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# Accounting, Soci(et)al Risks, and Public Reason: Governmental Risk Discourses About the ILVA Steel Plant in Taranto (Italy)



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**Abstract** The case of the ILVA steel plant in Taranto represents an example of contrasting, incommensurable sustainability issues, explored in terms of “social” and “societal” risks (Asenova et al. in *Managing the risks of public spending cuts in Scotland*, 2013; *Redistribution of social and societal risk: the impact on individuals, their networks and communities*, 2015) [Asenova et al. (2015) refer to social risks as the risks of unemployment, and to societal risks as environmental and health risks.]. The case of ILVA has received significant attention for the great amount of dangerous pollutants spread in the environment, as well as the evidence of higher illness and mortality rates in the districts nearest to the plant. In July 2012, the Italian Judiciary halted activity in the steel plant. Four months after, the Italian Government declared the steel plant site as a “Strategic National Interest Site”, and allowed the company to restart its activity. Drawing on governmentality (Foucault in *Questions of method*, 1991), the paper aims to explore the role of accounting—here broadly intended as calculative practices (Miller in *Soc Res* 68:379–396, 2001)—in moulding ministerial discourse to support decisions when the governance of contrasting risks is needed to safeguard public interest. Supported by discourse analysis of governmental speech, the research shows that the Italian Government based its decision on various experts’ risk appraisals: accounting shaped governmental discourse by giving more visibility and relevance to “social” risks (i.e. unemployment, economic development, productivity and competitiveness risks), while silencing “societal” ones (i.e. environmental and health risks). Focusing on a case of incommensurable contrasting issues, the findings contribute to show that accounting concurrently plays a significant role in government decisions legitimizing the business continuity through the creation of a specific risk discourse.

**Keywords** Social and societal risks · Risk governance · Governmentality · ILVA s.p.a.

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## 1 Introduction

At global level there is an increasing call for business sustainability (Hart 1997; UN Principles for Responsible Management Education 2007; UN Sustainable development goals 2017), which is referred to three pillars: economic, social and natural (Dyllick and Hockerts 2002). Nevertheless, the governance of sustainability issues is not always easy because governing a single pillar may lead to neglecting the others. Prior research has not yet investigated situations where such a paradox takes place. Our analysis of the ILVA steel plant in Taranto aims at investigating how accounting is mobilized within ministerial discourses to support decision-making when the governance of contrasting risks is needed to safeguard public interest.

The case of the ILVA steel plant has received significant attention from EU institutions, and has echoed worldwide because of the size and the amount of pollution that the factory has produced (Pooler and Politi 2017). It attests to the political and legal complexities involved in addressing a case of environmental non-compliance in a factory whose economic significance extends beyond local level. With the employment of about 12,000 people and a capacity of producing 10 million tons of steel annually, the ILVA steel plant in Taranto is the largest steel factory in the EU (European Parliament 2015). The pollution resulting from the activities has determined a higher than average incidence of some diseases as well as a number of deaths in areas close to the plant. Such a sensitive condition was highlighted by the halt provision of the steel plant ordered by the Italian Judiciary. This stop was justified by many factors: a level of pollution above the limits, the evidence of causality between dioxins emitted by the plant and found in the blood of sheep grazing around it, and higher illness and mortality rates in the districts nearest to the steel plant. However, four months after the Judiciary's decision, the Government decided for allowing ILVA to continue business activities by declaring the company as a "Strategic National Interest site".

In arguing its decision, the Italian Government drew on the technical documentation prepared by several "experts" (e.g. chemical experts, environmental experts, epidemiologists, economists, experts of industrial associations, accountants, etc.). This documentation, as well as the speeches of the Government's representatives, relied on a wide plethora of calculative practices, mobilized to provide evidences of the environmental, health and economic risks associated with the (dis)continuity of ILVA.

The government decision and the assessment process of the 'social and societal risks' shed light on the paradoxical situation in which the goal of contrasting societal risks through the adoption of new technologies is not aligned with the social risks (e.g. unemployment due to the crisis of the steel industry) nor with the timing and kind of business activities (in that it would take several months to turn off the plant). The Government had indeed to decide on allowing the steel plant to continue its activities, reducing the rate of unemployment in the region and increasing Italian industrial competitiveness, while implying the risks of increasing environmental pollution and the death of employees and people of the local community, or vice versa. Furthermore, all

these risks were measured but remained largely incommensurable because calculated and expressed through different standards/measures (average daily concentrations of pollutants; toxicological and epidemiological data; cancer rates; stochastic causality for risk estimation; rates of unemployment; financial values, etc.). Such a situation feeds interest in understanding how accounting—here broadly intended as calculative practices (Miller 2001; Jeacle 2017)—has been mobilized by the Italian Government in facing a decision involving contrasting and incommensurable sustainability issues.

Specifically, while previous studies predominantly focus on the role of accounting in measuring distinct environmental, economic, or health risks, the current research investigates the mobilization of accounting in the governmental creation of discourses on contrasting (environmental, economic and health) risks. Accounting is here intended not (only) as a “technical tool” adopted to quantify risks and rationally orientate decision-making, but also for its capacity to shape social reality by participating in the construction of “political truths” (Burchell et al. 1980; March 1987; Hopwood 1992; Carruthers 1995). In this respect, we take into great consideration the argument that accounting may participate in the “construction of an appearance of rationality” as it helps shaping the “rationale for decisions” (Carruthers 1995: 313–322). The analysis focuses on the “soci(et)al risks” attributed to the ILVA plant in governmental speeches and technical documentation prepared by the “experts” involved in the investigation of the environmental, occupational and health impacts.

The sociological studies on risk based on the Foucauldian Governmentality framework (Ewald 1991; Dean 1998, 1999; Lupton 2006; Gephart et al. 2009; O’Malley 2009, 2012) support the interpretation of accounting as a technology through which governmental risk discourses are created. According to this framework, government of risks becomes possible only through “discursive mechanisms that represent the domain to be governed as an intelligible field” (Miller and Rose 1990: 6), and accounting represents a form of “scientific” knowledge that provide rationales for risk discourses to be considered as “true” (Dean 1998). The present paper also benefits from the work of Jasanoff (1990, 2012) on how politicians construct “public reason”, i.e. “what emerges when states act so as to appear reasonable” (1990: 5). She argues that modern Governments, in claiming legitimacy, draw on a number of practices, discourses, techniques and instruments that help to cope with countless risks and manage them for citizens (Jasanoff 2012). In constructing “public reason”, governors are required to face trade-off between risks to health or the environment and the economic issues (Jasanoff 1990: 3), and they produce their arguments by drawing on the technical knowledge produced by “science advisors” (i.e. experts in the field).

Such theorization is expected to produce an understanding of how accounting is mobilized by governmental authorities when a decision must be made to safeguard public interest while contrasting and incommensurable social and societal risks have to be governed.

## 2 Accounting, Risks and Public Reason: Prior Research

Seminal accounting studies on the role of accounting in organizations and society (e.g. Hopwood 1973, 1983; Burchell et al. 1980, 1985) have figured out the relationships between accounting and decision-making. Going beyond a fully rational interpretation of the decision-making procedures, such studies assert the idea of accounting as “machinery” to be mobilized under conditions of uncertainty. Under these conditions, accounting often enacts complexity, ambiguity, and politics (March 1987; Carruthers 1995) as it cannot offer strict answers. Yet it may provide “learning” for judging complex situations, “ammunition” for “interested parties seeking to promote their own particular interests”, or serve as a “rationalization machine” for parties that need to “justify actions that already have been decided upon” (Burchell et al. 1980: 14–15).

Decision-making on risks falls within a “non-consequentialistic logics” (Mouritsen and Kreiner 2016: 21), as it entails the consideration of uncertainty over the “patterns of causation which determine the consequences of action” (Burchell et al. 1980: 14). The situation is considered to be even more complex when there is uncertainty [or disagreement] over the objectives of action [ibidem], as can happen when contrasting risks are simultaneously at play, and there is no agreed interpretation of the “best” objective to achieve and/or of the most proper way to commensurate various calculations (Samiolo 2012).

In this vein, Broadbent (2002) and Broadbent et al. (2008) has elucidated the role of accounting as a “steering device” apt for adjudicating social conflict in the case of a controversial initiative: “the visibilities that are created (by accounting) become resources to justify the particular approach that is required by the institutional steering bodies (in this case the government)” (Broadbent 2002: 443). The studies show the dominance of “accounting logic” in making certain kinds of risk visible and legitimizing the public decision process. Indeed, a “privileged position” has been given to quantitative risk estimation based on accounting, with the result of “silencing” qualitative uncertainties intrinsically connected to decision-making. In brief, they show the role of accounting in shaping and constraining the nature of the decision criteria, and in turn the legitimization of (risk) government.

Other studies point out that accounting can even create risks, or reinforce and redistribute existing ones. With a focus on “social and societal risks”, Asenova et al. (2013, 2015) show that the UK Government austerity measures towards Scottish local authorities have finished by mostly affecting disadvantaged, vulnerable people exposed to risks of health and unemployment. Hastings et al. (2015), in analysing the impact of the cost of funding cuts on English and Scottish local governments, identified the implication of accounting in the rising levels of social inequality: State governmental measures, enacted through the intermediate level of local governments and inspired by accounting considerations, put poorest people at higher social risk. Further, as Beck et al. (2005) show in their study of the UK bovine spongiform encephalopathy crisis, accounting considerations that are made possible

by the involvement of experts, are deemed to be of limited value for governmental decision-making when accounting cannot precisely quantify relevant health and safety risks.

Considered as a whole, these studies show that accounting is intrinsically involved in pondering, emphasizing or silencing risks associated to public interest. Indeed, State and local governors continuously draw on accounting expertise to make certain risks visible and affirm “public reason” (Jasanoff 1990). This is proven to happen when some risks can be quantified and other risks remain unquantified (see Broadbent 2002; Broadbent et al. 2008) as well as when most of the risks remain unquantified (Beck et al. 2005). What previous studies have failed to highlight is how accounting is mobilized when a State government has to deal with contrasting risks—i.e. risks that suggest opposite decisions—and such risks are quantifiable but incommensurable. To what extent and how is accounting mobilized in governmental discourses on contrasting incommensurable risks to support decision-making and public reason? The present research tries to answer this question.

### 3 Theoretical Framework

Sociological inquiries in the past decades have been vastly attracted by the concept of risk (Lupton 2006). Such inquiries have gone beyond the interpretation of risk as a “straightforward matter, measurable and calculable” (Gephart et al. 2009: 141). Rejecting the idea of risk as objective, socio-cultural perspectives neglect the idea that risk pre-exists in nature: “it all depends on how one analyses the danger, considers the event” (Ewald 1991: 199). Risk therefore is considered to be part of shared cultural understanding of society (Douglas 1986), as well as a matter that increasingly involves late modern societies (Beck 1992).

In line with a socio-cultural interpretation of society and its institutions, the Governmentality framework depicted by Foucault (1991) offers a unique basis for discussing the role of risk in regulating societies (Ewald 1991; Dean 1999) which may fill the gap identified in the literature. According to Governmentality, risk is created through discourse, strategies and practices that the governors draw upon to manage citizens (Lupton 2006). What is crucial about risk “is not risk itself but what risk gets attached to” (Dean 1999: 131). Government of risk thus becomes possible only through “discursive mechanisms that represent the domain to be governed as an intelligible field” (Miller and Rose 1990: 6). Notions of risk are mobilized to render reality in such a form as to make it amenable to types of action and intervention” (Dean 1999: 132). Further, risk is not considered to be “intrinsically real, but as a particular way in which problems are viewed or ‘imagined’ and dealt with” (O’Malley 2009: 5).

To make risk “thinkable” and then “governable” to the governors’ eyes, several forms of knowledge are mobilized: “from statistics, sociology and epidemiology, to management and accounting” (Dean 1999: 131) all are forms of “scientific” knowl-

edge that provide rationales for risk discourse to be considered as “true”. Discourse produce “truths” on risks that are then the basis for action (Lupton 2013: 113).

With her work on how politicians construct “public reason”, Jasanoff (1990, 2012) strengthens the Governmentality perspective. She argues that modern Governments, in claiming legitimacy, draw on a number of practices, discourse, techniques and instruments that help to cope with countless risks and manage them for citizens (Jasanoff 2012). In constructing “public reason”, governors are required to face “explicit trade-off between risks to health or the environment and the economic and social costs of regulation” (Jasanoff 1990: 3), and they produce “true” and “relevant” arguments by drawing on technical knowledge produced by “science advisors”. Governmental legitimization thus relies on “invoking science” (Jasanoff 1990) in support of the governors’ planned actions. It follows that the rationality ascribed to expertise is “never natural but always achieved, through institutionalized rules of the game that admit or preclude particular modes of asserting expertise” (Jasanoff 1990: 12). Jasanoff adds that experts and political authorities should commit to accuracy and evidence, but underlines that the former are more focused on the accuracy of their representation of nature, while the latter are more interested offering a “persuasive demonstration of causality and relevance (evidence)” (Jasanoff 1990: 15).

As argued by Dean (1999: 132), accounting participates in the constitution of risk discourse and public reason, being one of the “practices, techniques and rationales that seek to make the incalculable calculable”. Critical and interpretative accounting research has provided insightful interpretations of accounting as constitutive of organizational and social life (Burchell et al. 1980; Hopwood and Miller 1994), thus opening the possibility of exploring the role of accounting in the governing of risk.

Following the Governmentality perspective, accounting can be constitutive of risk when it contributes to the construction of discourse around it. The condition for accounting to be constitutive of risk relies on the participation of accounting in the unfolding of risk discourse, allowing risk to be calculated. According to Foucault, discourse not only relies on knowledge, but is also productive of knowledge in the sense that it establishes the basis for determining which statements count as true or false (Hardy and Maguire 2016: 84). Thus, accounting can be constitutive of risk when it supports the “truth” that governors are trying to assert. In this respect, and in line with Jasanoff’s arguments on public reason, we should expect the marginalization of the use of accounting in the constitution of risk where it does not allow supporting discourses contingently accepted as “true”. In brief, to be constitutive of risk, accounting should participate in the making of discourse by making the latter both possible and legitimate: accounting should make risk visible by creating discourse around it, but at the same time such a role is conditioned by the necessity that accounting supports governmental discourse by creating an aura of rationality around it.

## 4 Methodology

In order to support our analysis of how accounting informs the construction of governmental risk discourses on ILVA, this research develops a discourse analysis of the Italian Government's official speeches in relation to the technical documentation produced by experts as a result of their risk assessments of ILVA activities.

Our focus is on how the Italian Government supports its claims by drawing on the accounting calculations that the “experts” made visible in their social and societal risk assessment. This means that we do not regard accounting only as a technique of risk assessment, but also as a “machine” (Burchell et al. 1980) that legitimates the construction of a specific risk discourse. In this sense, we recognize the rhetorical dimension of accounting discourse (Burchell et al. 1980; March 1987; Carruthers 1995; see also Zhang and Andrew 2016).

The seminal work by Foucault (1972, 1977, 1982) offers a basis for developing our analysis. We have also taken into consideration extant studies adopting such a Foucauldian technique (e.g. Bacchi and Bonham 2014). Foucault argues that a discourse contains discursive practices and that a discourse should be analyzed for its capability in “ordering the world in a particular way” such as to create truth around it. In other words, Foucault calls on us to investigate the discursive processes through which knowledge about particular objects is formed and defines what should be considered as true. In their analysis of the potential of the Foucauldian concept of discursive practice, Bacchi and Bonham (2014) explain that “the term ‘discursive practices’ describes those practices of knowledge formation by focusing on how specific knowledge (‘discourse’) operate and the work they do. Hence discursive practices are the practices of discourse”. Foucault requires exploring the “set of regularities” on which the discourse is based. This means that we are required to detect the rules governing the emergence of “true” knowledge within the discourse (Bacchi and Bonham 2014: 180). Further, Foucault (1972: 229) asks us to “recognize the activity of cutting-out and rarefaction of a discourse”, paying attention to how the discourse normalizes certain subjects/objects and excludes others. As “comparing”, “ranking”, “classifying”, “hierarchizing” are considered as techniques of normalization and exclusion, we investigate how accounting plays this role. Further, we take inspiration from Lemke's (1995: 29) interpretation of Foucault's concept of discourse as a “general theory of intertextuality for the purposes of history”, to inspect how the risk discourse created by the Italian Government refers to other texts (i.e. those of the experts) in order to construct its truth. We are interested in detecting how the Italian Government refers to the experts' texts to construct its risk discourse, and in particular to highlighting how the experts' accounting calculations are part of these (inter)textuality processes.

From a procedural point of view, the analysis started with the search for public sources about the case of the ILVA steel plant in Taranto (technical documentation produced by “experts”, Governmental speeches and decisional acts, Judiciary decisions, European Union reports, company communications and financial statements, magazines and newspapers, etc.). This stage allowed us to reach a comprehensive

understanding of the main issues and the related risks ascribed to ILVA by the various parties involved in the debate about the (dis)continuity of ILVA's activities. According to our research aim, we decided to develop the discourse analysis by taking into consideration both the Italian Government's public speech in the Italian Parliament and the technical documentation produced by experts in the period from 2010 to 2012. The time span covers the period from the initial Judiciary inquiries to the final Italian Government decisions to allow the ILVA steel plant to restart its full activities.

We sorted the sources into three categories: the "technical texts", the "parliamentary debate texts", and the "decisional texts". The "technical texts" refer to the scientific reports produced by experts: they are chemical and epidemiological appraisals as well as other reports cited by the Judiciary and the Italian Government as sources. The "Parliamentary debate texts" report the Italian Government Ministers' speeches in Parliament. It is through such debates that discourse took form at the governmental level. Lastly, the "decisional texts" include the collection of the Italian Government's decisions together with the texts of the Judiciary's interventions. These last texts are very concise and do not offer possibility for developing a discourse analysis directly concerning them: they are considered to reveal both the Italian Judiciary and the Italian Government's decisions. Further details are reported in Table 1.

The analysis of the "technical texts" permitted highlighting how calculative practices were mobilized within the process of risk assessment developed by the "experts". Operatively, we looked for numbers (e.g. benchmarks, target values, rates, averages, etc.) ascribable to the assessment of the social and societal risks. We underline how the accounting calculations offer visibility to the social and societal risks. The focus lies on the risk measures, their actual values, and the descriptive details offered in the experts' reports.

We then focused on the "Parliamentary debate texts" in order to inspect the rhetorical dimension of accounting discourse. Relying on Foucault's interest in the rules that determine which statements are accepted as "true", we investigated the "themes", "practices", and "strategies" moulding risk discourse within Italian government speeches. First, we identified the focus of the "risk discourse", distinguishing between social and societal risks in each single statement. Second, we identified what are the "themes" emerging from the governmental statements. Themes are intended as the discourse summary emerging from each minister's statement. Third, to investigate the "practices" used by the government per each focus of risk discourse (social/societal), we verify the intertextuality (Lemke 1995) process associated to the use of accounting. That is, in which way accounting is referred to the same texts or of others according to the different social or societal risk discourse. Finally, we identified the emerging "strategies" as conveyed by "set of regularities" (Foucault 1972) in the governmental use of the practices. Specifically, we are interested in identifying a regular use of accounting in shaping broader (social and societal) risk discourses.

The analysis reveals how the governmental public reason on the risks posed by ILVA is constructed by discursively referring to accounting calculations developed by the experts. In this sense, we investigate the "practices" of textual and intertextual processes used through which accounting is mobilized within the discourse. This

**Table 1** Official documents covered by the discourse analysis

	Institution	Document name (and our coding)	Date of publication	
Technical texts	Regional Environmental Protection Agency (ARPA)	Environmental data relation about Taranto's area 2009 [T1] Benzoopyrene (BaP) analysis 2010 [T2] Environment and safety analysis 2011 [T3] Technical report for the analysis of pollution in the Tamburi district 2012 [T4] Dioxin emissions from E312 stack [T5] ILVA agglomeration plants emissions chronology [T6] Technical report following NOE inspection [T7] Health damage assessment SENTIERI project 2012 [T8]	2010, 2011 and 2012	
	Lecce's NOE (Police Environmental Operative Unit)	Note prot. 41/10 [T9]	2-Jul-2011	
	Chemical and epidemiological experts	Chemical appraisal conclusions [T10] Epidemiological appraisal conclusions [T11]	2012	
	Superior Institute for the Environmental Protection and Research together with the Integrated Pollution Prevention and Control National Investigation Commission	Decisive opinion [T12]	Oct-2012	
	Inquiry Parliamentary Commission about waste cycle illegal activities	Regional relation: Doc. XXIII n.10 [T13] Regional relation: Doc. XXIII n.12 [T14]	20-Jun-2012 17-Oct-2012	
	Eurofer—European steel industry association	European Steel in Figures 2007–2011 [T15] EUROFER Annual Report 2011 [T16]	2007, 2008, 2009, 2010 and 2011	
	ILVA	Separate and consolidated Financial statements [T17] Financial trends [T18]	2010 and 2011 2007–2011	
				(continued)

**Table 1** (continued)

	Institution	Document name (and our coding)	Date of publication
Parliamentary debates texts	Government	Senate 782a public audition of the Environment Minister [P1]	1-Aug-2012
		Senate 788 public audition of the Economic Development and Environment Ministers [P2]	5-Sep-2012
Decisional texts	Judiciary	Ilva stop production measure [D1]	07/26/2012
	Government	Protocol agreement on financial public resources for urgent environmental recovery and retraining measures for the Taranto area [D2]	07/26/2012
	Government	Environment Ministry Decree. Re-examination of the Integrated Environmental Authorization n. DVA/DEC/2011/450 released for the ILVA steel plant of Taranto [D3]	Oct-2012
	Judiciary	Production's requisition measure [D4]	Nov-2012
	Government	Law-Decree n.207 converted into law n.231/2012: Urgent provisions to protect health, employment levels, in the event of a crisis of industrial plants of National Strategic Interest [D5]	24-Dec-2012

permits detecting the overall “strategies” through which knowledge of social and societal risks is created and made “true”.

## 5 Findings

### 5.1 *The Italian Judiciary’s Intervention and the Experts’ Appraisals*

At the end of 2009, the regional administrative authorities (that is. the Regional Environmental Protection Agency and the Taranto Local Health Agency) ordered 14 flocks of sheep to be put down. The decision was taken after the animals were found to have three times the legal limit of dioxin in their blood. All the flocks belonged to farms operating in the Taranto industrial area and, for that reason, a ban on grazing within a twenty kilometers range from the area was issued and it is still in place.

The Judiciary immediately requested consultation in order to understand which kind of dioxin contaminated the animals and where it came from. Two kinds of analysis were run: a *chemical appraisal* to verify if there was any kind of pollutant inside and outside the industrial area and, if identified, to establish its source; and an *epidemiological appraisal* to inspect the local citizens’ past, present and future potential health damage due to environmental pollution.

The Parliamentary Inquiry Commission on waste cycle illegal activities requested counsel from the Superior Health Institute (*Istituto Superiore della Sanità*) about beryllium and benzopyrene pollution levels in the Tamburi area. The result of this counsel was a report called “SENTIERI study”.

In September 2010, the Italian Government approved a decree to extend the dioxin legal limit. According to this decree, even if a company had dioxin levels over the legal emissions benchmark in force up to that moment, the dioxin emissions would still have been considered as compliant to regulations for an additional period of three years. By means of this law, the ILVA steel plant was not prosecuted due to its dioxin emission level at that time. However, in the same year, in accordance with European Union standards, a new Integrated Environmental Authorization (the so-called “*Autorizzazione Integrata Ambientale*”, labeled as “A.I.A.”) was introduced in Italy. This authorization is based on hundreds of technological and environmental prescriptions that companies have to adopt. Verification of such adoption is carried out by the Integrated Pollution Prevention and Control national commission. On the basis of the conclusions reach by this commission, the national Environment Ministry approves authorization. Concession of such an authorization is crucial as it decides about the (dis)continuity of business activities.

In 2010 the Ecological Operative Police Unit (the so called “Nucleo Operativo Ecologico”, labeled as “NOE”) also started its investigation into ILVA. The results were revealed in a note [prot. N.41/10] which highlighted many irregularities concerning emissions into the air detected within the ILVA Taranto plant.

Following the NOE note, an inspection within the ILVA plant was requested by the Puglia Region's Environmental Quality Department. The Environmental Protection Regional Agency (the so called "Agenzia Regionale per la Protezione Ambientale", labeled as "ARPA") was in charge of data collection. As a technical-scientific body within the Puglia Region, it has the tasks of prevention, control, and monitoring. ARPA indeed released many reports on environmental data concerning the Taranto area (document T1 in Table 1), Benzo[a]pyrene analysis (document T2 in Table 1), environmental and safety analysis [T3] and pollution in the Tamburi district [T4]. ARPA was also in charge of data collection related to concentration levels, benchmark, range, average and pollutant quantities published in the reports about dioxin emissions from the ILVA E312 stack [T5], the ILVA agglomeration plants emissions chronology [T6], and technical results following the NOE note [T7]. Those technical results in particular report that almost 38% of the produced gas during the blowing operation is flared. Therefore confirming the NOE findings [T9] on the ILVA "sloping phenomena"—out of control emissions—and its huge environmental impact evaluated at almost 442,172,900 Nm<sup>3</sup> of gas emissions spread in the air.<sup>1</sup>

Despite the NOE and ARPA "results", the A.I.A. was granted to ILVA with a governmental decree (August, 4th 2011), thereby authorizing its activities while prescribing that the functioning of the plant had to remain within in the interventions and emissions' limit values indicated or requested in the measure itself. However, a few months later (in March 2012), the European Commission defined the steel industry "Best Available Technologies" that all the European steel companies have to adopt. This upgrade urged the Italian Environment Ministry to update the A.I.A.'s requirements and prescriptions, and to review the entire ILVA A.I.A. granting procedure.

The results of the chemical and epidemiological appraisals requested by the public prosecutors were revealed in July 2012. The findings of the chemical appraisal attested dangerous and out of control emissions, unloading powders, and toxic waste in contact with the aquifer [T10]. Epidemiological results estimated deaths attributable to exceeding of the limit for the annual average concentration of PM10 but also pointed out the limits of the study and the "great uncertainty in the estimations" [T11].

On the 26th July 2012, immediately after the revelation of both the chemical and epidemiological appraisals' findings, the Judiciary intervened with the measure to stop ILVA's production [D1]: "*functional to the protection of preventive-protective needs indicated in the law [omissis] and in particular about the serious and current situation of environmental and health emergency suffered by the Taranto's territory, attributed to the pollutant emissions by Ilva factory*".

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<sup>1</sup> ARPA was also requested to collect and collate data for the publication of this document in 2012. However, it was only released in 2013. Therefore, it is not cited the Parliamentary debate about ILVA made by Government and is not considered within the scope of this research.

## ***5.2 The Emergence of the Social and Societal Risks in the Experts' Appraisals***

The experts' appraisals allowed for the identification of the major risks surrounding the ILVA's (dis)continuity. Indeed, the experts' reports make the risk measures and values computed by the experts "visible", as well as the related descriptive information (Table 2).

The major focus of the experts' appraisals is on the "societal" risks, and environmental and health risks in particular. The risk assessment developed by the experts permitted revealing several risk measures and values regarding the chemical pollutants and the epidemiological risk data. As a technique of risk assessment, accounting permitted evaluation of many risk measures: the daily or annual average concentration; a comparison of the concentrations with legal limits; a geographical comparison; the computation of mortality, diseases and hospitalization rates; etc.

The assessment of the risks is primarily aimed at verifying both a potential non-compliance with legal limits and a possible association of such risks to a specific source, i.e. the ILVA plant.

The experts' appraisals identify and measure the environmental risk attributable to ILVA, highlighting that its IPA emissions' level corresponds to almost 95% of the national level, and identifying the pollutants deriving from its production as the main source of many legal overruns (Benzo[a]pyrene, PM10, NO<sub>2</sub>, Polycyclic aromatic hydrocarbons). Other kinds of pollutants (such as PCDD/PCDF) instead are compliant to the limits. Further, a time span comparison shows a decreasing trend of the risk. The current pollution level is under the limits while previous data showed their overrun.

The geographical comparison between the average data of health in Taranto and in the nearest districts to the plant shows higher health risks in the latter. In particular, Borgo and Tamburi districts are the most affected with higher cancer rates, higher mortality rates, higher estimated deaths due to excess of pollutants concentration and higher risk of hospitalization.

The documentation produced at the "technical" level also refers to "social" risks. Such documentation is produced by the European steel associations [T15; T16], and by ILVA itself, in ILVA financial statements and trends [T17; T18].

The social risk measures refer to specific company statistics like the number of employees and financial costs deriving from their employment, and the trend of its revenues. The technical economic value of the steel industry at the international level in terms of production and employment units is also presented.

Descriptive details on social risks refer to geographical and temporal comparisons highlighting the significant role of the steel industry for Italy. Results indeed show that Italy is the second highest country in Europe for market share and employment level in this industry. Financial data about ILVA, instead, are about the contribution of the plant accounting for 40% of the national steel production, with a disclosure of the almost 20,000 (direct and indirect) employees in the Taranto area, the total

**Table 2** Examples of risk measures and values related to the social and societal risks, as reported in the experts' appraisals

Source (see Table 1)	Risk category	Risk measures	Values	Legal parameters and terms for comparison	Descriptive details
T1	Environmental risk	PM10, NO <sub>2</sub> pollutants	In 2008 59 days of PM10 concentration over 50 µg/m <sup>3</sup> NO <sub>2</sub> annual average concentration [µg/m <sup>3</sup> ]: 49 in 2007, 39 in 2008, 32 in 2009 [first semester]	35 days/year with greater PM10 daily concentration of 50 µg/m <sup>3</sup> NO <sub>2</sub> annual average concentration limit 40 µg/m <sup>3</sup> Geographical comparison	Despite a positive trend, the limit on daily PM10 concentrations, continues to report exceedance in respect to the daily legal threshold
T2	Environmental risk	Polycyclic aromatic hydrocarbons emissions	IPA 25.84 tons/year 93% of the total national emission PAHs in air of 18.82 tons/year	Large industrial sources with pollutants emissions above 50 kg/year	In 2005 ILVA polluting emissions' levels are equal to the 93% of the total national emissions
T2	Environmental risk	Benzo(a)pyrene	1.31 Ng/m <sup>3</sup>	1 ng/m <sup>3</sup>	The predominant emission source of the legal overrun consists of the production processes conducted in the ILVA steelwork's hot area
T8	Environmental risk	Benzo(a)pyrene	1.8 Ng/m <sup>3</sup> annual average concentration	1 ng/m <sup>3</sup>	In 2010, there is a significant excess of the target value of 1 ng/m <sup>3</sup> indicated by Legislative Decree 155/2010

(continued)

Table 2 (continued)

Source (see Table 1)	Risk category	Risk measures	Values	Legal parameters and terms for comparison	Descriptive details
T8	Health risk	Cancer mortality	10 and 13% cancer rate	Geographical comparisons	The geographical comparison shows an excess of cancer rates around the steel plant
T8	Health risk	Polycyclic aromatic hydrocarbons pollutant	25% of workers had levels above 2.3 microMol/Molcreat	2.3 microMol/Molcreat	Data shows higher limits compared to the 2.3 microMol/Molcreat guideline
T10	Environmental risk	PCDD/PCDF pollutants	0.27 ng I-TEQ/Nm <sup>3</sup>	0.40 ng I-TEQ/Nm <sup>3</sup>	Pollutants values are below the limit according the Regional Decree no. 44 of 19/Dec./2008
T11	Health risk	Increase of PM10 and hospitalization rates	0.8% risk of hospitalization due to increments of 10 mg/m <sup>3</sup> of PM10 8.3% vp risk of hospitalization for respiratory diseases in Tamburi district 5.83% vp risk of hospitalization for respiratory diseases in Taranto	Geographical comparison	The analysis on residents in the nearest districts shows an association with mortality from all causes higher than for the Taranto city

(continued)

Table 2 (continued)

Source (see Table 1)	Risk category	Risk measures	Values	Legal parameters and terms for comparison	Descriptive details
T11	Health risk	PM10, estimated deaths	83 attributable deaths in Taranto due to PM10 exceedance of 20 micrograms per m <sup>3</sup> . 91 estimated deaths for Borgo and Tamburi districts	20 micrograms per m <sup>3</sup> Geographical comparison	Estimated deaths nearer the plant are attributable to the exceedance of the PM10 concentrations legal limit
T13	Health risk	PM10, NO <sub>2</sub>	0.84% increment of death risk for PM10. 0.60% increment of death risk for NO <sub>2</sub>	Geographical comparison	There is an increase in the risk of death due to increments of PM10 and NO <sub>2</sub> . Results show higher levels of risk in the area around the plant
T15	Occupational risk	Employees units	An average of 14,790 employees, 11,586 of which located in Taranto. Euro 634,400 for cost of labor	Geographical comparison between business units and with the previous year	In 2011 most of the ILVA employees are located in Taranto and the labor cost is increased compared to the previous year
T15	Economical risk	Revenues	Increase of revenues equal to €/000 1,046,333 (from 4,619,903 to 6,026,236)	Comparison with the previous year	Despite, the crisis, the revenues increased between 2010 and 2011

(continued)

Table 2 (continued)

Source (see Table 1)	Risk category	Risk measures	Values	Legal parameters and terms for comparison	Descriptive details
T16	Economical risk	Metric tons	2007: 31,553 2008: 30,590 2009: 19,848 2010: 25,750 2011: 28,726 (metric tons) 16.2% Italian market share; 25% German market share	International comparison and with previous years	In 2011, in line with the European market, Italy has an increasing trend of crude steel output and with the 16.2% of the European market share it represents the second country for production after Germany
T17	Occupational risk	Employment	36,898 employment units in the Italian steel industry 90,645 employment units in the German steel industry	International comparison	In 2010 Italy represents the second country (after Germany) for number of employees in the EU steel industry

cost for labor, and the amount and increasing trend of revenues despite the start of an industrial crisis at international level.

Overall, the “*technical texts*” give visibility to several “societal” and “social” risks.

### ***5.3 The Italian Government’s Decision on ILVA’s Activities***

On the same day of the Judiciary stop measure (26-July-2012), the Italian Government signed a protocol agreement [D2], to establish financial public resources for urgent environmental recovery and retraining measures for the Taranto area.

In the following months, the Italian Government, in the persons of the Environment and Economic Development Ministers, made speeches in Parliament in the debate about the events related to ILVA [P1 and P2].

On the 26th October 2012 the Environment Minister signed the A.I.A. review for ILVA, allowing the continuity of business through a ministerial decree [D3]. With such a decree the Government’s decision on ILVA’s future seemed established. However, on November 26th, the Judiciary published a new measure under which the company’s finished and semi-finished products were seized [D4].

In response to the latter measure, a new governmental decree-law, dated December 3rd 2012, followed. The ILVA steel plant was declared a “*National Strategic Interest Site*” ensuring its business continuity. Finally, on the 24th December 2012, this decree became law and the steel plant could definitively continue to run its activities:

In the case of a national strategic interest factory, identified with a Premier’s decree, when it employs a number of no fewer than 200 subordinated employees for at least one year, if there is the absolute need to safeguard employment and production, at the moment of the review of the integrated environmental authorization, the Environment Ministry can authorize, business continuity for a determined period of no more than 36 months and conditional on compliance with the prescriptions contained in the measure of such an authorization, according to the procedures and the indicated timing, with the aim of guaranteeing the most adequate environmental and health protection utilising the best available techniques [D5].

### ***5.4 The Construction of Risk Discourse by the Italian Government***

Some months before the final decision [D5], the Italian Government made its speech in Parliament [P1 and P2]. This speech gives information on both the “social” and the “societal” risks. The first refer to unemployment risks, local development risks, productivity and to international competitiveness risks. The latter refer to environmental and health risks. Details about the two categories of risks are provided in a very different manner (Table 3).

**Table 3** The governmental speech: example of risk discourses' focus, themes, practices and emerging strategies

Source (see Table 1)	Authority	Statements	Risk discourse's focus/Themes	Practices: Textual or inter-textual references to risk measures	Emerging strategies
P1	Environment Minister	1. "Therefore, part of the problems detected, for example, by epidemiological surveys that have been carried out on behalf of the Judiciary, but also from those which were made by the Higher Institute of Health, give an account of the population health status, with evident excess mortality, which presumably refers to environmental contamination derived from plants that were operating in accordance with laws of that time. Evident environmental impacts and likely health impacts, which however need to be correlated with the standards of that time and with the authorizations that over time these plants have received, as for all the technologies and plants operating in Europe over the last fifty years"	Societal risks – Environmental risk – Health risk Themes: Health status and causality with environmental contamination from the plant	Intertextual reference to epidemiological measures	To marginalize the societal risk discourse
P1	Environment Minister	2. "The analysis has shown that there is a broader spectrum, both in women and child population, which does not exclude that there is a relationship between environmental risks and damage to health; but this requires a more complex investigation"	Societal risks – Environmental risk – Health risk Themes: Conceivable relationship between environmental risks and health damages	Intertextual reference to epidemiological measures	To marginalize the societal risk discourse

(continued)

**Table 3** (continued)

Source (see Table 1)	Authority	Statements	Risk discourse's focus/Themes	Practices: Textual or inter-textual references to risk measures	Emerging strategies
P1	Environment Minister	3. "Nevertheless, what also it emerges from the inquiry that was carried out by Taranto Judiciary experts, is that we are in the presence of data that refer to diseases which, however, have the characteristic of long evolution course, and they have the characteristic of chronicity, when they are not tumors. In other words, these data are based on diseases that are manifested in the course of time and, in the event that it would be detected a relationship between the environment and these pathologies, among the environmental risks and these diseases, we must consider that the environmental risks are those of past decades, while it might be more difficult to identify a direct relationship of cause and effect with the current situation of the Ilva plant in Taranto which, as a result of the measures imposed by the environmental authorization, due to regional laws and national laws, however, has evolved"	Societal risks – Environmental risk – Health risk Themes: Difficulty to establish a direct cause-effect relationship between the environment, diseases and the current situation of the ILVA plant	Intertextual reference to epidemiological measures by experts	To marginalize the societal risk discourse

(continued)

**Table 3** (continued)

Source (see Table 1)	Authority	Statements	Risk discourse's focus/Themes	Practices: Textual or inter-textual references to risk measures	Emerging strategies
P1	Environment Minister	4. "ILVA is currently the largest European steelwork, one of the largest in the world, and the hot area of the Ilva Taranto plant is the first step of the all domestic steel industry production cycle. That is, it is from Taranto that semi-products depart to the various sites and steel industry plants of our country. It must be said that Ilva of Taranto represents the 75% of the gross domestic product of the Taranto province and the 76% of the harbor activities"	Social risks – Competitiveness risk – Local development risk Themes: Important role of ILVA at the local, national and EU levels	Textual reference to percentage of the gross domestic product covered by the company at the local level	To provide visibility and relevance to social risk discourse
P2	Economic Development Minister	5. "Overall, it [business closure] would result in a negative impact, which has been estimated at over 8 billion euro per year, attributable to approximately 6 billion euro to the imports' growth, 1.2 billion euro to income support and lower revenue for the public administration, and for about 500 million euro in terms of reduced spending power for the directly affected area"	Social risks – International competitiveness risk – Productivity risk Themes: Impressive costs related to the ILVA's discontinuity	Textual reference to the costs of the ILVA closure	To provide visibility and relevance to social risk discourse

(continued)

Table 3 (continued)

Source (see Table 1)	Authority	Statements	Risk discourse's focus/Themes	Practices: Textual or inter-textual references to risk measures	Emerging strategies
P2	Economic Development Minister	6. "The Taranto pole is one of the main European steel poles, with a production capacity of about 10 million tons per year, equivalent to more than 40% of national steel production. In the field of flat rolled production Taranto covers more than 60% of domestic demand, contributing decisively to the supply of strategic sectors for the Italian industry, such as household appliances, shipbuilding, automotive and mechanics. In occupation, Ilva employs more than 11,600 workers directly employed, to which must be added a closely related induced on the vertical plane, which brings direct employment to nearly 15,400 units. To this figure must add up 9200 units linked to indirect industries"	<p>Social risks</p> <ul style="list-style-type: none"> <li>- Productivity risk</li> <li>- International competitiveness risk</li> <li>- Unemployment risk</li> </ul> <p>Themes: Very high production capacity and employment levels of the company</p>	Textual reference to production values, percentages of the steel production and national demand, and number of direct and indirect employees	To provide visibility and relevance to social risk discourse

(continued)

Table 3 (continued)

Source (see Table 1)	Authority	Statements	Risk discourse's focus/Themes	Practices: Textual or inter-textual references to risk measures	Emerging strategies
P2	Environment Minister	7. "This is not a conflictual approach with the business continuity, but is intended to make sure that industrial activities - through technological innovations aiming at protecting the environment—acquire better productive capacity and thus enhance its competitiveness. Because the European target is to make sure that the European economy's competitiveness is driven by interventions that improve environmental quality. This is the aim that we have too"	Social risks – Competitiveness risk – Environmental risk Themes: Technological innovations for both protecting the environment and enhancing competitiveness	Intertextual reference to economic and environmental measures	To marginalize the risk discourse
P2	Economic Development Minister	8. "The company's commitment about the investments during these years was important, as evidence of a shareholder genuine interest to remain in the industry and in the area. Altogether, since it was acquired in 1995 until 2011, the Riva Group has invested more than 4.5 billion euro in the Taranto factory, concentrating in it almost the 72% of the investments made in the whole Ilva Group, in Italy and abroad. In the same period, the share of investment devoted to environmental protection accounted for 24% [approximately 1.1 billion euro] of the total invested in the Taranto plant"	Societal risks – Environmental risk Themes: Relevant corporate investments in the area and for the environmental protection	Textual reference to the costs for environmental protection investments supported by the company	To attach a "social" connotation to the societal risk discourse

(continued)

**Table 3** (continued)

Source (see Table 1)	Authority	Statements	Risk discourse's focus/Themes	Practices: Textual or inter-textual references to risk measures	Emerging strategies
P2	Economic Development Minister	9. "However, those findings cannot justify the serious situations of environmental damage and risk to health which remain despite the investments supported by the Riva Group: for this reason, a Protocol agreement was signed and 396 million euro have been allocated for environmental adjustments, adaptation of the harbor area [which recently entered into a strategic network of European harbors and it is affected by material infrastructure projects] and industrial upgrading"	Societal risks – Environmental risk – Health risk Themes: Governmental money allocation for enhancing environmental conditions	Textual reference to the costs for environmental protection investments allocated by the State	To attach a "social" connotation to the societal risk discourse
P2	Environment Minister	10. "There was, that is, an upgrade of technology; from the point of view of the technological performance, there have been significant results in terms of reducing emissions. In particular, dioxin emissions have been cut down drastically, but there was also a significant reduction of dust emissions, of the hot cycle emissions, also with regard to polycyclic aromatic hydrocarbon compounds"	Societal risks – Environmental risk Themes: Decreasing emissions trends	Intertextual reference to chemical measures	To marginalize the societal risk discourse

Firstly, the discourse associated with the societal risks describe a situation of decreasing emissions trends, in particular related to a dramatic reduction in dioxin thanks to technological upgrades (see statement 10, Table 3). Such discourse suggests a decreasing relevance of the environmental risks. The Government indeed underlines the many investments that ILVA's owner has undertaken, since the acquisition of the company, and the high amount set aside for environmental protection, representing almost one fourth out of the total investments made for the Taranto plant (see statement 8). In addition, according to the Minister charged with dealing with environmental risks a different practice is identified. Themes on environmental risks discussed by the Environment Minister adopt an intertextual reference to chemical measures. Whereas, when such themes are discussed by the Economic Development Minister a textual reference to the costs for environmental protection supported by the company is underlined. This latter practice suggests the attachment of an economic connotation (costs) to societal risks (environmental protection).

Secondly, the discourse on health risks are always present in association with environmental risks (see statements 1, 2, 3 and 9). The discourse analysis highlights the research into a causality relationship between environmental contamination, health damages and the plant activities. Intertextual references to epidemiological measures computed by experts highlighted the evident excess of mortality, presumably referring to environmental contamination deriving from the plant, which however was operating in accordance with the laws at that time. Governors highlight the impacts on the environment and the likely diseases presenting a long evolution path (statement 3). The difficulty of establishing a direct cause-effect relationship implies an uncertain attribution of causality with the current ILVA activity (statements 1, 2 and 3) and such uncertainty suggests need for more complex investigation (statement 2). Furthermore, it emerges that despite the investments made by the ILVA's owner, a serious situation of environmental damage and health risk remains and with the aim of environmental adjustments the Government decided to sign a Protocol Agreement. To highlight such risks a textual reference to the costs sustained by the State has been adopted (statement 9).

Thirdly, the discourse on unemployment risks tends to underline the very high employment levels within the company. A textual reference to both directly and indirectly involved employees (statement 6) is adopted to give relevance to such risks.

Fourthly, the Governmental discourse underlines that ILVA has a very high production capacity, equivalent to almost half of the national steel production, covering a third of the domestic demand (statement 6). By mentioning the gross domestic product, the productive capacity and the domestic demand covered by the company, ministers underlined its key economic role not only for the Taranto area, but also for the national economy as a whole. There are textual references to the percentage of the gross domestic product covered by the company at the local level, to production measures, and to percentages of the steel production and the national demand (statements 4 and 5).

Finally, discourse on international competitiveness risks highlight that ILVA is currently the largest European steelwork and among the largest in the world, and

that its business closure would result in negative impacts on import growth, income support, and lower revenue for the public administration as well as in terms of reduced spending power for the Taranto area. The emerging themes therefore highlight the importance of the company at international level and the impressive costs related to the ILVA closure (statements 4, 5 and 6). Discourse on competitiveness risk adopt a textual reference to costs and production values.

Furthermore, focusing just on the Environment Minister's speeches, the fact emerges that, despite his professional skills, he tends to speak about economic aspects a lot. For instance, he underlines the possibility of taking advantage of the environmental crisis and the mandatory adoption of new technologies to transform it into an economic development opportunity for the area, giving also the opportunity of increasing employment levels (statement 4). In his speech, the Environment Minister offers an economic perspective on the environmental issues. For instance, he speaks about "environmental *performance*", "*financial resources* for environmental adjustments" or "environmental best available technologies at lower *cost*". This discourse, linking environmental vocabulary to an economic meaning, appear to lead attention to the social side of the debate giving societal risks 'objects' a "social risk connotation".

To sum up, the governmental discourse about occupational, productivity, economic development, and international competitiveness risks was based on textual reference to their measures, making them "visible" and "relevant". On the other hand, relying on *intertextual* reference to societal risk measures, the governmental discourse emphasizes a decreasing environmental risk while recognizing its direct association to ILVA's past activities. In the meantime, the *intertextual* reference revealed that a direct association between diseases and current ILVA activity is difficult to identify, thus downsizing the relevance of the current environmental risks and the ILVA association with health risks.

Overall, this discourse allows the Government to feed the social risk "truth" through strategies diversified according to the focus of risk discourses. The adoption of textual reference, in particular, conferred great relevance on social risks, thus supporting a discourse oriented to silencing societal risks while arguing for business continuity. The adoption of *intertextual* reference allowed the marginalization of the societal risks without excluding their assessment. Confirmation of such conclusions are found into the Governmental law attesting the "absolute need to *safeguard employment and production*" however conditional to the adoption of the best available technologies "with the aim of guaranteeing the most adequate environmental and health protection" [D5].

## 6 Discussion and Conclusions

The sociological studies on risk informed by the Foucauldian Governmentality framework reject the idea of risk as objective, and argue that risk is created through discourse, strategies and practices that the governors draw upon to manage citizens.

Government of risk is made possible through discursive mechanisms that allow representing the risk domain to be governed. To make risk “thinkable” and then “governable”, several forms of knowledge are mobilized to provide rationales for risk discourse. As a form of technical/scientific knowledge, accounting participates in the construction of risk discourse by making this latter “possible” and “legitimate”. As underlined by Jasanoff (1990, 2012), the construction of governmental discourse is more and more based on the technical knowledge produced by “science advisors”: these latter offer politicians the possibility of producing “true” and “relevant” arguments while constructing “public reason”.

The present paper has drawn on this body of literature to investigate how the Italian Government has constructed its risk discourse in the case of the ILVA steel plant in Taranto, where various and contrasting risks were associated to its (dis)continuity. The technical texts give evidence of environmental and health risks (i.e. the “societal” risks) as well as to unemployment and economic development risks (i.e. the “social” risks). Thus, accounting provides the Italian Government and other authorities (e.g. the Judiciary) with a great number of risk measures and assessments. Citing the seminal work of Burchell et al. (1980: 14), we can say that accounting—mobilized in conditions of “uncertainty over the patterns of causation which determine the consequences of action”—supported governmental decision-making by clarifying the specific risk conditions. Government was indeed called to a decision on ILVA’s destiny drawing on the experts’ risk appraisals which identify measurable but incommensurable risks. Such a condition highlights the paradox regarding the governing of health and environment risks not aligned with the social risks. That is, the obligation for ILVA of achieving environmental standards and investing in new technologies as soon as possible does not match with the long period needed for the business reconversion and involves, due to the steel industry crisis, the loss of thousands of jobs in the poorest Italian area.

Thus, in the case under investigation the role of accounting extended beyond its capability to act as a “learning machine” (Burchell et al. 1980). Indeed, accounting was also mobilized to inform the risk discourse that the Italian Government produced in order to shape “public reason” on such decision. The risk discourse produced by the Italian Government—made “visible” by mean of the “Parliamentary debate texts”—draws on risk measured based on accounting calculations in various ways. The discourse analysis developed on these texts allows for detecting the governmental practices used to make the discourse as “true”. We find that the Government broadly adopts the following practices:

1. When the statements present arguments inherent to the “societal” risks (e.g. health status and causality with environmental contamination from the plant; conceivable relationship between environmental risks and health damages; decreasing emissions trends, etc.), there is an *intertextual* reference to the experts’ appraisal, while the statements do not report any specific risk measures. In other words, there is an *implicit* reference to the experts’ risk assessment, but without any disclosure about the specific risk measure. The citation of the experts’ risk assessment

allows legitimating the Governmental discourse as true, but there no explicit visibility of the measure of the “societal” risks;

2. Diversely, when the statements present arguments inherent to the “social” risks (e.g. very high production capacity and employment levels of the company; impressive economic and social costs related to the ILVA’s discontinuity; relevance of the ILVA’s activities at the local, national and EU, etc.), such statements also explicitly report specific risk measures or at least some calculation inherent to the situation and the context. In other words, there is a *textual* citation of the specific measures assessed by the experts in their risk assessment processes. The disclosure of the risk measures offers visibility to this category of risks.

This “set of regularities” (Foucault 1972) on which the discursive practices of the Italian Government are based, highlights the governmental strategy of emphasizing the relevance of the “social” risks while silencing the “societal” ones. While “social” risks measures are made “visible” within the discourse (Lupton 2013), “societal” risks are not.

Another emerging strategy corroborates our argument: the “societal” risks are often displayed in governmental discourse by referring to economic calculations. In such a way, the Italian Government does not explicitly say that the “societal” risks are not relevant, but it emphasizes the efforts made by the Government itself in financial terms and by ILVA to safeguard the environment and consequently reduce health risks. Thus corroborating previous research (e.g. Broadbent 2002; Broadbent et al. 2008) that has highlighted the dominance of the “accounting logic” in making visible certain kinds of risks, while silencing other risks.

The Government has created its discourse without explicitly explaining how the comparison between the “social” and the “societal” risks and the following decision-making took place: there is no evidence of commensuration between them. However, the characterization of both the “social” and the “societal” risks from an economic point of view creates an aura of commensuration around the two categories of risks. The previous studies that have highlighted the rhetorical dimension of accounting (Burchell et al. 1980; March 1987; Carruthers 1995) offer a basis for the interpretation of this finding. We can say that the Italian Government used the experts’ calculations as an “ammunition machine” in order “to promote [its] own particular position” (Burchell et al. 1980: 15).

Further, while the Italian Government offered its public speeches in Parliament in August and September 2012, its first intervention can be dated 26th July 2012, when it signed the environmental Protocol agreement. This means that the speeches followed its first intervention about the environmental matter. Thus, we can interpret accounting even as a “rationalization machine”, used to “legitimize and justify actions that already have been decided upon” (Burchell et al. 1980: 5). To summarize, accounting can play different roles concurrently, as the seminal work of Burchell et al. (1980) has called on to investigate but the majority of studies has largely neglected (Mouritsen and Kreiner 2016).

Prior studies that have explored the relationships between accounting and soci(et)al risks, advocate that accounting can create risks, or reinforce and redis-

tribute existing ones (Asenova et al. 2013, 2015; Beck et al. 2005; Hastings et al. 2015). We enrich this body of literature by showing how this role is mediated by the mobilization of accounting itself within a risk discourse.

According to Jasanoff's body of research on the construction of public reason, the construction of a "credible" and "relevant" discourse strongly relies on technical knowledge ascribable to experts (Jasanoff 1990: 11). The present study shows the fundamental role of experts in legitimizing/rationalizing the governmental public reason. Further, the present research shows the different "work" done by the experts and the politicians. The former offered an accurate representation of the social and societal risks by detailing several risk measures. Differently, the latter constructed a discourse by omitting part of the risk measures but continuously referring to the experts' appraisals. These textual and intertextual practices permitted persuasive demonstration of the "relevance" of the social risks in comparison with the societal ones.

The attribution of "relevance" to the social risks rather than to the societal ones supporting the decision for business continuity while recognizing the need for an environmental transformation of the company reflects this: 'the idea of sustainability has undergone a significant change of meaning, now connoting "sustainable development", with the emphasis on sustaining economies rather than nature (Pfaller and Lerch 2005: 205).

Our research has a number of limiting factors. First, we deliberately chose to inspect some texts and to exclude others in order to concentrate the attention on the experts' risk appraisals commissioned by both the Judiciary and Italian Government. Further, given the aim of approaching the governmental discourse by focusing only on its official speech, the discourse analysis does not consider the comments of the Italian Government's representatives within newspapers, TV and other media. Despite these limitations, we believe that the paper contributes to critical and interpretative accounting research by depicting how accounting can be mobilized when a State government has to deal with *contrasting risks*, quantifiable but *incommensurable*. The paper shows that accounting played several roles: it worked as a learning machine to reduce uncertainty and allowed the governors to take their decision on ILVA's destiny on the basis of the risk measured highlighted by the experts. Further, accounting also served as an "ammunition" and "rationalization" machine to create an "elusive link" between information and decision-making (March 1987). Thus, accounting participated in the governance of risk as it allowed for the construction of a discourse by making this latter "credible" and "relevant".

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