now they ask us why it's not conforming to the Group policy".

"Well," a clever group of central top managers worked out, "we just have to improve the system a little bit". The problem with this new solution of "Local Strategy" is that price visibility was starting to be slightly blurred. The tyranny of local decisions clearly had taken over the global pricing policy of the firm. Local branches had even launched their own technological programs, and started to commercialize their own little components. Everybody was practicing "retro-discounts", so that pricing ex-post was quite different from the ex-ante one. "Well, well, well", the senior managers thought, "we just have to implement a double negotiation process: we will decide on annual objectives that we will communicate to the regional managers. The local managers will send their objectives and forecasts to the regional headquarters. And we will adjust the objectives and pricing policies accordingly".

At the headquarters, the "father" of the Local Strategy Program was thriving in a sea of compliments. His program even made it to regional and national newspapers. A newcomer was interviewed in the regional newspaper in picturesque village of the French Alps, and explained how the "Local Strategy" program had helped him to question his business, to get closer to customers, and to be able to explain, and claim, the validity of his local outlets' choices for the specificity of Alpine customers.

Meanwhile, markets were being further deregulated. Following what looked like an accelerated Moore law, the prices of the core components of ERPRON business lines started to drop quickly. Whatever combination and packaging of these components ERPRON would make, it was becoming clear that the firm was packing commodities and trying to sell them for a high price. Consulting firms started to popularize the concept: "It is commoditization". Local salesmen and technical engineers started to

spread the word: “We are being commoditized”; “It’s happening quite quickly”; “The valorization of our suppliers dropped by 30% in the last quarter”; “We have to migrate the value of our customers on services, it’s the only way out”.

New entrants did not have to finance and develop the historical assets of ERPRON. As the core components were being commoditized, it was quite easy to find firms with “desperate assets”, ready to activate their production capacities at any price. The new entrants, unable to compete on a broad range of services, decided it might be as clever to group a few of those commodities in a box, to do a good pricing, and to sell the “bundles” aggressively. And so they did.

There were not such words as “bundles”, “commoditization”, and “economics of scope” in the Local Strategy Program’s vocabulary. If it did not belong the Local Strategy scope, therefore it must have belonged to the headquarters. “Somehow,” the regional managers concluded, “it must be taken care of by the central strategists”, not without an ironic smile. And so it was. A quick and radical response had to be implemented. Yet, there was something in the way of an efficient “command and control” chain, and it was called “The Local Strategy Program”.

The aggressive pricing was soon followed by rapid loss of market share. Bundles of new entrants sounded like the bells of the Local Strategy Program funeral. The situation in outlets had to then is fully documented. Most outlets had hundreds of product lines on their shelves. Salesmen were rewarded mainly on volumes, so that they did not really spend time analyzing their customer need. All information that had been produced during this period was extremely reliable and compliant to the Local Strategy program recommendations, and subsequently, totally useless to deal with the new situation. Using basic fax machines, all outlets and local managers were asked to send their sales figures, on a weekly basis, to a centralized team. “Sell, sell, sell” soon became the new motto. The party was over. Engineers and sales personnel became completely consumed by the production of cash flow Excel spreadsheets.

After this bumpy ride, the new CEO decided on a retreat, and took his key managers along. If the Local Strategy Program had been a failure, there was a clear reason: the firm was too centralized. In a highly complex and high velocity environment, it was

surely non-sense to be so centralized. What ERPRON needed was a fully decentralized organization, so that the word "Local Strategy" would just become common sense, not an imposed program from the top. And so it was decided. Branches became divisions. Divisions became listed companies, and introduced to the stock market. Local departments became start-ups; spin offs, privatized joint ventures. One, then two, three, four more brands were created; and listed independently. Given all the cash flow that the firm had accumulated during the technological boom, it was rather clear that such an ambitious project could not remain domestic. So, targets were chosen in neighboring countries. A first foreign firm was acquired, and ERPRON nearly doubled its size. A second firm was acquired, and ERPRON became American in America, Asian in Asia, and African in Africa… Meanwhile, new entrants were bundling. Prices were dropping. ERPRON debt was growing. The total valorization of all newly created units of ERPRON was half the initial valorization of the firm.

Realistic reflexive thoughts of managers on what really happened

The "Local Strategy" Program (LSP) not only shaped people's behavior, but also congealed both their ideologies and cognitive routines. For interviewed managers, it is clear today that people on the field first resisted the program, and then, adopted it with a differential treatment. Two routines were currently led in parallel. On one side, the operational routine of convincing, selling, and maximizing volumes was grounded into practices that were untouched by the LSP. On the other, people fine-tuned their agenda, and get used to "double reporting"; one for their local team, and one for the LSP.

As far as the reporting was in conformity with the LSP expectations, local behavioral programs were running unquestioned. In fact, the LSP reporting acted as very *destructive information*, helping people build a façade and maintain both their cognitive routines and behavioral programs unchallenged. Findings corroborate literature suggestions that people engage in "action generation" (Starbuck, 1983) and "do more of the same thing" (Watzlawick et al, 1975), generating problems that fit current solutions, fine-tuning their behaviors to fit dominant ideologies.

In the second phase of the LSP ("The deregulation"), we can observe managers continuing their behavioral programs and cognitive routines in the face of obvious

counter-evidences. In this phase, we observe another kind of "destructive information"; i.e. "information that prevents people to question their learning process". First, the LSP has shaped the cognitive tools of managers: the language with which they describe their reality. The words that describe the new threat do not belong to their vocabulary ("commoditization"; "economics of scope"). Second, as they listen upwards, and shape their thoughts and deeds on criteria they are being judged on, local managers just disregarded the disturbing stimuli, thinking that he would be "taken care of" by the people who had designed the LSP.

Interviewed managers were very talkative on this issue. They had the feeling that there was a "supra-ordinal" will and power. "If they had decided what could be local, surely, we thought, they were taking care of what obviously was beyond our reach and control", a manager recalled. Destructive information can take the form of "iron caged" beliefs, i.e. strongly institutionalized assertions that are disseminated throughout the organizations. The blind spot is created not by the information itself, but by the fact that managers take the uncovered domains for granted. The LSP generated very destructive information, by preventing the creation of new information. Top managers complained that they could not talk to local managers "outside the boundaries" of LSP. Likewise, local managers had the feeling that they had to report only on what was defined as the "Local Strategy". The polemics around direct or indirect pricing, retro-discounts provided a sufficient platform for a large number of interpretative variations; and kept both centralized and local management busy on according their symmetric perceptual filters. They got caught into "information-generation" as much as Starbuck's (1983) managers get caught in "action-generation". Information generators are prone to illusion of control. The "father", i.e. designer, of the LSP literally dived into a full range self-fulfilling prophecy, which was relayed by local and national newspapers.

Propositions: how to get it out

Before we attempt to draw a series of propositions on "how to get destructive information out of behavioral programs and cognitive routines", a few lessons might be drawn from the ERPRON case study:

- "Information generators" thrive in *ambiguous settings*. Destructive information grows quickly on the ground of coalitions, parochialism, and inter-subjectivity;

- "Information generators" can be as misleading and threatening for an organization, as "action generators" (1983); information-rationality has the same capacity for *autonomous development*, behavioral programming, than action rationality;

- The more a destructive information is part of *a ratification routine* or system, the most likely it will go unnoticed; the more rapidly it will shape managers' thoughts and deeds;

- Designers and managers are *well intended*. Destructive information flourishes on settings paved with good intentions.

- People in organizations make information destructive by forbidding themselves to emit, transfer or manipulate outside of their *jurisdictional boundaries*. Therefore, organizational programs that reinforce jurisdictional boundaries are likely to generate destructive information.

Our observations within ERPRON clearly indicates that inescapable organizational failure was the sole way "destructive information" got out of the scope of behavioral programs and cognitive routines. So far, we did not discover on the field a clever way of getting rid of such information without getting rid of the organization itself. However, an attempt to make a few propositions would unfold as follows:

- ***Prop. #1:*** *Unquestioned designs are likely to carry destructive information*. The lack of dissent on organizational design should be seen as a sign of the presence of an "information preventing new information", rather than of its exceptional performance;

- ***Prop. #2:*** *Excessive translation mechanisms are likely to be a sign of destructive information*. Behavioral programs and cognitive routines,

whenever possible, should be grounded into non-opposable, directly observable measures. In our cases, local realities were translated into local rationales, then translated into organizational rational myths, and then metamorphosed into supportive information to the corporate ideology. When managers start to get "lost in translation", it is very likely that they try to accommodate very disaccording information with on going behavioral programs or cognitive routines.

- ***Prop. #3:*** *Ad hoc informational organizations (Zand, 1981) should be perceived as a sign of destructive information in the main design*. When cognitive and behavioral routines collide, observed managers were either creating a double cognitive routine (ad hoc or parallel), or were disconnecting their behaviors from disturbing information from the market. Hence, the proliferation of ad hoc informational routines or systems in an organization could be a sign that engineers, managers; salesmen are struggling with destructive information.

Conclusion

Not all organizations thrive in crisis situations, and crisis is not a necessary step for radical change (Starbuck, 1989). Organizations which undertake a rapid strategic change may have more "perceptual crises" than actual disorders and conflicts. As Billing et al. (1980) noted, periods of radical changes are times of clashing frames. Managers, customers and stakeholders have to rapidly "unlearn" older myths of operational performance (Hedberg, 1981) and schemata that no longer apply (Starbuck & Milliken, 1988). When they eventually decide to interfere, they are likely to consider alternatives that are more bound to circumspection and shelter, than to exposed heroism. Neither systematically deterministic, nor spontaneously voluntaries, organizations work under sets of minima (minimal consistency, minimal faith, minimal contentment), "weathering the storm", "unlearning yesterday" in order to continue to "fly without flying apart", while "proliferating processes collide, contest, and interact with another to generate wisdom" (Hedberg, Nystrom, Starbuck, 1976).

With most companies competing against competitors who pretty much "strategize" having access to the same information (Starbuck, 1992), what make organizations more or less successful when facing recurrent "destructive information"? ERPRON did survive a series of "destructive informations" that proliferated throughout its walls during the great deregulation crisis. The CEO, the one described in this paper, was replaced on the demand of the main stockholders of the firm. A heavy-set cost cutting program followed, and dried the organizational buffers, leaving so little room for fantasy, that most "information generators" backed off. The LSP became an organizational artifact. When it is evoked amongst colleagues who had known this glorious attempt to make local managers heroes and strategists, there are tender smiles appearing. Time to time, at the far borders of the organization, in an unforeseen, taken for granted island of local rationality, there is still today some local managers than turn into "information generators". But, after all, isn't it the way organizations channel creativity? Through "*destructive re-creations"* ?

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