

## **History, space, and power. Theoretical and methodological problems in the research on areas at (industrial) risk**

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The present article discusses methods and theoretical problems in the research on areas at industrial risk, using examples and problems deriving from studies conducted in Sicily, as well as the review of a number of contemporary studies. The author argues that much of the contemporary research on areas at risk focuses on the “elites” (environmental movements, boards of citizens, and alike) rather than on populations, and does not reflect on the general ambivalence of the inhabitants. This tendency is also related to the frequent lack of historical analyses on the milieus hosting industrial plants, and the rhetoric employed by authorities and charismatic leaders in order to convince the populations to accept the industries into their territories. The author also reflects on the concept of space, and notices that many studies focus mostly on the process of production of slums, neglecting the role of the industrial villages in the creation of perceptions and attitudes towards industry. In a similar manner, the state of local economies is often ignored in many analyses, so that considerations on the possibilities for alternative models of development are not provided. Yet, in spite of the fact that the current debate on risk is characterized by critical approaches, a number of studies appear to be implicitly conservative and cooperative with regard to state and capital, and do not adequately reflect on the role of power in determining narratives and behaviors in areas at risk.

**Keywords:** Industrial risk; Italy; methods; power; history

### **1. Introduction: risk as a dependent variable**

The present article is intended to provide a “reflexive” account concerning doubts, impressions and questions I derived from my work on the areas at industrial risk of Sicily and Sardinia. Reflexivity in qualitative research, in fact, is to be intended as a strategy to consider the subjectivity of the researcher, and inform the reader about the cognitive processes shaping the research (Van Maanen 1989; Hertz 1996; Kunda 2006). In this paper, therefore, I will briefly discuss my experience in the field within an international research organization, and put my direct observations in connection to part of the existing literature on risk, highlighting some biases and problems. In the years 2007-2009, I was responsible for the qualitative segments of three different research programs aimed at investigating the perceptions of risks in the Sicilian petrochemical areas of Valle del Mela, Augusta-Priolo, Gela, and the Sardinian town of Sarroch. The programs were developed by international, multidisciplinary teams composed of epidemiologists, geographers, economists, statisticians, and sociologists. The studies deployed different techniques, such

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as vast surveys involving thousands of people living in the considered areas, focus groups addressing several dozen participants, cognitive interviews, in-depth interviews, diaries of time, participant observation and other tools as well. In short, the range of techniques was variegated, and these studies became an interesting laboratory in which to experiment and combine methods, and also allowed me to compare different research styles. Above all, beyond the technical aspects, these studies helped me, as it were, to observe research in action; that is, to witness how large investigation programs are carried out in the light of the size of the promoting organization, the different backgrounds and needs of the research personnel involved, the obligations imposed by the granting institutions, the interferences of the political system, and also the practical problems which are always present in the field.

Large and multidisciplinary research programs are in fact quite complex apparatus, framed within bureaucracies, duties, and schedulers. Time becomes an important variable affecting the way a study is conducted: the phases of a research – collection of the data, analyses, reports – are ruled by all sort of timetables and administrative obligations. Beyond that, communication codes, concepts and research epistemologies are often “constricted” by the cultural and disciplinary differences characterizing the teams. Notions of risk, for example, are frequently taken for granted, and reduced to their practical aspects in a given space and time – so that when studies investigate the perceptions of risks in the aftermath of a disaster, they are likely to isolate the event and reflect on the reactions to it, rather than develop a broader analysis on how previous perceptions and the conditions causing the problem came into existence. In part, this is a dynamic generated by the need for scientific parsimony, and the creation of a common terrain for the analysis – namely the adoption of acceptable definitions of concepts, which can be easily used and understood by the researchers involved, the granting institutions, and the politicians. In this way, research is subjected to administrative needs, and shaped by the same logic. A logic that usually helps to confront the immediate problems of areas at risk, but does not shed light on the deeper cultural, political, and historical processes that have produced sources of risk and perceptions. I became particularly aware of these problems during the first of the programs developed in Sicily. As I said, I was the researcher in charge of designing the qualitative segments of the studies conducted on the island, and the one responsible for integrating this section with the others – the surveys, in particular. Among other things, my task included carrying out a series of focus groups, producing both an autonomous, qualitative body of knowledge, and helping to integrate relevant findings stemming from my interviews in the form of a questionnaire, mostly derived from other international surveys, to be administered to several thousand people living in the considered areas. In the course of the long process of adaptation of the tools, I was occasionally puzzled by the rigidity of some parts of the questionnaires that our team was using. In fact, this tool presented a different degree of “flexibility”, so to say. Some parts could be changed; others were just unmodifiable. The latter, in my view, presented several problems: The questions were not clear, and sometimes illogical. Notwithstanding that, they had to be reproduced as they were, in order to guarantee the comparability between our and other studies: these unchangeable questions, in fact, had already been deployed in many international surveys on areas at risk. That was certainly not a “discovery” as the methodological literature has highlighted these problems several times ([Drabek 1970](#); Kohn, 1998). However, in spite of the general agreement on the limits of the above-mentioned questions, I was struck by the resolution of the team not to intervene: as researchers we were prone to comparability,

regardless of its quality. Moreover, after having carried out the first series of focus groups preceding the administration of the survey, I started wondering whether our questionnaires were truly measuring risk. Were we and the interviewees sharing the meanings of the words? Were we concerned with the same problems (pollution, industry, etc.)? My impression was that although we and the respondents were certainly sharing some of the meanings involved, the focus groups were expressing other elements that could not easily be included in the survey – namely, certain ideas about the interrelation between work, politics, and power in the historical process of the observed community. Whilst this may be considered in some way as normal, and is exactly what makes the integration of methods opportune, I started to feel less enthusiastic. In spite of the essential value of the surveys with regard to sampling, questions, and the results' interpretation, I matured a feeling of discontent with regard to certain principles in quantitative research, and international comparative studies in particular. Usually, these investigations focus on a narrow concept of risk – mostly “hygienic”, aimed at listing the fears and behaviors of the studied populations. In short, we were not learning anything about the context, the motivations, and the ways in which the perspective of the actors develops. In short, we were recording the impressions of the population in a given moment, but not reflecting at all on the process that brought these people to think about their reality in their own terms.

As I already mentioned, the programs I worked on over the course of those years, were numerous and articulated. One of them, however, has dramatically changed my perspective, and confirmed my feeling that some parts of our previous research (and other similar ones as well) presented serious limitations. The study responsible for this change in attitude, is the one I carried out in Gela in 2008. This is a town which, since the beginning of the 1960s, is host to a large petrochemical complex, responsible for the infiltration of massive quantities of pollutants into the groundwater and the sea, for very high lung cancer mortality rates, excessive morbidity risks for acute and chronic diseases of the respiratory system, and an excess of genital malformations (Manno et al. 2006; Martuzzi et al, 2006; Fano et al. 2006; Settimo et al. 2009; Musmeci et al. 2009; La Rocca 2010). Here I carried out about fifty in-depth interviews, one focus group, and conducted a participant observation in the research site. A group of epidemiologists helped me to realize a grid of questions for the interviews and the focus groups, but I worked alone for the entire time. The scope of this study was clearly different in nature from the others we were realizing in other places. Here there was no concern with international comparability, no standardized questions, maximum flexibility. In particular, the sources I was employing were mostly “historical”. During this time, I read a large quantity of material written by local historians, ethnographers, journalists, and non-professional writers who had been inspired by their need to narrate their experiences and views concerning the local social and economic relations. Here I began to realize that each place at risk is specific, and that our research group had not taken this into account. My impression was that, in spite of “precautions” such as the use of focus groups with adaptive functions, we were mostly applying general notions to particular cases, and missing the real peculiarities of each site – that is, the ways human beings produce meanings and dependence.

Furthermore, during my investigation in Gela I sensed that the concept of “risk” was far more complex than we thought – essentially, as vulnerability and potential for loss, related to wealth, education, housing, etc. (Cutter 1996). On the other hand, in my view, risk became a network of meanings and relationships that are not linked only to life and death, health and disease. Rather, risk is a complex plot of interests, priorities, duties,

ethics, needs, and power. Life is risk, and we were missing both life and complexity. In short, what we needed was a “new risk analysis”, which moved away from crude behaviorism and confronted the complexity of human and social actions ([Kirby 1990](#); [Dow 1992](#); [Blaikie et al. 1994](#)).

As far as complexity was concerned, I felt that we were not reflecting at all on the dynamics that led people to perceive the reality in a given way. We were considering risk as an objective domain of reality; that is, as something that exists in a form or another, as a real entity. In short, by providing a list of risks, fears and behaviors concerning their habits in the matter of food, mobility, etc., we were asking inhabitants of areas at risk to adhere to our idea of risk, and we were not considering either their own definition of that concept, or the ways in which they happened to construct their visions over the course of time.

I also realized that we were not alone, and that a certain “sectorial” way of looking at risk was common. Regardless of what is observed, most of the studies I reviewed seemed to reflect on single parts, rather than on the overall elements determining the perceptions of risk. For instance, forms of opposition against hazards and industries, fears, feared elements, knowledge about the environment, etc., are often discussed separately, and some links between elements are lacking. In simpler terms, I felt that the isolation of the concept of risk, and the discussion of it as a specific field of study, did not help to understand the process that leads to the acceptance of risk and pollution. Risk should not be seen as an independent variable, and its perception is rather the consequence of a certain structure of the economic and political organization of the communities. In Gela it became clear to me that, in previous studies, our team had failed to consider the nodes between elements. That is, we had omitted seeing how different elements, subsystems and domains relate to each other, and determine the collective feeling towards risk. Moreover, to put reactions to risk at the center of the analyses was erroneous, unless we were interested in the viewpoints of the “elite”, composed of active and informed citizens, rather than in the perspective of ordinary people. Among other things, in fact, Gela is well-known for its opposition to industry – a phenomenon which has been developing over the last few years. On the contrary, my observations showed that active forms of opposition were not so common, and involved only a limited section of local society. My study of Gela showed, in fact, that wages were more important than health, and while people fail to comprehend the possible consequences of pollution on health, they fully understand the meaning of an empty wallet. Politicians and corporations understand that meaning too, and in fact use this argument as a way of regulating consent. Thus, risk should not be intended as an explicative entity, but as one of the many elements making up people’s perception of their own town (in association with traffic, mafia, unemployment, etc.).

I suppose that some of these questions do not pose any new challenges to a classic methodological and epistemological debate. Notwithstanding that, I believe that it might be useful to refresh this discussion as the impact of methodological choices and omissions in the field of risk analysis would be serious. Research on risk, in fact, is often embedded within the framework of intervention, and is financed by institutions aiming to produce social changes. Research on risk, in short, is often “political” with regard to its effects. Therefore, periodical discussion and self-interrogation on methods, tools and objects can be helpful.

In the next sections an analysis of the “sectorialism” characterizing many of the current studies on risk will be proposed, in the light of my personal experience in the field. The materials I have collected in Sicily will help me to show how the existing literature

does not completely illuminate the dynamics at work in the context I studied. I will focus on two main aspects: history and space. I maintain, in effect, that in order to understand the approach of a population toward risk and toward particular risks, we should consider the general processes that have generated certain perceptions over the course of time. Thus, we should not propose only a history of the forms of opposition to the industry in a given place and time, or a collection of impressions about fears and misperceptions. Rather, we should produce the history of a milieu; that is, an analysis of the local forms of social organization that stem from long-lasting power relationships and asymmetries, economic structures, trade-offs, and particular events in an area. Here, I will deploy examples from the case of Gela, in order to show how history helps in the research on sites at risk – especially when we must confront apparent contradictions and forms of irrationality expressed by a population. Yet, history unfolds within a space. Space, therefore, is a key element for understanding the specificities of local historical processes. In particular, in the course of this article I will focus on the role played by paradoxical uses of space in producing consensus vis-à-vis the industry – a dimension that has been neglected by several scholars who deal with the concept of place in risk research. I argue, in fact, that the differentiation of space and the segmentation of the local society have generated not only negative reactions, but also a dream of inclusion in the world of industry – a dream made of wages, privileges, facilities, and security, which were unknown to most of the inhabitants of Gela.

Nevertheless, history and space are just two labels, which enclose many events unfolding in the course of time within a place. Among the many possible stories that developed over sixty years, I chose to focus on a few episodes related to the use of water, the creation of an industrial village, and a riot in favor of the oil industry and its pollutants. These appear as central moments in the life of the observed community because of the tensions they have caused, the collective memories they bring back, the public debates they have raised, and the intrinsic surrealist aura that surrounds them.

## **2. Creating consent: risky industries and the communities in the frame of history**

During the course of this article, I argue that many of the studies on risk are partial, both with regard to the object of their analyses, and the extension of the societies they observe. Accurate reviews of the sociological debate on risk show that, since the 1980s, the interest of the researchers moved from the focus on technology and hazardous events, to the perception of technology; from the assessment of the experts' liability, to the lay-public's perception of experts, technology and risk (Beamish 2001; Rosa 2010). Further developments include the study of the theoretical links between environmental hazards, "collective traumas", and the erosion of institutional credibility (Edelstein 1988; 1993; Erikson 1994; Freudenburg 1993; Wynne 1987; 1992; 1996). Whilst this evolution of our studies has broadened the size of the analyzed dimensions, still, the extension of the research on communities is significantly limited to technology and the reactions against its risks. The ones cited above are certainly studies on communities and urban centers, but they chiefly focus on a specific segment of civic life. These are mostly studies on how communities started thinking of themselves in the aftermath of a disaster, and analyses of the movements that followed either apocalyptic events or the discovery of the epidemiological rates concerning industry-linked diseases in specific areas. From this perspective, much of this research should be considered as belonging to the realm of political sociology, and the sociology of movements in particular. By saying this, I am not

trying to establish disciplinary borders, but showing another perspective from which to assess a certain discourse on risk. Studies on social movements are extremely important as they show what values mobilize consistent numbers of citizens, and how these claims threaten or strengthen the interest of states, economic elites, etc. ([Pizzorno 1978](#); [Melucci 1980](#); [Tarrow 1988](#); [Diani 1988](#); [Muller-Rommel and Poguntke 2002](#); [Della Porta and Piazza 2008](#)), and their inclusion in the research on risk is extremely fruitful. But social movements, and green movements in particular, in this historical phase cannot be seen as representative of society at large. One cannot discuss ecological movements as “mass movements”, and their extension is certainly not comparable with, for example, the working class organizations of the 1970s. Several groups and thousands of activists work, separately or jointly, in a sort of transnational space ([Della Porta and Diani 2006](#)) and gather periodically for forums and demonstrations, during which they appear as a critical mass. But at a very local level, with some notable exceptions, there are serious doubts that such movements involve entire communities – even when they focus on local issues and problems (see the NIMBY or LULU movements’ case as it appears in most cases). If one accepts this standpoint, which should be generally valid when reflecting on participation in contemporary democracies, then it will be possible to agree on the fact that most of the analyses on movements in areas at risk are just reflections on local “elites” – indicating by this word that reflexive class of citizens who decide to get involved in public debate on the basis of different motivations (deaths, diseases, ideology, etc.). The activities of such groups and elites can certainly produce changes, for example, inducing corporations to upgrade their technologies, and courts and similar authorities to fine company executives, ascertain the truth about the industrial operations in the territory, and so forth ([Mythen 2010](#)). However, the activities and the results obtained by the movements do not tell us much about society’s point of view on risk. Rather, they tell us about how a number of informed citizens have been able to influence the public debate, what strategies have been deployed in order to force the firms to change something in their procedures, and so on. This is very important for drawing conclusions on the functioning of the public sphere, and to understand what strategies can be used in order to obtain similar results in territories dealing with same problems and risks (or to prevent similar movements from succeeding somewhere else). In any case, these studies do not provide real information on societies at risk, but only upon certain segments of the populations with regard to two specific dimensions: Technology and the response to it.

Thus, what I suggest is that the qualitative studies I have cited above and others ([Wakefield et al. 2001](#); [Auyero and Swistun 2008](#); [Cable, Mix and Shriver 2008](#)), as well as the quantitative analyses employing either psychometric approaches or cultural theories (for a review of both these approaches, see: [Sjöberg 1998](#)), fail in investigating the history of sites at risk. In fact, in spite of their intrinsic quality and the common thickness of their descriptions – albeit limited to a narrow set of dimensions– these studies usually focus on the present struggles of the considered areas, and neglect a part of the past. I believe this is a serious limitation for each consideration that is aimed at understanding the process by which risky industries have settled in a given territory. History, in fact, can help understanding the terms of the “contract” that led communities to accept the presence of the plants in their land ([Kirby 1990](#)). The study of the European experience (see, e.g., the Eni’s case in Italy) shows that the establishment of petrochemical plants or similar risky industries in the aftermath of World War II took place through negotiations and communication actions aimed at obtaining the consent of the populations residing in the

areas chosen by the corporations for the development of their projects (Smith 1981; Chapman and Walker 1991; Saitta 2009). Behind the settlement of these industries there are, therefore, promises, expectations, rhetoric, trade-offs, and forms of exchange that have structured the contemporary general perception of industrial facilities (that is, the perceptions of many of those who do not participate in protests and groups). This combination of elements, which only history can help us to uncover, is lacking in most of the analyses I reviewed. As a result, we find studies that not only conceptualize the discourse on risk in a very limited way – by focusing only on portions of the involved populations – but which also do not produce any “genealogy” of the forms of subordination and consent (Foucault 1976).

Moreover, such forms should not be read as mere volatile cultural categories or narrations. On the contrary, these are “pragmatic” forms of dominion, consisting of informal job-market regulations, political exchanges, and so on. Unemployment, for example, was, and still is, a terrible specter for the inhabitants of Gela, a town with limited resources and poor agricultural production. The dream of being employed in the factory, and the exchange of jobs and votes during political elections, have been formidable methods of regulating consent. Still, the transmission from fathers to sons of work positions in the factory helped Eni to prevent trade-unions from protesting against the risky procedures in industry. Yet, emigration, although much practiced by the inhabitants, is considered almost a catastrophe by the local culture; so that people will do almost anything in order to avoid it. As Hytten and Marchioni (1970) put it, in order to interpret the role of the oil industry in Gela and other southern towns as well, one should consider the specific role of the company operating in those territories. Such company, Eni, was a “state company”, that is, a public organization historically entrusted to counter the oligopoly of large, mostly foreign private companies and the traditional land organization of southern Italy. It was an institution which also pursued capitalist objectives but was requested to do so in the view of producing “social profit”, that is, the supply of jobs and welfare. In Gela the local unions, as well as the rest of the society, were formed whilst considering the petrochemical establishment as public property, or a friend and, certainly, not an alien entity. Both inside and outside the industry, for decades, serious conflicts were avoided both by workers and common citizens – even during the politically turbulent 1960-1970s in Italy.

### **3. Fears, distrust, and trade-offs: the production of a social order**

But the negative social effects of the establishment are wider, and involve the entire public sphere. A very good example, among many, is represented by the water issue. The problem can be outlined as follows: The industry uses ground water, while for the population’s needs desalinated water is deployed. The population has access to a water that is not drinkable and is used only for flushing and washing, and in fact, industrial plants might be damaged by desalinated water (Ministero dell’Ambiente e della Tutela del Territorio e del Mare, 2007). In consideration of this technical problem, the local authorities and the industry have decided to allocate water of dubious quality to the people rather than to machinery. Even more interesting, with an eye to power relations, is the fact that during the years 1960-1990s, 50% of the good quality groundwater flow reaching Gela from the river Dirillo was conducted through an aqueduct built by Anic – a company controlled by Eni. This water was not used for industrial purposes, but for civil consumption. However, the groundwater was distributed not to people living in Gela, but

to the residents of Villagio Macchitella – an industrial village built by Eni, which hosted the “labor aristocracy” (Hobsbawm 1964) composed of technicians and skilled workers, mostly originating from the North of the country. In addition, the process of desalination and purification ended up producing a water lacking in essential mineral substances, as well as being warm, so as to render it, after several decades, undrinkable, as stated by a number of city by-laws (Ordinanza n. 312, 25 July 2003; Ordinanza n. 110, 03 March 2004; Ordinanza n. 707, 14 December 2006). Over the years, this issue has caused the circulation of harsh hypotheses and suspicions. In order to show the absurdity of the story, it may be useful to note that there are individuals, occupying important positions in the health sector, who argue that the water is drinkable and who use it regularly (as I was able to ascertain during the course of several lunch invitations). One of these witnesses recalled that the Caltanissetta City Health Agency (Asl 2), contrary to the Regional Government and the City Council’s opinion, has declared Gela’s water drinkable, and he considers that the formula used by the Region, which defines the water distributed in the city “potable but not drinkable”, to be an absurdity. According to the same officer, the leader of the group of interest, who years ago has pressed for water to be declared undrinkable, did so in order to obtain the title of Commissioner for the water sources (Commissario delle acque) – thus becoming a representative of the national government, and gaining extraordinary power in the area. This hypothesis, charming but confused, has to be reported because it shows the climate of the local public life, and the kind of rumors, suspicions and strains generated by a situation of relative deprivation over extended periods of time (for similar accounts see: [Paisley and McDaniels, 1995](#); [Geiger and Eshet, 2011](#)).

These and many other political practices, therefore, have structured the way the local people perceive not only the oil industry in Gela, but the public sphere. Thus, one would miss many important elements by neglecting the historical conditions that preceded the settlement and the consolidation process of the industrial plants. I also maintain that similar dynamics took place elsewhere, and that the investigation of this kind of historical processes should be taken into consideration in the study of areas at risk.

Furthermore, despite their aims, several “history-neglecting-studies” are implicitly colonialist in nature: in fact they consider the local inhabitants simply as passive “receivers”, who happened to witness the industrialization of their land, subjects with no history, a sort of new savages in the capitalist historical process. We should rather think that, beside the protests against hazards and pollution, there are those who *consciously* consider these industries to be a resource; and I claim that is very important to underline the elements of rationality behind the choice of supporting and consolidating the presence of risky industries as it may shed light on the reasons why the industrial plants continue to operate, in spite of the supposed massive opposition that they apparently cause.

In Gela, for example, on the day after the temporary seizure of the establishment, as decided by the local Court in 2001, the so-called “riot in favor of pet-coke” took place. According to the Italian law, the coal oil (or pet-coke) used to fire the plants, was to be considered “industrial waste”; the court, subsequently, declared illegal its use within the plant. The morning after, around twenty thousand inhabitants of Gela, apparently under the slogan “better sick than unemployed!”, took to the streets in defense of the refinery and against the order of seizure, erecting barricades, closing any access to the city and clashing with the police. Eventually, a local Senator and member of the party Forza Italia, in agreement with the staff of the then Prime Minister Silvio Berlusconi, enacted a decree that



would redefine the nature of the pet-coke, transforming it from waste into fuel and allowing the plant to be reopened (Ciccarello and Nebiolo, 2007,45-46).

One can interpret this event as a sign of dependency (Mudu 2009); that is, evidence of the collective introjection of the idea that the factory plays a central role for the life of individuals and the community, and that the survival of the town depends on it. Or we can conclude that the power display related to local life that took place in 2001, represented the culmination of a process of disciplining that succeeded in persuading local people to internalize the ethics of production, labor and profit at the expense of the quality of life. Also, one may highlight the role of misinformation in generating that kind of reaction (Saitta 2009). However, it would be too hasty to describe the matter solely in these terms, although they most probably portray a large part of reality. In fact, whatever the ultimate meaning of the riot, as a matter of fact thousands of inhabitants chose to support the industry and its pollutants. This is something that, in a single stroke, undermines both many assumptions on the relevance of the social movements working against industry, and the idea that the presence and persistence of the sources of risk are related to the passivity of communities.

Probably, the feeling of inadequacy that certain assumptions generate, derives from the fact that urban centers, movements and populations are studied in a “de-contextualized” perspective. This allegation is actually a little extreme, and it needs further specification. I am not claiming, in fact, that research on risk in general does not describe the contexts in which it develops (Ben-Ari and Or-Chen 2009). Only that often, it omits to provide details about the economic framework within which struggles take place. What are, for example, the structures of local job markets, the viable alternatives to processing industry, and the chances for a sustainable development in the areas where people and movements are said to oppose risky industries? Reports on areas at risk should investigate these dimensions for a better understanding of the successes and failures of opposition movements; but, above all, more information is needed in order to comprehend structures, forces, and interests that, on the one hand, produce consent towards risky industries, and, on the other, allow the same industries to control the surrounding economic environment. Populations may experience the misperception of risks due to information gaps or to cultural patterns, but, especially when residing in smaller towns, they are usually aware of the conditions of local labor markets. Thus, depending on the local economic structures, risky industries sometimes represent the only viable option for people who fears unemployment and lack better chances – in spite of the fact that in Gela, due to the automatization processes, the number of workers employed in the petrochemical industry decreased sensibly over the years (La Rocca 2010). Moreover, it is somehow secondary that the local unemployment rates have increased: many people believe in fact that – by means of the owned social capital, political patronage or other similar mechanisms – they will make it and will obtain any position whatsoever, either in the establishment or within a related firm. Under these circumstances, inhabitants may be aware of the hazards deriving from certain industrial productions, but they may deliberately decide that they want to take the risk because their fear poverty more than a conscious, but vague chance of contracting diseases. In certain cases risk-taking is, therefore, a very rational choice that does not need psychometrical tests for being fully understood. An economic analysis of the local markets and the observation of the informal practices, rather, would provide better insights regarding the vast acceptance of polluting industries in certain places or, at least, the ambivalence of the populations towards them.

#### **4. Differentiating the space: new social relationships in sites at risk**

The production process of space is, in my view, another topic that scholars dealing with risk need to discuss in different terms. The work of geographers, urbanists and other social scientists is certainly impressive: Pacioni's (2009) book on urban geography, for examples, provides an outlook on the enormity and the quality of the studies on spaces at risk. But whilst a number of scholars studying space and industry have dealt with problems such as industrial location (Chapman and Walker 1991; Corbridge, Thrift and Martin 1994; Malmberg 1997), environmental hazard (Horlick-Jones, Amendola and Casale 1995; Burton, Kates and White 1993; Chapman 1996), environmental racism (Bullard 1991; Cutter 1995) and the production of shanties and slums in the vicinity of industrial areas (Auyero and Swistun 2008; Cable, Mix and Shriver 2008), that is, with the forms of social exclusion and differentiation, lately, fewer scholars have studied the inclusion through the use of the space.

Whilst it is true that the industrialization-urbanization process in the cities of developing and colonial countries is "hetero-directed", that is, driven by regimes and economic powers external to the communities (Germani 1971) and "secondary" (Redfield e Singer 1954), in most of the European towns hosting risky industries, one is likely to find a "primary", pre-existing urban nucleus. Such a difference helps understanding why much of the contemporary literature on risk reflects on slums, shanties, and vulnerable neighborhoods: it often addresses developing countries (for a review of the existing studies, see: Davis 2007). In spite of the differences between countries, usually in this kind of contexts, vulnerability is related to poverty and other forms of deprivation. In the developed countries this correlation is either less apparent or perhaps relative, and the discourse on risk is shaped differently. As I have noted above, in fact, it focuses more on matters such as trust in technology and the experts, health, forms of "popular epidemiology", and struggles. In both the cases, forms and areas of exclusion are what researchers prefer to observe. Forms of consent are then much less discussed, although they develop within space.

Again, history is a very useful tool for analyzing this point. With regard to the production of tainted space, village industries represent the other side of the coin to industrial urbanism and urban degradation. A reading of older analyses conducted during the production process of an industrial space (which includes both plants and villages) would show that through the differentiation of the land, the creation of new middle- and working-classes was indeed sought (Hughes 1938; 1949; Buder 1967; Goldthorpe et al. 1968). If scholarly interpretations should not suffice, one ought read two original "manifestos", such as the ones written by Monserrat (1953) and Boulware (1953), two spokespersons for as many industries, who provide enlightening glimpses into the corporations' expectations of the 1950s regarding the communities in which they were established, and the proposed exchanges. In short, through the differentiation of the space and the creation of new villages for the industrial workers, separated from the older towns, some industries (such as Saras in Sardinia, and Anic-Eni in Sicily) have created the conditions necessary to reshape the expectations of the local population. Especially in Gela, whilst local people were living in the older houses of the historical center, together with animals such as donkeys and goats, and with almost no water to drink or for washing, industrial workers were living in a gated community, protected by private security, either in new small houses or in five-storey buildings which represented the most evident sign of

modernity in the Sicily of the Fifties. Whilst people in the old town centre suffered from thirst, workers in Villaggio Macchitella were told to wash their cars during the hot and dry Sicilian summers. Later, when the water was distributed in the town by means of a plant inside the establishment, desalinated seawater was given to the citizens, while the good spring water was provided for the inhabitants of the industrial village.

The differentiated spaces and the water became the two most apparent symbols of a disciplinary process aimed at developing a sense of belonging, and the full acceptance of the petrochemical plants by the population: over this period of time, the Sicilian peasant, in fact, started to imagine and understand how life might be, if only he could become an industrial worker (Hyttén and Marchioni 1970). Since then, a new industry-centred narration has started circulating from generation to generation, and the space-that-includes is at the very origin of it.

Moreover, over the course of time, the ordered and clean space that is Villaggio Macchitella has changed its function: the apartments were made available on the regular real estate market, and construction cooperatives erected new blocks and complexes. Meanwhile, the space within the town underwent dramatic changes: in fact the city developed wildly and spontaneously, as an effect of industrial wages. Up to the present time, houses are often unfinished as the constructors (that is, the industrial workers) do not have enough money to complete the facades, although between the 1960s and the 1970s, the town space dramatically modified, as did the life within. It is not only that part of the new urban centre got dangerously too close to the refinery; rather, it is the appearance of organized crime in a town that has never suffered from this problem that is of interest to us. In a classic book, Hyttén and Marchioni (1970) suggest that since its appearance in the area, the oil refinery has attracted criminal investments, due to the expansion of public works market, the creation of a particular fiscal regime for (fake) cooperatives under the control of criminal organizations, and the need for transportation and other services as well. In only a few years several mafia wars, the diffusion of the so-called “baby-killers”, and the consolidation of one of the toughest Sicilian criminal organizations, the “Stidda”, have marked the territory and made it into a nationwide case.

In this milieu, when associated to industry, the word “risk” presents at least one more meaning: it defines in fact a progress of degradation that does not originate from poverty, but from a sudden “opulence”. It is a form of degradation that is different in nature from other patterns, as it is based on materials like concrete rather than mud, and is accompanied by the expansion of consumerism and a popular notion of well-being.

By saying this, one may notice that my analysis is moving away from the realm of risk, and becoming something different. In fact, what I am suggesting is that any reflection on “industrial risk”, both in the developing and developed countries should include additional topics to those studied, broaden the field of the analyses, and therefore extend the notion of risk itself. In the proposed perspective, risk should indicate not only the physical hazards and the possibility of losses, but also the process of transformation of social relations through space, and the diffusion of forms of dependence among classes and individuals tending to worsen the asymmetries operating in the field (Mudu 2009).

## **5. Politics of risk research: practices and approaches to the field**

In the light of the previous discussion, I argue that the academic discourse on risk reflects much of society’s current ambivalence on this topic, and the fact that it is not clear as to its role in the current cultural and political debate. In other terms, is risk

analysis a “science of liberation” or a vestige of positivism, at least in some of its articulations? Or both?

I am aware that this may be considered another controversial statement, and I can foresee some of the objections against such a way of defining the role of experts, research programs and social sciences. It is certain, in fact, that much of the epistemological debate, as well as of the qualitative empiric research on science and risk, are everything but positivistic in nature (Bradford-Hill 1965; Brown 1997; Pellizzoni 2010; Irwin 1995; Wynn 1996; Hansson 2010); nevertheless, the most “metric” approaches appear as such. The state of the art is then twofold, in many senses. This is, of course, an intolerable sweeping statement; but I will maintain it in order to simplify my position. What I argue is that, in spite of the nuanced positions one can find on the ground, the current research on risk and science is fundamentally characterised by the counterpoised approaches of “critical” and “integrated” ideologies, methods, and goals. The observation of the growing debate on order, risk management, prevention, and control shows that while the paradigm of risk control has become the dominant ideology of the present (in matters of technology and environment as well as of security, health, etc.), the number of studies and scholarly positions opposing this process is apparent. I then define as critical those approaches aiming to show the contradictions of modern scientism, and reflecting on the impact of the positivistic ideologies of modernity and development that have oriented the economic policies of governments in the former colonies and in the western world, at least since World War Two (Fanon 1963; Schneider and Schneider 1976; Abu-Lughod 1989; Nandy 1990; Alvares 1992; Zachariah and Soorya Moorthy 1994; Escobar 1995; Davis 2006). I thus define “integrated” the other group of scholars and research programs, that is, those who made possible the governmental dream of regulating life, by providing theoretical bases for imposing the modern religion of measurement as a regulation method applicable finally to life, and not only to material resources and money – so that harm reduction, calculation and management of risks were constructed as the objective and “non political” goals of the regulatory action (Fischer and Poland 1998).

The rough distinction I presented above, stems from the historic scheme proposed by some classic analyses on social engineering in the modern era. The project of modernity, as Scott (1998, 4-5) put it, is composed of a number of elements, aiming at make the world legible. The first element is the administrative ordering of nature and society. The second element is the rise of a high-modernist ideology, pointing to a rational design for social order, commensurate with the scientific understanding of natural laws and the production of technology. The third element is a state that is willing to and able to use the full weight of its coercive power to bring these high-modernist designs into being. The fourth element is a prostrate civil society that lacks the capacity to resist these plans.

The same project, in Foucault’s words (2007, 20), ends with the creation of the *milieu*, that is, the space in which a series of uncertain elements unfold. The problem is now that of managing, administering and controlling such a milieu, by means of the scientific disciplines – medicine, biology, and the statistics, above all. The tactic of modernity, in sum, consists of the attempt to free relations of power from the institution, in order to analyze them from the point of view of technologies (Id. 2007, 118).

In the most modest way possible, I would suggest that the problem we confront today consists of liberating social sciences from technology, and the realm of administration. In other words, much of the social research on risk is, in my view, aimed at minimizing the collateral effects of industrialization. It does not really question the

“legitimacy” of the industry ([Stinchcombe 1965](#)) but rather provides a terrain for its development. It is not by chance, in fact, that for Aldrich and Fiol (1994) industry legitimacy coincides with the collective action problem at the center of the emergence of new corporations. Social sciences, then, should be seen as part of the “problem” at which these two authors point out. Science is not neutral, and is indeed part of a power structure – especially when operating in a field such as risk management. As suggested by [Pellizzoni \(2009\)](#), in fact, the intertwining of science, business, and politics has become tighter due to an increasing similarity of interests: the need for money, by an increasingly technology-dependent science, and science’s needs for increasingly innovation-dependent politics and business.

Such perspective, of course, might not be particularly original; nevertheless, this is the contradiction that “reformist research” in the matter of environment meets frequently – especially, when it does not aim to eradicate the conditions which affect reality negatively, limits itself to sustaining an empty rhetoric, based, for example, on the “corporate social responsibility”, and avoids conflict ([Haigh and Jones 2006](#)). At this point, one should ask whether social scientists are part of that prostrate civil society lacking the ability to oppose that technological dream of state and capital lamented by Scott.

It is indeed impossible to discuss of risk while avoiding politics. Regardless of one’s positions and the topics dealt with by researchers and institutions, both the subject (i.e, the populations’ struggles, the approach towards science and technology, etc.) and the ultimate effects of the proposed descriptions (the portrait of a community, its needs, hopes, aspirations, etc.) are political.

Politics thus becomes the field within which each discussion on risk takes place and develops, in spite of the debaters’ declared aims. The point consists then of making such aims clear, as nobody can be really neutral with the topics at hand. In fact one of the points is, that much of the existing research is, in a way or another, embedded within the programs of different institutions, pursuing a number of goals: for example, to understand people’s knowledge on the local environmental conditions, in order to conduct better informative campaigns, etc. However, whatever the purposes of certain studies (either reassuring the populations or informing them about the actual conditions of the inhabited territories) the very point is that these studies do not really aim to change the existing conditions, and are conservative. The very nature of most of these studies is either merely reformist or cooperative with regards to power and capitalism. One could use Bourdieu’s words and claim that they reproduce the “thought of the state, that is, of applying to the state categories of thought produced and guaranteed by the state and hence to misrecognize its most profound truth” ([Bourdieu 1998, 35](#)). In this perspective, it is secondary that most of the damages in the areas at risk are caused by private companies: in fact their presence originates from the interconnection between private and state interest, combined in such a way as to make it almost impossible to distinguish one from the other. The rhetoric of development is part of a common narration, involving private capitals as well as the state and the science. This “embedded research” is then fed by the same contradictions of public regulation: it mostly tries to reduce the damages, but it does not aim to solve the problems and to question the myth of progress and development. It does not try to decolonize the imageries ([Gruzinski 1988](#)), in other words.

The meeting of risk analysis and post-colonial studies would be, in this perspective, a perfect match. In spite of the fact that hazardous productions do not take place only in post-colonial scenarios, the Southern-Italian process of industrialization

shows, for instance, that the dynamics leading to the “development” of this backward areas of the country were “colonial” in nature (Hilowitz 1976; Schneider 1998). The petrochemical industry did not employ the military, and is not colonial in that sense, albeit, the way in which it has subtracted and delimited the land recalls those armed experiences. Nevertheless the military is not the most important element of colonialism; more essential is the cultural project behind it: in short, the idea that there are worlds (social organizations, economic forms, styles of administration, modes of interpreting time and, in general, the life) that must be replaced by others, more effective and civil (Panikkar 2003; Leys 2005). The industrial project as the most remarkable element of the western modernity, whose origin is geographically recognizable (located in the north, in the Italian case), represents one of the highest forms of colonialism. It raises the idea that through machineries, jobs, etc., “development” will follow (Rosenstein Rodan 1955; Myrdal 1957; Saraceno 2005; Farinella 2010). And what is this idea of development, if not that of the kind of civilization, moral superiority, etc., that will change the features of the agricultural south and transform it, finally, into a “modern” place? The discourses of the legendary founder of Eni, Enrico Mattei, were essential for the realization of this “cultural program”, as I defined it. When oil was discovered in Sicily, and the island became central to the industrial plans of the company, the Italian central government opposed Mattei’s project. He then had to gain people’s consent, and transform the inhabitants into allies; and he has indeed achieved his goals through a series of events that have been organized all over the region – namely, very passionate speeches where he asked the populations to share his dream in their own best interest (Saitta 2009).

Eventually, the project resulted in a massive form of industrialization without development. The industry brought the modernity only with regard to the organization of labour and technologies; but it certainly has not changed the nature of the post-feudal relationships operating in that society (Hyttén and Marchioni 1970). On the contrary, industry has exploited that organization, and used for its own purposes – a quite common pattern in the industrialization process that the classic literature on the organization has widely investigated ([Burns and Stalker 1961](#); Woodward 1965; DiMaggio and Powell 1983).

The analysis of this kind of narration is essential if one wishes to understand what the current attitude of the Sicilian people is towards the industry, and, presumably, that of many other groups. But the analysis of this historical and cultural process, as I have said, are lacking in most of the accounts I reviewed.

My impression is that current studies on risk would be more productive if they become a form of *counterknowledge* aimed at revealing the abuses conducted by the deadly intertwinement of capital and culture of civilization. This kind investigation would probably be more profitable than any mere measurement of people’s fears, and would help in understanding the very nature of the imageries. This historical and interpretative process should not avoid using surveys, as well as the other traditional tools of the social investigation. I am not in fact proposing to replace sociology with history. Rather, I think that, at the present time, investigation into the field of risk needs to be multidisciplinary more than anything else. To achieve this goal, the tools, the interests, and the questions posed by our studies need to change, and scholars in the field need to take note of hints coming from those disciplines that, traditionally, put the problem of power at centre of their discourse.

## **6. Final remarks: some indications for future research**

The observations that have been hitherto discussed are in no way definitive, and they may also be considered very partial. In fact they apparently treat social sciences as rigidly segmented and linear, that is, composed of many different kinds of investigations that cannot be easily intersected and used to fill gaps in different fields of knowledge, according to needs, interests and circumstances. Moreover, my analysis might be understood as to be aimed at denying the research object to that “discipline” inquiring about risk.

The former critique is not correct, and my way of discussing fields and disciplines is just an attempt to delimitate the extension of different analyses, and highlight problems and paradoxes. The latter possible objection would indeed be consistent, but it comprehends only a part of my discourse. In fact what I have tried to suggest, is that research on risk should enlarge the spectrum of its interests, and borrow tools and concepts from disciplines such as economic sociology and history. By doing so, the discourse on risk would gain greater thoroughness and a better characterization.

In particular, as I have already said, there might be much to learn by looking at the evolution of both postcolonial and subaltern studies in South America and India. The problem, for example, for much of the literature on society and environment today, consists of interpreting the attitude of those parts of society that do not intervene in the public sphere. This was the object of a prior section of this article; and it is tantamount to the problem that [Guha \(1983\)](#) faced in the study on peasant insurgency in colonial India. This author had to read this movement in the light of new categories, other than those provided by liberal or the Marxist perspectives. In particular, he had to outline the elements of autonomous forms of participation in the independence process, and invent new categories to make sense of it ([Ascione 2009](#)). Just like Guha, we have now to formulate new narrations as we cannot easily employ the older ones. Moreover, we have not only to develop new ways of conceptualizing local forms of subordination in the West, represented by the relationships between society, politics, capital, and, in certain cases, organized crime; rather, we should also tackle the problem of how to produce actual changes. Environmental restoration processes become, in this perspective, central. Such processes have generally a much larger impact than the practical and technical ones. In fact, they carry a value that might be defined both symbolic and communicative. Environmental restoration is, in fact, an issue that generates widespread social expectations; in a context of widespread suspicion and distrust, such as the one I have described in Gela, it tends to raise negative and even collective “conspiracy” interpretations. In that town, many of the political decisions taken in the past, ended up by reinforcing the idea that law is a blurred concept, open to continuous negotiations. This had already happened, when decisions about constructions, industrial plants, water, pet-coke, and the greenhouses had to be made. We can therefore affirm that the environment is a space for themes and actions that, better than others, lends itself to manipulation and the transmission of symbols and values. The collective imagery, that is, the perceptions that we have hitherto discussed, are just the result of the processes of symbolic manipulation that took place over a period of fifty years, and during which the relationships between local communities and industry have developed. Restoration plans, therefore, beyond the effects to health, also constitute a space where the renovation of the social order and the related imageries is possible. Losing this game would be dramatic for public health, public trust, and the life and the economy of the areas to be revitalized.

As active scholars, not belonging to a “prostrate civil society”, we should probably see our task as consisting of learning from the past, in order to think up radically new forms of management for the future – possibly, liberated from the technocratic commitment.

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