# **Conceptual Frameworks for Safety Culture and its Manifestation in Organisations**

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Abstract: Safety and organisational safety culture play an ever-increasing role for social and business organisations. While the use of the different safety management systems is more and more inevitable and becoming an integral part of organisational processes, researching the human factor is of key importance in the different interpretations of safety culture. Recent research on culture has identified a number of factors that affect organisational behaviour, however, little is known about personal values, competences, attitudes and other implicit factors that make people capable of effectively managing safety processes in an organisation. Creating safety at the workplace, raising awareness of prevention, perception of risk factors, minimisation of risks, non-stop "alertness" and appropriate communication, in other words safety awareness and the ability to cope with crisis situations may be defining elements of organisational safety culture.

Keywords: safety culture, organisational behaviours, culture dimensions, Hungary

#### 1 Introduction

Safety represents a fundamental issue in organisational culture which is embedded in societal culture. As a result of cultural changes generated by technological advancement, analogous processes appear at societal, organisational and individual levels. The new risk factors are global, unpredictable, can be forecast only to a limited extent and change quickly and constantly (Szilágyi et. al., 2013). The above statements are fully supported by the financial crisis of 2008 and its implications (Csiszárik-Kocsir, 2012). It is presumed that fundamental changes have taken place in economy in the recent past, which some authors regard as significant in scale as the development of agriculture or the industrial revolution (Szigeti – Tóth, 2013; Tóth – Szigeti, 2014).

A stable organisation is a safe system which is in a normal state of operation and can maintain its operability on a continuous basis (Kornai, 2005). Global changes resulting from innovative technological solutions made it necessary to reconsider the notion of safety culture. Documents from international organisations and

legislation emphasise the role of three fundamental factors in this new conceptual framework: systematic approach, safety awareness and cooperation (Nagy, 2008).

Apart from such factors identified in international guidelines and documents (OECD, 2003), the functional scope of organisational safety and security culture has also expanded in practice. Safety processes on the different levels of corporate hierarchy are performed with different roles and responsibilities and according to different rules, but in terms of the underlying content the highest priority is to implement safety awareness on a wider scale and based on cooperation. Another important shift of focus has also taken place recently: instead of risk avoidance, proactive risk management (Timár – Borzán, 2013) has come to the forefront.

The purpose of this article is to present the conceptual framework and the different approaches to organisational safety and security culture based on academic literature, stressing the high importance of human factors that affect safety culture, and to give insight into some of the relevant characteristics of the Hungarian culture in which it is embedded.

## 2 Approaches to organisational safety

The concept of safety culture does not have a consistent definition and the term may refer to completely different theoretical approaches. When reviewing academic literature pertinent to the conceptualisation of safety - particularly from British and American authors – one may have the impression that the different theories may rarely be used directly to improve organisational safety (Amalberti, 2013). The most popular topics for technical journals include safety culture and safety climate, more specifically issues related to industrial risks (such as public utilities, traffic and health care). As for the diagnostic tools for organisational safety culture, two parallel frameworks have developed: work and workplace safety as well as product safety (Guldenmund, 2007).

Followers (Schein, 2010) of classical culture theories (Hofstede, 1983) researched safety culture from a theoretical perspective of social psychology. Focusing on small groups, management roles and top managers, they looked at how front line managers saw their own working environment. Many questionnaires were created on this ground aiming to assess cultures and safety climates and widely used tools were developed to diagnose safety culture and human/organisational factors.

Based on the findings of these studies, creating a good safety culture requires the following elements:

- a democratic leadership style
- respect for the roles of others within the hierarchy
- respect of processes,
- absence of a culture of failures/blame,

- ability to report about failures/events/accidents/technical incidents without having to be afraid to punishment (culture of openness),
- confidence that people higher up in the hieararchy listen to you,
- a high level of group solidarity and mutual help,
- a low number of industrial incidents, etc.

Other authors (Westrum, 2004) define good safety culture by focusing on how middle and top managers deal with business process incidents/accidents. They stress the need for an in-depth analysis and insist that sanctions should be connected to the adverse events. They maintain that there is a need for a sustainable system which helps avoid legal consequences, as long as there is evidence that the human error/omission was unintentional (just culture). Other authors see the context of safety and sustainability on a global level and encourage an economic theory that is more appropriate to that perspective (Tóth 2009, 2012, 2013).

According to Reason (2001), a safety culture is one where four types of organisational culture are manifested at the same time:

- a) a reporting culture: safety concerns are reported
- b) a just culture: unsafe acts are investigated and sanctions are imposed
- c) a flexible culture: capability of adapting to quick changes
- d) a learning culture: ability to learn from incidents

HRO theorists adopt a risk-based approach (Marais – Dulac – Leveson, 2004; La Porte, 1996) and maintain that a good safety culture meets the following criteria:

- the group is capable of adapting to non-standardized situations,
- leadership has a key role,
- technical expertise is crucial and people should respect the scope of their own roles and responsibilities,
- resilience and the ability to improvise in unexpected situations.

Finally, some theories treat safety culture and quality culture as equal (e.g. Lean management) (Womack, 2003). This approach is different from the previous ones in that it maintains that managers running the processes play a key role in creating a safety culture. Their role is to minimise the failures that may hamper production and manage quality work on the production line, but they fail to place sufficient focus on measures that can help prevent safety incidents.

## 3 Manifestation and elements of safety culture in an organisation

The key elements of an IT/information-driven culture include ethical behaviour, values, life style, health, personal life and safety (Targovski – Rienzo, 2004). Safety culture is always part of the different organisational culture models that are created in culture studies.

Organisational safety represents the undisturbed and appropriate implementation of (business) processes. Safe operation requires the minimisation of threats and risk factors in order to protect the company's assets, including the confidentiality, integrity and availability of resources (Michelberger – Lábodi, 2012). It should be noted that the availability of IT support to manage risks provides a wide range of opportunities for users, however, there are great differences in the ways such risks are represented in documents and in the tools used to assess them (Szabó, 2014). (Pató, 2013, 2014, 2015) argues that the above goal may only be achieved by having job descriptions that focus on people and corporate goals, and the alignment of the two.

For all employees that are part of a consistent and integrated safety and security culture created within the organisation (Lazányi, 2014), the concept of safety contains the same elements, norms, core values, behaviours and controls, and they know their rights and obligations related to them and enforce them.

Consequently, a key element of safety culture is how employees relate to safety (their attitudes, experiences, behaviours and conduct etc.). No safety culture can be built in an organisation without safety awareness, and the continuous improvement of such awareness will considerably influence and even determine this culture. Safety awareness is a soft area of the safety culture in which it is embedded. It follows that safety culture is considered to be a subculture which is based on functional grounds but also supports the unique culture of a particular organisation (Vasvári – Lengyel – Valádi, 2006).

According to NRC's definition, safety culture is determined by the factors that influence the employees'behaviours and actions. The most important considerations for shared norms, values and rules are as follows:

- safety is an overriding priority
- employees assume personal responsibility for maintaining safety
- they are proud of their organisation/company
- they demonstrate ownership

In addition to the above considerations, an advanced safety culture is also homogenous. Employees at all levels of the organisational hierarchy work non-

stop to identify and minimise risks and raise awareness of them. In other words, safety is a high priority in operations, even if the decisions that need to be taken may run against current business interests (Izsó, 1997). Management in most cases needs to make a mindshift, as safety will not directly increase the company's profits. Therefore, more focus needs to be placed on the psychological background of safety awareness, for example by implementing a Safety Awareness Program (Vasvári – Lengyel – Valádi, 2006).

Another key element of advanced safety culture and safety awareness is commitment, not only by management but all employees. Commitment needs to be the fundamental attitude in all employees' organisational behaviour. Safety culture can be improved at the level of main and subsystems, it can be trained, it helps personal development, it can be integrated and transferred from one generation to the other, just like any other elements of inclusive cultures.

McKinsey's 7S model (Peters – Waterman, 1982) divides the elements of organisational culture into two groups: hard elements are related to an organisation's/company's regulatory framework and include things like strategy, organisational structure, management tools, productions systems etc. Soft elements, on the other hand, are more difficult to describe and cannot be quantified, however, they are are as important as the hard ones in shaping organisational culture. Soft elements include the employees' and managers' competences, explicit and implicit knowledge, their training and qualification, the values and norms of the organisation, level of confidence etc. that determine organisational behaviour (Tóth-Bordásné Marosi – Bencsik, 2012).

Elements of safety culture can be divided along the same lines:

- Hard elements: regulatory framework, laws, guidelines, legislation, standards, control strategies, safety management, methods, managements, strategy, IT systems etc.
- Soft elements: factors influencing organisational behaviour, safety awareness interventions, methods, training, education, sensitisation, core values etc.

A general statement that often occurs in safety literature is that while safety climate is easy to change, safety culture is not. The former refers to the objectified aspect of culture (Schein, 2010), whereas the latter refers to subjective values. In other words, elements of the safety climate may be changed through organisational management processes within a certain period of time, but the values, beliefs and other implicit contents that represent organisational culture are hard to change, as it may take several generations of cultural change for one culture dimension to develop. Neither standard risk matrices, nor action plans cover such a long period of time.

Another truism in academic literature is that there is no ideal safety culture, but there are cultures that may be appropriate in any situation. In an age when the different corporate cultures are becoming more and more difficult to classify, any approach that is exclusively normative will be counterproductive. To apply different safety models can only make sense if one can strike the right balance among flexibility, competitive advantage and performance. This should be based on the management/application of the different safety cultures.

## 4 A fit between cultures vs. safety

As part of the fitting between societal and corporate cultures, organisational cultures embedded in national cultures are heavily affected by the macro-cultures that surround them. This is mainly due to the fact that the history, tradition, sociography, training and education system of a country has a deep impact on the values, norms, attitudes and behaviours of the communities living there.

Therefore, the purpose of comprehensive research on national organisational culture is to explore the specificities of the surrounding cultural context. For example, if the executive director of a company is able to recognize that national culture has a predominant impact on his company's corporate culture and can raise awareness in his employees, it may trigger powerful resources (Jarjabka, 2010).

It follows that cultural embeddedness is a defining factor for organisational safety culture, as safety behaviours are inseparable from the different cultural dimensions. Therefore, the interaction between national and organisational cultures along with deeply rooted values and cultural dimensions may be decisive factors in shaping organisational safety and security in the future.

However, it should be also noted that "universal" values that are independent of cultural embeddedness are presumably as influential as national cultural dimensions.

#### 4.1 Cultural dimensions and Hungary

Based on academic research on societal and organisational culture and the organisational models created by national culture researchers, we can conclude that organisational culture in Hungary can be classified either as a "well-oiled machine", using Hofstede's model (2001), or as an "Eiffel tower", using the Trompenaars and Hampden-Turner model (2000). A "well-oiled machine" is one where power distance is small and uncertainty avoidance is strong. Other key characteristics include a high priority for a stable environment, a process-driven approach and a focus on result and goal-oriented operations. The role of managers is to lead and support measureable results. "Eiffel tower" type of corporate cultures have a strong hierarchy and a task-driven approach where logic and reason as well as accurate job descriptions are highly valued. The role of managers in such companies is to coordinate operations and make long-term plans. What

these two models have in common is that both have a strong focus on safety which can have an influence on safety and security culture in Hungarian organisations.

One of the most comprehensive empirical studies on national and organisational culture was the Project GLOBE (Global Leadership and Organizational Behavior Effectiveness) that studied cross-cultural dimensions in 61 countries along nine competencies. In terms of Hungary, the findings of the research are the following (Bakacsi, 2008). This article highlights only the competencies that are relevant to safety culture:

Uncertainty avoidance is low so employees are capable of following changes. Although people refuse large power distances, they may be rather common in organisations, consequently there is a low degree of proactivity in decision-making situations and personal ownership.

In terms of future orientation, Hungarians prefer short-term goals, immediate decisions and ad hoc solutions. The international study STRATOS (Strategic Orientation of Small and Medium Sized Enterprises) has come to the same conclusion (Jarjabka, 2010), which shows that managers of small and medium-size enterprises in Hungary do not make detailed long-term plans for the future but they are committed to change (Barakonyi, 1995).

Human orientation in Hungarian society is low (similarly to Germany and France). This culture dimension shows the degree to which individuals in organisations or societies encourage and reward individuals for being caring, empathetic, altruistic or tolerant to others. Hungarians have been found to be competitive, unbiased and lacking confidence in each other (Bakacsi, 2008).

The above findings make us presume that short-term thinking, a low level of personal responsibility and the lack of confidence in others do not support the future development of safety culture.

The explanation for this is the low level of social capital in Hungary. Varga has supported this statement with several international studies, concluding that Hungary is considerably lagging behind other countries in terms of social capital, as revealed by the Social Cohesion ranking published by the Swiss IMD, looking at 60 economies (where Hungary ranked last). This is not beneficial for the Hungarian economy as low social capital implies a low level of trust. And without trust, it is very difficult to think long-term and establish economic partnerships (Varga, 2012).

#### 4.2 A snapshot of Hungary and its safety culture

Not much academic research has been conducted on the safety and security culture of Hungarian organisations. Fearing a loss of reputation, managers are usually reluctant to disclose information about that so one needs to rely on statistical data to assess Hungarian companies' safety maturity. For this reason, some of the facts

and information stated in this article are based solely on opinions by authentic experts.

It is rather common in Hungarian organisations that the main obstacle to the effective implementation of corporate safety policy is the company's corporate culture itself (norms, values and beliefs etc.). Mindset and mentality in the everyday practice includes the following elements:

- shortage of personnel required for the operation of key processes,
- overburdened employees, and sometimes unjustified cost cuts,
- unreasonable streamlining of costs/human resources,
- fire-fighting in problem-solving,
- prevention and planned crisis management is not a priority for managers,
- short-term thinking, ignoring "what if" scenarios
- huge stress, day-to-day work drains all energy.

Research conducted in Hungary reveals that the most common weaknesses of safety culture in Hungarian companies are the following (Vasvári – Lengyel – Valádi, 2006):

- no systematic approach to safety management
- staff is not informed about safety incidents within the company or only to a limited extent.
- no opportunity is provided to learn from safety incidents and identify safety measures,
- safety and security mechanisms are weak or based on insufficient evidence because systematic risk assessment is not part of business practice (not part of the culture)
- organisations tend to invest in production processes, rather than in effective safety controls.
- they are reluctant to spend money on something that has never happened because ROI on safety investments cannot be calculated exactly.
- lack of safety culture attributes that are required for the successful implementation and use of a safety management system, such as openness, spirit of experimentation, innovative thinking, the appropriate cost-benefit thinking etc.
- although managers must follow procedures, the profit motif supercedes safety (eg. banks)
- some companies prefer to pay fine rather than consider the implementation of a proactive prevention system.

Interviews with Hungarian company managers reveal that professional safety is a priority for those large companies that must follow international standards, guidelines and laws. But their primary goal is to avoid sanctions, rather than create a consistent and advanced safety culture and integrate it to the organisational culture.

Overall, the above stated phenomena suggest that the level of organisational safety culture in Hungary is less than optimal and safety awareness is rather immature. In order to create a safety and security culture that is based on awareness and intentions (Lazányi, 2014), all stakeholders of the company should accept that safety is a requirement. As a result, a complex system would emerge which is based on rules and human factors and where all individuals work towards creating and maintaining a safe organisation from an inner motive and conviction (Sharpanskykh, 2012).

### 5 Conclusion

The design, development and effective implementation of organisational safety must be aligned with the organisation's safety culture which is impacted by the organisational and national culture in which it is embedded.

Robust organisational safety requires, on one hand, a high quality regulatory environment which helps the designing process (Michelberger, 2013) (e.g. standards, definition of roles and responsibilities, appropriate communication). On the other hand it requires tools to raise/improve safety awareness and practices to be used in managing crisis situations. Such tools include training, testing, follow-up guidelines, identification of a crisis management team and their availability (e.g. list of individuals and authorities to contact in emergency)

Continuous improvement of safety culture does not only need professional expertise, knowledge, experience and certain personality traits (capability to learn, openness to new ideas, emotional stability etc.), but also some deeply rooted societal and organisational cultural factors that determine organisational behaviour: one can probably learn corporate all safety rules and applications, but there is no ready-made guideline for every unexpected event.

In the future, regulatory models may be less consistent so the written and unwritten rules of organisational culture will need to be treated/developed in a flexible way. Therefore, companies will need employees that have convertible knowledge and personality traits that are in line with the company's innovative processes and safety strategy.

As a general conclusion, we can establish that development of the personal competencies that support safe corporate operation by gaining a deeper understanding of a company's cultural characteristics will be a key focus for cultural management in improving organisational safety culture. The tests, tools and complex methods that may be necessary for that will need to be validated by national and foreign studies.

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