

# A Review of Literature: Individual Blame vs. Organizational Function Logics in Accident Analysis

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**When an accident happens in an organization, two different approaches are possible to explain its origin and dynamics. The first approach, called *individual blame logic* aims at finding the guilty individuals. The second approach, called *organizational function logic* aims to identify the organizational factors that favoured the occurrence of the event. This article compares the two different logics of inquiry, the consequences that they produce, in particular in the case of accidents caused by unintentional actions. Though favoured by the scientists, the organizational function logic approach is in real life usually beaten by the individual blame logic. Reviewing the literature, this article brings together the arguments for using the organizational function logic from the perspective that learning from accidents is necessary to prevent them from happening again.**

## 1. Introduction

Accidents and disasters in organizations are shocking events for society. These events call for an explanation. As Weick puts it: 'A cosmological episode occurs when people suddenly and deeply feel that the universe is no longer a rational, orderly system. What makes such an episode so shattering is that both the sense of what is occurring and the means to rebuild that sense collapse together' (Weick, 1993, p. 633). Roux-Dufort associates to this fact the notion of the necessary cosmogonic explanation after crisis. 'Literally the term cosmogony means a mythological account about the origin of the universe and its components. The Bible's Genesis is a cosmogony. [. . .] The event seen as a cosmogonic episode therefore implies that it sheds light on its consequences and its origin' (Roux-Dufort, 2007, p. 110).

There are two distinct approaches possible for the explanation of the origin and dynamics of an accident, which usually lead to different conclusions. When we

speak of accidents in this article they are by definition the result of unintentional acts.

The individual blame logic (IBL) is an accusatory type of approach which tries to identify the guilty individuals. This approach is typical of criminal law, but is also prominent in organizations based on a punitive culture (Avery & Ivancevich, 1980). More generally, this approach fits in with the wish of society to identify a clear cause for the accident (Helsloot, 2007).

The organizational function logic (OFL) is an organizational and functional type of approach which intends to identify the factors within the system which favoured the occurrence of the event. In this second approach, once these factors are removed, it is hoped that similar events cannot happen again or that they will occur less frequently and less probably.

The two approaches are characterized by two distinct inquiry logics which generate different consequences.

A central aspect in this article is the measure in which both approaches give the possibility to learn from

the accidents under investigation. The subject of learning from accidents is a relevant theme in a risk society (Beck, 1986; Luhmann, 1991) with its seemingly endless series of emerging risks.

As a preliminary remark it must be noted that the OFL itself consists of more than one way to conduct inquiries and organizational analyses in the case of an accident. Well known is the explanation that the school of *Normal Accident Theory* (Perrow, 1999; Sagan, 1993) gives for the analyses of accidents, i.e., accidents are 'normal' in certain technical and organizational contexts. Another classical approach within the OFL is the *High Reliability Theory* (Roberts, 1990, 1993; Weick, 1990; Weick, Sutcliffe, & Obstfeld, 1999; Weick & Sutcliffe, 2001), where an area of tangible improvement of organizational reliability is identified in the management processes. The inquiries of major accidents like those of Weick for the Tenerife accident (1990), and of Vaughan for the Challenger accident (1996) are a point in case. An interesting attempt to combine both viewpoints was made by Snook (2000). For a critique of both approaches see Marais, Dulac, & Levenson (2004), and for a discussion of more approaches within the OFL see Catino, 2006.

The objectives of this article are:

1. to compare the two inquiry logics IBL and OFL. On the basis of the inquiry logics followed, different 'facts' can emerge;
2. to highlight the 'perverse effects' IBL may have in the sense that by searching for the individual responsibility IBL prevents real learning, thus, is unable to improve the system;
3. to evidence how the OFL, which is oriented on learning and thus preventing accidents, reinforcing safety and improving resiliency, does not have institutional legitimacy as IBL, and therefore its merits remain unheard;

As an introduction the following case based on a real accident is presented.

### 1.1. The accident

Mr. X is 65 years old when he is hospitalized for an emergency on Saturday morning for the fracture of his femur. His general condition is good, though he has had rheumatoid arthritis for several years. Upon entering the hospital he informs Dr. *First*, the admitting physician, that he is being treated with Methotrexate (Mtx), two vials of 500 mg per week. Dr. *First* asks Mr. X and his daughter who is a nurse, for a copy of the prescription. Meanwhile, he writes what the patient told him on the patient case sheet. Mr. X is admitted to the ward which lacks the vials of Mtx 500 mg; they are ordered from the internal pharmacy. In the meantime, the daughter of

Mr. X confirms what her father said in admittance, providing neither written documentation nor his medicine from home. Two days later, Dr. *First* goes on vacation leaving the ward to Dr. *Second* who visits the patient daily. Dr. *Second* correctly copies the prescription (two vials of Mtx 500 mg once a week). The following Wednesday, he treats the patient with the first dose of Mtx. The anaesthetist visits Mr. X, controls the therapy and signs the authorization for surgery. Mr. X undergoes surgery (endo-prosthesis) and afterwards, a second dose of Mtx. Unexpectedly, the general condition of the patient worsens: his temperature reaches 38.5°C with marked asthenia. A possible infection is suspected because of the operation and a broad spectrum antibiotic therapy is started; at the moment no one considers the dosage of Mtx, nor the doctors on duty, or the intern. On day 8, the general condition of Mr. X worsens even more; his fever rises above 38.5°C with marked asthenia, leucopenia and granulocytes. He is transferred to the infectious diseases ward, where he is treated with folic acid for suspected septicaemia. On the 11th day after being admitted to the hospital, Mr. X dies.

### 1.2. The quest for an explanation

What happened? What was the error? The facts which can be straightforwardly collected are these: the drug Mtx is used to treat rheumatoid arthritis, but in doses of 5 mg and not 500 mg, as was used. At this level it is used to treat malignant tumours, but it must be administered together with drugs like folic acid, which are able to reduce the harmful effect of Mtx on the production of white blood cells. Mr. X was treated with a dosage 100 times superior to what was necessary for him and the error of the dosage was not noticed:

1. by Dr. *First*,
2. by Dr. *Second*,
3. by the doctors on duty in the afternoon,
4. by the anaesthetist,
5. by the intern,
6. by the pharmacy.

Considering the case from the perspective of the IBL, the central question is: Who has made a mistake and who has made the most prominent mistake?

Considering the case from the perspective of the OFL, the central question is what are the organizational factors that favoured this mistake? It then is clear that the collected facts are not sufficient to answer this question.

## 2. The two approaches presented

In this section both the approaches are presented.

### 2.1. IBL

The starting point for the IBL is the assumption that people make mistakes because they do not pay enough attention to the task they are doing. It, therefore, adopts a causal linear model leaving the organizational context mostly in the background. The efforts to find the blame are as a result directed to people in the front line, and the result of the approach is the attribution of the blame. If the guilty person is found, he or she can be held responsible for the accident. In practice this may mean that the 'bad apple' will be removed or prosecuted.

The IBL is based on some 'good reasons' (Boudon, 1992): beliefs that are valid for making decisions and carrying out the choices made. These beliefs indicate what the actors consider right in certain circumstances, to behave as they behaved. Referring to Reason (1997) the IBL, is based on some of the following beliefs:

1. *Voluntariness of actions.* People are considered as free agents capable of choosing between safe and unsafe behaviour. As demonstrated by numerous research reports, human actions are implicated in 80–90% of accidents and because human actions are perceived as subject to voluntary control, then accidents must be caused by negligence, inattention, inaccuracy, incompetence, etc.
2. *Responsibility is individual.* The personal based model is based on a conception of individual responsibility. As in criminal law, the personal approach searches for the person who is responsible for the error.
3. *Sense of justice is strengthened.* The IBL is emotionally satisfying; after a serious error, or worse a disaster, the identification of the blame tends to satisfy the people involved and the public in general.
4. *Convenience.* Basing the responsibility on the individual undoubtedly has advantages for organizations from the legal and economic point of view, also because it lets them maintain their organizational structure, their rules and their power system unaltered.

The IBL is in agreement with the Western legal system. Gherardi (2006) says that safety, from the legal perspective, is a matter of individual responsibility and a potential source of liability and punishment. The goal of criminal law is in other words to identify the responsible individual and to allocate adequate punishment for the type of crime committed.

The search for who is responsible tends to focus the inquiry towards the identification of one or more people who committed the error. These people who

activate the accident are often the front line operators of the complex human–machine system. It is obviously easier to identify a person who is in close contact with the system (the pilot of the plane, the physician, the nurse, the control panel operator, the train conductor, etc.) who is responsible for the event, rather than the hidden factors of the organizational and managerial aspects which are the product of collective actions diffused in time.

### 2.2. The OFL

There is an increasing recognition that mishaps are inextricably linked to the functioning of surrounding organizations and institutions (Dekker, 2005). The OFL is based on the assumption that failure is part of the human condition, and if we cannot change the human condition, then conditions under which human beings work can be changed (Reason, 1997). The organizational model views human error thus, more as a consequence than as a cause (Reason, 1997, p. 226).

If the IBL leads to the identification of the person who is responsible for the event, the OFL instead leads to the identification of the latent factors<sup>1</sup> and criticalities that are at the origin of the accident. Remedying this can keep other accidents from happening in the future. The OFL therefore reconducts the causal factors of an event to the whole organization. It acknowledges that accidents are the result of mistakes made by individuals, but these mistakes, however, are socially organized and systematically produced (Vaughan, 1996). From this approach, accidents are derived from a connected sequence (usually rare) of defects in numerous defense systems, safeguards, barriers and controls to protect the organization from unknown hazardous events.

OFL approaches usually distinguish the 'active errors' which activated the accident committed by the operators closest to the task, from 'latent factors' understood as organizational criticalities which made the accident possible, or sometimes caused it: temporal pressures, equivocal technology with ambiguous man–machine interfaces, insufficient training, insufficient support structures, a work atmosphere which is not safety prone, unclear procedures, communication problems and still other factors (Reason, 1990, 1997). It is obvious that the human factor is the element which directly induces an accident in most cases, but the human factor is only the *first order cause*<sup>2</sup> of the accident history where history is completed through the analysis of the entire sequence of events and of the latent and pre-existing organizational factors (Catino, 2006).

The main idea of the OFL is to shift from the individual causes to the understanding of the accident in terms of 'reasons', of why the events and the errors

occurred (Leveson, 2004). The analyses of famous accidents, like Chernobyl or Bhopal have shown that these disasters were not caused by the coincidence of technological failures and human errors, but by the systematic 'migration' of the organizational behaviour towards the accident under the influence of efficiency and cost reduction pressures in aggressive and competitive environments (Rasmussen, 1997). The analysis of the disaster of Linate (Catino, 2006) points out how the flow of events cannot be lead only to the action, which is or is not the voluntary action of a single operator.

This OFL approach points out the limits of a model of linear causality. Discussing linear actions and events which cause an accident is reductive, because it does not incorporate the nonlinear relationships between the events and the feedback. Such nonlinear relationships are for example the commitment of management to safety and the 'inheritance' of the errors and omissions of those who designed and manage the operational and organizational system.

It will be clear by now that the way in which the same accident phenomenon can appear 'objectively' different under the two logics, stems from the fact that there are two processes of different *framing* at work (Dewey, 1938; Shrivastava & Schneider, 1984; Dodier, 1995). Each one selects from the abundance of facts what is relevant for inquiry, based on the different finalities to be pursued. What is taken into examination is only what is considered *significant* in relation to the goals of the inquiry. This leads to a different way of reconstructing the 'truth'. The concept of 'cause', together with the concept of 'finality', is the element which most distinguishes the two different inquiry logics and is also the most controversial.<sup>3</sup> The two logics thus possess different frameworks (Goffman, 1974), they operate with different paradigms (Kuhn, 1962), and they have different *sense-making* processes (Weick, 1995). The two logics achieve a different kind of accountability: the 'what happened' question thus relates to a social and institutional construction of the facts.

### 3. Inquiry logics: the case for OFL

As we have seen there are different criteria for the attribution of the cause of the accident: the search for a cause is inevitably tied to the point of view and interest of who is making the inquiry. In this section the arguments for the case for OFL are presented.

The central argument against IBL lays in the vicious circle<sup>4</sup> illustrated here below (Figure 1).

Once the 'guilty actors' found according to IBL are removed, it is very probable that the organizational system will continue to function with the same organizational conditions and mechanisms which lead to the

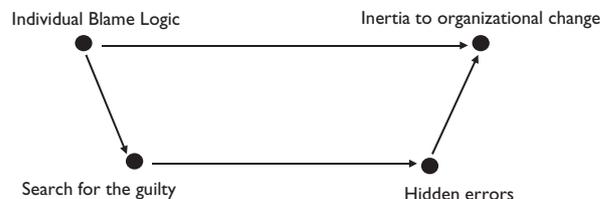


Figure 1. The vicious circle of the individual blame logic.

error and to the accident. Being principally interested in searching individual responsibilities, the IBL creates a sense of fear of sanctions and of legal actions. In a punitive organizational environment the individuals refuse risks and worry more about their own legal safety than the safety of the user. The Institute of Medicine (USA) aims to decrease errors in the health field by 50% in 5 years, but as the *New England Journal of Medicine* observed every effort made to prevent the damage derived from a medical treatment is obstructed by the 'dead weight' of a legal regime which induces the operators to secrecy and to silence (Brennan, 2000). Merry & Smith (2001) again referring to the health system affirm that working under the threat of legal action creates an atmosphere of fear which does not lead to the best management of people in a medical system. The 'demonization' of errors prevents physicians from admitting and discussing them publicly because this information could be used against them in criminal lawsuits. The legal system puts the doctor and the patient one against the other (Gawande, 2002), forcing both to give an unrealistic version of the facts. Therefore, fear of legal consequences favours the fact that errors are hidden.

Adopting the IBL, the organization is not able to understand its own errors (Crozier, 1963; Hale, Wilpert, & Freitag, 1997). The result is organizational change inertia: if one or more people are responsible for what happens, why change things? It follows that the persistence of a blame culture, reinforced by a certain type of legal action, becomes the first obstacle to the creation of greater safety. As Vaughan wrote (Vaughan, 1996, p. 392): 'the benefit of an explanation which immediately identifies the cause of an organizational failure in the decision makers is that remedies are possible quickly. The ones responsible for the accident can loose their jobs, be transferred or be sent into retirement. New rules which regulate decision making can be instituted. After making these changes . . . the organization can go forward'.

Turner & Pidgeon (1997) affirm that the impact of the legal system has the power to suffocate any attempt of learning from the errors. For example, during a legal inquiry, the organizational improvements could be omitted or delayed because it could constitute implicit admission of previous negligence. In this case these improvements would show that the organization possessed elements which could have avoided the accident.

In research from many years ago, Drabeck & Quarantelli (1967) supported the perfect rationality in the identification of scapegoats following disasters and the usefulness for the managers of identifying the blame at the individual level. The incrimination of single individuals, having become scapegoats, was an expedient to delay and avoid structural changes of the organization (Douglas, 1995). Public opinion was lead to believe that the exemplary punishment of the 'guilty' individual could serve as a future deterrent.

In reference to the Challenger accident, Vaughan affirmed that 'this case shows why it is so difficult, for the normative and legal system to assign the right responsibilities when the organizations have harmful results. It is well known that the division of labour in organizations obscures the responsibilities of the organizational actions' (Vaughan, 1996, p. 408). This type of analysis runs the risk of not producing changes, but also risks limiting itself to an extremely dangerous blame culture. It is also true, more prosaically, that when a single person is identified as responsible for the disaster, the individual responsibility is split from the responsibility of the organization, with overall significant economic and financial advantages for the system.

While the IBL is not likely to produce organizational changes, the OFL can be used for determining the organizational conditions of the events of the accident and removal of the latent critical factors. Above all, the OFL looks for those critical organizational conditions which if not removed, will continue to create risk and

error conditions independent of the people who are operating (Figure 2).

The OFL<sup>5</sup> tends to substitute the question 'who caused the accident?' with 'what conditions and mechanisms have increased the possibilities of its happening', 'how and why did the defense systems fail?', 'what can we do so that the event will not be repeated?' (Reason, 1997). As ascertained by research from the last 25 years, disasters and accidents in organizations are not generated by a single cause but by a number of interrelated events which taken singularly can appear to be totally insignificant and not influential in the origin of the accident (Weick, 1990; Turner & Pidgeon, 1997; Reason, 1997; Dekker, 2005; Hollnagel, Woods, & Leveson, 2006). However, they enter into a relationship with each cause, and in the presence of a weak defense system, they increase the possibility that an accident will happen.

As a detail, for the OFL, both an accident and a near miss<sup>6</sup> are of equal interest, if they are morphologically similar. The near miss in fact is weakly relevant from the legal point of view, but crucial in the organizational functional perspective. It informs the analysts about the state of risk of a system, and observations of its magnitude and frequency is essential to understanding the latent critical areas of an organizational system (Table 1).

The central aim of the OFL is to learn from errors and accidents. On the basis of the lessons learned from the event, it attempts to actively generate better prediction ability in the operations of the organization (Toft & Reynolds, 1994). The OFL is typical of the 'generative organization' (Westrum, 1995) which in its ideal form is a thinking and self-aware organization. It is constantly on the look out, and continuously reviews its own procedures. A generative organization is a highly reliable organization which never considers safety as a condition that has been definitively achieved, but as an objective which has to be pursued continuously (La-Porte & Consolini, 1994; Weick et al., 1999; Weick & Sutcliffe, 2001). The aim of the organizational functional logic is to make organizational learning possible (Friedberg, 1993; Argyris & Schön, 1996) and to favour

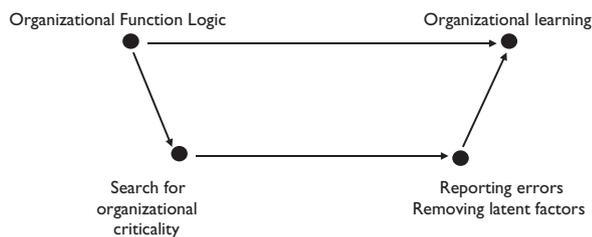


Figure 2. The virtuous circle in the organizational functional logic.

Table 1. Inquiry Logics: A Comparative Overview

	Individual blame logic	Organizational function logic
Aim	Identify the guilty; sanction	Understand, explain, improve
Principal question	Who caused the accident?	What factors favoured the accident? How and why did the defense system fail?
Concept of cause	Causal linear model	Cause networks; systemic approach; latent factors
Failure concept	Individual	Built organizationally
Form of post-accident inquiry	Judicial inquiry	Organizational analysis
Context	In the background; accidental; does not exclude individual responsibilities	Structuring action
Result	Only individual; removal of the <i>bad apple</i>	Organizational and inter-organizational
Undesired effects	Inertia to change; subjective attribution of the disaster	Individual irresponsibility

organizational change, at different levels, as well as introducing a possible 'clinical' dimension. Therefore, such an inquiry has pragmatic value,<sup>7</sup> in the sense that the results can help the subject review the functioning logics of the organizational system, improving the knowledge the actors have of the system and of their own context of action (Friedberg, 1993).

#### 4. Limits of learning from accidents; the case against a belief in OFL

'Do human societies learn? If so, how do they do it; and if not, why not?' Sheila Jasanoff asks herself (2005). Learning from a disaster is a complex, ambiguous process – conditioned by culture, yet not easily forced into univocal, totalizing, national narrative. Jasanoff reconducts the different forms of disaster inquiry to a specific 'civic epistemology': the styles and the modalities of public inquiry, public accountability issues, the strategies used to find the responsibilities and to achieve objectivity. With this useful concept, Jasanoff intends 'the public ways of knowing, constituted, displayed, and reaffirmed within the decision-making processes of states, including those aimed at the management of risk and prevention of harm' (211). Civic epistemology refers 'to the mix of ways in which knowledge is produced, presented, tested, verified and put to use in public arenas' (226). Seen in this light, civic epistemology is a constitutive element of political culture of risks: 'the particularity of national civic epistemologies lies, in part, in the boundary that each framework constructs between factual and moral causes or, put differently, between responsibility and blame' (Jasanoff, 2005, p. 212).

The organizational learning concept that is used in the OFL is consistent with the Argyris & Schön (1996) conceptualization of organizational learning as the detection and correction of error. It is possible to distinguish two learning modalities related to an accident: a passive learning approach and an active one (Toft & Reynolds, 1994). The passive learning approach is characterized by the acquisition of the results coming from public investigations and related recommendations. The active learning approach needs a wider awareness of the event and is aimed at improving the foresight ability of the organization in the daily activities and in facing the risks. Active learning from accidents proves to be very difficult in real life. Many authors (Sagan, 1993; Rasmussen, 1990; Vaughan, 1996; Turner & Pidgeon, 1997; Perrow, 1999; Choularton, 2001; Busby, 2006; Elliot & Smith, 2006) underline the difficulty of learning from accidents and errors and how to act in order to prevent the risk that the same errors can occur again. According to Choularton (2001, p. 62) in case of accidents 'while superficial learning is com-

mon, more fundamental lessons are harder to learn'. Busby (2006, p. 1391) affirms that 'organizing around risks of catastrophic failure critically involves processes of systemic reform whose efficacy is limited by conditions that organizing itself tends to produce'.

Turner & Pidgeon (1997), referring to the definition of Wilensky (1967) who speaks about 'failure of foreseen' and 'failure of intelligence', underline the inability of the members of an organization to recognize and become aware of the signs of danger which transpire before an accident occurs.

Some authors use the term 'organizational intelligence' to refer to the capacity of an organization to obtain and elaborate clear and reliable information which supports the process of being aware of what is going on. The information should be understood in the same way by operators belonging to different professional communities. However, this usually does not happen and the same event is considered in different ways from different communities which work in the same organization. There is an 'organizational myopia' which inhibits the analysis of signs, as well as reports and complaints by people. There are also situations where the signs of danger are intentionally hidden. March (1988) underlines how successful organizations tend to not to change their strategy, independently from its relative value. There are many reasons for this imperfect learning (Turner & Pidgeon, 1997). Some of them are related to the institutional dilemma of the blame, to the fact that danger and blame are constitutive characteristics of the society, elaborated to defend the chosen mechanism (Douglas, 1985, 1992; Douglas & Wildavsky, 1988).

Concerning the problem of learning from accidents, the normal accidents theory (NAT) and the high-reliability theory (HRT) diverge significantly. The NAT (Perrow, 1999; Sagan, 1993) is pessimistic and emphasizes the limits of learning, while the HRT (Roberts, 1990, 1993; Rochilin, 1993; Schulman, 1993; LaPorte & Consolini, 1994; Weick et al., 1999; Weick & Sutcliffe, 2001) has a more positive outlook. According to the NAT there are many different obstacles to learning. Sagan (1993) identifies four of them: (1) highly ambiguous feedback for organizations; (2) learning happens in environments which are strongly influenced by political interests, and efforts to identify causes of an accident are addressed to protect the personal interests of powerful people rather than being aimed at promoting the learning process; (3) information related to an event is incomplete and inaccurate; (4) the non-disclosure, intended as compartmentalization inside the complex organizations, is the disincentive to share information. On the contrary, according to the HRT, serious errors can be an important source of future safety improvements.

In an OFL the organizational learning from failures is based on reporting error and this depends on a no-

blame culture based on a different anthropology of error focused on the idea that learning from errors is the only way to avoid accidents (Catino & Albolino, 2007). At the same time, learning from errors and failures implies a 'just culture'. The just culture can be defined as a culture where there is an atmosphere of trust in which people are encouraged (even rewarded) for providing essential safety-related information, but also in which it is clear where the line must be drawn between acceptable and unacceptable behaviour (Reason, 1997).

## 5. Summary

This article analyzes two different ways to consider the accidents relating to two different civic epistemologies, focusing on one aspect of learning: 'the efforts to determine a causal agent or agents in each instance, since identifying causes is a prerequisite to any subsequent effort to target solutions and remedies' (Jasanoff, 2005, p. 212).

In a complex organizational system the simple punishment of an operator for an accident, without assessing the deficiencies of the system, means favouring the repetition of the unfavourable events also with other actors. However, it is important to realize that the OFL for the understanding of errors and accidents is not without problems. Wells, Morgan, & Quick (2000, p. 503) affirm the following:

'Given the emphasis on avoiding the individual blame trap, there is arguably, a danger of overlooking aspects of valid individual responsibility. At the very least, the collective approach risks blurring lines of accountability and avoiding necessary questions of where responsibility should lie. It is possible that, by skewing the emphasis in favour of wider organizational factors, errors will never be regarded as an individual's fault, even when they might properly be so regarded. Further, this could erode the sense of personal and professional responsibility. Arguably, there are positive aspects to blaming. It is difficult to deny the deterrence aspect of blame particularly with legal processes'.

A criminal sanction could be effective in preventing misconduct in deliberate actions such as fraud or sabotage, but at the same time it is hardly effective in cases where the operators are not able to completely control their behaviour. It has little effectiveness in error cases, in cases of unintentional actions. Accidents in a complex system cannot be attributed to a single cause. Identifying and removing the people who are potentially implicated in the event is easier than implementing the revisions of processes and organiza-

tional dynamics which generated the failure. However: '[...] we must be aware that people who are substituted will be subject to the effects of the same culture and structure. In fact, every remedy which is limited only to individuals leaves the structural origin of the problem unvaried' (Vaughan, 1996, p. 418).

To understand the dynamics of an accident it is useful to ask if under the same conditions a different actor would have been able to make the same error which caused the damage. If the answer is positive, then it is the situation which is prone to error. Investigating with these terms the dynamics of a complex accident would mean shifting from an IBL to an OFL based one. Nevertheless, this passage is not easy and requires three conditions.

The first condition is the no-blame safety culture (Catino & Albolino, 2007) where front line operators or others are not punished for actions, omissions, or decisions made by them that are commensurated to their experience and training, but are punished for gross negligence, violations and destructive acts. It is necessary to explain that a no-blame organization is not an organization where everything is lawful as long as it is declared. A no-blame organizational environment requires the establishment of boundaries between actions and blameworthy errors and between actions and tolerable errors, so that the second category can be as broad as possible. An organization which does not put this distinction into effect risks losing credibility in the eyes of its own members.

A second condition of an OFL is to provide models of organizational analysis and improvement suitable to the complexity of the event. They are systemic and organizational models that are socio-technical, which consider accidents as being derived from the interaction among people, between organizational and social structures, within design activities and components of the physical system (Vaughan, 1996; Hollnagel et al., 2006). These models are focused on the different levels involved: (a) *individual* (the actions of the people), (b) *organizational* (work processes, the management and organization of the context where the event takes place, (c) *interorganizational* (the organizational field, the organizations of the reference system, the suppliers, the control and regulation agencies, etc.) (DiMaggio & Powell, 1991; Catino, 2006).

The third condition relates to institutional level of OFL. This is often a weak point. The strength of the institution contributes in determining the effectiveness of the prescription. As already mentioned, the judicial inquiry is authoritative because the actions and the decisions made by the actors are legitimized by the society which share them, or which they consider binding. This inquiry has formal rules, practices and institutional conducts, administrative apparatus and areas of action that could not be in any other way.

On the contrary, the inquiry used in the OFL does not have the necessary power to begin the change which is needed at the organizational level. The management of the organizations involved should not give importance to this kind of inquiry. The *veto players*<sup>8</sup> present in the system can easily oppose the changes. For example, the air transportation system has a broad and complex interorganizational system composed of numerous public and private, national and foreign subjects. The number of veto players by definition is high. The number of actors with veto power is high, because they are threatened or penalized by actions of change. Therefore, they can successfully delay or totally block changes.

As March & Olsen (1989) sustain, the reorganization efforts which ignore the networks of power and interest are destined to failure and therefore remain without consequence. Using the distinction made by lawyers, especially those in the area of international and European law, it can be said that the IBL inquiry to identify responsibilities applies *hard law*, with alternatives of legal validity of authority of binding power, whereas, the OFL inquiry to improve the system applies *soft law* producing recommendations, guide lines, and reference points which have less authority and binding power.

It would be useful to further investigate the institutional legitimacy of different types of inquiries, identifying the possibilities and the modalities of increasing the degree of institutionalization (the strength) of the OFL inquiry.

To conclude, an OFL looks to the future and improves the organization, whereas an IBL favours organizational change inertia and does not eliminate the condition of risk. The improvement of organizations should not be delegated to criminal law but other mechanisms of self-improvement must be found. This is a topic which merits further research.

## Notes

1. The latent factors are elements of organizational nature generated from managerial decisions that can remain silent and not easily visible in an organizational system until an error or a violation combined with it generates the accident.
2. If the goal is to assign the blame, as in the individual blame logic, the reconstruction of the causal chain often stops when someone or something is identified as being suitable for the blame.
3. Russel (1918) suggested the elimination of the concept of 'cause' from the vocabulary because even advanced natural science, for example physics, has acknowledged that there is no such thing as an ultimate cause.
4. With the word 'vicious circle', a degenerative process is meant, which beyond the will of the single subjects leads the organization to dysfunction and inconveniences (Crozier, 1963).
5. The analysis in this approach adopts a singularist cause perspective (Anscombe, 1971) and thus is not deterministic. While a deterministic perspective reduces the causality to regular successions (X is followed by Y), the singularist perspective assumes that only a probabilistic link exists between the individual events that are causally connected. In other words, the singularist theory of the causes supports a probabilistic point of view of the causality, affirming that cause A does not determine the effect B, but it increases the probability; cfr. Dekker (2005).
6. A near miss is an event that could have caused an accident, but for some barrier did not result in a real accident. The difference between near miss and an accident is in the consequences and not in the morphology that could be in common.
7. But what are the boundaries of this analysis? If the latent organizational factors are searched for, when should the search stop? The way out is pragmatic: in the analysis of an accident the generative mechanisms and hidden critical factors are searched for (organizational and organizational field) which if removed, increase the resiliency of the system.
8. The term veto player refers to the individual and collective decision makers whose agreement is necessary for a change of the *status quo* (Tsebelis, 2002). In an organizational system, the greater the number of veto players, the more difficult it is to change the *status quo*.

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