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## FOR A COMMUNICATIONAL ANALYSIS OF INTERNATIONAL MANAGEMENT STANDARDS IN SOCIETAL SECURITY

**Key words :** *management standards ; communication of influence ; communicational study of organizations ; performativity ; intertextuality*

Axe1

### INTRODUCTION

This proposal presents a communicational analysis of international management standards in the field of private and public organizations. We study the new communication policies and strategies transmitted by these texts.

This work (part of the NOTSEG project, 2009-2012, financed by the French National Research Agency) concerns the international standardization of societal security. The aim of this project is to study management standards (international, European and national) in relation to the institutions and the stakeholders who produce and use them. We attempt to uncover the organizational and social changes which are recommended.

This proposal aims to show how a communicational approach to organizations can contribute to the analysis of these normative texts. An additional aim is to suggest a methodology to carry out this study.

The normative texts are analysed in connection with the institutions and the interested parties who put them forth and use them. This analysis throws light on the communication strategies (in particular the strategies of influence) of the protagonists in their relationships with the new organisational politics they promote, and which are revealed in the texts. We will illustrate this approach with an excerpt from the corpus composed of resilience and business continuity standards.

### SPECIFICITY OF THE TOPIC STUDIED: THE DEVELOPMENT OF MANAGEMENT STANDARDS IN THE FIELD OF THE INTERNATIONAL STANDARDIZATION OF SOCIETAL SECURITY

In 2000, Lelong and Mallard noted: "Surprisingly, technical standards, social cohesion, and communication are interrelated" (2000, p. 9). In this context, recent evolutions in standards (via the so-called 'management standards' of information security) are at the heart of our analysis. Like technical standards and quality standards, security management standards contribute to giving structure to practices and to the ways in which information is organized, evaluated and controlled in organizations. The processes of international industrial standardization apply not only to the artefacts of technical devices (in technical standards), but also, from the beginning of this century, to organizational methods and the evaluation process of these devices. This includes state regulations, especially in standards of management. As a result, domains such as "crisis management", "business continuity" and "resilience" now possess standards of 'security management'.

We have focused on information security management standards within the field of societal security. The industrial standardization of security and risks concerns both global security and international standardization. We contend that these two areas will play a leading role in the field of industrial regulation in the 21st century. They will have a major impact on industrial, economic and geopolitical – including social - areas.

### CONSTRUCTING A COMMUNICATIONAL APPROACH FOR THE ANALYSIS OF NORMATIVE TEXTS

Industrial standards are generally studied within management science and engineering. There are few studies in communication science that deal with them (Perriault J. Vaguer C., 2010 ; Juanals B., 2010, Juanals B. & al., 2011), but they are considered in larger studies. (Bazet I., Jolivet A., Mayère A., 2008).

The specificity of our topic – information security management standards within the international context of societal security – has led us to design an analytical framework that will allow us to describe these texts and understand the communicational and organisational policies they recommend for organisations. In a given field of activity, we seek to identify the conditions and mechanisms that lead new standards to participate in the crystallisation, communication and circulation of recommendations for practices, knowledge and procedures, modes of organisation and socio-technical arrangements<sup>1</sup>. What are the organisational principles and modalities by which these texts contribute to structuring organisations and framing the actions of people working in the said field or who have working relationships with it? What are the motivations and communication strategies in the organisations that are the authors-protagonists? Where do the concepts and organisational principles that are reified in these standards come from, and how are they developed? What is the degree of performativity of these texts? What are the mechanisms which lead organisations to refer to these standards and use them?

This study takes a comprehensive approach, and is carried out from a socio-constructivist perspective.

Among the wide variety of communicational approaches to organisations and their subjects of study (Bouillon J.-L., Bourdin S., Loneux C., 2007, p 14), we have elected to focus on the connection between text, discourse, and communication. We treat language in its socio-pragmatic and performative dimensions. We will draw on concepts and methodologies from text linguistics (Adam J.-M., 1992) and socio-pragmatics (Austin J. L., 1972). The concepts of text linguistics are used to describe enunciative polyphony. We also draw on protagonist-network theory in the sociology of science which focuses on the protagonists, their institutions and their industrial or scientific policies (Latour B., 2006). Our work therefore tackles issues linked with the circulation of knowledge (Juanals B., 2008) and the monitoring of controversies or industrial and scientific innovations. Text analysis is backed up by field studies using qualitative methods (participant-observation, interviews with experts).

A number of French studies (such as Gramaccia G., 2001; Fauré B., 2007) have used a pragmatic approach to language to study the illocutionary aspect of speech acts in organizations.

Along the same lines as research on "organizing as a process for sensemaking" (Weick, 1995 ; Taylor and Delcambre, 2011, p.150), work in Canada by Taylor has emphasized the increasing complexity in the writing process of organizational operations. This complexity is linked with a conception of authority as a distributed phenomenon, inscribed in texts and realized through interaction (Taylor and Van Every, 2010).

## A STUDY OF STANDARDS IN THEIR INDUSTRIAL AND CULTURAL CONTEXT

Adopting a socio-pragmatic approach, we consider the texts of standards as ways of validating and communicating the technical choices, knowledge and practices linked to professions. These elements are investigated in their cultural and industrial context, against a background of economic competition. Within this analytical framework, we study the circulation of models, practices and professional knowledge through these texts. Considered both as a process and as a result, the construction of these texts is analyzed as the temporary crystallization of elements coming from sociocultural, legal, industrial and technical backgrounds.

Texts are the traces of the result of this construction. Enunciative activity is analysed by considering the linguistic traces left in the utterances (the normative texts) as indications of the subjectivity of the speakers (the experts) who contributed to producing the texts. The aim is to understand and account for the diversity of stances and national viewpoints of the protagonists, which are expressed in heterogeneous spatio-temporal and cultural frameworks. In our analysis, we have focused on the concepts and definitions used in the texts; they are mainly grouped in the “Terms and Definitions” section which is found in all standards. This decision was motivated by the fact that in standardization meetings, these terms and definitions are the topic of long, often heated, discussions and negotiations. All the experts questioned agree on the strategic importance of the terms and definitions that have been accepted for each standard. Once the standard has been put down in writing, a group of concepts, definitions and organisational principles is thus reified.

These terms and definitions were analysed with a comparative method in order to track convergences, specificities and overlapping between texts.

The study of normative texts and their socio-organisational context is backed up by field observations started in 2010. They were carried out according to qualitative methods, in the form of participant observation in European and international standardization committee meetings (European Committee for Standardization CEN/TC 391 Societal and Citizen security, International Committee ISO/TC 223 Societal Security), and during interviews with the experts involved in these meetings.

## AN ANALYSIS OF STANDARDS IN THEIR TEXTUAL AND INTERTEXTUAL ASPECTS: AUTHORITY AS A DISTRIBUTED PHENOMENON

Crisis management, business continuity or organizational resilience will soon be equipped with “security management” standards. According to experts, they will play an increasing structuring role in public bodies and organisations. What criteria and mechanisms will govern their implementation? The degree of performativity of these normative management texts will have to be explored within companies.

Based on a text-linguistic approach, we examine the textual dimension of standards. This dimension is studied by using the linguistic concepts of intertextuality and performativity. The intertextuality and performativity of normative texts play a central role in their implementation and are still to a large extent unexplored in this industrial context.

The formatting constraints defined by standards create the conditions of a performative; a form of action is present both intrinsically and extrinsically. This performative dimension is analysed in relation with the concept of intertextuality. Intertextuality, which describes a “relationship of copresence between two or many texts” (Genette, 1982), makes it possible to trace the connections between texts. It recaptures an enunciative polyphony that leads one to question the mechanisms by which organisations refer to standards and use them.

Industrial norms, which are texts written by national, European and international NGOs, are also rules. First of all, the performative power of each standard depends on the purpose and the modes of use of the standard that are defined in the text. In this respect, we note that the text of a standard is linked to other standards through quotes or repeats (which can be more or less explicit). It also contains a list of standards that are fundamental for its application and a further bibliography of recommended standards. The connection between these texts also depends on the nature of the standard: a certification standard is read together with standards of good practice with a view to the implementation of a particular activity, which respects the recommendations of the “certifying” standard. Thus, the standard of the ISO/CD 22313:2011-02-15 good practices shows that two documents are “fundamental for its application”: the standard vocabulary ISO/DIS 22300, and the ISO/FDIS 22301:201“-29-08 certification standard.

Secondly, the application (voluntary, compulsory, recommended, non compulsory) of standards is linked to other texts beyond the text of the standard itself: standards are in general voluntarily applied, but they can be made compulsory by a national regulation. In this respect, Dumortier cites regulations that can provide an incentive for using continuity or security standards (e.g. the national regulation on the security of activities of vital importance – SAIV -, the European directive on European critical infrastructures – ECIs-, or the national influenza pandemic plan “Flu Pandemia”). He specifies that standards can also be used “as a means to guarantee compliancy with a legal requirement”: in France, standards in the ISO/CEI 27000 series on information security can be used to meet the personal data processing security requirements laid down by the Computing and Freedom law of 1978; for service providers who assist administrative authorities in securing their computing systems, the General Security Referential (GSR) expressly recommends certification to the

ISO 27001 standard. This recommendation will certainly result in the standard being referred to in the calls for tenders published by public bodies (Dumortier, 2012). Even when their application is voluntary, i.e. not compulsory, management standards can strongly condition market access through security. Following the example of technical standards, management standards are used in the consultancy sector and by organisations that wish to obtain certification for their activities. A recent report by AFNOR stipulates that “the concept of business continuity, which for the moment is dealt with in a rather sectorial way (e.g. the banking sector in France) is likely to evolve towards a contractual requirement shared by the protagonists of a value chain. Evidence for this is the fact that the financial field is ruled by clauses that stipulate an operation of data resilience with regards to potential losses in the event of a breakdown in computerised transactions (e.g. stock market orders). Furthermore, some mass retailers (Groupe St Michel, Ardenay Cereals) are starting to request their food industry suppliers to declare that they possess a PCA”. Experts confirm this trend, specifying that the technical clauses of subcontracts can stipulate compliancy with technical or management standards – the request for certification, for example. From this point of view, compliancy with certification or good practice standards is considered as a differential market advantage for organizations.

These observations are along the same lines as the work by Taylor who, when studying the performative properties of the texts, describes their capacity for action as “textual agency”. Authority can be perceived as a phenomenon that is distributed through hybrid and fragmented

texts (Taylor & Van Every, 2010). Thus, in the security and business continuity field, the performative power of texts of various kinds and from various sources (standards, regulations, referentials, contract clauses...) is partly due to their arrangement and their interaction.

## THE ANALYSIS OF GAMES OF INFLUENCE ON THE INTERNATIONAL SCENE : TEXTS AND PROTAGONISTS STUDIED IN INTERRELATION

In the editing process of standards, we question the nature of the “consensus” that is presented as one of the operating rules of the international standardization committees which collectively produce the texts. When the linguistic traces of the power games between the texts are matched with their “authors-protagonists”, they reveal issues such as market domination and structuring choices of organisational models and control.

We present hereafter an extract from the synthesis of this work. The extract is limited to the question of lobbying strategies in eight national and international standards taken from our corpus. This extract deals with the negotiations and the texts on the themes of business continuity and resilience, which play a central role in societal security.

On a national scale, according to all the experts consulted, the British standard (BS 25999-1:2006 Code of practice for business continuity management and BS 25999-2:2007 Specification for business continuity management) stands out as the international reference regarding business continuity in national texts. It is edited by the BSI (British Standards Institute) and generates a series of activities in standardization and in the related sectors of editing, audit, certification, and training (for companies and auditors seeking accreditation). This standard includes a Code of Practice and a Specification which provides guidance concerning the requirements for certification. It is linked to the good practice guidelines (BCI Good Practice Guidelines 2010) of the BCI (Business Continuity Institute). The terms “Business continuity” and “resilience”, and their associated definitions, appear to be the same in the three texts.

Two international ISO standards dealing with business continuity are currently being written: one text, on certification, is being finalized (ISO/FDIS 22301:2011-29-08- Societal Security – Business continuity management systems – Requirements) ; the terms and definitions contained therein are applicable to a text under development concerning good practices (ISO/CD 22313:2011-02-15- Societal Security – Business continuity management systems – Guidance). The British experts (consultants close to the BSI and the BCI and a representative of the BSI), who have produced two projects of international standards, have promoted the British conception in the international standard. A topic brought up in meetings is their concern to ensure a transition period for companies moving from the British to the international standard; this is a direct reference to concerns of market protection. According to experts, Great Britain – which developed, in the eighties, emergency plans in application of the Health and Security at work Act - is a precursor in this field. This experience led the BSI to develop a national standard that is recognized on an international scale, and to occupy a predominant position in the ISO by supervising the edition of the two international standards on this subject.

Within the JTC 1/SC27, an influential technical committee of the ISO that creates standards on ICTs in the field of information security, an international standard ISO/IEC 27031:2011 (Guidelines for ICT Readiness for Business Continuity, 2011) has recently been edited on the subject. It is very similar to the British conception of the terms “business continuity management” and “resilience” and its associated definitions.

The United States have two texts in the field of societal security. An American standard of the ANSI (American National Standards Institute), ASIS SPC.1-2009 Organizational Resilience : Security, Preparedness, and Continuity Management Systems – Requirements with Guidance For Use, is backed by the influential ASIS International association. The American technical standard (NFPA 1600 2010 Standard on Disaster/Emergency Management and Programs, 2010) of the NFPA (National Fire Protection Association) is close to the ANSI standard; it differs in that it is mainly meant to help communities responsible for civil security (small or medium sized towns) in the management of emergencies and business continuity.

Supported by the American association ASIS and an Israeli expert, a project for an international standard on organizational resilience (ISO/WD 22323 Societal security – Organizational resilience management systems - Requirements and guidance for use) gave rise to heated debate within the ISO/TC 233 in 2010-2011. It is at present being written.

A more general international standard on risk management, NF ISO 31000:2009: Risk management. Principles and guidelines, 2009, ISO TMB), with a guide of associated vocabulary, is often mentioned by experts.

The representatives of the British and American national standards have played an extremely active role in the editing process of international standards. The role of the editor appears to be a fundamental one, as it is he who authorize an expert to propose a first version of the text, to take part in the writing and to supervise the writing by other experts. During negotiations between experts, the editor of a standard can promote his conception of the field and of the industrial and cultural framework of which it is part. He can do this by, for example, selecting the main terms and their associated definitions. The editor and his close associates can thus introduce into the international context the balance of power that is in their favour on the market.

The analysis of the content of the standards and the interviews carried out with the protagonists (the “experts”) who participate in writing the texts or who are kept updated on the work in progress, has allowed us to better understand the stance and issues within these texts.

The project of an international standard on organisational resilience draws on an analysis and a risk assessment based on the international risk management standard ISO 21000:2009. The views of Australia/New Zealand (AS/NZS 5050:2010. Business continuity – Managing disruption-related risks, Standards Australia, Standards Australia, may 2010) are the same as the American position on this matter. The project of organisational resilience describes an iterative learning process allowing an organisation to adapt to a complex and changing context. It includes risk analysis, risk management and business continuity. Considered from a sequential point of view, it deals with the pre-crisis, the crisis and the post crisis stages, whereas the British and NFPA standards focus mainly on crisis management. The American-Israeli position limits business continuity management to the strategic and operational capacity of an organisation to plan and respond to conditions, situations and events in such a way that it continues its operations to a predefined acceptable level. The British position on business continuity is different: it includes resilience and focuses on risk management until an acceptable situation is re-established. The British experts criticize the detailed conception of risk assessment which they consider unrealistic (arguing that it is impossible to anticipate all the potential risks) and very costly.

According to French experts, the projected standard on organisational resilience aims at destabilising Britain’s domination of business continuity on the international market. However, it also reflects the criticism by professionals that the British doctrine is outdated. In fact,



the British position is criticized for only taking single-incident scenarios into account, whereas the complex incidents that a company has to face show that this model needs to evolve. In this respect, the experts take the example of the series of disasters at the Fukushima nuclear plant in 2011. Another criticism expressed by the experts concerns the very general coverage of the international certification standards presently being written, that could eventually affect their credibility. They are beginning to be called “alibi standards”. At the time of the accident that happened in 2001, the French AZF plant had started an ISO 14001 (environmental management) certification process although it had a poor security system. Can these very gross standards guarantee the security of organisations, processes or sites?

This example shows that integrating the various national conceptions within a new “consensual” international text turned out to be unachievable because of the market rivalries and cultural and industrial divergences. The standards that are the most widely applied in national or international markets were directly used as references to develop international standards in that field. An analysis of the traces of influence in the texts that was extended to cover all the terms of a standard (going beyond the scope of the present article) confirmed this state of affairs (Juanals & Minel 2011, 2012). The major protagonists in the business continuity market, i.e. the British and the Americans, managed to transfer a large part of the contents of their national standards to international standards. The latter will soon be taken up in European standards and will be applied to the countries in the European Union.

## CONCLUSION AND RESEARCH PERSPECTIVES

In the field of societal security, we have uncovered and analyzed the new technopolitics (edited or being edited) which are materialized in normative texts. In the editing process of standards, this work reveals the current process of arriving at a “consensus”, which is presented as one of the operating rules in the international standardization committees which collectively edit texts. The linguistic traces of the power games between texts, connected to their “author-protagonists”, have disclosed market domination strategies associated with structuring choices of models in organization and control.

Methodologically, the use of software for representation and textual analysis for the computerised processing of vast corpora is under study (Juanals & Minel, 2012) in order to jointly analyse texts, protagonists and the diversity of viewpoints expressed. In the field of societal security, it becomes hard to find one’s way in the abundance of texts whose fields of competence, on the same theme, sometimes overlap. A corpus of 50 standards (the JTTC1 alone contains more than 1000) involves analyzing over 2000 pages. The size of the corpus to be studied and our desire to propose a generic approach, including metrics to evaluate the accuracy of our experiments, entails using the methods and tools developed for automatic language processing (ALP). An instrumented methodology that explores the heterogeneity of the texts is in progress (Lafréchoux, Juanals, Minel, 2012). The ALP and knowledge engineering tools that we use do not require a unified representation of knowledge and protagonists. On the contrary they aim at preserving the diversity and the richness of the viewpoints of both national and international texts. Finally, our decision to locate our study in the ecosystem of Linked Data (Dublin Core, GeoNames) will provide the possibility for further enrichment regarding institutions, protagonists and texts. This choice led us to use the standard languages of the semantic web framework in order to exploit the possibilities given by “linked Data”. More generally, this research contributes to revealing and critically assessing the new politics being developed as regards their characteristics and the way they are worked out. In the fields of societal security, information security and risk management, models of theories and action that are specific to engineering sciences and information technologies are being extended to society and organisations. This field, which is still in a development phase, reveals important evolutions in society and still remains to be widely explored. On a societal scale, these theoretical and operational choices have direct consequences on organisations (public or private) and populations. The latter have to face crises, or even catastrophes, of various origins (natural disasters, accidents, malicious intent), whose prevention and management are regulated by normative and regulatory texts that they are often unaware of. However, these models convey issues of a societal, political and ethical nature. For this reason they should be the subject of interdisciplinary study and public debate

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