

RISK COMMUNICATION AND THE DISCOURSES OF THE SERGIPE PRESS REGARDING THE TRANSPOSITION OF THE SÃO FRANCISCO RIVERⁱ

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Introduction

Ever since the period of The Brazilian Empire the possibility of diverting the course of the São Francisco River to the so-called Drought Polygon has been under discussion. It was put forward as a way of addressing the problem of water shortage in the semiarid region of the Brazilian North East, a region which has always suffered from periods of lack of rain. However, in the first decade of the 21st century this topic became once again the subject of headlines in the Brazilian press because of the so-called Project for the Integration of the São Francisco River with the River Basins of the northern region of the Northeastⁱ. This topic was also discussed in newspapers in the state of Sergipe. The waters of the “Velho Chico”ⁱⁱⁱ pass through Sergipe and the state has historically been against its transposition, defending instead its revitalization.

In view of the importance of this water project and its potential impacts on the environment, this article seeks to analyze discourses published in Sergipe newspapers concerning the socio-environmental risks which may result from the river’s transposition. Our theoretical discussion will cover three distinct areas: first, the concepts of risk and its socio-environmental aspects, encompassing various forms of perception and interpretation; second, Risk Communication as a fundamental stage in the Management of Risk, as proposed by ISO 31000:2009, given that such an approach not only includes warning and providing advice to the population at risk or

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disaster situations, but also promotes their inclusion in decision-making processes; and third, outlining the discourses in the Sergipe press concerning this undertaking.

This work adopts a structuralist methodology, though it is also of a descriptive nature, involving the analysis of secondary documentation. The study includes bibliographical research on the theoretical foundations of risk (BECK, 2010), the social construction of risk (HANNIGAN, 2009) and risk communication (PAHO, 2009), (ALMEIDA, 2011), as well as documental research in the following newspapers: *Correio de Sergipe*, *Jornal da Cidade* and *Cinform* covering the period from 2004 to 2007ⁱⁱⁱ. Journalistic discourses were chosen according to their statements, where during an initial selection, all news items and reports which addressed the river's transposition and the historical context in which these discourses were presented were identified. Only in this way was it possible to successfully carry out the "study of meanings" and the "mapping of voices" present in these discourses. A second selection sought to identify "discursive formations", above all, in relation to the socio-environmental risks and impacts related to this river project. This is because discursive formations - what is repeated again and again - confirm the notion of a lack of neutrality in discourse. The method adopted for this stage of the work was Discursive Analysis (DA), as we argue that the reports published transmit, in their textual make-up, social-historical characteristics. This means researchers need to understand not only their explicit content but also the historical context and how they are socially and culturally framed (BENETTI, 2007). In short, DA aims to understand both how a symbolic object produces meanings and how it is given significance by and for its subjects (ORLANDI, 1999). Such an understanding, in turn, requires that the interpretations organized within the text that relate subject and meaning are made explicit.

Risk and its social construction

Risk is a concept that is widely accepted as being relevant to processes of assessment and decision-making across a number of areas of activity. However, a rigorous, simple and widely accepted definition of the concept does not exist. The word "risk" in its Portuguese form is associated to the Latin term "*risicum*" or "*risiscus*", defined as danger, fate or crisis, and to the Italian term "*risicare*", from where the contemporary terms of risk in Latin languages and English derive (ALMEIDA, 2011).

A number of factors point to the importance of this concept in contemporary society, which Ulrich Beck has termed "Risk Society", due to its cultural and political aspects and its significant role in forming social behaviour in the face of uncertainties and threats. When conceptualizing the term "risk" Beck makes it clear that risks are not a modern invention. However, their scale is the differentiating factor between risk in earlier times and those of present day. For example, the risks taken by Colombo in discovering new lands and continents were personal risks *and* involved a certain amount of daring and a sense of adventure. By contrast, present day risks to our civilization veer away from this perception, causing situations of global threat or potential self-destruction of life on earth, turning them into collective risks. In his own words:

Present day risks and threats are different, therefore, from their medieval equivalents - though they frequently appear similar from the outside - fundamentally because of the *globality* of their reach (human beings, fauna or flora) and their *modern* causes. These are the risks of modernization. They are *products in series*, a result of the industrial machinery of progress, *systematically* aggravated by their later development (BECK, 2010, p. 26).

For Beck, in contemporary societies the risks of modernization are cognitively dependent. In this sense, both risks and wealth may be distributed, and consequently, are both influenced by positions, whether in terms of threat or class. Social risks may involve consumer goods, income, educational opportunities and property, assets which are scarce and sought after. By contrast, phenomena which are harmful health and destroy nature, and should thus be regarded as social risks, are often imperceptible and indiscernible to individuals. This is because, according to contemporary social makeup, they require evidence by specialists in order to be seen as “objective”. From this perspective, risks do not depart from the capitalist logic of development; on the contrary, they become “*big business*”. In other words, in order to increase profit and political and economic power, industrial society increasingly creates situations of threat which fuels a growing class of risk professionals.

The result is what could be termed an overproduction of risks. These partly relativize, partly complement and partly invade each other's territories. Parties interested in each point of view look to equip themselves with definitions of risk in order to repel those that threaten their financial well-being. Threats to the land, flora, the atmosphere, water and the fauna occupy a special position in this “all versus all” struggle for the most lucrative definitions of risk, in that they allow a space for the common good and for the voices of those who do not have a voice of their own (BECK, 2010, p. 36-37).

According to the Portuguese engineer António Almeida, in his book *Gestão da Água [Water Management]*, risk is a concept that is both wide-ranging and ambiguous with multiple dimensions and a special capacity to promote and justify environmental protection and safety measures for people and goods; place a value on uncertain events; place decision-making alternatives in a hierarchical order; and justify management or governance choices and actions. Its historical evolution and different modes of usage and analytical points of view reveal the multiple dimensions of the concept of risk. Amongst these dimensions, Almeida (2011, p. 34), emphasizes:

- **Technique:** allows a quantitative and objective characterization of risk. It is directly linked to the areas of engineering, technical calculations and management;
- **Subjective:** associated to individual perceptions of risk and to the psychological behaviour of each individual in response to situations of risk or threat in

uncertain environments. It is related to the areas of psychology, economy and management.

- **Social:** associated to the social perception of risk and the collective behaviour of societies, particularly in terms of public participation and interaction with social communication in topics involving risk. It is found in social psychology and social sociology.
- **Legal:** associated to law and to how risk is considered in the application of laws and in the resolution of conflicts and determination of responsibilities. It predominates in Law and the judicial system.
- **Cultural:** associated to the evolution of Humanity and to how mankind has faced threats, both individually and collectively, and developed protection measures deemed appropriate. It involves the identification and study of beliefs, myths, rites and cultural customs of societies, organized in different places and periods. It relates to anthropology and history, but may also include the religious dimension associated to risks.
- **Philosophy:** associated to three aspects: 1) knowledge (epistemology) and methodologies associated with the scientific characterization of phenomena; 2) the meaning and the reality of risk; 3) ethical issues in face of the moral dilemmas and questions that arise from risk. It is predominant in philosophy, particularly in ethics and the philosophies of science and probabilities.
- **Economy:** associated to behaviours in terms of markets and their economic consequences, and to impacts resulting from the creation of products and services, commercial management and business, and economic support of mitigating measures. It relates to economy and business management.
- **Politics:** associated to political power and governance, action plans and management of resources, and protection measures against public risks. It is linked to political science and international relations.

This set of dimensions demonstrates the complexity of risk management, above all in areas related to contemporary environmental problems. Furthermore, it is important to remember that everyone faces different types of risks which they evaluate differently in accordance with their individual perception. In some cases, familiarization with risks can be so great that they are actually underestimated. It is sometimes forgotten that the perception of each person and/or social group and their scale of values is directly linked to the social context within which human perceptions are formed. In other words, individual and/or collective perception is strongly affected by a wide range of primary (friends, family, colleagues) and secondary influences (public figures, the media) which operate as filters in the dissemination of information within a community. This reaffirms risk as a sociocultural construction determined by structural forces in society of a political and administrative nature and may also involve cultural, traditional and historical beliefs (HANNIGAN, 2009).

With regard to the social construction of risk, Hannigan states that amongst different approaches to this topic, a number of sociologists are concerned with uncovering

how perceptions of risk vary between populations who face different life opportunities and whether the pattern of choices primarily originate from differences in power among social actors. Another sociological school of thought argues that political debates concerning questions of risk are invariably restricted to a framework of “social arenas”, that is, they take place within a “political organization where actors base their arguments on how best to influence the formulation of public policies” (HANNIGAN, 2009, p. 169). Specifically with regard to this article, the theoretical framework of the second sociological school of thought was adopted. This is because it is understood that the “social arenas” model is closer to what it is called Risk Communication, that is, a dialogic process between the actors involved and which seeks to understand which risks will be accepted or rejected by society.

The social arena is divided into various “stages”: the legislative, the administrative, the judicial, the scientific, media and civil society. Within the social arenas of risk, the process of defining what is acceptable will always be based on negotiations between diverse, or multiple organizations seeking to mould their mutual relationships. The institutional evaluation of risk, in this case, is essentially the process of formulating arguments, where organizations compete and negotiate between themselves to establish a definition of what is acceptable risk.

From a theatrical perspective, social arenas of risk are occupied by a number of groups of actors. Palmund (1992), in his article *Social drama and risk evaluation*, proposes six “generic roles” in the social evaluation of risk, each relaying its own dramaticity:

Risk bearers are the victims who carry the direct cost of living or working in dangerous places. [...]; *risk advocates* go on the public stage to fight for the rights of the victims. [...]; *risk generators* - such as service providers, logging companies, chemical multinationals and pharmaceutical companies - are labeled antagonists or villains, given that they are held by advocates as the primary source of risk; *risk researchers*, notably scientists and universities, government laboratories and publicly funded agencies are portrayed as “assistants”, attempting to collate evidence on why, how and under what circumstances an object or activity carries risk, who is exposed to that risk and when risks can be considered “acceptable” [...]; *risk arbiters* (mediators, the courts, congress/parliament, regulatory agencies) generally remain off-stage, attempting to determine, in a neutral way, to what extent risks should be accepted or how they can be limited or prevented, and what compensation should be given to those who suffer from a situation deemed to be dangerous. Finally, *risk informers*, primarily the mass media, play the role of a “chorus” or messenger, bringing issues into the public domain and examining actions (PALMLUND in HANNIGAN, 2009, p. 170 and 171).

Although there are many theoretical schools of thought used by environmental sociology in order to understand and explain socio-environmental risks, from the second

half of the 20th century onward, most researchers of risk, above all, those from more technical areas, began to see the need to marry technical analyses to knowledge about society. This is, therefore, an innovation in Risk Management, whose novelty lies in a “interdisciplinary area involving sociology, psychology, the cognitive sciences, statistics and economics” (ALMEIDA, 2010, p. 60).

From management to risk communication

By bringing together social studies and more technical studies on risk, in recent years, this dialogic discourse has had a positive effect on governments, managers of environmental projects and on civil society. Above all, the signing of the Hyogo Framework for Action in 2005 saw the governments of 168 members of the United Nations commit themselves to adopting measures to reduce the risk of disasters and resultant losses, such as human life, and social, economic and environmental assets. The Brazilian National Department for Civil Defence^{iv} states that only after *Hyogo* signatory countries began to “foster knowledge on the causes of disasters (effects of natural, environmental and technological hazards) and bring prevention, preparedness and response actions in line with international directives to reduce the impacts of disasters” (BRASIL, 2010).

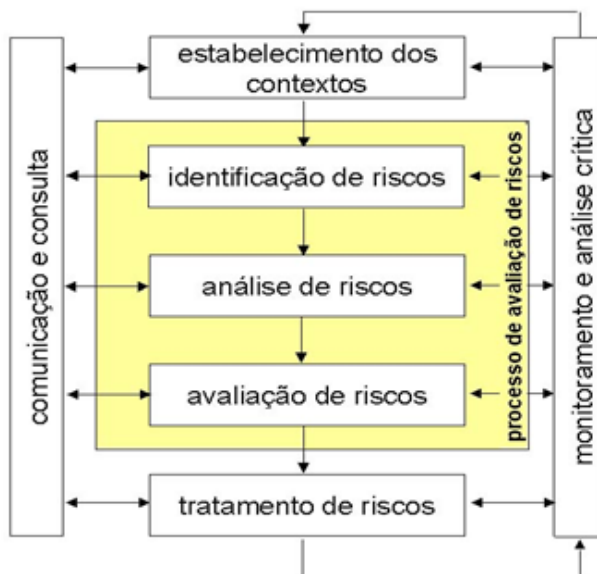
In order to reduce disasters, therefore, it is necessary to identify and evaluate existing risk and take action on two fronts: decrease the probability and intensity of threats (forewarning or indications of a disastrous event) and reduce vulnerabilities (conditions determined by physical, social, economic and environmental factors or processes which increase the susceptibility and exposure of a community to the impact of threats) by means of accurate information.

In the development of an environmental project, Risk Management, as a set of activities associated to the deployment of the concept of risk (Figure 1), should include some of the steps within the general process, as proposed by the International Standard ISO (ISO 31000:2009).

Particularly in relation to the communication and consultation step, it is understood that appropriate Risk Communication is fundamental to individual and/or social perception of risk, and to the mobilization and participation of third parties and/or the public in the implementation of measures. In view of the specific characteristics of the process or type of risk, establishing consultation and a system of active participation of stakeholders is welcomed from an ethical point of view. Developing a communication plan is vital in attempting to reduce communication “background noise”, to minimize unnecessary fear or panic, and also to evaluate adequate means of communication and types of media for each case and each type of public.

One of the first institutions to establish a definition of Risk Communication was the National Research Council of the United States, which in 1989 defined it as:

Figure 1 - Risk Management process structure



Legend: (up-down) defining contexts, identifying risks, risk analysis, risk assessment, dealing with risks; risk assessment process (yellow box); communication and consultation; critical monitoring and analysis (left to right)
 Source: ISO 31000:2009 (Adapted)

An interactive process of exchange of information and opinions among individuals, groups and institutions. It is a dialogue where multiple messages are discussed, expressing concerns, opinions or reactions to the messages themselves or legal and institutional agreements on the management of risk (PAHO, 2009, p.3).

At the time, Risk Communication emerged as an important and growing topic in Latin America and the Caribbean particularly in terms of contribute to the dissemination of information, especially in public health. Health professionals themselves needed to have knowledge about the realities of communities receiving care, so as to facilitate the dialogue concerning the technical aspects of risk.

Since that time, different environmental risks, such as the contamination of air, water and soil, have brought new concerns for society in general. Together with these new hazards, humanity finds itself in a new and unprecedented era in terms of the availability of and access to information. Whenever there is a new discovery which could be considered harmful, such as an epidemic or a natural disaster, society has the means to obtain information very quickly.

It is increasingly common that most sources of information are owned by a small number of corporations which, in a developmentist vision, aim to maximize their profits.

This can mean that the media overstate risks in order to attract the attention of as many people as possible.

Moreover, there is a growing recognition across the world that traditional methods of involving citizens in decision-making are not always effective. The participative focus of Risk Communication may lead to greater consensus, without achieving perfect harmony. Therefore, when risks are well understood, predictable and measurable, communication can be clearer and more direct, resulting in fewer conflicts.

According to the Pan American Health Organization (PAHO), there is no easy answer to ensure that Risk Communication is successful. However, seven basic rules are recommended (*The EPA's Seven Cardinal Rules of Risk Communication*) which while seemingly obvious in theory, are not always followed in practice: 1) accept the public as legitimate partner; 2) listen to the public; 3) be honest and flexible when listening to other opinions; 4) coordinate and collaborate with other credible agencies and groups; 5) meet the needs of the media; 6) speak clearly and with empathy, without being patronizing; 7) plan carefully and evaluate performance (COVELLO; SANDMAN, 2001).

In terms of these seven rules, it is also worth emphasizing the importance of good planning in order to ensure that the risk management programme is successful. Indeed, "the success or failure of risk communication may depend, to a large degree, on the definition of clear targets" (PAHO, 2009, p. 5). Such targets can of course vary according to the nature of risks and may include information, education, persuasion, negotiation, guarantee and prevention. The strategies employed to achieve these targets should prioritize interactive discussion amongst stakeholders, with a view to changing attitudes.

Thus, in order to develop a Risk Communication plan with the least amount of background noise, four main elements must be taken into account: 1) source; 2) message; 3) media; and 4) the public or community. In terms of source, it has been shown that the success of messages concerning risk is strongly associated to how much confidence and credibility the receiver of the message attaches to the source, that is, the risk communicator. In relation to message, there is a consensus that information should be transmitted in a simple and objective manner and be accessible to all citizens so that everyone understands the risks and take part in protecting themselves and others. With regard to the media, it is quite clear that this element plays an important role in risk communication as the mechanism by which the message reaches its target public. It is important to objectively decide which type of media should be used in a risk communication plan. Finally, it is necessary that those who receive the message are clearly identified so that the message is successfully decoded. Indeed, when the public are engaged and knowledgeable as a result of appropriate communication, they are likely to help in compiling information which can contribute to the technical analysis of risk.

Nevertheless, to ensure that all stages of a plan are achieved, an assessment of Risk Communication is necessary. Indeed, if the communicative process is not systematically assessed how can one be sure that it was efficient or effective? According to PAHO, therefore, it is necessary to develop an assessment strategy as Risk Communication activities are being planned and executed. For this reason, it is important that

the assessment strategy developed uses both quantitative and qualitative data to ensure that information is as comprehensive as possible and, in this way, is able to contribute to the subsequent steps.

The discourse in the Sergipe press

The general structure of the Risk Management process involves a series of steps, such as: assessment, identification, analysis and treatment of risk, as well as risk communication and monitoring. This process has become increasingly important so that decisions - on which the risk society should accept or reject - are backed up by reliable sources of information.

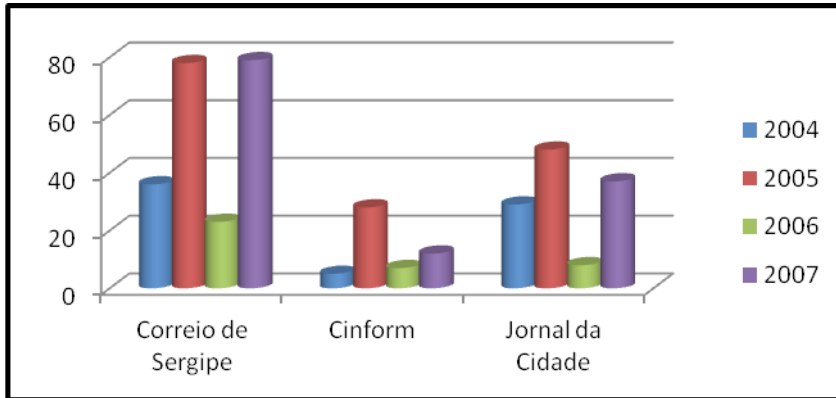
Environmental Impact Studies (EIS) and Environmental Impact Reports (EIR), in addition to being legal instruments of National Environment Policy (NEP) for securing environmental licenses issued by the appropriate public body, are essential sources of information in order to ensure the mutual understanding of risks and environmental impacts of particular projects.

In general, when they are applied, the EIS and EIR fulfil the principle of publicness, as they allow for public participation in the approval of an environmental licensing process by means of public hearings involving the community affected by the project. The primary difference between these two tools is that while the EIS is highly technical, written in a language that is inaccessible to the general public, the EIR is compiled objectively and in terms that can be understood by everyone, as well as containing maps, graphs, graphics and other visual communication aids. This ensures mutual understanding of the advantages and disadvantages of the project, as well as the socio-environmental consequences related to its execution.

For this reason, before analyzing the discourses of the Sergipe press (*Jornal da Cidade*, *Cinform* and *Correio de Sergipe*) concerning the potential risks which may be caused by the transposition project, an EIR analysis^v was carried out to identify the risks in the Rio São Francisco Integration with the River Basins of the Northern Region of the North East Project^{vi}, as well to see how these risks are interpreted and disseminated by the press to the Sergipe society.

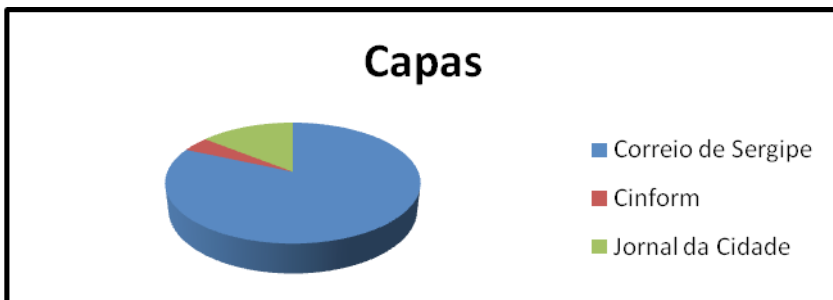
According to the results obtained from the documental research^{vii}, between 2004 and 2007 there were approximately 400 reports on the transposition, across a range of contexts. Of this total, 216 reports were published by *Correio de Sergipe*, 122 by *Jornal da Cidade* and 52 by *Cinform* (Graf 1). The graph also shows a concentration of reports in 2005 and 2007, due to the wave of court actions and public protests against the transposition. Whereas in 2006 there are very few reports on this topic due to state government elections that year.

Graf 1 – Comparison of reports published in the Sergipe press about the transposition, in absolute values.



The considerable difference in the number of reports published by the *Correio de Sergipe* in relation to the other two newspapers is even more revealing when we look at the number of “main headlines” about the transposition which feature on the front covers of the newspapers (GRAPH 2). Between 2004 and 2007 *Cinform* had two headlines (4%), *Jornal da Cidade* had seven (14%), while *Correio de Sergipe* had 40 (82%) main headlines.

Graf 2 – Comparison of main headlines on the transposition project in the Sergipe press, in percentage terms

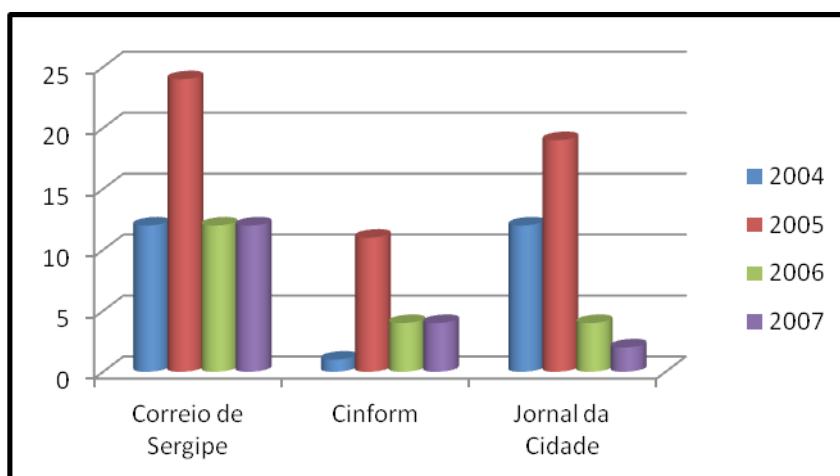


These data lead us to believe that despite its relevance for the Sergipe state, interest in this topic is not the same across all the newspapers. That is, though it is clear that an important debate was held about the transposition within the period analyzed, there are also private interests behind the volume of information communicated to the public. One of the possible explanations for this interpretation relates to the fact that *Correio de Sergipe* belongs to the Alves family. João Alves Filho was the Governor of Sergipe during this

period, and as an engineer, he referred to himself as “someone with profound knowledge of water resources” and an “advocate of the São Francisco River”.

From approximately 400 articles in the Sergipe newspapers, around a quarter made some sort of reference to the socio-environmental risks and impacts that the transposition of the River São Francisco could cause both to the environment and to the survival of riverside communities. It can be seen (Graf 3) that most of the articles (60) were produced by *Correio de Sergipe*. *Jornal da Cidade* contained 37 published articles and *Cinform* 20. It can also be observed that the majority of the articles on this issue were published in 2005, at the exact time that public hearings concerning environmental licensing were taking place.

Graf 3 – Comparisons of reports concerning the socio-environmental risks of the transposition, in absolute values



Given that the first section on the documental research is concluded, it is now possible to expand on the central objective of the analysis, that is, to identify the “meanings of the discourses” and the “mapping of voices” so as to reveal their “discursive formations”. According to Benetti (2007), within Discursive Analysis, the analysis of meanings is seen as a suitable method to be applied in journalism. It is necessary, therefore, to visualize the structure of the text, in the understanding that this structure comes “from outside”, given that a text results from a series of forces which are both external to and which precede it. Pêcheux argues that:

The meaning of a word, expression or proposition does not exist in itself (that is, in its transparent relation with the literality of meaning), but is determined by ideological positions brought into play in the socio-historical process in which words, expressions and propositions are produced and reproduced (PÊCHEUX, 2009, p. 144).

Therefore, in order to analyze the meaning of discourses it is necessary to understand the historical process to which they belong. Four discursive periods were identified between 2004 and 2007:

1) Between the second half of 2004 and the beginning of 2005 there is a strong political movement against the transposition, which a report published in *Cinform*, edition 1138, shows:

“[...] no matter what party, what ideology or what colours are defended on the streets or within parties. When the subject is the Federal Government’s project for diverting the River São Francisco - which became a complete fixation for the President, Luiz Inácio Lula da Silva and his Minister for National Integration, Ciro Gomes - Sergipe members of parliament, whether at federal, state or municipal level, are totally against the project” (CIFORM, 2005, p.11).

Throughout 2005, criticism of the EIR increased, in reports which emphasized a more technical discourse concerning the risks of the transposition. One of the articles published in edition 1207 of *Correio de Sergipe* commented that the researchers at the Federal Public Prosecutor’s Office had argued that the transposition was not viable based on superficial data from the EIR. “For the public, the report is not elucidating, therefore, it is not valid [...] it is an informative text, full of data and numbers, but which does not say what it really should say” (CORREIO DE SERGIPE, 2005, p.A8).

Public protests in defence of the River São Francisco, such as Bishop Luiz Flávio Cappio’s first hunger strike, helped to highlight the atmosphere of criticism surrounding the project. In one of a number of articles on Dom Cappio’s hunger strike, the *Correio de Sergipe* (edition 1407), reported that the then governor, João Alves Filho, led a march toward Cabrobó, involving around 1500 people, in solidarity with Dom Cappio. During the march the Governor announced “the opening of an Ecological Headquarters in Sergipe, in defence of the Rio São Francisco” (CORREIO DE SERGIPE, 2005, p. A4). The Ecological HQ, as it became known, included lawyers and technicians with knowledge of the actual situation of the river in order to oppose the transposition project.

3) In 2006, a series of judicial actions stopped the project works and the transposition emerged as the key issue in the electoral campaign for the governorship of Sergipe state. In an interview given to *Cinform* (edition 1211), João Alves Filho (PFL), as candidate for re-election, stated that one of his motives of his candidacy related to the transposition project. “In the first place, as governor, I will have the support to stop the transposition of the Rio São Francisco project, which is technically inadequate, ecologically disastrous and, in socio-economic terms, criminal”. According to the candidate, “[...] the São Francisco is literally in the hospital emergency ward, the river is likely to die because of this transposition” (CIFORM, 2006, p. 12).

In another article published by *Cinform* (edition 1223), President Lula, during a campaign rally in Aracaju, capital of Sergipe, made it clear that he was not happy that João Alves Filho had recorded an election broadcast demonstrating the reduced flow of the river, and thus reinforcing the idea that the transposition could provoke water

shortages in many cities in Sergipe. For Lula, “he clearly did not dip his feet in the river, he must have dipped them in the sewage that he, as governor, allows to be thrown into the São Francisco” (CINFORM, 2006, p. 04-05).

4) In 2007 the protests against the transposition began again, particularly after IBA-MA (Brazilian Institute for Environmental and Renewable Natural Resources) granted the license to implement the project works and authorized the army’s activities in Cabrobó/PE. In an article published in edition 1848 of *Correio de Sergipe*, the newspaper claimed that despite the license “the protests against the transposition project continue across the whole river basin area”. This is because “social movements and organizations did not intend to bow down to pressure from the federal government” (CORREIO DE SERGIPE, 2007, p. B1). In the *Jornal da Cidade*, (edition 10,426), a report covering a public event organized by the OAB/SE [Brazilian Bar Association, Sergipe Branch], highlighted that “the protest had become a real democratic movement”, emphasizing this position with the headline: “Population says no to transposition” (JORNAL DA CIDADE, 2007, p. B1). However, one question remains: the Sergipe population was actually heard in this process?

To answer this question, we conducted a mapping voices - other appropriate research in the field of journalism which perfectly fits the precepts of the Discourse Analysis. A journalistic discourse is ideally polyphonic. In other words, as my discourse dialogues with other discourses, there are other voices present within it, and these are voices with which I agree or disagree, totally or partially. Indeed, “all talk is dialogic, all discourses contain other discourses, and everything that is said has already ‘been said’” (BRANDÃO, 2001, p.67).

Therefore, no discourse is unique or unprecedented, it is in continuous interaction with other discourses which already were or are being produced. In this inter-discursive relationship (with other discourses), whether quoting others, commenting or parodying these discourses, the truth as expressed in words is in dispute, in a relation marked by alliance, polemics or opposition. “It is in this sense that one can say that discourse is a gladiators’ arena where speakers or voices, from different ideological, social and cultural positions, look to interact with and act upon each other” (BRANDÃO, 2011).

From this premise of DA it is possible to affirm that despite the considerable number of articles published by the Sergipe newspapers, particularly about the risks and socio-environmental impacts that may be caused by the transposition, there was a lack of nuance in the journalistic discourses. In other words, over the four years analyzed, discourses on environmental risks and impacts were refined, however, the meaning of statements remained the same. This is evident in the mapping of voices, given that the speakers are relatively limited.

Thus, among politicians who defended the River São Francisco from a point of view of the risks of transposition, it is worth mentioning: the Governor João Alves Filho (The Liberal Front Party) and his wife, Senator Maria do Carmo Alves (The Liberal Front Party), the federal deputies José Carlos Machado (Brazilian Democratic Movement Party) and Iran Barbosa (Workers Party), the state deputies Augusto Bezerra (Brazilian Democratic Movement Party) and Ana Lúcia (Workers Party); it is also worth mentioning, representatives of public institutions, such as Eduardo Matos, the State Public Prosecutor;

and representatives from public bodies, such as Luis Carlos Silveira Fontes the Executive Secretary of the São Francisco River Basin Committee; members of unions and professional organizations such as the president of the Brazilian Bar Association/Sergipe, Henri Clay; members of churches, such as Bishop Luís Flávio Cappio, as well as specialists and researchers. By contrast, among those who defended the Federal Government's project for diverting the waters of the River São Francisco, main sources were: the then President, Luiz Inácio Lula; the ministers for National Integration, Ciro Gomes and Pedro Brito, respectively; and the then Minister for the Environment, Marina Silva. It is important to emphasize that the newspapers rarely gave the wider population the opportunity to express an opinion on the issue. This polyphony is evident, above all, in articles covering protests and/or public hearings.

Having compiled a list of reports, studied their meanings and mapped their voices, we can finally elaborate the discursive formations (DF) used concerning the socio-environmental risks of the transposition. Developed by Pêcheux, the concept of DF regulates the reference to interpellation-subjection of the individual into a subject of discourse. "It makes us aware of the fact that speaking subjects, situated in a specific historical conjuncture, may agree or disagree about the meaning given to words" (BRANDÃO, 1991, p. 39). Furthermore, DF reiterates the idea of discursive non-neutrality. Given that when the discourse is delivered, it is inherently connected to a web of other discourses with similar choices and exclusions. Discursive formation is, therefore, everything that is repeated and which, on being repeated, is transformed and gains re-significance within a specific historical and ideological context.

Based on these precepts, seven discursive formations were identified in the articles analyzed:

1st DF - "The information in the EIR is biased", and therefore cannot be considered to be a reliable analytical source (CORREIO DE SERGIPE, 2004, p. B6). This discourse gained prominence as specialists and researchers in water resources developed their analyses based on the EIR;

2nd DF - "the transposition is not for human consumption but for cultivating prawns and for irrigation" and this was seen as one of the greatest errors in the project. In an attempt to stop the project, in an extraordinary meeting, the River São Francisco River Basin Committee (CBHSF) decides that "redirecting water for the transposition can only be authorized for the purposes of human consumption, and only when there are no alternatives for capturing water" (JORNAL DA CIDADE, 2004, p. A3);

3rd DF - "the river flow would be put totally at risk", and the transposition would also mean the unavailability of water for future projects (CORREIO DE SERGIPE, 2004, p. A6). It would be necessary, first, to increase the river flow through revitalization measures and only then reconsider the issue of transposition;

4th DF - "the river is sick, it is in the hospital emergency ward", so how "can water be taken from a sick river in order to promote agribusiness" (CINFORM, 2005, p. 07). The sickness of the river to which its defenders refer is related to degradation, silting, erosion, deforestation of riparian woodlands and a reduction in the volume of water and fish stocks;

5th DF - “the death of Velho Chico” is proclaimed as the result of the “increase in saline intrusion, that is, the increase in the saline mass which, if not properly controlled, could make the water brackish causing significant negative environmental impacts, especially for the soil, fauna and flora of the water basin” (CORREIO DE SERGIPE, 2005, p. A3);

6th DF - the transposition is “technically unsound, ecologically destructive and politically disastrous”, a sentence frequently uttered by the then Governor of Sergipe, João Alves Filho, apart from provoking division between northeastern states, the poor condition of the project could result in an environmental catastrophe for the region of the river’s estuary, which separates the states of Sergipe and Alagoas (CORREIO DE SERGIPE, 2005, p. A3);

7th DF - the apocalyptic discours: the river’s transposition would cause a “water supply crisis” in which “60% of the population of Aracaju would have to be evacuated due to drinking water shortages and whole communities from the semiarid region, in inland areas of the state, would be forced to abandon their towns, given that all water supply in Sergipe comes from the River São Francisco” (CORREIO DE SERGIPE, 2006, p. A4).

Final Considerations

The aim at the beginning of this article was to analyze the discourses in the Sergipe press concerning the possible risks caused by the transposition of the São Francisco river. Once the study was concluded, it can be argued that in the period studied, there was indeed an attempt on the part of the local press to inform society about these risks. However, that is not to say that journalistic discourses were necessarily transparent or objective. On the contrary, while the press outlined how harmful the transposition would be to the health of both the river and, consequently, riverside communities, it did not specify what were these risks. Therein lies the need to understand the historical and polyphonic context of statements, in order to capture in full the meaning of journalistic discourses.

Given the existence of the movement against the river’s transposition in Sergipe, articles setting out the positive aspects of the Federal Government’s project were rare. *Jornal da Cidade* was the only newspaper of the three analyzed which demonstrated, in the period of analysis, a concern for a basic tenet of journalism, that is, acting as mediators between facts and individuals. Journalism must open up space for more than one source, thus allowing for differences in opinion and voices both for and against the issue at hand. Indeed, *Jornal da Cidade* was the only newspaper which published a report on the “positive impacts” of the river’s transposition, particularly in economic terms. By contrast, *Correio de Sergipe* always made clear its political-ideological position against the project, while *Ciniform* showed some empathy with the opposition movement to the transposition of the waters of the River São Francisco.

This study demonstrated that the mapping of voices is a type of research appropriate for studying the field of journalism, it is also frequently used in discourse

analysis. Based on this analytical procedure, it can be said that despite the considerable number of reports published by the Sergipe newspapers relating, in particular, to the environmental risks and impacts, few nuances were detected in the journalistic discourses. There are relatively few speakers. On one side the so-called “defenders of São Francisco”, on the other “government representatives”. The population, on the other hand, only exercises the right to express their opinion when public protests are held. Furthermore, throughout the period of four years in which the discursive formations were elaborated, the meanings of their statements have remained the same, and are exhaustively repeated by, in particular, authoritative sources which, according to Hall (1997; 2003), are overwhelmingly specialized, political and institutional in nature.

Finally, it can also be observed that whilst the risks of the transposition project were divulged, it cannot be said that Risk Communication was adequate during the decision-making process. Indeed, as one of the strategic steps in Risk Management, this communicative activity must include two ethical imperatives - transparency in providing information and the extensive participation of actors in decision-making processes. Neither of these premises were fully present in the actions of the management of the project nor were they practiced by the Sergipe press.

Notes

- i The project is managed by the Federal Government's Ministry for National Integration.
- ii Velho Chico, is the familiar name given to the river in the region, 'Chico' a shortened form of Francisco.
- iii This study's timeframe was set in line with the publication of the Environmental Impact Report (EIR) and the period of public hearings held to present and discuss the diversion project. At the end of 2007, after a series of judicial actions, the Federal Government started work on the project.
- iv Body connected to the Ministry for National Integration.
- v The results of the analysis carried out via this primary source document (EIR) are made available in the Annals of the XIVth IWRA World Water Congress – Adaptive Water Management: Looking to the Future - held from the 25th to the 29th September, 2011 in Porto de Galinhas, Pernambuco, Brazil.
- vi According to the EIR, in the chapter Conheça os impactos que o projeto poderá causar [Be aware of the impacts which may be caused by the project], of the 44 socio-environmental impacts identified, 23 were considered to be of major relevance, 11 of which were positive and 12 negative.
- vii This research was carried out in the second half of 2011 in the Historical and Geographical Institute of Sergipe (IHGSE) archive.

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RISK COMMUNICATION AND THE DISCOURSES OF THE SERGIPE PRESS REGARDING THE TRANSPOSITION OF THE SÃO FRANCISCO RIVER

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Abstract: This paper aims at analyzing the discourse from the press in Sergipe concerning possible socio-environmental risks caused by the transposition the waters of the River São Francisco/Brazil. To ensure the initial scope, the theoretical argumentation will be structured in three distinct moments: the first one introduces a concept of risk and its socio-environmental dimensions, the second presents risk communication as a fundamental step in the management of socio-environmental risks, according to ISO 31000:2009; the third concerns the results obtained from discourses in the press in Sergipe that deal with the transposition. This work employs discourse analysis in a documental research of the papers *Correio de Sergipe*, *Jornal da Cidade* and *Cinform*, in the period 2004-2007. The journalistic discourses were selected by means of their headlines, in an attempt to effect a “study of meanings” and a “mapping of voices”. Afterwards, we identified “discursive formations” related to socio-environmental risks of the transposition, thereby confirming the idea of a non-neutrality of discourse.

Key-words: Risk communication; Socio-environmental risk; Transposition; Press in Sergipe; Journalistic discourses.

Resumo: O presente artigo tem como objetivo analisar o discurso da imprensa sergipana sobre os possíveis riscos socioambientais causados pela transposição das águas do rio São Francisco. A fim de garantir o escopo inicial, a argumentação teórica será estruturada em três momentos distintos: primeiro, conceituando o risco e suas dimensões socioambientais; segundo, apresentando a comunicação de risco como uma etapa fundamental na gestão de riscos socioambientais, conforme propõe a ISO 31000:2009; terceiro, discorrendo sobre os resultados obtidos nos discursos da imprensa sergipana sobre a transposição. Este trabalho utiliza-se da Análise do Discurso para a pesquisa documental nos jornais *Correio de Sergipe*, *Jornal da Cidade* e *Cinform*, no período de 2004 a 2007. Os discursos jornalísticos foram selecionados a partir de seus enunciados, no intuito de realizar o “estudo dos sentidos” e o “mapeamento das vozes”. Em seguida, identificam-se as “formações discursivas”, relacionadas aos riscos socioambientais da transposição, que confirmam a ideia de uma não neutralidade discursiva.

Palavras-chaves: Comunicação de risco; Riscos socioambientais; Transposição; Imprensa sergipana; Discursos jornalísticos.

Resumen: Este artículo tiene como objetivo analizar el discurso de la prensa de Sergipe sobre los posibles riesgos socioambientales causados por la transposición del río São Francisco/ Brasil. Para garantizar tal objetivo, la argumentación teórica será estructurada en tres momentos distintos: primero, conceptualizando el riesgo y sus dimensiones socioambientales; segundo, presentando la Comunicación de Riesgo como una etapa fundamental en la gestión de riesgos socioambientales, tal como propone la ISO 31000:2009, tercero, discutiendo sobre los resultados obtenidos en los discursos de la prensa sergipana sobre la transposición. En este trabajo se utiliza el Análisis del Discurso para documentar los trabajos de investigación en los periódicos *Correio de Sergipe*, *Jornal da Cidade* y *Cinform*, en el período 2004-2007. Los discursos periodísticos fueron seleccionados a partir de sus declaraciones, a fin de alcanzar el “estudio de los sentidos” y el “mapeamiento de las voces.” A continuación, se identifican las “formaciones discursivas”, relacionadas con los riesgos socioambientales de la transposición, que confirman la idea de una no-neutralidad discursiva.

Palabras clave: Comunicación de riesgo; Riesgos socioambientales; Transposición; Prensa sergipana; Discursos periodísticos.
