

Logics of justification within communication of risks

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On September 26, 2019, a large-scale fire affected the Lubrizol industrial site in Rouen, France. The management of the consequences of the accident gave rise to the implementation of an original body within the variety of existing mechanisms of citizen participation on industrial risks: *"the Transparency and Dialogue Committee"* (then mentioned as TDC). This committee brought together various actors concerned by the consequences of the fire. Its intended purpose was to monitor over time all the issues related to the consequences of the accident and to share all the information available. The content of the minutes of the ten sessions of the TDC which were held between 2019 and 2021 are considered under the background of the *economy of worth* as proposed by Boltanski & Thevenot which provide a theoretical framework of the dynamics linked to the presence of multiple rationalities. An economy of worth stipulates what things count, how, and in what ordered hierarchy, thereby offering a coherent space within which people interact. Instead of seeking for the determinants of the behavior of individuals, the objective of the study is rather to see how they construct and use argumentative resources in situations where they are led to justify their claims. This specific structure for citizen participation on industrial risks provides materials to analyze the potential foundations of agreement and the necessity to justify through this *"test of justification"*. In that kind of test, the actors refer to specific principles. This paper presents how the Transparency and Dialogue Committee can be analyzed through the different "logics of justification" used, in what extend these logics respond to public concerns and which "common superior principles" would be valuable candidate to resolve conflicts and try to reach an agreement between the stakeholders.

Keywords :Justification, Risk Governance, industrial risks, risk communication, economy of worth

1. Introduction and research question

Risk communication is officially designed by European institutions as the external layer of technological risk management policies around reducing the risk at source, land-use planning, and emergency plans (Foussard & al. 2023). The stated objective of these policies is to avoid the occurrence of victims and to lay down rules aimed at preventing major accidents that could be caused

by certain industrial activities and at limiting their consequences for human health and the environment. Although the accident did not result in any deaths or injuries, the fire at the Lubrizol factory in Rouen in September 2019 (see Fig.1). has aroused many reactions within French society and lead to the expression of significant public's distrust regarding industrial risk management (Tannous, & Merad, 2022). The management of the political consequences of the accident gave rise to

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the implementation of an original body within the variety of existing mechanisms of citizen participation on industrial risks: *"the Transparency and Dialogue Committee"* (then mentioned as TDC).



Fig.1 The fire at the Lubrizol plant in Rouen on Sep 26, 2019.
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This committee brought together various actors concerned by the consequences of the fire: residents, elected officials, industrialists, environmental associations, trade unions, representatives of the agricultural world, economic actors, state and Health services... (see Fig.2). Its intended purpose was to monitor over time all the issues related to the consequences of the accident and to share all the information available.



Fig.2 1st session of the *"Transparency & Dialogue Committee"*

TDC is a pluralistic organization where the multiple logics of the different actors must be considered. The increasing complexity of contemporary issues leads to the search for new modes of arbitration between divergent social interests and thus requires new research that mobilizes theoretical frameworks to grasp the heterogeneity of the social. It is from the framework of the Economies of Worth (Boltanski & Thévenot, 1991) that we will analyze the behavior and discourse of the actors placed in a position of controversy during the TDC implemented by the French authorities following the industrial fire at the Lubrizol site in the city of Rouen. From the grid of

worlds defined by the model of Economies of Worth, we will highlight the foundations on which actors rely to assess their own legitimacy and that of other actors. We will rely on secondary data from the official reports of the ten TDC sessions held from October 11th, 2019 to December 10th, 2021 as well as statements of the various actors reported by the local press. The novelty of this ad hoc body (the TDC) deserves attention as part of a more global study of risk management and communication in the context of the Rouen accident. Although there are some references in the field of management (Fiorono, 1990; Patriotta & al., 2011), this kind of object of study is to our knowledge little treated in the theory of organizations. The use of a highly theoretical conceptual design aims to provide a finer understanding of the phenomenon of controversies and the cognitive foundations justifying the behaviors and discourses of actors. Operating in pluralistic organizations, Risk Managers must know how to integrate multiple logics in a constructive way, crisis and controversy management having become a central challenge for managers as well as for organizational researchers (Berkeley Thomas, 2003). In the field of Risk Communication, *"the unintelligibility of public demands does not arise so much from inappropriate remarks or unreasonable questions, but from the inadequacy of concerns with their place of expression."* (Foussard & al., 2022). To deal with this problem, French authorities made the attempt to provide a dedicate place of expression for public concerns following the industrial accident by setting up the TDC. Our research question is: **"What are the justifications and criticisms that have been mobilized by stakeholders during the implementation of the TDC following the industrial accident at the Lubrizol plant in Rouen between 2019 and 2021?"** The objective is to question the rationalities that underpinned the actions during conflictual times in order to better understand how they interact during a controversy related to industrial risk taking place in public space. In other words, we aspire to (1) grasp the multiple rationalities mobilized by the actors, (2) understand how these rationalities interact and (3) understand how it is possible to stabilize the situation placing multiple rationalities in interaction.

2. Methodology and data

Boltanski and Thevenot's approach of the theory of justification draws on various currents: interactionism, ethnomethodology (Garfinkel, 1967), sociology of science (Merton, 1973), linguistics (Chomsky, 2009) and philosophy

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(Wittgenstein, 2010). The *actors* are endowed with moral skills, a "faculty of being reasonable" to formulate judgments and more especially criticism. The latter are likely to destabilize the social order and confront action in public situations of disputes. An argument is triggered because of an *uncertainty* about an *order of worth*, that is, the value given to a person and more generally to a thing. The *economy of worth* has as its main objective to build a framework allowing to analyze with the same theoretical instruments and by implementing the same methods, the critical operations that the actors engage in when they want to express their disagreement without resorting to violence, and the operations by means of which they manage to build, manifest and seal lasting agreements. Thus, reaching an agreement is equivalent to removing uncertainty about quantities. The *economies of worth* model proposes to focus primarily on the skills of individuals to assess situations through shared equivalence systems. Relationships between people can be forged thanks to common magnitudes, allowing everyone to find the landmarks that will guide their relationships in the situation, characterize it. These magnitudes, these systems unfold in worlds governed by the coherence of the principles that are activated there. The model postulates 6 worlds named as followed: *inspiration, domestic, opinion, civic, commercial, industrial*. Later, the green world (Lafaye & Thévenot, 1993) and the project world (Boltanski & Chiapello, 1999) were added to this six-world structure. These worlds involve different forms of agreement, different

social objects, which will make it possible to recognize the nature of the situation, and to know on which mode of resolution of conflicts and controversies to position (see table 1). From there, actors can enter several types of relationships. If a controversy arises in the same world, a common higher principle is used to close it. People engaged in the same world having the same equivalence system and moving in an identical size, objects are thus identified and prioritized in a compatible way. Or there can coexist different worlds without discord, but in this case the balance remains provisional. Or again, there may be a controversy between different worlds. The controversy can then be clarified in one world. It can also be resolved by an arrangement as the stakeholders agree locally on a transaction. Finally, the actors can reach a compromise, and in this case, they bring together several worlds through a common good. This approach can be enlightening because it considers the variety of logics and multiple justifications that are put forward by actors to legitimize their actions. Each time different forms of agreement or compromise will be necessary to coordinate. Thus, the problem of agreement is put forward in relation to the analysis of conflict or rationality. On these bases, the theory of justification has gained recognition in the field of organizational studies (Jagd, 2011; Chiapello & Albert, 2019; Mitev et al., 2018). The method is set through analytical grid which allow to describe and understand the dimension of controversies that relates to the divergence of the worldviews of the different actors.

'Common worlds'	Mode of evaluation (worth)	Test	Form of relevant proof	Qualified objects	Qualified human beings
Inspired	singularity, creativeness	Passion, enthusiasm	Emotional involvement	Emotionally invested body or item, the sublime	Creative beings, artists
Industrial	Technical efficiency	Competence, reliability, planning	Measurable: criteria, statistics	Infrastructure, project, technical object, method, plan	Engineer, professional, expert
Domestic	Esteem, reputation	Trustworthiness	Oral, exemplary, personally warranted	Patrimony, locale, heritage	Authority
Civic	Collective welfare	Equality and solidarity	Formal, official	Rules & regulations, fundamental rights, welfare	Equal citizens, solidarity unions
Green	Environmental friendliness	Sustainability, renewability	Ecological ecosystem	Pristine wilderness, healthy environment, natural habitat	Environmentalists, ecologists
Fame	Renown, fame	Popularity, audience, recognition	Semiotic	Sign, media	Celebrity
Market	Price, cost	Market competitiveness	Monetary	Freely circulating market good or service	Customer, , merchant, seller

Table 1 - Schematic summary of orders of worth
Derived from Thevenot & al. (2000)

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Then, the speeches are associated with a specific world by categorizing the vocabulary that relates to each of the worlds. It is through this vocabulary that we will try to analyze the discourses involved in the controversy related to the accident at the Rouen plant in order to qualify the arguments. However, care must be taken not to stereotype the different stakeholders, not to qualify them from these worlds because one of the assumptions of the economies of worth model is that actors can, in the same day or in the same social space, refer to different worlds to justify themselves according to the situation they face. An actor can thus intentionally mobilize one world to justify itself at one time and use another later (Boltanski & Thévenot, 1991). Thus the main concepts that highlight the system of equivalence of each of the worlds are (1) the common higher principle (i.e. principle according to which acts, things and persons are judged in a given city), (2) the state of great (i.e. This strongly embodies the values of the city, which represents the common higher principle.), (3) the state of small (i.e. Those whose behaviors are inadequate according to the values of the city), (4) the investment formula (i.e. sacrifice to be made to reach the state of great), (5) the Worth ratio (i.e. the relationship of order between level of worth), and (6) the legitimacy test (i.e. the moment in which a particular device is engaged.). All the reports of the 10 TDC sessions covering more than 40 hours of presentations were analyzed and for each part a logic of justification considered dominant was assigned according to semantic markers (table 2).

NB: It is important to note that the reference to the industrial world does not mean justification of the industrial but logic of justification using criteria such as *efficiency, performance, predictability, reliability, experts, specialists, means method, calendar, standard, series, average, probability, variable, graph, time models, calculation, hypothesis, measure ...*

3. Main Findings

3.1. Multiple rationalities mobilized by the actors

The fire at the Rouen plant was experienced as a trauma by a large part of the population of the Normandy region, trauma catalyzed by the unprecedented media coverage in its intensity and duration for such an event (Labracherie & Hervé, 2019). The representation of the event is the site of a major controversy that revolves around the gap between the effective efficiency of the emergency services (no victims are to be deployed) and the

social requirement that this type of accident simply never takes place. Many sub-controversies were invited to the debate: possible infringement of environmental regulations, laxity of the authorities, toxicity of fumes, impacts on agricultural production, air, water, soil pollution, dioxin, long-term effect... The agenda of the 10 sessions of the TDC follows essentially the same pattern with variability in the duration of the different themes, the diagram of restitution of the committees includes all the themes stated as sub-controversies. The content analysis (see fig.4) identified the following:

The common world *inspiration* (0%) did not appear in our content analysis which seems consistent with its lack of importance in the unfolding of the controversy. The world *industrial* is the most frequently mobilized (38%). Indeed, a large part of the presentations relate to the '*consolidated statement of analysis results*'. The legitimacy test revolves around the quality of measurements, the precision and significance of the results, the use of statistical history. Most of the sub-controversies revolve around the environmental and health impacts of the accident. All the analyses conclude in the absence of significant elements "*Air analyses show no exceedance of the benchmark. value, either for acute exposure (one hour) or subchronic exposure (up to one month)*", "*Ingestion: very low calculated risk levels despite higher assumptions taken into account*", "*The quantitative study does not highlight any health risk*". The conclusions are supported by numerous measurements carried out over an extremely wide geographical perimeter. Unless it is considered that the control bodies are incompetent or dishonest, it is indisputably established that the health consequences cannot be considered significant.

The world *green* (5%) is mobilized in the form of an announcement effect to clearly mark that the health and environment dimension is taken into account, but the content systematically switches to logics of justification referring to the industrial world.

The world *domestic* (18%) is mobilized in the very title of the committee since dialogue and transparency are explicitly semantic markers linked to this world. The justification here sought to highlight the authority of the state over companies, their subordination to the law and the need to comply with the requirements imposed by laws, codes and regulations. In the domestic world, greatness exists in the hierarchy, in the position of a chain of dependence in which a bond of trust exists between subordinates and superiors. Thus, the prefect plays

Semantic markers used for linking 'units of sense' to 'common worlds'
from the original list provided by Sotomaior and Thévoz (2006)

Inspirational emotional, being, traditional
Industrial Efficiency, performance, future, functional, predictability, reliability, professionals, experts, specialists, operator, person in charge, means method, environment, axis, direction, definition, goal, goal, calendar, standard, cause, series, average, probability, variable, graph, time models, goals, calculation, hypothesis, solution, organization, stabilization, order, anticipate, implement, adapt, detect, analysis, maintenance, analysis, efficiency, resources, industrial, action, operational, measurement, instrument, technology, technological, security management, production, consequences, analysis, report, information, checks, construction, knowledge, tools, identify, tests, time, emergency power, supply system, components, proof, solution, energy, system, installation
Domestic benevolent, trustworthy, honest, faithful, respect, responsibility, solidarity, subordination, hierarchy, cooperation, responsibility, transparency, duty, task, dialogic, seriousness, information, integration
Civic Collectives, collective will, legal, rule, government, official, representative participation, rights and obligations, solidarity, moral being, democracy, legislation, formality, code, statement, organizational goals, membership, association, republic, state, democracy, assembly, movement, election process, consultation, rules, law, actions, processes, decisions and orders, reaction of state institutions, legal way, control, agreement, political interests, negotiation, legitimacy, legal evaluation, state regulation, democratic principles, public interest
Green Environment, influence or danger on environment and human beings, ecological, environmental protection, protection of the nature, plants, environmental pollution, biomass, protection of the nature, fauna and health
Fame Public opinion, public, audience, public attention, reputation, public debate, boycott, public pressure, public legitimizing, communication strategy
Market Competition, selfishness, market, wealth, opportunities, rivalry, contract, ideas, price, money, benefit, result, competition, management, costs, profit, allowance, economy, profit maximization, success, compensation, dividends, euro, calculation, finance, payment, wages, commerce, price, strategy, margin, lease, demand, supply, economy, production, competitors, client, supplier, buy, get, sell, economically, business, expertise, economic efficiency

Table 2 Semantic markers

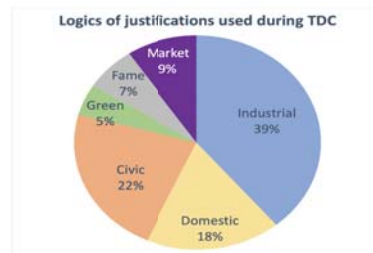


Fig. 3 Logics of justification used during TDC

the essence of his legitimacy on this dimension. The definition of its function is officially the local delegation of executive power of the state to the local level of the territory. The reference to interim orders is significant. The idea is to justify that the state cannot show any laxity or complacency vis-à-vis Lubrizol and that it will fulfil its duty to compensate for damage in accordance with the polluter-pays principle.

The world *civic* (22%) is mainly mobilized as part of the health survey. The logic of justifications revolves around the desire to show that the public interest is well taken into account, the study area covered is increasing in order to show that the state takes into account all citizens, that local residents are consulted, that associations are considered ... French methodological tools for pollution prevention and management are governed by regulatory texts (Circulaire, 2013) and are structured around two studies: IEM (interpretation of the state of the environment) and EQRS (quantitative study of health risks). The results confirm that there is no significant toxicological impact, which is congruent with the levels of smoke exposures that remain low. A survey in the form of a feeling questionnaire is then used to establish an impact on mental health (see below).

The world *fame* (7%) is mobilized by convening prestigious or high-reputable organizations to justify the seriousness of studies and show a form of deference to citizens. Academics are invited to participate in a round table, the action plans developed by the Ministry to give national importance to a local event are presented, the

conclusions of inter-inspection reports written by prestigious senior officials are presented.

The world *market* (9%) is mobilized only in the context of compensation and insurance. In the end, around EUR 50 million will have been channeled through the farm compensation fund. The logic of justifications revolves around the economy, compensation, operating losses, financial impact on production. The representatives of the agricultural world, although invited, were only present at the first sessions of the TDC. (Allot & al., 2020). It can be hypothesized that once they were assured of compensation, they did not find any interest in attending this meeting.

3.2. How rationalities interact

In a situation of discord, the test of worth is the legitimate means by which individuals are equated in each world, by which states of worth are attributed. In order to preserve the legitimacy of a test, elements from other worlds are kept at a mere background noise, to which no attention is paid and which has no influence on the results of the test. Nevertheless, in some cases, this background noise becomes too important to be ignored, being purposely highlighted by some actors who therefore question the validity of the test. It is at this point that a situation of discord arises that can take two forms: the litigation or the dispute. The litigation is the figure of a discord remaining within the same world. In this case, a test of worth is organized, the result of which will make it possible to establish a new disposition of people according to their real ability to highlight the objects (e.g. it is not a question of

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denying the situation, but simply of making order in the distribution of states of worth). The dispute arises when some of the actors in situation seek to question the validity of the test by relying on the use of another worth from other worlds to support the process of contestation. Finally, the controversies result from the highlighting of a plurality of worlds placed in a situation of trial in the same socio-temporal universe. Thus, the agendas testify to the desire to cover all sub-controversies. The purpose of the logic of justification here is to establish the legitimacy of political authorities. However, this domestic legitimacy can only hold if it revolves around the civic (i.e. taking into account the common good) and the efficiency and rigor with which it fulfills its missions (i.e. logic of justification from the industrial world).

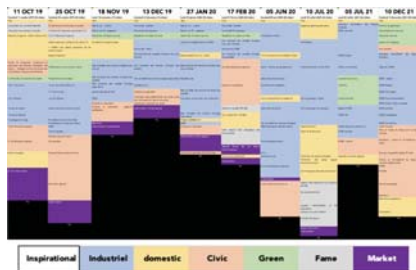


Fig. 4 Assignment of dominant logic of justification for each subparts of TDC session

3.3. (Understanding of) the possibility to stabilize the situation placing multiple rationalities in interaction.

Situations of discord, involving several worlds and where the challenge lies in the contestation of the principle of the test and in the potential shift to another world, are more complex and can call for two types of agreements: arrangement and compromise. The local arrangement aims to create a temporary agreement on a specific topic or decision between actors who decide to stay in their own world. The compromise aims for a more lasting agreement, based on the different worlds mobilized in the controversy. In this form of agreement, actors mobilizing divergent worlds seek the common good that goes beyond their own greatness. The participants refrain from clarifying the principle of their agreement by associating objects beyond the worlds of each of the stakeholders. Therefore, "one way to harden the compromise is to put at the service of the common good objects composed of elements

from different worlds and to endow them with their own identity so that their form is no longer recognizable if one or other of the elements of disparate origin of which they are made is removed" (Boltanski & Thévenot, 1991). The choice to carry out a quantitative health risk study (EQRS) is a typical example of compromise. "Although the thresholds and levels of the results of the samples and the IEM did not present any particular challenges, it was decided to activate the EQRS." To demonstrate their commitment to the well-being of citizens, state authorities choose to set this study justifying it by an extensive way of understanding the precautionary principle. By doing so, they hope that people would be felt really considered and that the instruction of the case would be judged as exemplary and transparency. The drawback is that the fact of conducting the EQRS becomes by itself a kind of "proof" of the seriousness of the situation whatever the results of the EQRS. In fact, it leads to a lose-lose situation, if the study is not conducted, then authorities are accused of cover-up, but if the study is conducted, it is seen as it proves that major sanitary issues are faced.

In the end, the controversy turns out to be more of a political issue than a risk management issue. The need of justification is on the side of the executive power and it is therefore logical that the TDC is under the aegis of the prefect. Although the institutional discourse is presented with the attributes of the worth of the industrial world (precision, accuracy...) it appears that the industrial character is only a pretext for a test of justification of politics towards the populations, a test that the politician formats himself. It is a question of legitimacy not of the ability of industrialists to manage their risk but of the executive power of the state to play a role in the administration of the city, to restore its civic dimension in the face of public criticism who fantasizes it as a corrupt body serving commercial interests. Despite two years of meetings and substantial allocated resources, the results seem mixed to say the least. The commissions of inquiry (Allot & al., 2020) consider that "The establishment of the committee for transparency and dialogue is a good initiative but which has not yet met all expectations, (...) the objective that the name of this body ("transparency and dialogue") implied could not be achieved. "An effort to 'expose' and explain the facts was real and exhaustive – responding to the ambition of 'transparency', numerous testimonies and comments lead to the conclusion that the 'dialogue' aspect could not actually be developed." This failure is also observed through the effective attendance rate which regularly decreased over time

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(e.g. 65% at the first meeting, 38% in January 2020 to finish around 25%). Finally, the main point highlighted by politicians is the need to develop a culture of risk among local residents. This request would be an unanimously expressed need. Yet during the restitution of the various studies for the populations, the rooms rang empty; Similarly, only 11 people showed up for the open house at the Lubrizol plant site on October 12, 2022. The need for a culture of risk for all is a mantra mooted by politicians but in reality of no interest to anyone in the general public. Even more striking, after month of dialogue, the prefect has to say that the attacks against him by the associations do not weigh on him. *"It leaves me indifferent to read that I would be the prefect of denial. I put everything on the table. Whether the results of the analyses are good, average or bad, I publish them all, without exception. I have always been keen for the State to express clear and precise positions, even if it sometimes frustrates. I reproach the three associations, each of which has about thirty members, for not wanting to take scientific considerations into account. I will always be fierce against conspiracy."* (Prefect, January 27, 2023). On the other side, activists say that *"We are basted with studies but we know the needs."* As a final challenge to the legitimacy of institutions, they believe that the solutions lie in my creation of an eco-citizen institute in charge of controlling factories.

4. Conclusion and discussion

This study offers several contributions. First, we looked at an object of study that has little been treated in the management literature (Patriotta & al., 2011) and in the theory of organizations where the models chosen are intended as normative frameworks for decision-making techniques. The choice of a theoretical conceptual design makes it possible to identify a finer understanding of the phenomenon of controversies, to better understand the interactions between each of the actors and to observe the active work of individuals who try to preserve their legitimacy. This knowledge will also be useful to practitioners who are increasingly faced with difficult decisions scrutinized by an informed public. Organizations are under greater pressure and organizational boundaries are becoming increasingly blurred. Risk managers are forced to deal in controversial universes where establishing the relevance of public concerns becomes a structuring issue regarding the role of safety professionals (Van Wassenhove & al, 2022). Environmental conflicts are rooted in the differences

in values implied by technological advances (Fiorino, 1990). The main causes of environmental controversies cannot be reduced to technical failures and have their roots in value clashes between divergent visions (Shellenberger & Nordhaus, 2004). *« Many technical controversies are primarily disputes over political goals and only secondarily concerned with the veracity of scientific issues which are related to these goals. »* (Mazur, 1981). The recognition of the plurality of orders and the resulting complexity (Hargraven & Van de Ven, 2009) leads to relativize the importance of certain theoretical models of risk communication (Lautman, 1996; Boholm, 1998) and to challenge the identification that is sometimes made of the latter with the notions of rationality or justice (Worms, 1996). On the one hand, we cannot be satisfied with the elaboration of these problems offered within the main existing orders of justification and on the other hand see in the idea of developing a culture of risk a solid base of new alternative orders ensuring the stabilization of conflict resolution practices or the search for agreements on the collective conduct to be followed. The quarrels over the legitimacy of the various stakeholders and the associated demands for justifications paradoxically lead to the testing of the very concept of risk (Duclos, 1996). A concept originally built in the commercial and industrial worlds as an operational tool to deal with hazards (Foussard & Denis-Rémis, 2014), its substitute in the form of risk aversion becomes the guarantee for the emergence of precaution (Ewald, 2002) as superior principle of the worlds *green, civic and opinion*. It seems unlikely that societies will change fundamental benchmarks (i.e. questioning the principles common to the different orders of justification currently at work), so the difficulties in building a commonly accepted order combined with the inability to share an order becomes an essential component of controversies related to the relevance of public concerns as criteria for risk management.

5. References

- Allot, F., Sauzey, P., Montbabut, T., Michelet, P., Chevet, P. F., & Assemat, B. (2020). Retour d'expérience après l'incendie d'un site industriel à Rouen en septembre 2019—Analyses et propositions sur la gestion de crise.
- Berkeley Thomas, A. (2003). *Controversies in Management*. London, Routledge, 236-236
- Boholm, A. (1998). Comparative studies of risk perception: A review of twenty years of research. *Journal of Risk Research*, 1(2), 135–163
- Boltanski, L., & Chiapello, E. (1999). *The New Spirit of Capitalism* (Vol. 10). Paris: Gallimard.

8 Foussard C., Van Wassenhove W. & Denis-Rémis C.

- Boltanski, L., & Thévenot, L. (2006). *Justification: Economies of worth* (Vol. 27). Princeton University Press.
- Chiapello, E.; & Gilbert, P. (2019). *Management tools*. Cambridge, UK: Cambridge University Press.
- Chomsky, N. (2009). *Cartesian linguistics: A chapter in the history of rationalist thought*. Cambridge University Press.
- Circulaire du 9 août 2013 relative à la démarche de prévention et de gestion des risques sanitaires des installations classées soumises à autorisation.
- Duclos, D. (1996). Power and weakness of the concept of risk. *The sociological year (1940/1948-)*, 46(2), 309–337.
- Ewald, F., & Kessler, D. (2000). The marriage of risk and politics. *The debate*, (2), 55-72.
- Ewald, F. (2002). The return of Descartes's malicious demon: An outline of a philosophy of precaution. *Embracing risk: The changing culture of insurance and responsibility*, 273-301.
- Fiorino, D. J. (1990). "Citizen participation and environmental risk: A survey of institutional mechanisms," *Science, technology & human values*, vol. 15, no. 2, pp. 226-243.
- Foussard, C., Van Wassenhove, W., & Denis-Rémis, C. (2023). Professionalisation in safety: in the heart of emergency response. *International Journal of Emergency Management*.
- Foussard, C., Van Wassenhove, W., & Denis-Rémis, C. (2022). Taking public concerns into account as a risk management criterion. A case study. In 32nd European Safety and Reliability Conference (ESREL 2022).
- Foussard, C., & Denis-Rémis, C. (2014). Risk assessment: methods on purpose?. *International Journal of Process Systems Engineering*, 2(4), 337-352.
- Garfinkel, H. (1967). *Studies in Ethnomethodology*. Englewood Cliffs, NJ: Prentice-Hall.
- Godard, O. (2004). Around conflicts with an environmental dimension: Economic evaluation and coordination in a complex world. *Cahiers d'économie Politique*, 47, 127-153.
- Hargrave, T. J. and Van de Ven, A. H. (2009). 'Institutional work as the creative embrace of contradiction'. In Lawrence, T. B., Suddaby, R. and Leca, B. (Eds), *Institutional Work: A New Agenda for Institutional Studies of Organization*. Cambridge: Cambridge University Press, 120–40.
- Jagd, S. (2011). Pragmatic sociology and competing orders of worth in organizations. *European Journal of Social Theory*, 14(3), 343-359.
- Labracherie, J. & Hervé N. (2019) Incendie de l'usine Lubrizol à Rouen et mort de Jacques Chirac : comment les chaînes info ont traité d'une double actualité - *La Revue des médias*, octobre 2019.
- Lafaye, C., & Thévenot, L. (1993). An ecological justification?: Conflicts in the planning of nature. *Revue française de sociologie*, 495-524.
- Lautman, J. (1996). Risk and rationality. *The sociological year (1940/1948-)*, 46(2), 273–285.
- Mazur, A. (1981). "Media Coverage and Public Opinion on Scientific Controversies," *Journal of Communication*, Vol. 31, No. 2, pp. 106-115.
- Merton, R. K. (1973). *The sociology of science: Theoretical and empirical investigations*. University of Chicago press.
- Mitev, N., Morgan-Thomas, A., Lorino, P., de Vaujany, F. X., & Nama, Y. (2018). *Managerial techniques in management and organization studies: theoretical perspectives on managerial artefacts. Materiality and Managerial Techniques: New Perspectives on Organizations, Artefacts and Practices*, 1-38.
- Patriotta, Gerardo, Jean-Pascal Gond and Friederike Schultz (2011). "Maintaining Legitimacy: Controversies, Orders of Worth, and Public Justifications," *Journal of Management Studies*, vol. 48, no. 8, pp. 1804-1836.
- Shellenberger, M., Nordhaus, T. (2004). *The death of environmentalism: Global warming politics in a post-environmental world*.
- Tannous, S., & Merad, M. (2022). Have the risk policy shifts related to Seveso Upper Tier establishments in France led to an improvement in risk prevention? A focus on three risk prevention tools. In 23e Congrès de Maîtrise des Risques et de Sécurité de Fonctionnement, IMdR
- Thévenot, L., Moody, M. and Lafaye, C. (2000). 'Forms of valuing nature: arguments and modes of justification in French and American environmental disputes'. In Lamont, M. and Thévenot, L. (Eds), *Rethinking Comparative Cultural Sociology: Repertoires of Evaluation in France and the United States*. Cambridge: Cambridge University Press, 229–72.
- Van Wassenhove, W., Foussard, C., & Denis-Rémis, C. (2022). A case study on the Industrial Risk Management (IRM) post-master academic education program of MINES Paris PSL University. *Safety science*, 151, 105733.
- Van Wassenhove, W., Foussard, C., Dekker, S. W., & Provan, D. J. (2022). A qualitative survey of factors shaping the role of a safety professional. *Safety Science*, 154, 105835.
- Wittgenstein, L. (2010). *Philosophical investigations*. John Wiley & Sons.
- Worms, F. (1996). Common risks, public protection and sense of justice. *The Sociological Year (1940/1948)*, 46(2), 287–307.