Chapter 2
Safety Models, Safety Cultures: What Link?

An Introduction

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Abstract In this introductive chapter, Claude Gilbert, President of the FonCSI "strategic analysis" group on safety models and safety culture, shares with us the group's initial findings on this topic. This text was also used as the introduction to the research seminar organised in June 2016, key step of the project that led to this book. Depending on what is meant by "model", the way to address the link between safety models and safety culture will be different, ranging from straightforward to very complex. This chapter adopts a viewpoint focused on the actors concerned by safety, and questions how they are led to "navigate" through a world of constraints and opportunities. It highlights the importance to consider what is "already there" (company cultures), what may drive the organisations choices among the multiple offers available on the "safety culture ideas' and methods' markets". It ends up giving food for debate by proposing some research avenues to help industrial organisations better meet their expectations in terms of safety culture.

Keywords Safety models · Company culture · Constraints · Trade-offs

1 A Simple Question?

FonCSI's industrial partners asked a question to the FonCSI "strategic analysis" group, addressing the link between safety models and the safety culture in order to increase safety within companies carrying out hazardous activities. Depending on the approach, this question can be very straightforward or, on the contrary, become rather complex. Furthermore, it assumes a consensus on the very definition of safety, which is far from being the case.

The question is straightforward when the "model" is considered as a prescription, in the sense of a "model to follow" and something that can contribute to improving safety culture. Safety culture is then often associated with (a) an

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awareness of hazards and risks and (b) the way people involved in these activities adopt individual or group behaviours in order to manage these risks in the best possible way. In this approach, one can distinguish between two elements: a production of knowledge accompanied by recommendations and procedures, and conscious human beings whose behaviour must comply to these recommendations and procedures. This is a classic scenario. It relies on the domination of knowledge over action and on the distinct roles of those who think (researchers, consultant, etc.) and those in action in the field. In most cases, the expectations of actors who want better safety (e.g. industrial companies; regulatory authorities) are expressed in reference to this scenario.

The question becomes less straightforward when the "model" is considered from a more analytical rather than prescriptive perspective. It then refers essentially to the work carried out by researchers and consultants. This work distinguishes between various configurations of reference frameworks, organisational structures and practices that are typical of an industry (Amalberti, 2013) or even, of a company. Although this type of work can lead to recommendations and procedures, that is not its primary goal; even less so given models (resilient, safe or ultra-safe, for example) prevail in the industries and companies concerned for survival reasons. These reasons differ from one industry to the next, as does the relationship to safety: civil aviation and the nuclear sector have no choice but to have ultra-safe safety models, just as sailors and fishermen have no other choice than to adopt a model that is simply resilient. When we approach the "model" from an analytical angle, the question arises as to how important safety is or is not, considering the various constraints to which the different industries are subjected. Moreover, such an approach partly blurs the boundary between safety models and safety culture. Indeed, practices that are inseparable from what is usually meant by safety culture are used to define safety models.

The question initially put forward is no longer straightforward at all when we do not consider safety models to be external tools that can/must be applied to individuals and work groups in order to improve safety. This is the case when we take as a starting point to the analysis the safety culture as it is already present within the different industries and companies, and thus as we can understand it from an anthropological perspective. In other words, when through the notion of culture we seek to embrace what certain sociologists call the "already there" (Lascoumes, 1994), i.e. everything that existed prior to the desire to make safety-related changes. Thinking from this perspective means firstly considering that within industries and companies there are already safety cultures that simultaneously incorporate "safety models" (with a coexistence of old and new models), local knowledge (sometimes formalised, sometimes not), and know-how that results from practical experience (with various ways of sharing and transferring it). The whole corresponding to a quite baroque combination. It also means considering that these safety cultures—combinations of distinct elements—correspond to the trade-offs made between the various constraints to which the industries and companies are subjected (profitability, business continuity, safety, preservation of social harmony, etc.). When, instead of throwing ourselves head-on into the pursuit of the desired future

and making a clean sweep, we first try to find out how what is "already there" is configured, the perspective changes. When it comes to safety, the challenge lies in focusing on effective possibilities for change given what already exists, while also taking into account the internal and external contexts within which these changes are to take place.

2   Shifting the Question

The discussions that took place within the FonCSI group establish a link between these general or even abstract questions, while also shifting the questioning. Rather than questioning the safety models/safety culture combination (in one direction or the other), it would seem preferable to "situate" the actors concerned by safety (in the first instance, those in companies), seeking to promote it in relation to a set of constraints and opportunities (Fig. 1).

In fact, industrial companies are at the conjunction of:

"Company cultures", which correspond to what is "already there", reflecting everything that has been established and accepted in the way of looking at and implementing safety (via the general activities) and which has been incorporated into the organisational structures, procedures, habits of individuals and work groups, technological choices… through which safety is truly embodied, "the dead seizing the living" («*le mort saisit le vif*») to quote an expression used by Pierre Bourdieu (1980). Cultures buried within the actual reality of companies and that
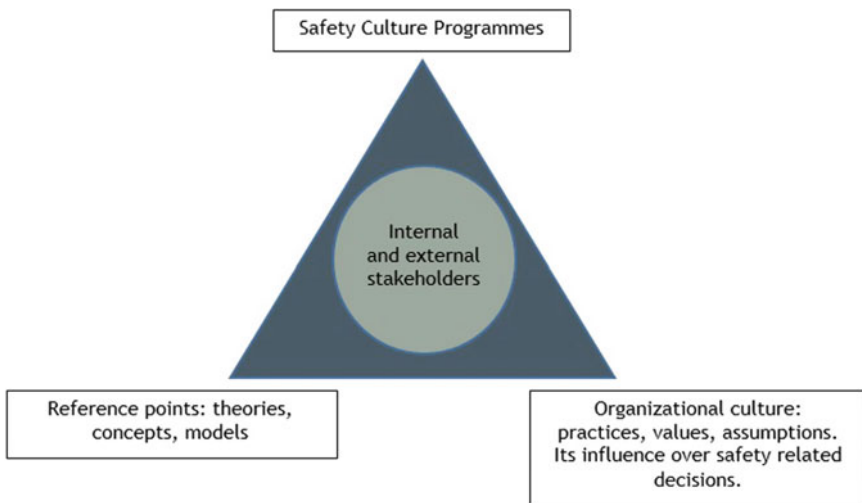

Fig. 1 The safety models and safety cultures triangle by Hervé Laroche and members of the FonCSI "strategic analysis" group

rather imperceptibly carry a great deal of weight in that they determine both the possibilities and impossibilities for change.

A safety-related offer in the ideas market fuelled by intellectual output (concepts, theories, methods) from the academic world and from consultants, and which can have analytical or prescriptive aims. An offer which, as it spreads across both the academic field and the field of consulting, sometimes spilling over into the public arena, can incite action or a manifestation of the intention to act. Indeed, it is regularly in reference to these potential resources that public debates arise when incidents, accidents or crises occur.

A set of safety-related approaches that aim to improve safety within companies, in any form whatsoever. These approaches can have internal origins, since different categories of actors can, depending on the circumstances, "have an interest" in promoting safety. Some research has indeed highlighted the fact that safety, which is a cross-functional issue within companies, can be a lever for different types of action or even a way to gain power (Steyer, 2013). The approaches can also have external origins and stem, for example, from actors that, for various reasons, are looking to demonstrate specific skills in the area of safety and thus position themselves in what is in fact a market (connected, of course, to the ideas market).

Therefore, the choices made in relation to safety, whether these are to promote models and/or strengthen cultures, will not be based solely on rational acts (in the generally understood sense). They will also result from the way in which industrial companies are led to "navigate" through this world of constraints and opportunities, through this "force field" (Chateauraynaud, 2011), once they are required to act (whether due to a deliberate desire to achieve efficiency or whether in reaction to requirements or requests for justification from the environment within which these companies operate—regulatory authorities, media, civil society, etc.).

A few lessons can be drawn from this:

It is probably unrealistic to believe that "good" safety models exist per se, either as a result of academic or expertise work, or even as can be evaluated internally based on efficiency criteria. A good safety model is indeed a model that fulfils objective requirements, which specialists are skilled at setting, but also a model that is compatible with the culture of the company in question or, at the very least, that provides levers to understand the company such as it is configured by the culture that characterises it; a model that gives "good reasons" to act and that provides elements to justify this (particularly with regards to external actors acting as observers or even critics).

It is probably unrealistic to believe that it is possible to strengthen the safety culture solely by disseminating "good" safety models, particularly if these focus on raising the awareness and influencing the behaviour of individuals (as it is still partly the case today, despite the emphasis placed on the organisational aspect). Whether or not they involve the integration of new safety models, actions that are effective and long-lasting in this area are those that get to the very foundations of the company culture, "buried" as it is in the company's procedures, organisational structures and practices, and those that successfully re-open the "black boxes" that have thus formed.

3   So What?

Based on these observations, what are the avenues to explore in order to meet the expectations of industrial companies, even if it means shifting the questioning (as is actually expected from the FonCSI group)?

First avenue: emphasise the need to truly establish what is "already there" before engaging in any deliberate action in the area of safety. This is a difficult task for several reasons. Going down this path means recognising that the reality of companies is particularly complex with the accumulation and layering of different technologies and organisational options that correspond to different logics. It also means recognising that even though safety can correspond to specific competencies, it is largely diluted within the general activities of companies and is thus part of their general culture. Consequently, understanding what already exists and its many consequences requires investigation and analysis work that can seem a priori costly (not only financially, but also in terms of time, investment, efforts spent elaborating specific diagnostic tools, even if it is based on recommendations from the IAEA[1]). It can also be costly on another level, since it can produce an image of companies that does not match the one presented for marketing and communications purposes. Nevertheless, this cost should be compared to that of not proceeding down this path (and all it entails).

Second avenue: consider that safety models, as they are introduced in the academic and expertise market, are resources for the internal and external actors who, for various reasons, act as the promoters of safety. Going down this path means recognising that, beyond the fact that it seems to be an evident problem that needs solving, safety represents a challenge but also leverage for power within and outside of companies and it can act as a "springboard". Therefore, it means recognising that the different advocates of this cause are driven by different types of interests and that they can potentially be used to promote safety. In this case, it should be determined which of these actors and groups of actors are, in given circumstances, the most able to do what is required. The difficulty lies in the fact that any decisions are then as scientific as they are technical and political.

Third avenue: consider safety-related actions as being part of a company's strategy and not simply as the application of procedures. Going down this path means recognising that safety is not a technical matter and that it is above all a strategic matter, given the existence of tension or even contradictions between the safety culture as it is incorporated into the general company culture and safety as it is presented in models. It therefore means recognising the need to find the actors and action plans that are most likely to find ways to create interfaces between the "existing", or what is "already there", and the planned changes contained in the models. In particular, so that these changes are long lasting. The difficulty, then, lies

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[1]International Atomic Energy Agency.

in identifying the "go-betweens" who have enough tactical or even political sense to make these changes or to guide them, and to allocate the necessary resources to their implementation.

All of these avenues and the perspective from which they have been formulated will no doubt give rise to much debate. Questions have already emerged within the group following the analysis it carried out: "If safety can be alternately an object of power, a strategic company objective or an academic subject, what is its essence?" Or, "If safety is the subject of exchanges between authorities that develop regulatory requirements, actors that resist (or not) and experts that make recommendations, what then is the nature of the exchange that takes place?" And, from an even broader perspective, "What is the economy of this ecosystem?" Indeed, "Though the company is at a crossroads, it is also at the centre of a hub…". In closing, it is clear that the approach suggested by the FonCSI "strategic analysis" group raises new questions even though it is already possible to identify concrete avenues for action.

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