BEYOND RISK MANAGEMENT: MANAGING THE UNEXPECTED

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Abstract. *Modern organizations attempt to get a grip on uncertainties and disruptive incidents by anticipating changes as early as possible. Consequently, some organizations try to manage complexity by transferring it into defined, controllable structures and processes, aiming at the ability to deliver the desired strategic outcomes in a predictable and reliable manner. Others trust a high degree of freedom at the shop-floor and team level allowing for quicker decisions and self-determined choice to successfully respond to unexpected events. Both solutions demand new procedures to manage the unexpected, focusing on the need to balance structure and flexibility. This conceptual article asks which structures make sense for organizations in complex or even chaotic environments. I will focus on the team and organizational level and foremost at the interaction between these two. By combining theoretical concepts of behavioral and organizational research, especially decision-making based on systems theory, situational awareness and sense-making, I aim to approach a more comprehensive discourse on ways of coping with the unexpected. Beyond common rational plan and command orientation, the article stresses the importance of a unique equilibrium of structure and autonomy for each given situation, organization and team. Furthermore, I will argue that one can make use of autonomy and enable autonomous decisions on the shop-floor level just because one can rely on unquestioned structures: pre-determined communication paths, hierarchies, structures of orders, knowledge of one's people and esprit de corps.*

Keywords: *the unexpected; complexity; autonomy; situation awareness; sense-making; systems theory.*

Introduction

Without a doubt we live in a VUCA world, characterized by volatility, uncertainty, complexity, and ambiguity (Bennett & Lemoine, 2014). For one thing, modern organizations attempt to get a grip on uncertainties and disruptive instances by anticipating possible changes as early as possible. Consequently, the management of complexity is often interpreted as transferring uncertainty into defined, controllable structures and processes. While trying to deliver the desired strategic outcomes in a predictable manner, some organizations nowadays increase direct control and reduce trust and transparency when faced with the unexpected.

Against this trend, others believe the opposite to be promising in uncertain situations: a high degree of freedom for the parties involved allowing for quicker decisions and self-determined choice to successfully respond to unexpected events. These organizations react with internal flexibilisation, such as agile project work and ad hoc teams, expert pools and fluid organizations, resilient and adaptive structures (Busby & Iszatt-White, 2015; Snowden & Boone, 2007).

Common to both solutions is the opinion, that new procedure must be implemented to manage the unexpected, focusing on the need to re-arrange structure and flexibility. Based on theoretical considerations this conceptual article asks, what are the challenges for organizations in complex or even chaotic environments and which configurations make sense to achieve resilience?

First, we investigate the concepts of complexity and the unexpected based on organization theory inspired by decision-making and systems theory (Luhmann, 2000; March & Simon, 1958). These theories define structures as "structures of expectation" and stress the importance of shared orientation. Social construction theory informs us that the unexpected can only be understood in relation to an observer: the expected and the unexpected therefore are not entities in themselves but are "produced" by and from the perspective of an observer.

By combining theoretical concepts of behavioral and organizational research, especially situational awareness and sense-making, we aim to approach a more comprehensive discourse on ways of coping with the unexpected. This article will focus on the team and organizational level and the interaction between these two. On the background of mutual arrangements of autonomy claims and structural (hierarchical) prerogatives, we will analyze the relationship between structure and autonomy in organizations, and depict some necessary foundations to enact this equilibrium.

Complexity and the unexpected

At the core of management is the idea of controlling outcomes and steering the organization in a rational and predictable manner. No surprise then that any (traditional) management approach is also about avoiding uncertainty. Whenever uncertainties occur, they are to be converted into risks as far as possible. The risk is understood as a probability-driven decision where the decision maker is able to assign probabilities to a known range of future events on the basis of either mathematically known chances or empirical or statistical data about such events in the past (Knight, 1921). Accordingly, processes like risk management are supposed to make it possible to transfer threats and opportunities into – basically calculable and therefore decidable – risks.

Since the eve of modern times, the idea of action is dominated by rational choice based on the (full) information. A brief overview of the history of decision making seems to prove the idea of controlling uncertainty rationally with ever new instruments and methods: Market research and PESTEL, management information systems and big data, Monte Carlo algorithms, game theory and simulations approaches, to name a few. Our proposition is that neither more information nor better algorithms are sufficient to solve complex non-programmed or wicked problems within the rational framework in principle.

Complexity is defined as a state where more linkages exist than we (normally) can describe or analyze (Luhmann, 1995). Complex systems are characterized by unstable input-output relationships, system boundaries changing over time, and system behavior that is not (fully) depending on the past (Checkland, 1999). In this situation,

we, as observers and decision makers, are forced to select important and not so important causes and effects and have to decide when to stop searching for further linkages. Given there is no absolute rule to decide selection and termination, different observers will end up with different cause-effect explanations and dissenting forecast for the same observations. Any one best way is redefined to one best way for each given situation and for each given person.

Recursive effects in complex environments can make the rational choice of actions impossible (Stacey, 2011). This is the case if one's own action has implications for the other's acts, but the other's action, in turn, is made based on one's own decision. In business reality, we can observe more recursive effects in time, e.g. the number of orders will raise revenues, which allows increasing sales force, resulting in more orders. But at the same time, the number of orders raises the size of the backlog, which extends delivery time resulting in sales difficulties – and lowering of orders (Senge, 2006). The chance to observe mutually influencing, simultaneous effects is limited within the linear perspective. From this viewpoint, clear-cut cause-and-effect links are circular and leading to unexpected outcomes. Long-term outcomes are partly emergent and partly intentional, interventions could be planned, but the outcome could not be predicted.

The unexpected is that event, that one does not expect – that sounds trivial. Social construction theory informs us that the unexpected can only be understood in relation to an observer: "Everything said is said by an observer" (Maturana, 1982, p.148, see also von Foerster, 1984). But observations are not arbitrary, they are structured and these structures are based on expectations. The expected (and the unexpected) are not entities in themselves but are "produced" by and from the perspective of an observer, either an organization, an employee (Dorniok & Mohe, 2011) or a team based on sense-making (Weick, 1993). Within organizations, strategy, organizational rules, culture and so forth define what is relevant, what is important and what has to be considered as not so important.

Taking a closer look, we can differentiate between events that occur totally surprising, and "outcomes or events that actors have identified as possibly existing, but do not know whether they will take place or not" (Geraldi, Lee-Kelley & Kutsch, 2010, p.553). This spectrum of growing uncertainty is frequently known under the labels of known knowns, known unknowns, unknown knowns and unknown unknowns (Cléden, 2009; Winch & Maytorena, 2012). Uncertainty can either be seen as a lack of data necessary to assign objective probabilities to an event ("unknown knowns" where expectations grounded in historical practice are used for a subjective probability) or as an inherently unknowable future ("unknown unknowns").

Duchek and Klaußner (2013) differentiate between the unexpected having a temporal ("when") or a content-related ("what") dimension. The purely temporal unexpected is the least problematic, the organization can react by drawing on reserves, rapid access to fresh resources or attempts to shift some tasks if the organization had used better times to bulk up organizational slack – provided, the organizations resilience wasn't killed by lean management and related managerial myths. The unexpected in purely content-related dimension allows for the delegation of the problem upwards and/or initiating a (perhaps even routine) analysis procedure that mostly includes (internal or

external) experts. Problems occur if events are characterized by both a temporal and a content-related dimension.

For surprising situations that long for a long-term reaction only, the organization will have enough time to search for additional information, calculate by advanced analysis methods, and plan in-depth and in advance. The proper time of the organization allows for an uncoupling from the external pressures of expectation, groups can "muddle through" or wait for the next "garbage can", and individuals will sense when the time for decisions (along with their own interests) is mature (Wrapp, 1967). But issues become more complicated when urgency is an issue. Time pressure might stem from environmental changes, but "urgency" has to be translated into and defined as an organizational necessity. By defining "time" importance and (peer) pressure is generated, decision processes are terminated by deadlines, not by the result, and communication (including meetings) is triggered by timelines (Luhmann, 1968).

Structures, decisions and decision-making premises

The complexity of the world cannot be represented within the organization, even not the complexity of life in the organization themselves. The organization is forced to restrict relations, to select. Structures of expectations accomplish that. They condense "the open complexity of possibilities to connect each element with each other into a tight pattern of "valid, common, foreseeable, repeatable, or however preferred relations." (Luhmann, 1984, p.74). Selectively re-used, cascades of decisions build up a structured history of expectations. Organizations use these structures of expectations as decision-making premises what to observe, how to decide and what to do. They provide organizations with stability and predictability, allowing for the transfer of uncertainty into risk.

First structuring elements are strategic goals and plans. Purposes and plans must be translated into the language of the organization. This could be done directly by decisions based on plans. But this is a very unstable and cumbersome procedure. Plans can gain speed and stability when they condense into (Luhmann, 1988, 1993, 2000):

- Decision programs (rules, regulations, procedures, standards ASO): decision programs try to predefine individual decisions. Two forms: target programs, and conditional programs.
- Communication paths and hierarchies: formal and informal communication paths restrict how information circulates and which information has binding effects in the system. Furthermore, formal and informal decision-making power of a position and the power of the individual person are regulated.
- Persons: in organizations, persons are a bunch of expectations, e.g., you usually know what to expect from a supervisor or an expert within an organization.
- (Organizational) Culture: defines what is seen as a self-evidence and taken-for-granted matter of course that everyone who is familiar with the organization understands and accepts.

Plans and decision programs

Planning is the attempt to fix the future characteristics of the system, to formulate expectations of (positive) future states of the organization and the environment, together with a specified way to achieve this state. Controlling can be interpreted as an attempt to exert influence on perceived differences within the framework of planning and the real state and the effort to reduce them. Some might even define the unexpected with relation to plans: the unexpected is every event without a provision in respective planning. Obviously, this is a very narrow definition and it insinuates, that by simply improving planning (or controlling, if you like), we can reduce the amount of the unexpected.

Only naïve people believe plans to come true, at least that is what we can experience when we go beyond simple and short-term issues. Nevertheless, plans are important. Plans set aims and thus help to select means and operations. Plans depict interactions of different actions of divergent actors, define a common sense for the organization, and enable to detect and correct deviating developments. They focus attentiveness. And paradoxically enough, they inform organizations where to expect the unexpected. But at the same time, they make organizations structurally blind for the unexpected in other areas. Earlier research on uncertainty (Dörner, 1989; Perrow, 1984) and newer investigations on wicked problems (Checkland, 1999) have shown that the advantages of (pre-)structured expectations in organizations make it difficult to handle the complex unexpected reasonably.

Conditional programs, appearing in the form of (clear) instructions, application of standard procedures and programs, check lists, and so on, resemble the efficiency of a machine. Conditional programming, while at the first glance best suited for the quick response, seems to be unable to handle the unknown unknown, even more so, it can make things even worse when short term reactions are needed: Deadline pressures force a preference for socially accepted solutions and is thus hostile to innovation. Only those information is used that is easily accessible, only those decisions made where routines are available, and established co-operations are preferred, groups and individuals regress to pre-mature and emotional states. Even more so, following rules at all points may cause disaster (Cavallo & Ireland, 2012). It is not for nothing that works to rule is considered as an effective industrial action.

The problem of structural blindness against the unexpected both on an organizational as well as on an individual level re-emerges when using conditional programs. Just because close control models (e.g. checklists), personal expertise and accountability, and decision-making responsibilities are normally so successful, they prevent facing the unexpected in complex situations (Luhmann, 1986). The dilemma is particularly evident when organizational regulations, which are based on the common cases and therefore the expectable, are confronted with individual perceptions in new and complex situations which would indicate countervailing measures (Busby & Iszatt-White, 2015).

Target programming based on definitions of objectives or soft targets, controlled by mission, vision and strategic context, empowerment, and so on, seems to be better suited to react quickly to the unexpected, and it is more open to innovation. Again, the dominance of time leads to but unwanted results: To end up with socially accepted

decisions team-work is critical. Reflection work and downtimes should be scheduled; non-cooperative tasks socialized and made to team tasks. And maybe new teams must be formed or the set-up of existing ones to be changed, with all the (time-consuming) burden of group-dynamics. As means to meet ends are vague and have to be sought of, time would be needed, but this is a scare resource. Organizations using target programming are more open to limited predictability, risk taking, and acceptance that the existing rules of the game change continuously. But confronted with urgency, they still recourse to persons (as experts, leaders etc.), clear communication paths and culture to keep decisions efficient, quick in reaction and controllable.

Communication and hierarchy

All researchers agree that more and open communication is crucial to address the unexpected (Barton & Sutcliffe, 2017). The reasons for that sound obvious, as more communication allows for a better information basis, more ideas about what's "really" going on, different views and perception frames, more expertise, more commitment to solutions, and shared burden in decision and action. Weick and Sutcliffe (2001) stress the importance of face-to-face interactions and direct communication in change or crisis situations to create a collective understanding of the situation.

But the tighter the time horizon, the more restricted communication must be to avoid information overflow and allow for quick reaction. Communication is very time consuming, and gathering and analyzing information together is not acting. Rather, it inhibits fast and necessary (but maybe less sophisticated) action. To gain valuable information in a timely manner and to secure the coordinated action in response to the unexpected, it appears necessary to communicate at the same time more intense, but also to be more specific and selective. To be able to communication quick, it is important to have a clear picture of one's (virtual) communication network in advance that could be activated in crisis situations. The form of communication should be clarified in advance, i.e. when to use one-way or two-way communication, when and how to use feed-back loops, the preferred communication cannel (oral via face-to-face or phone, written as letter, mail, SMS, social collaboration tool) for which (kind of) information, whom to inform on which aspects, to name a few. And it is equally important to have clear and comprehensive language at hand, i.e. common technical terms and concepts, mutual understanding of the semantic field and even a clear and short structure of speech acts, like in military commands or manuals.

In the same vein, most authors make the case for flat hierarchies and liquid, at least adjustable responsibilities. As Weick and Sutcliffe (2001, p.160) in their renown statement put it: "When problems occur, let decision making migrate to the people who have the most expertise to deal with the problem." Approaches like Agility (Beck et al., 2001) or concepts like Holocracy (Robertson, 2015) promise to be better suited for a complex and fast-changing world with a bunch of daily surprises just because they reduce traditional hierarchies, duties, and fixed responsibilities.

A closer look at these concepts shows that they do not abolish hierarchy in the original meaning, i.e.: defined area of accountability, functional responsibility and communication flow patterns (Luhmann, 1964, Weber, 1921). Rather they re-define them away from stable and formal norms to learning and adaptable structures. Just because the unexpected can disrupt structures, it is even more important to have a

clear basis to act on: As structures serve as a guide in the minds of the members of the organization, they must continue to exist particularly in crisis situations, so that the individuals can align their actions to it meaningfully (Weick & Sutcliffe, 2001).

Typically, clear communication paths, rules, and hierarchies have a relieving effect for decision makers, both subordinations and supervisors: Individuals need not care about everything that is going on in the organization, but has to consider those facts only, that are within their formal (or informal) discretion. The hierarchy also has a protective function for employees as only distinguished positions have a right to interfere and control actions: Hierarchy thus protects self-organization and relative autonomy. If delegation is taken seriously, this also includes the "right" to make mistakes. And hierarchy is a mechanism to solve conflicts between all people in the organization, and if it cannot be resolved, then for the time it can be defused (Baecker, 1999).

Furthermore, these concepts react to the prevalence of informal structures: Not acting against informality, but incorporating them can be understood as an intelligent handling of informalized structures. This is by no way surprising: Previous research on micro-politics in organizations has stressed the mutual dependency of control and autonomy, formality and informality (Crozier & Friedberg, 1980). Some would even go one step further and tolerate a certain degree of illegality if this illegality is useful (Neuberger, 1995; Ortmann, 2003). In business life, "useful illegality" is widely accepted – and embedded in still clear (formal and informal) structures (Kühl, 2007).

Even with flat hierarchies and open communication, coordination and common orientations are still necessary, especially in turbulent fields. Thus, reducing the impact of more formal decision-making premises must be accompanied by a growing importance of less structured premises for the decision process: these are persons and (organizational, team) culture.

Persons and situation awareness

Persons can act in a very timely manner. In this sense, a person is a flexible counterpart to planning. The person as an organizational member is normally connected to a position in an organization, and hence in the possession of certain responsibilities, authorized to decide and enact on programs, and controlling a distinct knot in the communication network. We ascribe the ability to provide information in the specifically defined area to "experts" and we expect certain behavior from superiors and managers. We can address persons easily, and they can address us directly. Sometimes, especially in situations of crisis, persons are chosen to convey confidence and trust, and to promote certain programs or ideas, allowing to bypass the difficulty of casting disputed values into binding targets formally. All these features make a person a valuable resource to face the unexpected.

The discussion on the use of persons to help to cope with the unexpected revolves around the concept of situation awareness (Endsley, 2003; Schaub, 2012). Originating from research in military aviation, situation awareness aims at understanding how information provided by machines can be combined with personal perceptions to derive appropriate decisions. This view can be transferred to complex situations in management. A manager must also provide a comprehensive overview and quickly

make decisions based on the data contained in an MIS and on figures showing relevant environmental trends.

The most common model for the description of situation awareness was established by Endsley (2003) and distinguishes three levels or phases: In level 1 (perception phase), the environmental elements are perceived. Situation awareness is created by the perception of the state, characteristics, and dynamics of the system elements. It is important to identify the relevant influencing factors, but at the same time avoiding premature selection, so that relevant information is not faded out too early. Level 2 (comprehension phase) is about understanding the perceived elements and thus the current situation. Situation awareness is created by conceiving a holistic image based on existing patterns and interactions ("mental map"). In level 3 (projection phase), the future state of the objects is projected. Situation awareness is created by generating assumptions of what might occur in further developments, based on the knowledge gained from level 1 and level 2 (e.g. different scenarios).

Perception is shaped by the perceiver, or to be more precise, by his expectations. Because we can only see what we are looking for, schemas (along with the available information) determine what is perceived (Neisser, 1979). If perception is a constructive process, we then should be critical and question, why certain information is communicated redundantly and intensively, while another one is completely overlooked. Especially in situations of operational hustle and bustle, relevant information is ignored. Then, the action is more oriented towards re-acting as quickly as possible, rather than approaching issues actively and plan-based. Reverting to well-known procedures reassures team members and managers in dynamic situations. One moves on familiar terrain, there is neither time nor aspiration to undergo the tedious procedure of constructing full situation awareness. In the end, by setting short-term actions, people can evade being accused of not having done something.

In summary, relying on people only can also have a downturn: Situation awareness is especially necessary for dynamic situations, but exactly in these circumstances, the perception will be based on reduced and well-known information only so that new data is no longer perceived. It is difficult to have an overview of a complex environment and to recognize the various sources of uncertainty, to align the expected horizons and to create corresponding situation awareness. Based on false perception, comprehension will take the quick short-cut to well-known and deep-rooted explanations, considering neither diversity nor suitability for new situations.

The advantage of flexible reaction is lost, if persons set existing knowledge, beliefs, expectations, skills and so forth absolute and even do not get aware of their ignorance. This threat is especially prominent for experts, but also top management. Given that limitation, there is a need for mental models that help to portray the "real" conditions appropriately. For once, the "wisdom of doubt" protects persons to apply existing knowledge without reflection to new situations (Weick & Sutcliffe, 2001).

In most cases, a better understanding can only be achieved by a diverse team with different views and approaches. Shared situation awareness allows the team to understand the initial situation in a common image and to make appropriate conjectures and take the actions the new situation requires (Schaub, 2012). A "shared situation awareness" must, therefore, be assigned a key role in managing the

unexpected. Shared situation awareness requires three things: appropriate visual preparations which are understood by all parties concerned; the willingness to raise and to allow critical questions on the team level, and even invite team members to take the position of a "devil's advocate"; and an organizational culture that calls for contradictory observations and views and welcomes the opinions of unconventional thinkers.

Culture and sense-making

The concept of organizational culture summarizes the organizational "soft facts" that cannot be adequately reflected in (other) organizational structures: common values, norms, language, and behavior, to name a few. The importance of organizational culture is based on the observation that all the other structural elements are interpreted (framed) before the background of (more or less) jointly shared considerations and how the world and its events are to be understood. Reality is not perceived, but enacted (Mead, 1934; Weick, 1985). This process of sense-making is in need of constant interaction with others. The enacted reality is not random; rather, people in organizations spend much time on negotiating what is considered a decent representation of what is going on and what reality "really" is.

Weick (1993) gives us an impressive example of the importance of sense-making in his famous interpretation of the Man Gulch disaster. Weick reports that several fire jumpers expected the fire to be small but then encountered a large amount of information which they could not make sense of: the fire did not act like the fire they expected and understood. Furthermore, several team members behaved in ways which the other could not reconcile with the particular situation. Weick argues that the organization's failure was the result of a collapse of the structure, i.e. obeying orders and leadership, and this failure, in turn, resulted from a lack of common sense-making. The firemen did not manage to build on a synthesis of meanings among different group members and a joint subjectivity, further deteriorated by the crew members who failed to inform each other not only what they did, but why did what they did. The foreman failed to build his team of the smokejumpers in advance, and there simply was no time to enact a shared sense or a common situational model of what was happening in situ.

These observations point to the importance of previous team building activities to be able to face the unexpected. Creating a team culture that is sensible for the unexpected is closely connected to a no-blame or just-action attitude, a high transparency of task fulfilment and permanent and joint learning. Managing the unexpected thus requires an organizational and team culture that avoids passing the buck for failure just to avoid being blamed oneself. We need a "culture of errors" that allows to talk about errors and failures rather than displace them, a culture in which mistakes are accepted, that is working with openness and through mutual feedback to avoid mistakes in the future.

This culture change must be accompanied by a structural change in HRM systems, most notably reward and career systems. Any attempt to establish an error-friendly attitude will be crushed in a winner-takes-all organizational culture. Rather than concentrating on pure individual success, now so prominent both with incentives and promotion criteria based on work-hard play-hard, organizations and managers must

concentrate on team performance and organizational reliability (Nachbagauer, 2013; Neckel & Dröge, 2008).

Conclusions and implications

Solutions tackling the unexpected so far have promoted EITHER more structure and planning OR a shift to towards flexible, informal management structures: adhocracy, the absence of strong formal hierarchy, decentralization, little formalization of behavior and decision-making power for specialist teams.

Rationality as optimization, viewing decision-making as a fully rational process of finding an optimal choice with the given information, was long considered to be the ideal solution to decision-making. And still today we find arguments – though in a smarter form- in favor of a more formal and structured control of the unexpected: Let us take as an example project management, i.e., a discipline for which dealing with uncertainty and the unexpected is central. The ultimate aim of project management, defined by the PMBOK (PMI 2013), is to deliver the desired strategic outcomes in a predictable, controllable and reliable manner. Söderholm (2008) observes that project-oriented organizations thus seem to increase direct control, reduce trust and transparency when faced with project crises. On the modelling and algorithms wing, we see a bunch of older and more recent approaches to instruct project decision makers, e.g. Monte Carlo algorithms (Agarwall & Virine, 2017; Hulett, 2017) and simulation approaches (Chapman, 2017; Chua & Hossain, 2011; Jo, 2015), high hopes for predictability are connected to new buzzwords like big data (Galbraith, 2014; McKinsey Global Institute, 2011; Whyte, Stasis & Lindkvist, 2016).

But the term of rationality has undergone a crisis. Newer approaches to managing uncertainty are now promoting "irrational" perceptions as the major source of information, of quick decision-making and of quality of actions (Gigerenzer, 2008). Information is no longer made available only through rational, analytic and conscious thought but also through sensual perception. Atkinson, Crawford, and Ward (2006, p.688) suggested that uncertainty management asks for "generic management processes associated with building trust, sense-making-organizational learning, and building an appropriate organizational culture". Especially the research on resilience and high reliability organizations have stressed the importance of near-to-shop-floor decisions and flexible structures (Duchek & Rätze, 2017; Sutcliffe & Vogus, 2003; Weick & Sutcliffe, 2001).

These developments are accompanied by the search for a no-blame culture ensuring permanent and joint learning. For example, managers use retrospectives and systematic review procedures to take their team through the decision-making process and reflect on how to handle the event more mindfully. One method for reflection is the so-called after-action review built around four questions: What did we set out to do? What actually happened? Why did it happen? What are we going to do next time? Mindfulness requires people to focus on failures rather than successes, on gut instinct rather than on strategies and to acknowledge that others might know more than oneself (Weick & Sutcliffe, 2001).

Persons are supposed to be important resources to face the unexpected, therefore people and knowledge management – both formal and informal – play a decisive role, comprising also motifs, traits, and experience. Organizational culture and sense-making shape how all other structural elements are perceived, thus, enacting a common culture and allowing for sense-making in teams before the unexpected occurs are crucial. Ex ante team building efforts and face-to-face interactions in crisis situations help generate intersubjective meaning and develop a common situational model for action. At the same time appreciating a "culture of doubt" pays off, especially when employing experts.

Rejecting the idea of mutually exclusive solutions my argument is that organizations can make use of autonomy just because they can rely on unquestioned structures: pre-determined communication paths, hierarchies, structures of orders,

Especially in turbulent environments, coordination and common orientation are desperately needed, responsibilities must be very clear and at the same time, they should be a shift to that level that is dealing directly with the instance. The demand for intense communication also asks for clear communication structures and a shared language when faced with high time-pressure. It remains (or is even more) important to have a clear basis to act on when faced with the unexpected. A few core cultural values, enforced by the team, combined with a flexible choice of means by which these values are realized and knowledge of one's people and esprit de corps help to manage unexpected events.

The obvious problem is to link up the culture of clear decision-making structures and responsibilities with a high degree of flexibility, open communication, and error-friendly culture. Combining centralization with decentralization is one of the cornerstones to mindful organizing. This cannot be solved in an either-or-manner but deserves a unique equilibrium of structure and autonomy for each given situation and organization. Managing the unexpected demands thinking beyond apparent opposites: We ask both for a culture of clear decision-making structures and responsibilities AND a high degree of flexibility and open communication.

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