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On: 16 May 2012, At: 02:34

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



## Journal of Risk Research

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/rjrr20>

### An unwelcome user? Or how to negotiate the use of a risky space

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Available online: 10 Oct 2011

To cite this article: Hervé Flanquart (2011): An unwelcome user? Or how to negotiate the use of a risky space, Journal of Risk Research, DOI:10.1080/13669877.2011.609316

To link to this article: <http://dx.doi.org/10.1080/13669877.2011.609316>



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## **An unwelcome user? Or how to negotiate the use of a risky space**

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*(Received 13 January 2011; final version received 26 July 2011)*

Taking as a starting point the distinction between danger and risk, with the latter being seen as a particular form of the former, in that the probability of its occurrence and the potential damage it causes can be clearly identified (and thus be insured against), questions can be asked about how the shift is made from one to the other, and what events may facilitate this change. This issue is here treated in the context of a sandy beach and cove which were formed as a result of renovation work on a harbor and which, spontaneously, became places frequented for pleasure and leisure activities. Initially, the dangerous industrial sites nearby were neglected as sources of risks, because the only risks identified by the users and the authorities were drowning or traffic accidents. Then, in the 1980s, various major industrial accidents occurred in Europe and the rest of the world, leading to greater awareness among national and European political authorities concerning the risks inherent to industrial production. This awareness led to directives and legislation reinforcing the regulations governing dangerous industrial sites and restricting access to places exposed to such risks. There is thus a shift from dangers that are little known or taken into account, to risks that are socially constructed, which the local authorities must manage according to the law, while also respecting the inhabitants' great desire to continue frequenting places to which they feel really attached. Over 30 years of history of the seawall and cove thus also show the difficulty in managing a territory when the authorities and users do not have the same perception of what the risks are and how to deal with them.

**Keywords:** risk; danger; maritime port; industry; constructionist approach

### **Introduction**

Sociologists' approach to risk is primarily and quite logically constructionist, because they are interested in what is socially constructed about its existence, its perception, and its management. They try to understand how and why, at a certain time, and in a certain society, a practice, situation, or state of affairs is considered to lead to a risk (natural, economic, or social). From this departure point, sociologists try to understand how the identification of a risk and its management vary from one society to another, and from one social group to another.

Based on the approximately 30-year history of a particular space in the north of France, situated near dangerous industrial sites, we shall try to test the explanatory power of the constructivist approach, in its way of seeing risks as the products of a social view, which is historically and geographically situated. In particular, we shall

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try to understand how, over time, after the occurrence of major industrial accidents in other countries, the vision of the various risks attached to this space has evolved in France, and how more or less significant divergences have appeared between the various players in terms of how these risks are to be considered. While, traditionally, experts' vision of risks is quite simply opposed to that of lay persons, we shall see how, in order to analyze correctly the way the industrially risky space in question is managed, it is beneficial to take into account the vision of a third type of player: local politicians and state representatives, who together wield the political and administrative power. This is because they cannot simply agree with one side or the other, and their situation forces them to negotiate, while taking into account other risks: the possibility of conflicts, the unpopularity of their policies, and even losing subsequent elections in the case of local politicians.

The first part of this article will be devoted to a theoretical analysis of the distinctions between danger and risk, and the way in which the former turns into the latter in our contemporary societies. Then, basing ourselves mainly on the work of Taylor-Gooby and Zinn (2006), we shall make clear the position we intend to occupy along the continuum of the theories of risk, running from the most realist to the most constructionist.

A brief presentation of the particularities of the geographical space under study, as well as the methods that we have used to analyze both its past and present will make up the second part. Then the life of this space will be described, from its creation as a simple part of a harbor complex, to the emergence, and then lasting presence of a new function, which had not been foreseen at the outset: a site for beach and seaside leisure activities. This additional function, associated with changes in the social views of industrial risks, has changed the way this particular space is both considered and managed.

In the discussion at the end of this article, we shall go back over our constructionist approach in the analysis of the perception of the risks, and try to appreciate its heuristic dimension. We shall also examine the reasons for the divergence in the perceptions of industrial risks between experts, lay persons, and administrators (local politicians or civil servants), and we shall see what these tensions between the various types of players imply in terms of the decisions that are (or are not) made.

### **Risk and danger**

Before dealing with the question of how the inhabitants of the Dunkirk conglomeration live with risk, and how the authorities (local and national) manage this situation, it seems essential to us to show how the dangers created by industrial installations have gradually started to be perceived as constituting a risk.

For, it is necessary to distinguish between a risk and a danger, even if they are closely associated. It might be said that a risk is a danger that has been detected then analyzed. It is given as a probability of happening, as well as possible (human and material) damages that are relatively easy to evaluate in financial terms. The dangers of truck traffic can thus be seen to be a risk, given that insurers have a database allowing them to identify, with an acceptable margin of error, the probability of various types of road accidents as well as the human and material damages they cause. It is when dangers can be analyzed as risks that they can be insured against, and that insurance companies can fix the premiums to be paid so as to

cover any damage caused by an accident. The policy holder's age and driving experience, as well as the power of the vehicle result in different hazards, and so the amount of the premium to be paid is adjusted according to these parameters. In the same way, for social risks, or the 'life accidents' against which the welfare state considers it to be duty to protect its citizens (Ewald 1986), balanced accounts are possible only if the probability of their occurrence and their costs have been correctly evaluated.

Risk is thus a socially constructed phenomenon, and has no existence outside of scientific knowledge and a social, cultural view (Lupton 1999b; Peretti-Watel 2003). It is the view of individuals and institutions concerning a danger identified scientifically, and which has been measured and appropriated by experts, that determines if it is a risk or not. For example, at the beginning of the 1980s, heroin addicts were in danger when exchanging their syringes, as well homosexuals (but heterosexuals too) when they had unprotected sex, but this did not stand as a risk, because HIV had not yet been identified and the physical damage it caused was still unknown. When there is no scientific knowledge about the identity of the contaminating factor and the means of contamination, there is clearly a danger – unknown and ignored by those concerned – but not a risk (Pollak 1988; Setbon 2000). In the same way, for there to be a risk, the possible damage must have been identified and evaluated. But this factor can be lacking when it comes to a given negative phenomenon, or danger; this is particularly true when the effects are postponed and unknown at the present time. For example, there are the illnesses caused by the handling of asbestos in factories or bovine spongiform encephalopathy (BSE) resulting from the use of animal flour in the feeding of cattle (Ford 1996; Philips of Worth Matravers, Nicholas, and Ferguson-Smith 2000), which were only identified and analyzed quite late (Chateauraynaud and Torny 2005). There may also be the case of waves emitted by cell phones, because there is currently no epidemiological study that seems to provide a definitive answer to this issue (Souques 2009).

Furthermore, damage is socially defined: some nuisances, as well as some physical or material degradation may be considered as damage in one society but not in another. In societies that are currently poor (and western societies in the past), psychological damage is (was) not taken into account, and only the destruction and degradation of goods or physical lesions of individuals are (were) considered to be genuine damage. On the other hand, in societies that are now rich, and where legislation often allows people to sue if they have suffered psychological damage, there is an extension of the possible field of damage. And also, of risk. Thus, in other societies, and at different times, an event that leads only to psychological damage, without there also being material or physical damage, does not enter the field of potential risks. For this reason, it is only recently, and in certain countries, that moral harassment has become a risk run by employees in companies, alongside labor accidents and various professional illnesses.<sup>1</sup> In the same way, during the nineteenth century and the early twentieth century, little attention was paid to damage caused by industries, the construction of large-scale infrastructures, such as highways, airports, or maritime and river ports, which may have affected nature, biodiversity, etc.

The approach whose explanatory power we want to check, in the case of the geographical space under investigation, is thus on the constructionist side of the continuum, as described by Lupton (1999a, 1999b), which runs from the realistic approach to a highly relativist, constructionist approach. This continuum has also

been used in an almost identical way by Taylor-Gooby and Zinn (2006), who place quite logically, along an axis limited on one side by a realist pole, and on the other by a constructionist pole,<sup>2</sup> the sociological theories of risk close to the second of these poles whereas the psychological theories, the rational actor theory (dear to free market economists), and the technological scientific approaches are located on the opposite side. The constructionist position tested in this article is, in fact, close to that of the Risk Society of Ulrich Beck (1992) or Giddens (1990); even though the latter's version stands as a rather more individualistic and less institutional version than the former's, their constructivism is approximately equivalent. It is also close to the sociocultural perspective in the social anthropology of Douglas (1992) and Douglas and Wildavski (1984), which is situated a little higher up the axis that leads to constructionism.

However, while our constructionist approach is clear, it remains measured, because the aim is not to affirm that the social view has the ability to create social realities, on its own, from nothing or virtually nothing (Latour 1995; Rorty 1998), when it comes to risks, or any other artifact. In the same way, in the field of risks and their management, we doubt that there is any question, as in governmental perspectives (Foucault 1991), of 'a top-down functionalism that seeks to explain social development in terms of the exigencies of government and other power-holding instructions, to see people as inherently manipulable' (Taylor-Gooby and Zinn 2006, 406). Thus, the approach tested here is not strongly constructionist; it simply considers that the progress of scientific knowledge, the increasing demands in terms of safety in developed countries, and the appetite for the conquest of new markets by insurance companies, have simply transformed a – known or unknown – danger into a risk. There is an individual or collective desire for protection from its occurrence and for insurance for any damage after a possible accident. To sum up our position, it can be said that, for us, if the existence of a danger is not a sufficient condition for the social production of a risk, it is still almost always a necessary precondition for it.

Scientific progress and its diffusion, the increasingly accurate and rapid awareness of tragic events in a world in which information circulates quickly, the transformations of mentalities and the demands for safety, and so on, all participate in a constant redefinition of the nature and contours of risk. Thus the Risk Society current, initiated by Beck (1992), considers that individuals in modern societies are both more subject to risks and more averse to them. Contemporary societies, marked by increasing individualization, seem to be less and less confronted by relationships and conflicts between classes, but instead more confronted with risks, in particular the technological ones, that cross national and social frontiers, and may affect indifferently both the rich and poor. To illustrate this thesis, Beck compares on the one hand penury, which can be seen as being 'hierarchical' and affecting social classes in different ways, and on the other smog (and behind it all the nuisances and dangers linked to the development of science and technology) which can be described as being 'democratic', affecting all individuals indifferently, whatever their place in the social hierarchy. Furthermore, our modern societies seem to be characterized by risk management not just by institutions but also by individuals, who thus develop a feeling of existential anxiety, while seeing their ontological safety being eroded, to paraphrase Giddens (1990). It should be noted that the different comprehensions of risks by different populations, politicians, and the media (all three being linked) mean that the social visibility of certain risks is amplified,

or on the contrary toned down, as the theory of the social amplification of risk shows (Pidgeon, Kasperson, and Slovic 2003).<sup>3</sup>

Furthermore, a certain number of risks, characterized by a high degree of complexity, ‘embedded in the larger context of societal processes’ (Renn, Klinke, and van Asselt 2011), such as BSE or biodiversity loss, can be described as being systemic risks. They then require the use of a governance that involves, as well as local or supranational governments, heterogeneous actors: expert groups, nongovernmental organizations, environmental associations, etc. The establishment of discursive processes ‘assures the integration of technical expertise, regulatory requirements, and public values’, and can greatly contribute to this governance (Renn 2008, 640).

In this article, we shall examine the history, during half a century, of a space that shows up this social definition of risk, and the way in which events that have taken place far away from it, but which have received a lot of publicity and led to new legal, national, and European dispositions, have contributed to the redefinition of the risks that concern it, thus leading to a partial divergence between the perceptions of experts (and thus those of administrators, politicians, and civil servants) and those of lay persons. This divergence of perceptions between experts and lay persons has also led to an important debate in the social sciences in the attempt to discover which one is more exact, or at least less faulty. The scientific vision, which systematically agreed with experts, because of their know-how, has been succeeded by a valorization of the knowledge of lay persons (Wynne 1996), or else a leveling of both (Boghossian 2006). However, we shall not enter into this debate here, and shall limit ourselves to showing up the possible divergences of opinion between the various types of actors, while pinpointing their sources.



Figure 1.

## Context and methodology

### *Presentation of the geographic space of Dunkirk and the Braek seawall*

The urban conglomeration of Dunkirk, with a population of 200,000 inhabitants is situated in front of the Northern Range of France's sea lanes, and contains the country's third largest maritime port in terms of trade. It is a major energy and industrial pole in European terms (first European energy pole, with over 10,000 employees in the energy, metallurgy, and petrochemical sectors); also the construction of a methane terminal has been planned during the years after 2010. The space under discussion here resulted from the construction of a Usinor metallurgy site in the 1960s on 450 ha of land recovered from the sea. The Braek seawall was built at the same time as the metallurgy site, as part of the port architecture with a view to protecting the industrial site from the sea and the weather (Figure 1). It encloses a basin where ore to blast furnaces can be dumped. As for the cove of Clipon, it is made up of a strip of coastland between the Braek seawall to the west, and the jetty of the new outer harbor which was dug out in the 1970s. Winds and sea currents have progressively brought in and deposited sand at the foot of these two constructions, thus creating a beach and a sandy cove.

### *Methodology*

The article is based on a sociological reading of historical and geographical material. The aim is to apply the Interpretive Sociology approach as defined by Schnapper (1999) and Weber (1965), in other words the attempt to reconstitute – by selecting the main traits to the detriment of nuances based on the overly individual aspect of things, and thus simplifying – the vision of this territory which the inhabitants and public authorities have, as the main players acting on this space. This work of 'historical sociology' can be considered as an attempt to participate in a sociogenesis of industrial risks, on the model of what Norbert Elias has done on courtly behaviors and relationships with the body in the Christian West from the Middle Ages to modern times (Elias 1982, 1994; Sica 1984). As the traditional method of interviews with the players who have acted on this space was possible only rarely, we worked mostly from written sources. The essential part of these was a corpus of press articles concerning the Braek seawall and the cove of Clipon, from the end of the 1970s to 2010. The great majority of the articles devoted to this piece of coastland come from *La Voix du Nord*, a regional daily newspaper benefiting from a virtual monopoly on local news in France's two most northerly *départements* – Nord and Pas-de-Calais – with a joint population of four million inhabitants. However, the question of the Braek seawall–cove of Clipon has also occasionally been treated in the national press (*Libération* and *Le Monde*). For this work, we have also exploited the few documents that institutions, especially the *Agence d'Urbanisme* (AGUR or 'Town Planning Agency') devoted to this space during the 1970s. Furthermore, as we had taken part in a team of three researchers who investigated the village of Mardyck, surrounded by three high-risk industrial sites (classified as 'Seveso', see below) and situated near the cove and the seawall, we undertook a secondary exploitation of the data gathered during the completion of the questionnaire and the notes taken during the conversations that often accompanied it (Flanquart, Hellequin, and Vallet 2007a, 2007b). The exploitation of all of this material has led us to compose a

historical account of the frequentation of the seawall and cove as a space containing various dangers, some of which were quickly recognized and treated as risks, while others were neglected or played down. This has also allowed us to show up different points of view about the question, and in particular the divergences that can exist between the vision of those who frequent the space for leisure purposes, and those responsible for managing their safety. This account does have some gaps but, in our opinion, the main stages of occupation of the space and the evaluation of the risks by the people frequenting the space and the authorities responsible for their management have been identified.

### **A carefree period**

#### ***The Braek seawall and the cove of Clipon: the birth of a leisure space***

In the 1970s, the Braek seawall and the cove of Clipon became a risky space because inhabitants spontaneously started frequenting a place which was initially intended only for use as a harbor. The reasons for their enthusiasm about the seawall and cove are easy to understand. Firstly, since the transfer of the port toward the west and the resulting restructuring of the coastland, the inhabitants of the western part of the conglomeration no longer had any direct access to a nearby, natural beach. They either had to cross the conglomeration to go to the beaches to the east of Dunkirk, near Belgium, or else they could adopt the seawall and the cove of Clipon, where sand had accumulated, brought there by the northern winds.

Secondly, even though access to the seawall and cove requires a rather complex journey through the port and its industrial installations, once the seawall has been reached, people can park their car near their parasol and beach gear. The car can even then be part of their beach equipment. A press article in the summer of 1979, illustrated by two photos of people on the sand and tarmac slope, with their bikes and cars nearby, explains:

Nor is there any problem parking, because you can park your car at the foot of your parasol and so have everything to hand: cold drinks, the back seat for the baby's nap and the radio for the weather forecast.

The enthusiasts of this sea resort can also sunbathe between the neighboring dunes; meanwhile keen fishermen can cast their lines into the water in the canal or the mineral basin. (*La Voix du Nord*, Dunkirk edition, Tuesday July 31 1979)

Finally, the maneuvers of the ships coming to the harbor, to supply the blast furnaces of Usinor,<sup>4</sup> provide an additional attraction. The enthusiasts of this space even consider that it has a 'wild' character. For example, during the 2006 study of Mardyck, a village surrounded by factories and close to the seawall and cove, one inhabitant declared that he appreciated the calm of the village and above all the ease of access to the beach at Braek:

You can find a little nature there, hidden by the seawall. (Man, working class, in his 30s)

Then, encouraged by the interviewer to be more precise, he explained that what he liked was the absence of businesses – cafés, restaurants, stores selling beach arti-



cles, etc. – that characterizes the Malo seawall, Dunkirk’s other, highly urbanized beach.

In the 1970s, the arrival of unexpected visitors in a harbor zone created dangers. However, only some of them – evaluated by the authorities and seen to feature identifiable damages with a probability of occurrence – can really be seen as being risks. A study of the press of the 1970s provides an understanding of how these dangers were identified by the harbor and municipal authorities, with a view to neutralizing them. There are two main types: firstly there are dangers coming from swimming in a zone where there is no surveillance or analysis of the quality of the water, secondly, there are those dangers coming from traffic along the five miles that run along the top of the straight seawall.

### ***Renovating and securing the space***

Having noticed the appropriation by the inhabitants of this part of the harbor as a site for leisure activities, the administrative authorities of the municipalities concerned by this space, in agreement with Dunkirk’s independent harbor authorities,<sup>5</sup> decided, in 1978, to undertake a rapid renovation of the zone to make it more welcoming and above all safer for the public. The idea was to make leisure and tourism easier and safer, given the presence of factories and the smoke they give off.

With this in mind, in that same year 1978, the Dunkirk municipal authorities, the *Fondation du Cadre de Vie* (Habitat Foundation) and the *Agence d’Urbanisme*, decided to set up the *Association de la digue du Braek* (Braek Seawall Association). Its statutes declare that its objective is ‘the reception of the public on an industrial coastline’, ‘from the Dunkirk semaphore to Gravelines and, in particular, its new outer harbor’. The association brings together seven municipalities, which are geographically concerned by the Braek seawall, either because it is their direct access to the sea, or because they are close enough for their inhabitants to have a quick and easy access to the site: Dunkirk, St-Pol-sur-Mer, Fort-Mardyck, Grande-Synthe, Mardyck, Loon-Plage, and Gravelines. The idea was to carry out minor work, which would make life easier and safer for those who frequent this place for leisure purposes. Reporting on the renovation plan for the seawall, as presented by the town planning department, an (anonymous) journalist wrote:

And so there will be rest rooms; a surveillance post, with lifeguards; an eatery; clearly marked off parking spaces, so that misdirected traffic on the seawall does not create problems of safety ... but no major constructions; just amenities reduced to a minimum, but providing the essential ... (*La Voix du Nord*, Dunkirk edition, 11 July 1979)

This association, which began renovating the west of the seawall (beside Loon-Plage and Mardyck) in 1978, planned to continue its work eastward, especially by establishing ‘paths for pedestrians and cyclists making access easier and safer’. At the same time, a surveillance post was indeed put in place with two lifeguards, as well as traffic restrictions on the top of the seawall. But the introduction of a series of hump-backs on the part left open to traffic so as to ‘avoid it being turned into a speedway’ seems never to have occurred. On the other hand, street lighting (whose vestiges can still be seen today) was set up along the route, making driving at night safer.

The same article, quoted above, even mentions projects based around the development of industrial tourism, with a view to facilitating and encouraging the discovery of the industrial sites around the harbor:

Why not envisage a ‘living museum’, established on the new outer harbor and containing animated displays, with mock-ups, of its current industrial activities? ... There will be plenty of ideas, which is just as well: tourism requires a lot of them; our region too ... (*La Voix du Nord*, Dunkirk edition, 11 July, 1979)

### ***The zenith of carelessness about industrial risks***

So as to promote what had spontaneously become a ‘leisure and seaside resort’ and which it had now decided to develop, on Sunday 8 July 1979, the *Association de la digue du Braek* organized a French motorboat championship. Making the most of the sunshine, 40,000–50,000 spectators (journalist’s estimation) gathered on the seawall, using its slope as terraces to watch this motor sport event in comfort. The day after the competition, *La Voix du Nord* reported on it in rather lyrical terms, without making the slightest mention of the possible dangers for the spectators coming from the presence of dangerous, polluting industrial sites:

[...] there was quite a crowd, and on several levels, along the gentle slope of stones, as well as in the nearby area of dunes where some people had barbecues, under the glittering tips of their parasols, while others, sitting calmly like supporters on the terraces, blindly followed the motions of the speedboats skidding across the waves at a speed of 100–150 kph, if not more. (*La Voix du Nord*, Dunkirk edition, 10 July 1979)

The journalist tells how the traffic was so dense that it took him an hour and a half to leave the Braek seawall. This gridlock was caused by the Charles de Gaulle lock (Figure 1), which was being renovated, meaning that no cars or pedestrians could take that route. So the only way out was via the dunes bridge (to the west of the seawall), and no one seemed to be concerned about the fact that this single access route would not allow a sufficiently rapid evacuation if there was a serious problem on the metallurgy site, to the other side of the mineral basin. An accident in the steam cracker or oil refinery would have been even more serious, because this would have immediately blocked the way out across the one operational bridge. Still in the same article, the journalist does make some criticisms of the seawall as a leisure space, but these considerations are purely aesthetic rather than to do with industrial risks:

So who will now dare to say that they do not know the beach of Braek, a Janus with one face of fine sand, with endless, wild perspectives which have remained until now virgin; and a second face, far less attractive for sure, with its horizon blocked by the superstructures of blast furnaces and smoking with the gray fumes from the vapocraquor! (*La Voix du Nord*, Dunkirk edition, 11 July 1979)

At the end of the 1970s, what seemed off-putting were the gray fumes and the dark forms of the blast furnaces, which were judged to be unattractive, rather than the dangers linked to industrial exploitation. Furthermore, in the same article, the journalist, who was later to become the president of the federation of associations for the defense of the environment in the Dunkirk region, concluded as follows:

[...] it does not seem impossible that, after pulling off such a success, the association of Braek will be invited one of these days to repeat it. And how not to believe that, based on this experience, certain organizational failings (the traffic and parking in particular) will soon be remedied? (*La Voix du Nord*, Dunkirk edition, 11 July, 1979)

It should be noted that this sort of event, which took place three years after the accident at Seveso (in 1976) and three years before the publication of the European Directive aimed at controlling the uses of spaces close to dangerous installations (Figure 2), has never been repeated.

### *The missing question*

During this period of spontaneous, then accompanied, development of the seawall as a leisure space, the question of the safety of the walkers, tourists, fishermen, and other enthusiasts of the Braek seawall and the cove of Clipon was not entirely absent; however it was limited to risks that were already socially constructed, in other words which had identified and treated in the political and media spheres (Gilbert 2003). As well as the facilities and services intended for the comfort of the users so as to make access to the site easier (the extension of a bus line during the summer period was envisaged), others were introduced so as to guard against two types of risks identified by the authorities and for which they felt responsible in terms of prevention and control: these concern swimming in the sea and the cohabitation of automobiles, bicycles, and pedestrians in the same space.

In the series of press articles from the end of the 1970s to the beginning of the 1980s, there is no mention of the question of industrial risks in this zone: neither the possible explosion of a blast furnace or of the vapocraquor, nor the release of toxic fumes after a manufacturing accident.

This was not specific to the zone made up of the Braek seawall and the cove of Clipon, because at the same time, just a few miles away, a former sand quarry was transformed into an urban park with a total surface area of 175 hectares. But the blindness was the same. In what was to be called the *Parc du Puythouck* (Figure 1), the pool of water which had formed during quarrying to extract sand was made into an artificial lake, and it was connected to the network of water gangs, or drainage channels from polders (a third of the surface of the conglomeration of Dunkirk lies below

#### Main industrial accidents:

1966	1971	1974	1976	1984	2001	2010
Feyzin (France)	Brunswick (USA)	Fixborough (UK)	Seveso (Italy)	Bhopal (India)	Toulouse (France)	Ajka (Hungary)

#### The Braek seawall and cove of Clipon :

1979	2009
Motorboat Championship	Launch of the procedure PPRT (Dunkirk West)

#### The legal framework EU :

1982	1996
1 <sup>st</sup> Seveso Directive	2 <sup>nd</sup> Seveso Directive

France :	1976	1987	2000	2003
	Law of 19 July 1976 (classified installations)	Law of 22 July 2007 (Seveso 1)	Decree of 10 May (Seveso 2)	"Bachelot" act (PPRT)

Figure 2.

sea level). There was also a project to continue cultivating this park, thus pursuing the work already begun by the town of Grande-Synthe, on whose land the park was situated. Here too, as with the seawall and the cove, factories were not seen as possible dangers, just unpleasant because of their look. This negative connotation is clearly explained in a press article in *La Voix du Nord* in the fall of 1979, which states:

This operation is placed on a section of plain land lacking any particular characteristics and which is totally flat, but this banal landscape is worsened by its extremely varied environment, dominated to the south by the crushing weight of Usinor-Mardyck. (*La Voix du Nord*, Dunkirk edition, 4 and 5 November 1979)

Further on, toward the end of the article, the journalist did mention some risks that will need solving for the future public of the site, but here too they are limited to the water and the landscaping of the banks:

While the different parts of the lake can be used for various aquatic activities, prudence should still be shown, because the water in the lake is still rising and the banks are dangerous. (*La Voix du Nord*, Dunkirk edition, 4 and 5 November 1979)

The banks of the artificial lake were ‘sloughed’, and the water continued to rise, so the plan was, to create a safer zone for swimming, and, to the northeast of the lake, a beach which would broaden the banks, making access to the water safer and easier. As for the seawall, the risks in question were those of drowning, with no mention of the nearby industrial sites. The danger was clearly there, but the view society had of it means that it had not yet been turned into a risk.

## **Toward an unstable balance**

### ***Thirty years later, where are we now?***

It is clear that, today, in France and the other main industrialized countries, the dangers associated with the exploitation of petrochemical and metallurgical industries have emerged as socially constructed risks, which authorities attempt to reduce at their sources while limiting their effects on people and property. A series of industrial accidents in Europe and the rest of the world incited the European Commission and national authorities to issue directives and laws to control dangerous industrial installations (Figure 2). In June 1982, the European Seveso Directive was adopted, after the catastrophe that occurred in July 1976 in the town of Meda, near Seveso, in Lombardy (Italy). A cloud containing dioxin, which escaped from an overheated reactor in the Industry Chimiche Mendionali Azionaria (ICMESA) chemical plant, spread across the plain of Lombardy. While this event caused no victims, it deeply marked public opinion. This Directive, with its national versions in the various countries of the European Union, fixes perimeters of danger, including the banning of certain constructions, as well as safety measures to be taken, etc. In France, a law dated 22 July 1987 brought French legislation into conformity with the European Directive. This law classified industrial installations into four categories of dangerousness; those in category D, with only very limited risks, were only lightly regulated, while the other three – A, B, and C – required prior authorization and a presentation to the authorities of an impact and danger study. Urbanization around these sites was also controlled.

In 1996, the European Union passed the Seveso 2 Directive, which is more restrictive and normative than the previous version. It was turned into French law by the ministerial decree of 10 May 2000. These regulations take into account all of the dangerous processes of an industrial site, as well as the possibility of a ‘domino effect’, in other words the spreading to other nearby industrial sites of a fire and/or an explosion originating from a single site. This led to a doubling of the classified sites, which in France went from 596 to 1250. It should be noted that it is only in this second Seveso Directive that the term ‘risk’ appears and replaces the term ‘danger’. A risk is defined by the European authorities as: ‘the probability that a specific effect will occur during a given period or under given circumstances’. The danger and impact studies carried out by the companies are checked by a state body of engineers working for the DRIRE (*Direction Régionale de l’Industrie, de la Recherche et de l’Environnement*, or Regional Direction of Industry, Research and the Environment), and the installations are regularly inspected by these engineers to check that they still conform with the law. Danger perimeters are defined around industrial sites, and it can be forbidden to build in certain areas.

On 21 September 2001, an accident occurred at the AZF plant in Toulouse (France). The explosion of a stock of 300–400 tons of ammonium nitrate caused 31 deaths (including 10 employees in the plant), injured about 2500, and led to extremely heavy material damage to the urban areas around the factory. In France, this catastrophe led to the setting-up of a parliamentary inquiry as well as a national debate, with, in each of the 26 administrative regions that make up the country, panel discussions bringing together public services in charge of safety, local politicians, industrialists, directors of environmental associations, and trade unions. From all of these reflections and consultations, a law was passed on 30 July 2003, whose objective was to gain a better control over industrial risks. This law, known as the ‘Bachelot’ act, from the name of the minister who brought it through parliament, in particular called for the drafting of 420 Plans for the Prevention of Technological Risks (PPRT), concerning 630 industrial sites, in 9800 municipalities. The aim of these PPRT is to reduce risks at their source as far as possible (burying or dividing of vats, internal walls in sites, improvement of the safety and emergency equipment), while continuing to trace out perimeters, in which building is limited, forbidden, or else destroyed if constructions are already present, according to the level of the dangers (Suraud 2007; Le Blanc et al. 2009). The drafting of these PPRT took longer than expected, and in Dunkirk, one of the four areas with the greatest concentration of dangerous industrial sites in France, the first plan – concerning the western part of the conglomeration – was initially to be completed for summer 2010, but has now been put off until the end of 2012.

An article in the national newspaper *Libération*, by Stéphanie Maurice, dated August 2003 – less than two years after the AZF catastrophe and just two weeks after the passing of the ‘Bachelot’ Act – discussed the level of frequentation of the Braek seawall and the possible dangers. The journalist describes the crowds of people who are drawn to the site as soon as the fine weather returns, the satisfaction of the bathers, the adepts of sunbathing, and other occupants of the space. She quotes the words of the president of the MNLE (*Mouvement National de Lutte pour l’Environnement*, or National Movement for the Protection of the Environment) for the Nord-Pas-de-Calais region, drawing up a description of the appeal of the beach at Braek that strikes a chord with others that could be read in the press back at the end of the 1970s:

We don't always go to Malo, Dunkirk's tourist beach, because we also have natural dunes. It's more pleasant to go to the Braek seawall, you're not crushed together, you can see the boats coming into the port. Behind you, there may be factories, but in front of you, there's the sea. (Libération, 13 August 2003)

Strangely enough, when this environmental militant mentions a risk, he talks only about the nine wind turbines on the seawall,<sup>6</sup> in the fear that one of the propellers could fall and hit the people who park their cars near these installations, 'because the ground is more compact there'. The article, which was supposed to be about industrial risks, contains no quotes from this militant concerning that question.

At the same time, Philippe de Place, director of the independent harbor authority, who had every interest in seeing that the decree forbidding frequentation of the seawall was respected, as was strictly the case in the rest of the harbor's facilities, resigned himself to letting the tourists and bathers in:

It is now impossible to impose a complete ban, there would be a riot. So we will have to regulate the current situation. (Libération, 13 August 2003)

The director of the inter-municipal syndicate of the Dunes of Flanders, which includes five municipalities and is responsible for the touristic promotion of the 10 miles of beach and 800 ha of dunes between Dunkirk and the Belgian border, expressed the same resigned position:

We're not going to use the police to turn people away. (Libération, 13 August 2003)

However, the journalist does point out that if there was a major accident in one of the industrial sites near the Braek seawall and the cove of Clipon, it would be very difficult to evacuate people from the beach. And it would be particularly hard on a bright Sunday in summer, when frequentation of the site is at its highest (in such circumstances, there can be an estimated 5000–7000 people on the beach). Evacuation by the sea would then be the only possibility.

### ***The split between lay and expert visions of risks, and the existence of a provisional balance***

Currently, there exists a provisional balance concerning this space made up of a seawall and a cove, surrounded by Seveso-classified factories. While there are clearly visible signposts forbidding cars and bathing, and while the police occasionally hand out parking tickets to people who park on the seawall, there is still considerable tolerance for those who frequent the site, to fish, hunt, swim, or do water sports such as kite-surfing or windsurfing. For example, it was still possible to read in 2010, on the website of Dunkirk's Tourist Office, a recommendation that the Braek seawall is good for windsurfing and kite-surfing, and for the latter activity, there is even the following remark:

Dangers: no known dangers.

In the same way, in the Hazebrouck edition of *La Voix du Nord* (a town situated at about 30 miles from Dunkirk by car), an excursion by coach to the cove of Clipon

was recommended so as to observe the passage of northern gannets, shearwaters, ducks, and other migratory birds which transit via the Pas-de-Calais on their way from Scandinavia to southern Europe. The text mentions neither the industries nor the fact that it is forbidden to enter the area, but simply says:

The cove of Clipon at Loon-Plage is a sublime point of observation, because it juts out far into the sea. (*La Voix du Nord*, Hazebrouck edition, 11 October 2009)

This excursion, organized by the Ornithological and Naturalist Association Nord, shows how little such bodies are conscious of industrial risks and that they do not want to give up on the pleasures provided by frequenting this site. This is particularly true for the kite-fishing association (a fishing technique consisting of casting natural bait behind rollers, the line is held taut and the rod upright on a support), who often protest on their websites when the police hand out tickets to those who park on the seawall, or when there is a rumor that the seawall and cove are going to be closed.<sup>7</sup> What is more, the founder and head of DKite, a kite-surfing school in Dunkirk, when interviewed by a journalist, deplored the fact that the future building of a methane terminal in the cove of Clipon would mean that he could no longer take his pupils to a site which he considers to be extremely reassuring, whatever the wind direction:

The cove is very sheltered, with few waves. It's not bad for beginners. (*La Voix du Nord*, Dunkirk edition, 16 April 2010)

He even expressed a fear that inexperienced young users might take to the water from a different beach in Dunkirk, at Malo, where the wind coming from the hinterland could take them far out to sea and put them in danger, as opposed to the situation at Clipon. Sea sports associations and enthusiasts of various beach activities thus show themselves to be more focused on immediate, personal risks (drowning, or drifting out to sea), and on the advantages of the cove of Clipon and Braek seawall (a 'wild' site because it has no businesses), than on industrial risks.

Elected politicians, be they regional or national, cannot afford to forbid access to a space which the local population loves. It would be against the wishes of their electorate. The words of a deputy representing the area covering the municipalities to the west of the conglomeration of Dunkirk are highly revealing. In Spring 2005, the dunes bridge, to the west of the seawall and just at the entrance of the cove of Clipon, had been damaged by a truck and was closed for repairs. On Sunday 21 August, in *La Voix du Nord* published extracts from a letter written by the deputy to the director of the independent harbor authority. In it, he posed as his electors' spokesman, complaining that they could no longer go to the seawall and cove for their leisure activities:

My attention is constantly being drawn by the nuisance caused by the closure of the bridge, which provides an indispensable link for the inhabitants of Loon-Plage and Mardyck, but also for those who go fishing, hunting or practice other leisure activities during this summer period [...]. (*La Voix du Nord*, Dunkirk edition, 21 August 2005)

He explains how access to the seawall is still possible, but requires a long detour via the Charles-de-Gaulle lock, which is often closed to allow through mineral ore

tankers to supply the metallurgy site. Forgetting that the first two activities are simply tolerated and the third forbidden, he concludes by saying that his electors must:

make a 60 mile detour to be able to enjoy going fishing, hunting or simply swimming.  
(*La Voix du Nord*, Dunkirk edition, 21 August 2005)

Here, the deputy adopts the vision of his electors, who are focused on the attractions offered by the seawall and the cove, with little awareness of the risks caused by the proximity of dangerous industrial sites to their favorite leisure site.

## Discussion

By examining the history of this coastline space, made up of the Braek seawall and the cove of Clipon, it can be seen how the dangers inherent to the proximity of metallurgical and chemical industrial sites are now seen to constitute risks, and how their management has progressively been submitted to international directives which have subsequently been transferred into national legislation. And how the various authorities – local and national – try to make secure any space where such risks can occur.

But it can also be seen how ordinary citizens, both because these industrial sites are part of a familiar landscape and their daily lives, and because if they no longer frequented such places this would mean giving up certain leisure activities which they particularly enjoy, tend to get used to industrial risks and ignore the ‘no entry’ signs on the Braek seawall and in the cove of Clipon.

If, according to the interpretive sociological approach described above, an attempt is made to analyze the position of the various stakeholders of this space, the situation could be described as follows.

The experts in official services have identified risks, the consequence of which should be to make the seawall out of bounds, because of the legislation governing industrial installations. But the users, who are highly attached to the place, focus instead on its amenities and are not ready to go without them. They thus prefer to ignore the various danger signs which have been placed around and on the site. At the same time, the local politicians are torn between the experts and the users. According to the circumstances, they waver between the positions of these two types of actors, while trying to solve an impossible equation: watching over the safety of their fellow citizens but not depriving them of access to a leisure site which they are particularly attached to.

The state representative (the sub-prefect) should take things in hand, push the local politicians, and harbor authorities into respecting the law and guaranteeing the safety of the citizens, but he too is caught up in local concerns and avoids making any definitive decision. The fact that he serves in Dunkirk only for a limited period (at most a few years) between two other appointments, certainly also contributes to this state of affairs.

The history of the Braek seawall and cove of Clipon can thus be read in a constructivist way, because it was the occurrence of industrial accidents elsewhere in the world that was the source of a new awareness of the risks linked to the immediate proximity of industrial sites and places of habitation or leisure. It was these accidents that inspired the various European Seveso Directives and their transferral into French legislation, and which thus, at the same time, transformed dangers,



which were already present on the site but were more or less ignored, into real risks to be dealt with. The rules for the cohabitation between industrial activities and leisure activities were considerably modified as a result.

However, this constructivism is not total, because, while there are now real risks, they are not merely the product of a social view, but constituted from already existing dangers which were for a long time either incorrectly evaluated or else neglected by the various players. Furthermore, as opposed to the vision developed in governmental perspectives, it can be seen that the users of the site are not 'inherently manipulable' (Taylor-Gooby and Zinn 2006, 406), but are instead quite capable of developing a lay vision which is different from that of the experts and of setting up a resistance against behavioral injunctions from legislation.

In fact, in order to understand what is being played out in the particular space made up of the Braek seawall and the cove of Clipon, it is interesting to lean toward certain research carried out in the field of social psychology, which shows that the worries of individuals and social groups about risks are not constant, and can be simply a part of everyday life. When Parkhill et al. (2009) studied the lifestyles of inhabitants living near nuclear power stations in Great Britain, they noticed among them a familiarization with the sites and a tendency to make the risk normal. In the same way, as Tulloch and Lupton (2003) have shown, in terms of medical risks, including cancer, such risks are integrated into daily life, in other words they are not a constant preoccupation that overshadows the rest of their lives.

This frame of reference, in terms of familiarity seems to be the most relevant when it comes to analyzing the frequentation of the Braek seawall and the cove of Clipon by the inhabitants of the conglomeration. This is because those who enjoy swimming, sunbathing as well as the various sports and leisure activities, offered by the Braek seawall and cove of Clipon, see this site as a familiar place, part of their daily lives, and a space which can often be linked with childhood memories. It thus cannot be truly dangerous, and if there are certain risks, they are of the sort that can be managed individually, through prudence, for example those associated with swimming or board sports such as kite-surfing. As for technological risks, they would be considered as perils<sup>8</sup> in the analysis of Luhmann (1993), because no one has the possibility to act on them, and people prefer not to think about them, thus reducing the cognitive dissonance (Festinger 1957; Gjernes 2008; Teuber 1990) which a real awareness of the dangers posed by the factories and a presence on the seawall or cove would create.

In the case of this leisure space, which the inhabitants of the Dunkirk conglomeration have conquered themselves (and even those who go there occasionally from further afield to go kite-surfing, surfcasting, hunting, etc.), the harbor authorities, the local politicians and the sub-prefect – the regional representative of the state – are forced to remain tolerant about an occupation and circulation which should normally speaking be forbidden, but which means so much to the inhabitants that it would be politically costly to ensure that the law was strictly respected. It can thus be described as a provisional compromise rather than as a real governance of the risks (Renn, Klinke, and van Asselt 2011) that are inherent to this space.

## **Conclusion**

The space containing the Braek seawall and cove of Clipon has allowed us to understand the transformation of existing dangers, which were more or less ignored,

into socially constructed risks, in other words how they are transformed into negative events which are known, more or less predictable, and potentially leading to human and/or material damage. Chemical and metallurgical industries, as well as storage areas and their dangers are increasingly considered to be risky zones, especially after the various industrial catastrophes that have occurred throughout the world. But in the leisure area of a seawall and cove, used for water sports and relaxation, dangers were above seen as coming from the sea (drowning) and from traffic; it was only later that the industrial plants on the other side of the basin and along the road taken to access the seawall from the west began to be seen as important sources of risk. However, this awareness remains weak among those who frequent this space, which they see as above all a source of attractions, where the risks they encounter remain generally linked to swimming, kite-surfing, and other sea and beach activities. They tend to tone down any industrial risks, or even ignore them, so as not to give up on a space that satisfies them because of its proximity (for the western part of the conglomeration) and its wild aspect (being nonurbanized). Politicians, the harbor authorities, the sub-prefect and his administration are legally obliged to take into account the industrial risks that affect this space, but they do so only sporadically; they avoid making any pronouncements and do not attempt so see to it that the restricted access to this site is actually respected, from a fear that they will be misunderstood by people who have learnt to live with industry over the past 50 years and have never directly experienced a major accident, and so view it more as a source of employment than of risks.

And if we zoom in on the position of local politicians – the mayors of Dunkirk and of other neighboring municipalities – it can be said that they are forced to arbitrate between two risks: a political and an industrial one. Each side of this situation is potentially damaging for them: they could make their electors unhappy if they forbade access to this leisure space, but also be blamed for their inaction if an accident occurred. Their tolerance of this frequentation and their only sporadic reminders that it is forbidden show that they aim more at minimizing the former risk, even though they are aware that their electorate will have a selective memory if ever there is an accident, that they will probably forget the amenities that they were provided with, and will blame the politicians for not having sufficiently warned and protected them from danger. We are thus confronted with a case of what cognitivist psychologists would call an *a posteriori* prediction effect (Piattelli Palmarini 1995).

The planned construction of a methane terminal in the years to come will further increase the potential risks of this space, and will certainly lead to a renegotiation of its use. But, unless the harbor authorities, local politicians, and state representatives in the area reach an agreement and so take advantage of this chance to forbid access to the Braek seawall and the cove of Clipon, while also being ready to stand up to popular protests, which implies that the current consensus has not necessarily been condemned.

## Notes

1. For example, in France, paragraph IV of Section II of the ‘social modernization’ law of 18 January 2002 contains articles outlawing moral harassment. This is defined as follows: ‘No employee may suffer repeated moral harassment the aim of which being to produce a degradation of work conditions likely to undermine his/her rights and dignity, to affect his/her physical or mental health or compromise his/her professional future.’

2. The two authors also use a second axis (horizontal and orthogonal to the first), which opposes individual (subjective) and social (collective) visions of risk, placing on the former side technical–scientific approaches, as well as the great majority of psychological theories, and on the other side sociological theories. The latter theories are, then, in terms of the two axes, situated in the north-east quarter of the graph, a position which thus characterizes them as being both constructionist and social/collective.
3. Parallel to this transformation of dangers into risks because of the progress in scientific knowledge and citizens' increasing demands for safety, contemporary societies create new dangers (linked to atomic technologies, genetic transformations, etc.) which are more or less rapidly transformed into risks. This was shown by Beck (1992), who speaks of a Risk Society in order to qualify modern, advanced societies in which risks are increasingly difficult to avoid.
4. This company has successively been called, after various mergers and acquisitions with or by other enterprises, Usinor, Sollac, Arcelor, and now Arcelor-Mittal.
5. The *Port Autonome de Dunkerque* (Autonomous Port of Dunkirk) is a state body charged with managing and developing the harbor installations in Dunkirk.
6. They have since been removed, after a propeller did indeed fall off during a storm.
7. See the site [www.opalesurcasting.net](http://www.opalesurcasting.net).
8. We have decided to translate *Gefahr* by 'peril' rather than 'danger' to avoid any confusion with what we call 'danger' in this text. When Luhmann uses the word *Gefahr*, he is referring to something which is already known, socially constructed, and thus a risk; but it can be distinguished from other risks by the fact that people confronted by it are totally subjected to it, and cannot possibly act against it.

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