

A photograph of a rocky coastline under a cloudy sky. In the foreground and middle ground, numerous people wearing white protective suits are scattered across the dark, jagged rocks. Some are standing, while others are crouching or bending over, possibly collecting samples or examining the terrain. The background shows the ocean with white-capped waves crashing against the shore. The overall tone is somber and investigative.

Ricardo García Mira
(Editor)

READINGS ON THE PRESTIGE DISASTER

Contributions from
the Social Sciences

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Xoan Vicente Viqueira
Institute for Psychosocial Studies and Research

FIRST EDITION

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INSTITUTE FOR PSYCHOSOCIAL STUDIES AND RESEARCH "*XOAN VICENTE VIQUEIRA*", 2013
Faculty of Educational Sciences
University of A Coruña
Campus de Elviña, s/n.
15071 – A Coruña (Spain)

Photography: José Ramón Pardiño Busto and Carlos Lago de la Plaza.
Text revisions: Adina Dumitru, Ricardo García Mira and Alberto Díaz.
Legal deposit: Lugo–106–2013
ISBN: 978–84–932694–4–9
Printed in Spain

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ACKNOWLEDGEMENTS

The editor acknowledges the support of the Institute of Psychosocial Studies and Research “*Xoan Vicente Viqueira*”. The authors also express their appreciation to all the persons who have provided documentation, made suggestions, or participated in interviews during this project, and in particular, to the volunteers who participated both in the research, and, most importantly, with the cleaning tasks in the months following the disaster.

Similarly, he expresses his gratitude to the publishers listed below for their support and collaboration in the edition of this book.



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PREFACY

José A. Corraliza

Autonomous University of Madrid, Spain

In 2013, ten years after one of the greatest disasters in the environmental history of Spain, and one could say, of Europe, a group of researchers coordinated by Professor Ricardo García Mira has dared to gather together in this volume a wide array of empirical proof which shows that the Prestige disaster is (in present tense, as many of its effects still exist), an environmental event with strong political, psychological, social, economic and cultural implications. The effort of the qualified group of researchers who are authors of the chapters of this book is not only timely but also scientifically significant as it contributes to providing a complete image of the significance of this unfortunate event. It also constitutes an obvious proof of the commitment of these social scientists in giving back to society the results of their research projects.

When reading the different contributions to this volume, a central question appears: ¿Is the Prestige disaster an environmental disaster? Obviously, the answer is yes. But the Prestige is also much more than an environmental disaster. A disaster such as the one analyzed in the pages to follow not only affects the functioning of an ecosystem, but also that of a social landscape and the image its inhabitants have of it. In a press article published in the days of the disaster, I had the occasion to signal that with a spill of this kind “we lose not only a natural resource, but also and above all a livelihood which is the result, in many cases, of centuries of subtle adaptations. We lose not only what we have, but also a part of who we are, basic landmarks of our identity. Besides the material loss, an oil spill implies losses in our immaterial heritage: our environmental memory gets tainted with grime just as much as the landscapes, which are the vital signs of the activity of an ecosystem”. A disaster of this type produces long-lasting psychological and social effects. Due to these long-lasting consequences, the Prestige disaster is a worthy object of study for the social sciences. This is why this book, *Readings of a disaster. The Prestige: Contributions from the Social Sciences*, edited by Professor Ricardo García-Mira is of such great interest and is so timely an appearance.

There is a documented example of the social importance of this type of disasters. In 1995, through the National Opinion Research Center, Columbia University

researcher Arthur Levine coordinated a research on a sample of 9100 people, on the political and social events that were most significant in people's life during the decade of 1985 to 1995. He found that 84 % of the interviewed people mentioned the Exxon Valdez (40 tons of oil spilled in the Prince William Sound, Alaska, on the 24th of March of 1989), as one of the most significant events of the decade. The disaster was listed only third after the Gulf war of 1992 and the Challenger explosion, and had a similar percentage of response as the fall of the Berlin Wall. It is obvious that these are events which are maintained in the collective memory as significant references that mark a historic time period. The Prestige disaster is an event of the same characteristics.

Looking over my personal notes taken during the disaster, my attention is drawn to the declaration of a school child, the son of a fishnet maker of Cangas de Morrazo, a community living within the Vigo estuary, who, after describing the evident signs of the disaster, its consequences and the ways it was dealt with, expressed these feelings in front of a TV camera: "for everything I see....I feel fear, anger and sadness". This is a clear example of the human reaction in front of an environmental disaster, which comes before what has been called "psychoterratic" alterations" and what Glenn Albrecht, an Australian social psychologist has described with the term "solastalgia" to refer to the human distress in front of the damage done to the natural landscape in which one lives, as a consequence of a natural or technological disaster. "Solastalgia", in this case, is embedded in the three words which the school boy used to describe the impact of the Prestige disaster: fear, anger and sadness. "Fear" is the result of an increase in the felt sense of vulnerability which appears frequently as one of the most important consequences of such a disaster. "Anger" is the result of the seriousness of the consequences, as well as of the difficulties to cope with the effects of the disaster, or with the erratic decisions in its management, as it is shown in the results of the research presented in this volume. "Sadness" is the expression of an emotional climate of bereavement shared by all people and communities, and especially by those directly affected.

This book gathers together the work of researchers from different disciplinary backgrounds (Environmental Psychology, Environmental education, Economy, Law, Communication and Political Science). In this type of books, we often find that the sum of different pieces of research does not amount to clear conclusions or that it is difficult to find the common thread running through them. This is not the case for the present book. In it, it is easy to find transversal axes which connect the different contributions, in spite of their different disciplinary home. It is a commendable success of the editor, Professor Ricardo García Mira, to have been able to structure the book in such a way as to obtain an integrated vision of the issues related to the Prestige disaster. The analysis of the social involvement of citizens, the study of the communication and information transmission processes, the attributions of responsibility of the Prestige disaster or the evaluation of the damages are some of the themes that appear in the different contributions, offering the reader the opportunity of an articulated and integrated vision of the empirical proof stemming out of a wide array of disciplines. Furthermore, this book is an excellent example of what was classically termed "social sciences in action". This does

not refer to the definition of each of the disciplinary fields, but instead to the presentation of the results of a process in which different social science researchers gear their disciplinary concepts and references to describe or explain an eco-social problem of such transcendence as the Prestige. I thus invite the readers to look at the whole picture stemming out of the different approaches, which are clearly complementary. One should look not at each disciplinary approach in itself, but at their capacity, when put together, to offer proposals for coping with disasters, as well as to teach us about the adequate approaches to the management of this type of situations.

Furthermore, this book is a relevant contribution to the definition of the object of study of social scientists in situations of risks and disasters. Since the publishing in 1986 of Ulrich Beck's book ("Risikogesellschaft"), we know that risks are intrinsic to modernization processes, technological development and scientific progress. Beck writes in his book that "the demon of hunger is fought with the Belcebuth of risk potentiation". The risk is defined as "the invisible perils that are turned visible" because "the damage and destruction of nature are not only consumed outside of personal experience (in the physical, chemical or biological realm of effects), but become more and more become clear to the smell and hearing" of affected people and communities who feel more and more vulnerable and unprotected. Besides the purely technical discourse of risk evaluation, there is an imperative need for the work of social scientists in the management and evaluation processes of risks and disasters. This book is an excellent example of this kind of work and allows the reader to discover the many areas of contribution of social scientists to the intervention in risks and disasters.

To conclude the honorary task entrusted to me when asked to write this preface for Readings of a disaster. The Prestige: Contributions from the Social Sciences, edited by Ricardo García Mira, I want to thank the editor for the invitation and the opportunity of being one of the first readers of the extraordinary work of the different research groups contributing to this book, done in the last ten years on the Prestige disaster. In each of them we see the undoubted quality of the undertaken research. And this is, of course, the major merit of this book. But it is not the only one. In every chapter, we have a glimpse not only of the quality of the research presented, but also of the commitment of the researchers to contribute to the solving of pressing social problems. Besides the admirable quality of the research, I cannot but applaud the value of this book as a magnificent example of this commitment to finding solutions to the social problems we face in the risky time we live in.

INTRODUCTION



1

THE PRESTIGE: AN APPROACH FROM THE SOCIAL SCIENCES

Ricardo García Mira



Abstract

Since the *Prestige* sank off the coast of Galicia in 2002, many different disciplines have undertaken a rigorous analysis of the physical and social impact produced by the catastrophe. This study analyses how it is possible, from the social sciences, to carry out a rigorous analysis to contribute to the evaluation of public responses related to the prevention of disasters and accidents. The *Prestige* showed that the solution to the problems goes beyond the technological aspect, and that there are numerous human and social variables that arise during the management of a catastrophe, and they cannot be understood if they are not explained from a multidisciplinary perspective that contemplates the fields of the social sciences and humanities in close interaction with other sciences to take on real problems. From our point of view, we would opt for building up dialogue to ensure that these fields are included in daily practice and policies. The reinforcement of this focus from different approaches, such as psychology, education, political science, economics, communication, information and law gives us a vision of the problems and the information that favours understanding and accepting what happened, and the design of the best strategies for facing up to it, evaluating it and quantifying it.

Keywords: Prestige, Social Sciences, Interdisciplinarity, Coping strategies.

Introduction

Just over ten years ago the worst oil tanker disaster in Spain contaminated thousands of kilometres of the coastline in Spain, France and Portugal; the greatest damage was caused on the coast of Galicia, in the north-west of the Iberian Peninsula. Since the trial against the ship's captain and a further three people accused of causing the contamination started, almost a year ago now, we have been able to uncover and pinpoint significant details that are gradually making up the basis for the decision about the possible criminal liabilities they might have to answer for. As far as costs are concerned, the *Prestige* disaster cost Spanish public funds over 4 million Euros. The oil slick from the sinking of the tanker covered the shores with over fifty thousand tons of tar from the Atlantic and mobilised more than three hundred thousand volunteers who came to Galicia from other areas in Spain and other countries in Europe.

Now is the time, therefore, to look back and from today's perspective to gather together all the work done and once again incorporate it in the debate on a topic that is still current and which in addition to the grave ecological, social, labour and political impact, also affected the field of research generated. As an example we could quote the book coordinated by Urgorri and Señaris (2012, see Prada and Vázquez,

2012; Fumega, 2012 in particular), which describes the work carried out over the last decade from many different points of view.

Nevertheless, even though the Universities of Galicia implemented their own response devices, from which research into the impact of the *Prestige* was undertaken from as many points of view as there are specialities at each university, the study groups making up the focus adopted in this collection are those of the social sciences, and within this field, the perspective of political science, environmental psychology, environmental education, the economy and the right to information make up the focal point in this book. Selecting studies concerned with the same topic always involves a risk of bias, which might indicate the selector's preference for or inclination towards a specific field. Accepting this risk, this project arose from the well-intentioned desire to disseminate social knowledge with the main purpose of publishing certain aspects which possibly remained more in the dark because of the greater attention usually paid to hard science, which traditionally characterises environmental research.

The responsibility of social and environmental research

Research and innovation today are excessively official, and this leads, thanks to the demands of academic and scientific rigour, to the most specialised journals describing scientific results and findings to the scientific community published by researchers in the form of articles and reports. The problem is that this official channel, even though it is the most recommendable from a scientific point of view as it guarantees and safeguards objectivity and acts as a quality filter for the scientific accuracy of what is published, is limited, as it does not always reach non-scholars. Given that non-scholars finance the country's research and innovation system with their taxes, it would not be fair for them not to enjoy the right of free access to the results of scientific productivity. This is why, appealing to the necessary responsibility of social and environmental research before the man in the street, we have brought together this series of research articles that aim to paint certain social, political and educational brushstrokes about some of the most relevant aspects of research from the field of the social sciences.

Not in vain did the European Commission recently express its concern that the results of research, apart from being published in the pertinent scientific circles, should reach common people in the form of specific applications and policies that impregnate social and political action.

In the case of the *Prestige*, there is a very powerful reason that legitimates political action and demands a commitment that derives from universities' institutional responsibility and then gives rise to specific multi-university and interdisciplinary strategies. In some cases the universities took joint action, while in others each one adopted its own strategy. Some of these strategies and their corresponding analyses are given below.

Drawing up lines of research from the social sciences

The capacity for analysis and support for public action in disaster prevention goes beyond technological solutions. The *Prestige* disaster showed that many social and human variables emerged during the handling of the catastrophe and they cannot be properly understood without recourse to an explanation from the different fields of the social sciences and humanities. As this book includes different approaches from the fields of psychology, education, political science, the economy, communication and law, it provides key results and information for understanding and accepting what happened, designing strategies for facing up to it, assessing it and quantifying it, anticipating the manipulation thereof outside its social and environmental interest.

A disaster is something that happens quickly. When you become aware that it is happening, the worst has already taken place – basically, a break with daily routine and with what is usual and predictable for inhabitants. The community quickly builds up and incorporates an image in its desire to understand what is happening. Social structure is placed at risk and disorder may take the place of regular order.

The communication and management of information are of great interest and constitute the foundations for building up a system of trust that enables people to effectively face up to the consequences of the threat, and in general, the impact of the disaster. The research gathered together herein shows the importance of this dimension of trust for making people capable of facing up to a disaster, and also of the social value of the protests that arose against the desire to downplay the impact of the threat as a strategy of confrontation by the public authorities, instead of incorporating those affected into a necessary interface to build up a social device characterised by co-operation in management and the construction of trust in management as guarantees of success in action.

Drawing up a line of research from the social sciences for taking on disasters is related to social vulnerability and is justified by the need to incorporate a multidisciplinary focus on the analysis and management of this vulnerability, defined as a community's capacity and that of the place where they live to take care of and respond to an emergency, to face up to the damage and rehabilitate and recover the people affected.

Science has taken little care of social factors, and research carried out shows the need to incorporate into territorial management and societies affected the necessary elements of the political, socioeconomic, communicative, psychological, educational and cultural analysis of vulnerability against emergencies like the *Prestige*. This will doubtless serve to build up a preventive effort in the field of law, the psychosocial processes involved, environmental education, information campaigns and community organisation.

Difficulties in communication and the contradictory handling of information

One of the main reactions to the *Prestige* disaster was the excessive institutional prudence, which together with the reinforcement of scientific strategies from the universities, led to a support campaign for volunteers, although at the same time an unjustified caution that raised barriers in some cases to the communication of information, including the first results of social research.

Barreiro (2004) defines it as the failure of the scientific class, which united the political institutions' incapacity both in the government and the opposition, or disconnection with the problem of an inefficient information system that paid more attention to sensationalist news than to responsible action to identify the causes of the disaster and consequent action, and which led to a contradictory strategy between the media on the government's side and those against it. The consequences of this were serious and very costly.

This in turn led to endless disagreements between the government and the mass media that did not tow the official line, which as Pombo later pointed out, was contrary to the evidence. The censorship that presided over government action led to confusion and raised social tension. The communication strategy adopted by the government over the first few days of the crisis conditioned the way in which it was subsequently solved. Downplaying the problem generated was a strategic mistake that cost them people's trust. As we pointed out in one of the studies reproduced herein (García Mira and Lema Blanco, 2005), for reasons of safety and trust, people develop a belief that the government will solve emergency situations, and hope that they do. However, when the government denies the existence of the problem, it transforms the magnitude of the scale. Contradictory information between the mass media and the public authorities upsets the system of institutional credibility and causes a serious crisis, which for ordinary people activates mobilisation and protest on the one hand and participation in the cleaning up process in the first few months of the crisis on the other.

The mass media and people in Galicia reacted in a similar way to the government's position of downplaying and control. Different versions were compared, there was mistrust about official statements, and use was made of diverse sources of information. Part of the press, for example, reacted with a sense of social responsibility and saw the disaster as a chance to increase coverage and focus attention beyond institutions, and published information from fishing guilds, ecology groups and official French and Portuguese entities (freely available anyway on Internet), while at the same time providing an intense coverage of the disaster.

In short, information and communication are two significant aspects covered in this book, in the studies by Barreiro (2004), Pombo (included herein) and García Mira and collaborators (García Mira and Lema Blanco, 2005; Real, García Mira and Voces, 2005), revised in García Mira and Lema Blanco (2007), to which we refer readers for further information. Throughout this book we also refer to other studies that arose as a consequence of the coming together of the public authorities,

mass media and scientists, resulting in the joint publication of manuals which can be used as support for crisis information management in maritime catastrophes (cf. Pombo and collaborators, 2004) and which, in an attempt to come up with an *interface* among scientists, informers and politicians, with some kind of utility, gather together different analyses from the broad range of disciplines the problem was seen from.

Research into the public perception of environmental risk, applied to the case of the *Prestige*, illustrated a way of assessing public concern and people's knowledge about the disaster, and how this information was used as a basis for supporting the taking of environmental decisions with a measurable social impact.

The social representation of the disaster and the lasting threat

Psychologists have always been interested in finding out how the mind structures information from the environment. In this book, our work is aimed at discovering how people became aware of the gravity of the problem generated and their perception of its seriousness. The studies by García Mira and collaborators (García Mira et al., 2005, 2006 and 2007; García Mira and Real, 2006), introduce readers to analysis methodologies for information from interviews, and hence subjective information, and to strategies for analysing it objectively. These strategies are nowadays modes of analysing and accessing information that is not directly accessible; you need tools to present and see it. This is how we found out about how the man in the street interpreted, understood and felt affected by the disaster, about how he perceived the threat, how he assigned responsibility for what had happened, and how he evaluated the credibility of the different players in the solution to the crisis. By taking different samples of the population we could also observe the evolution of social perception as the evidence of the damage caused by the oil slick became less visible.

The social and political nature of environmental education

The rupture of the educational system with the disaster, as far as setting up the necessary collaboration between Science and the State is concerned, is another aspect taken on by Meira (2005). He invites us to analyse and consider both the local variables, linked to the particular idiosyncrasy of the Galician people, and the global variables, associated to the risk derived from industrial development and the deregulation imposed by the market economy as a method to stabilise the economy separately from social interests. Meira emphasises the need to consider the global and the local in interaction to describe the global nature of the disaster, the emerging social reaction and the "organised irresponsibility" which he relates to the institutional handling and manipulation of information, which legitimated the expert systems run by interests foreign to environmental interest.

In his second study, Meira (2005) analyses the political nature of environmental education and describes how the *Prestige* disaster was a chance to make it evident. The *Prestige* opened up a new scenario in which the role of environmental education became evident; the conflict that the public authorities open up with teachers was also uncovered, and how they interfere in the educational process of the transmission of environmental values to the community as part of their strategy to downplay the risk. Meira defends the political value of environmental education as a principle of civic and participative education and as an inseparable value in the community's defence of nature and their biophysical surroundings, as opposed to the government's more neutral and passive stance, which urges us to accept a system of knowledge and experience whose inefficiency has been shown by the *Prestige*.

The social and economic impact on fishing and tourism and legal liability

A disaster can cause serious impacts, sometimes irreversible, on both the economic and social structure and the environment. This is why, as González-Laxe (2003) points out, the analysis of a land's vulnerability should include the study of the physical characteristics affected (structural vulnerability), the key internal set-up for operating infrastructures (neo-structural vulnerability) and the spatial design and organisation of the places affected (functional vulnerability). Facing up to the risk means reducing uncertainty and taking on management in accordance with principles of efficiency when taking decisions. However, in a society in which risk does not increase in proportion to greater information or the dissemination and communication of the consequences and strategies for taking it on, social trust in both institutions and science in general is lessened. All this is a consequence of the controversies involved in quantifying and assessing the impact, which leads to the use of unequal criteria and significant differences, which in turn leads to greater mistrust. In his study from 2003, González-Laxe reflects on the best methods for evaluating and assessing the damage and impact caused as a strategy for supporting decision taking, and calls for specific entities with responsibility for implementing preventive and analytical policies and risk assessment.

Garza-Gil, Prada-Blanco and Vázquez-Rodríguez (2006) present a short-term economic evaluation of the damage caused by the oil slick on fishing and tourism in Galicia. They break down and discuss the different components of the social costs of a slick of this size, and then estimate the damage done to two sectors that are very significant in Galicia – fishing and tourism – and include the evaluation of cleaning up the land and restoring it to its original state. The authors underline the difficulty involved in evaluating the cost of variables related to lost leisure opportunities, such the use of landscape and beaches, and the variables related to the loss of passive use (culture and heritage values), together with social damage not contemplated to receive compensation for the inexistence of a market where there is a price for exchange, which favours the profitability of risk strategies in maritime hydrocarbon transport. Finally, they propose certain methods for the evaluation and estimation of collective loss.

Finally, Martínez-Buján (2003a, 2003b) takes us into the legal aspects of the social sciences, laying emphasis on criminal liability. In his study he analyses, on the one hand, the government's possible responsibility in the handling of the disaster, and on the other, that of people like the captain, owners and operators of the tanker that sank.

The *Prestige* ten years on: the lessons learnt

In short, from the perspective of a decade that has gone by, numerous studies have been carried out and numerous lessons have been learnt. The changes, however, have not been so numerous. Some response systems failed and some reaction devices did not work or did not work as they should have done. This is enough to make us aware, ten years on, that there are still things to do and political action to take. Some of these things involve global decisions but with local involvement. As we point out below, the top to bottom focus for solving problems has generated, and is still generating, even more problems, especially in information communication processes and the coordination of action.

The degree of freedom in modern democratic societies can favour the activation of participative processes via which the communication pattern among people, scientists and politicians can open up new pathways to cooperation and the management of social resilience when facing up to the threat. The government's response of downplaying the risk, the attempt to fragment the community response made evident in social protest, and the intention to weaken the emerging social support networks are all counterproductive actions that increase both the risk perceived and the perception of a community's low capacity to face up to a threat, and they ultimately produce a result that helps neither recovery nor cooperation.

In the *Prestige* disaster there were physical processes, derived from the accident itself, blended with social and institutional processes, which by interacting with cultural and psychological processes alter social perception of the risk and therefore the social response and subsequent socioeconomic impacts (García Mira et al., 2007). The *Prestige* disaster also enhanced the need for correct risk communication (Cvetkovich and Earle, 1992, Trettin and Musham, 2000; McComas, 2003), which increases the trust perceived in the government and reduces the discrepancies whose origins lie in contradictory information and a faulty communication system.

The research carried out over this last decade illustrated the importance of social and environmental investigation, the public knowledge and social perception of the threat, and how all this works in the mind of the man on the street. The use of the social sciences in general also became clear in the reformulation of social and political problems, and in the setting up of independent supervision over the drawing up of reports, analyses and conclusions based on hastily given and misleading

evidence, in reply to interests that are possibly more related to the interests of those who finance them than to those of the general public.

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2

THE LEGEND OF THE PRESTIGE: CONSTRUCTING POLITICAL REALITY*

Xosé Luis Barreiro Rivas



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Abstract

The key word that determines the way the *Prestige* catastrophe was handled is indecision, because far from being a natural and unavoidable catastrophe, or the fatal result of a mistaken decision, the huge slick caused by the *Prestige* was a kind of irrationality typified as the *logic of indecision*. Hence it is virtually impossible for the Government to inform the judge or parliament of the way decisions were taken, because despite the efforts made after the event to reconstruct the documentation, nobody seems prepared to accept the responsibility for a non-existent decision process.

The explanation of so many mistakes and so much negligence can rather be found in the faulty initial evaluation of the catastrophe, which far from being seen as the beginning of a colossal oil slick, was believed to be an annoying rescue operation. The Spanish authorities did not see it as an unavoidable shipwreck and so they acted as though this would never happen, or as if their only goal was to “get rid” of the problem, without incurring any non-recoverable costs or paying the price of unpopular decisions.

After analysing what happened at sea and on the coast of Galicia after 13 November 2002, and comparing the handling of the catastrophe with the theoretical information model generated within the framework of the PSO (*Public Service Orientation*), we can only conclude that the information and management pattern followed in the “*Prestige case*” is the absolute opposite of modern techniques of information, environmental and political management.

Keywords: Prestige, management, information, policy, administration

A memory in the mist

The sinking of the *Prestige* oil tanker happened in slow motion, allowing all of us to see how negligence and inefficiency, ignorance and lack of resolve came together to create a viscid disaster with criminal and apocalyptic overtones: observed by the eye, touched by the hand, smelled through the nose, tasted in the oil-smeared fish and heard in the song of the guillemots and seagulls which lay dying in the tar-ridden sands. Perhaps the audiovisual nature of the catastrophe, (perfect for filling thousands of newspapers, hundreds of radio chat show hours and every prime time slot on television) was the reason why that final procession was watched in awe by the whole of Europe, as the ship was led unsteadily and uncertainly to its bizarre end, where it now lies at the bottom of the sea in an inaccessible chasm. It is therefore impossible to explain why, with all the components required to reconstruct an exact and undeniable version of events to educate future generations, it has ended up as a hazy and vague event, which only a single year later is expressed by a thousand different narratives with frequent contradictions.

Obviously in a region brimming with legends of enormous fantastical cities under the waters of lagoons covering no more than half an acre and only a dozen or

so feet deep, it should come as no surprise that the sinking of the *Prestige* is on the way to becoming a legend itself, and that the tangible and foul catastrophe is now summarised in abstract tales of staunch popular and official resistance against an accident for which no-one can be blamed except whimsical fate and foreign mafias constructed and described as the epic requires. We must therefore acknowledge that the techniques used in constructing social and political reality have clearly held out against the historical account and that the roles of noblemen and serfs are now being allocated at the discretion of those who have come out on top, or by those initially caught off-guard hunting in Toledo who ended up either awarding or receiving the 'Gold Medal of Galicia'. The political effects of the tragedy (as we will see further on) came to nothing, and all expectations of having witnessed an event capable of stirring up the critical awareness of a people accustomed to comprehending governance from a wholly passive standpoint turned out to be utopian and in vain, to say the least. If we become any more rigorous and realistic in our judgement, we will end up recognising that the only political effect of the sinking of the *Prestige* was to reinforce political patronage in the coastal areas and demonstrate the immense ability of the People's Party (PP) in writing our history and our reality in accordance with their electoral needs.

For such a thing to happen, or for this nonsensical ending to be possible in which the only heroes that exist are Manuel Fraga Iribarne, Francisco Álvarez Cascos, Mariano Rajoy, Rodolfo Martín Villa and Arsenio Fernández de Mesa, certain significant events had to happen, events which do no more than reinforce the already favourable setting in which the PP rewrote the tragedy to suit its own ends. This is why we would like to draw the reader's attention to the following matters:

1. **The total failure of the scientific community**, evident in Galicia and in Spain and as much in the universities as in specialised scientific bodies. Although the problem had to be studied and evaluated under circumstances which were unfavourable for the development of a solid investigation or the formulation of widely accepted conclusions, neither was there expected to be such weakness in the means and capacities of established research teams, or so much string-pulling and opportunism in the teams created ad hoc. To date, and after reams of publications on the *Prestige*, it is absolutely impossible to objectively establish certain basics such as the amount of fuel-oil spilled and the amount left in the wreck's cargo tanks, the real cost (direct or indirect) of the disaster, the real consequences for fishing grounds and shellfish beds, the panorama for ecological recovery and the amount of fuel-oil that is still floating in the sea or harming the depths of the continental shelf. It is possible to find totally contradictory reports on any of these matters, some for example saying that the catastrophe will be long-lived (15 to 20 years) whilst others say that the area has already recovered from the spill. One does not have to stick one's neck out too far to say that, if we just consider the matter realistically, most of the initial reports coming from the scientific community were ridiculed (as being too catastrophic or imprecise) by

the actions of the different administrations and the real state of economic and social activity.

When analysing operations, it was also impossible to establish whether the ship had the manoeuvrability to drop anchor and be unloaded, or if it should be kept at a distance; and nor was it defined whether, in this last instance, the ship should have zigzagged away to nowhere in particular, or whether it should have headed for a more enclosed place for its probable sinking. We do not truly know whether there are ports or harbours in Galicia capable of sheltering a ship in distress (hypothetically speaking: a new accident), nor whether there was an action plan for engineers and administrators or shipping officers simply acted as best they knew how. The responses from the scientific community are so abstract, inadequate and haphazard that even today it is impossible to find reports and data that better the conclusions commented by some of us non-experts with an education in the arts who, with no more help than the application of medieval logic to the known data, made evaluations and established action criteria which were not matched or improved upon by the so-called scientific community. There is little need to continue, only to say that after regularly reading reports and counter-reports, hardly anything remains that is not a general study or measuring and control methodologies already seen umpteen times before, which were later applied with little success to describe the case of the Prestige.

Although it is assumed that we have learnt much from this tragic accident, no one has yet dared to formulate any single conclusion in writing, or propose an action plan that does not consist of the generic demand for more resources and greater sensitivity. This leads us to think that if we were unfortunately to be faced with another incident in Galicia next winter, perhaps we would still send the distressed ship back out into heavy seas.

2. **The glaring inability of the opposition parties** to offer a realistic critique of the problem and a credible range of alternative approaches and solutions.

Taking the votes of no confidence presented in the Galician Parliament by the Galician Nationalist Party (BNG) and the Spanish Socialist Party (PSOE) as a reference, or the questions and challenges put by the latter's spokesman Jesús Caldera in the Spanish Parliament, it can quickly be concluded that the opposition was not capable of presenting an operational vision that was any better than that used by the PP, and that it was plain that with things as they were, the matter would only be settled by the government who happened to have the misfortune of the accident occurring during their term. As such, the accident can be compared to that of the Aegean Sea tanker which ran aground next to the Tower of Hercules in A Coruña in 1992, demonstrating that a golden opportunity had been lost to define action criteria and an action plan which would have saved us from the evident improvisation we were subjected to this time around, which without a shadow of doubt only served to exacerbate the disaster.

3. **A media system clearly dominated by sensationalist journalism**, with little interest in identifying and clarifying critical aspects of the disaster and its subsequent management. This explains why, when the information became more commonplace and lost the sensational appeal that attracts audiences and makes programming easy, the Prestige case also lost currency and gave way to other matters which were either more important (the Iraq war) or more trivial (election-related matters).

Save some notable exceptions, the media was unable to contradict the government's media office, which meant that the situation rapidly arose whereby information strategies managed to substantially modify the news outlook. Clever media strategies by the Government Commissioner meant that without taking the Prestige off the agenda, practically all of the information released was diverted towards fields in which the government was doing well, or at least, had a solid case.

The immediate consequence of this process was that, as well as allowing contradictory information to be headed up by the public media and by television channels and radio stations openly aligned with the government, there was a sensation among the general public of a lack of alternatives. It became commonly accepted that, in contrast to the idea of inefficiency and improvisation that had triumphed in the first few days of the tragedy, an "unfortunate" event had occurred: an event which was to a certain extent unpredictable and for which no clear and effective remedies existed, or at least none to hand.

4. **The incapability of social movements (especially Nunca Más) to extend their pressure beyond the results of the next elections.** The proximity of the municipal elections and the massive response obtained by the initial civic movements provided the political opposition with a double-edged opportunity. While on one hand it led to significant wear and tear on the government, it also steered the entire force of criticism and the responsibility for formulating, albeit in a very general manner, alternative management proposals away from political parties and towards the social movements. This is why many politicians and social researchers went so far as to make a direct connection between the response to Nunca Más and other social movements (especially those opposing the invasion of Iraq) and the foreseeable behaviour of voters in the local and regional elections on 25 May, to the point of suggesting a possible correlation between the strength of the social movements opposed to the way in which the Prestige crisis was handled and the war, and the electoral strength of the nationalist and socialist opposition parties.

The end result had two unexpected consequences, which will be commented on later in greater detail. Although it was proven, once again, that social movements do not reflect a parallel political movement and may even be proof that civic protests channel what cannot be channelled in a stable manner through political

debate, it was also confirmed that mass social movements with a very specific motivation display a pattern of intensity characterised by rapid growth followed by an equally rapid fall in numbers. This explains why, once the outcome of the elections had scuppered the electoral expectations of the opposition parties, the elections of 25 May became the tacit signal that marked the end of social mobilisation and the beginning of the recovery of support for the PP and of its image, this being further enhanced by the initial declaration of the end of the invasion of Iraq and the turn of political events within the Madrid Regional Parliament.

5. **The enormous ability of the People's Party to draw its people together around a compact response free from U-turns** was also devastatingly efficient at reaping what they could from the previous process. In contrast with the idea of chaos and mismanagement, the unified and disciplined response of the PP gave party strategists the opportunity to overshadow crucial debates (Prestige and Iraq) by focusing on the comparison between a cohesive party with coherent policies (the PP) and a party plagued with internal leadership challenges and on an unstable course. This widened into a process culminating in the announcement of Mariano Rajoy as the successor to ex-Prime Minister Aznar, one which still does not seem to have yielded all the favourable political effects that can be accumulated as part of the electoral processes leading up to the general elections scheduled for March 2004.
6. **The creation of the post of Government Commissioner**, occupied by the veteran politician Rodolfo Martín Villa, who intelligently mediated a governmental/non-governmental front that showed devastating efficiency in breaking up strategies designed to bring the government into open confrontation with the political opposition and civic movements for social action.

An unexpected outcome

Fast approaching the first anniversary of the Prestige sinking, I have no qualms in saying that the political and sociological outcomes of the tragedy were totally unexpected and that instead of the severe downfall which we had predicted for the PP government, it seems to have cemented the strength of right-wing electoral positions, adding a very effective component to the crisis affecting the socialists and, although with significant differences and observations, complicating the issue of succession for the BNG. Put in another way, and as an urgent response to the question that appeared as the subtitle to our previous publication, I believe that the Prestige was not 'the tragedy that stirred up Galicia'. I believe, moreover, that it has even confirmed the deeply-entrenched way of participating in and understanding politics which is in open contradiction to the progressive direction many hope it will take. Far from putting an end to the interminable dominance enjoyed by the right in Galicia, everything points to the sinking of the Prestige being tiptoed around in

Galician politics, like a confusing and upsetting nightmare with no bearing on the political and electoral pre-eminence enjoyed by the right since the first regional elections in 1981, which has only been interrupted by the three-party coalition government (1987–1990).

I must say, however, that the confirmation of this fact, which supposes an objective analysis of the whole process, does not include any rectification of the accusations of inefficiency and irresponsibility that I levelled against the government in the previous publication, and which I now reiterate with the same forcefulness and conviction.

Political science makes a very precise differentiation between the rationality and the efficiency of different actions, making it clear that in the analytical framework of public management there can be rational decisions which are also efficient; rational decisions which, however, are inefficient; efficient decisions which are not overtly rational; and irrational decisions which are also inefficient. For a decision to be deemed rational it must fulfil three essential conditions which in no instance can be passed over: a) that it is possible to explain the causes and the purpose of each decision made; b) that there is a general evaluation of the foreseeable consequences and the least serious are chosen; and c) that there are a series of alternative options and a comparative analysis of the costs and effects of each one. Therefore rationality cannot be claimed for an action that cannot be explained with complete clarity, even though a certain margin may be left for inevitable mistakes in evaluating or for any unexpected and unforeseeable circumstances that may arise.

If a government explained that a stricken oil tanker was going to be towed to a sheltered bay to be offloaded, a citizen can immediately see the rationality of the decision, even if an unforeseen event or miscalculation of the damage done to the tanker meant the decision ended in disaster. If we were informed that the tanker was going to come inshore to prevent the oil-slick from spreading, we would be able to understand the reasoning behind the decision taken, although we may think that there are other and better alternatives. Even if we were told that they were going to steer the tanker to an area of shallow water so as not to lose control of the cargo tanks in the event of the vessel going under, we would understand that the decision is the lesser of two evils in the case of an inevitable disaster. However, if you are told of the zigzag course on which *Prestige* was towed between 13 and 19 November 2002, if you realise that the tanker was going nowhere in a rough sea without being able to put into port or unload her cargo, and if in the end you finally learn that the tanker sank 130 miles from the Galician coastline, in an inaccessible chasm, where the heavy fuel-oil became an uncontrollable ecological time bomb, you need no further information, nor do you need to be an expert naval engineer, to conclude that this is an irrational way of acting that cannot be explained in terms of its causes or understood in terms of its ends, and can only be understood as the cowardly intention to lose control of the ship on the very edge of the area for which

Spain has responsibility for maritime rescue operations, passing it on like a hot potato to neighbours France and Portugal¹.

Remembering the facts.

The handling of the accident involving the *Prestige*, which first showered the Galician coast with oil before finally sinking 3,800 metres down in the vicinity of the Atlantic Trench, is a perfect example of inexcusable irrationality. Irrespective of the well-meaning comments from Fraga and Álvarez Cascos indicating that ‘the best that could be done, had been done’, this implies the absolute impossibility of being able to explain the decision to the general public, parliament, the judge and the authorities of the countries towards which the ship was heading, and what was the real reason behind this strange journey. For this reason it can be concluded that the management of the *Prestige* disaster did not adhere to any action plan to guarantee the intervention of competent authorities, the availability of appropriate contrasting reports, evaluation of the causes and effects of the problem, comparison with other possible alternatives and the effects of a totally uncontrolled sinking which vastly increased the costs of subsequent interventions² and threatens to prolong the crisis in an exasperating manner.

Far from being a natural, unpredictable and unavoidable disaster, or the inevitable result of a poor decision or sudden change in circumstances, the enormous oil slick caused by the *Prestige* is clearly a form of irrationality characterised by the logic of indecision, whereby all actions are guided by two unplanned objectives:

- a) To move the problem away as a matter of urgency, until it becomes lost in the Atlantic. Then treat it as a false alarm.
- b) To pass the buck as if it were a game of pass the parcel, so that fate can decide where the responsibility falls.

It is therefore totally impossible for the government to inform the judge or the parliament of the key decision-making factors put into practice, the action plan followed, the administrative record containing the crucial details and the political and technical bodies which acted in each episode of the disaster. In spite of the efforts made subsequently to reconstruct documentation, nobody seems prepared to assume the responsibility of a non-existent decision-making process, unless we take the strategic self-incrimination of López-Sors, Director General of the

¹ Confirming the intention of the government to “lose control” of the *Prestige* on the edge of the area in which Portugal is responsible for maritime rescue operations, Arsenio Fernández de Mesa announced: ‘The tides will move the oil tanker away from our coastline’ (15 November 2002).

² Submersions of the bathyscaphe diving vessel *Nautilus* cost more than 100 million euros. Rescue and salvage plans for the cargo of the *Prestige* vary between 115 and 230 million euros, depending on whether it involves two concrete casings to bury and stabilise the remains of the ship, or an extraction process of unknown efficiency to empty the tanks in the bow and the stern, which sank separately. The calculated cost for cleaning up the Galician coastline amounts to more than one billion euros. Including non-assessable or non-compensable costs, the total cost of the spill is approximately four billion euros, according to figures calculated at the beginning of March 2003.

Merchant Navy, before the judge of Corcubión. The reason being is that, despite us all being convinced that a significant part of the government's strategy was based on false information to generate confusion and facilitate the abstract line adopted for official explanations, there is also the feeling that many of the untruths spoken by Mariano Rajoy, as official spokesperson and coordinator of a tragedy that had already struck, corresponded in fact to crass ignorance regarding what had really happened.

The key to explaining the huge misjudgement in the way the Prestige crisis was managed is to be found in the poor initial assessment of the disaster. Far from being described as the beginning of an oil slick of massive dimensions, it was regarded as a tiresome rescue manoeuvre which could be palmed off to both the Prestige's owner and neighbouring countries such as Portugal, which could provide an area of useful shelter to avoid the sinking of the vessel and its unforeseen consequences.

The Spanish authorities did not initially consider that the vessel would inevitably sink, and therefore, acted as if this was never going to happen, or as if there was no other objective other than 'getting rid' of the problem, without having to shoulder unrecoverable costs or pay the price of unpopular decisions. Rather than responding to the stereotype of irresponsible politicians, running away from a problem rather than confronting it, the fact that Fraga and Álvarez Cascos were off hunting reveals a much more serious and significant political and social problem. Three days after the initial incident, they still did not have an exact description of events, a reasonable risk analysis or a detailed report of the interventions of the government itself. While out hunting over the weekend of 17–19 November, both Fraga and Álvarez Cascos were convinced that there was no need to exaggerate or dramatise the incident and that initial comments regarding the disappearance of the State³ and an orphaned civil society were no more than an exaggerated figure of speech to discredit the PP governments in Madrid and Santiago. This helps to explain why on 19 and 20 November 2002, when images of the oil tanker breaking in two and sinking gave a more exact idea of what was about to hit us, the party political instructions from the PP were to minimise the problem and flee from the maelstrom created by the Prestige in its last long voyage to the bottom of the sea.

In terms of pure political psychology, Fraga's initial reactions to the tragedy were of annoyance, as if it were a minor event that was hindering his way of life and of doing politics. While his presence at a hunting reserve in Toledo with regional ministers Cuiña and Del Álamo ended with the stupid comment 'I was talking to the chairman of the Madrid Chamber of Commerce, Fefé [Fernández Tapias] from Vigo, who knows a lot about oil' (24 November 2002), reaction to a sticky and blackened Atlantic Ocean was soberly reduced to a comment regarding gastronomy: 'it's not really that important whether Roncudo has a few kilos of barnacles more or less.'

³ My article 'Where was the Xunta?' was published in the newspaper *La Voz de Galicia* on 15 November 2002, in the same issue that reported the following words, worthy of a true statesman, spoken by Manuel Fraga: 'The worst of the danger is now over.'

Although the regional newspaper *La Voz de Galicia* had been warning of the imminence of a disastrous oil slick since 14 November,⁴ the Galician regional government's Minister for Fisheries the Spanish Minister for Agriculture⁶ and the Government delegate in Galicia⁷ preferred to downplay the problem, just as Mariano Rajoy did shortly afterwards with his infamous and much quoted speech about little trickles,⁸ 'looking much like plasticine' being released from the sunken tanker. Thus, with the express aim of avoiding the political damage caused by lack of foresight and appalling crisis management, a policy of cover-ups and lies started to take shape characterising the interventions by the spokesperson for the government and all autonomous and central state authorities between 18 November 2002 and 10 January 2003, until the appointment of Rodolfo Martín Villa as 'commissioner for matters relating to the Prestige disaster' marked a relative turning point in non-treatment of information concerning the disaster. By then it was already evident that the Prestige had caused, in the words of Michel Girin, 'the worst oil spill in the history of Europe'.⁹

It has to be said, however, that our protest against the way of reporting on the Prestige adopted by the government is not simply due to the consideration of its electoral strategies or image-building policies, but from the absolute conviction that this manner of reporting contributed to the delay in mobilising the masses that were later to prove highly operational in alleviating the effects of the disaster. Therefore, just as it was previously stated that the government was responsible for serious misinformation, underestimation of the initial incident and prevention of a suitable handling of the crisis, this misinformation can now be taken to be partisan, irresponsible and untrue, led by the government itself to cover up widely-known data or twist it into half-truths, significantly worsening the effects of the spills.

After analysing the events at sea and on the Galician coast from 13 November 2002 onwards, and comparing the management of the disaster with the theo-

4 Full page headlines in the *La Voz de Galicia* were as follows: 14 November 2002: 'Drifting oil tanker threatens Galicia with huge oil slick'. 15 November 2002: 'Prestige leaves 37km slick just off coast'. 16 November 2002: 'Prestige about to break up 62 miles from Galicia'. 17 November 2002: 'Oil slick already affecting most of Coruña coastline'. 18 November 2002: 'Prestige spills again: threat of more slicks'. 19 November 2002: 'Erratic course of Prestige endangers Rías Baixas'. 20 November 2002: 'Prestige sinks and spews another slick towards Galicia'. 21 November 2002: 'Storm surge to bring a slick exceeding all expectations'. 22 November 2002: 'First patches of fuel-oil at Prestige sinking site'. 23 November 2002: 'France and Portugal spot new slicks denied by Spain'. 24 November 2002: 'New fuel spills mean worst-case scenario for Galicia'.

5 On 17 November 2002, the minister López Veiga spoke to *La Voz de Galicia* and said: 'It is not a 'black tide', only a little spillage of fuel-oil'. Reminded of those words in an interview with *El País* newspaper on 3 March 2003, he tried to make light of it by saying: 'Next time I'll say the oil will reach Ourense'.

6 'The rapid intervention of the Spanish authorities, sending the vessel out to sea, means that we do not have to fear an ecological disaster' (Arias Cañete to *La Voz de Galicia* on 16 November 2002).

7 'The fuel of the Prestige which has sunk to the bottom will solidify due to the low temperatures and will remain there forever' (Arsenio Fernández de Mesa, in a press conference held on 19 November 2002).

8 The statement made by Mariano Rajoy, Deputy Prime Minister, was as follows: 'Some little trickles are coming out, there are in fact four thin streams which have solidified, looking much like plasticine being stretched vertically' (press conference held on 5 December 2002).

9 Michel Girin is the director of CEDRE, the most prestigious European centre for research into oil spills. His statements appeared in newspapers on 9 January 2003.

retical model of information generated in the Public Service Orientation (PSO) framework, we have to conclude that the guidelines for divulging information followed in the 'Prestige case' are in total contradiction with modern news management techniques, once the Spanish and Galician governments had opted for a strategy displaying all the features of an image campaign based on limiting information and the self-serving distortion of the facts:

- a) Instead of government accessibility, they chose to overinflate the value of office work and invent the confrontation between those that 'work' and those that take 'demagogical photos'.
- b) Instead of respecting people's right to know the protocol for managing the crisis, scant and contradictory information was supplied.
- c) Instead of making the Maritime Control Tower of A Coruña accessible to users and the general public, they chose to shroud it in an incomprehensible technical mystery.
- d) Instead of attentively listening to the interests of the public, they opted for direct confrontation with social movements.
- e) Instead of the obligation to seek the public's points of view, suggestions, complaints and worries, they staunchly defended their decisions, time after time.
- f) Instead of seeing public opinion as the true barometer and litmus test of their services, they chose to openly challenge the more widely-held opinions and create confusion about the most essential aspects of the process.

While Portugal and France provided reliable and easily verifiable data, Deputy Prime Minister Mariano Rajoy held on to the strategy of denying the problem, of insisting that the slicks would stay away from the coast and giving credibility to any hypotheses that could put science behind helping to divert the growing attention of public opinion away from the Prestige. Much precious time was lost in creating an anti-oil spill strategy, such as the one that was to yield such positive results in the Rías Baixas.

It was also at this time that Prime Minister Aznar embarked on his curious crusade against 'demagogical photos', as the idea of going down to the beaches affected by the oil slick to meet volunteers and discover for oneself the enormous reality of the slick as a mere way of haggling for votes became more popular, while staying in the office or referring to the Prestige from Washington or Central America was presented as an example of real involvement in the tragedy. On 14 December, 31 days after the first distress call from the Prestige, Prime Minister Aznar visited Galicia and before flying over the affected area by plane, declared that he had already done his homework by bringing 260 million euros with him to deal with the problem. Shortly after that awful day the government would have to recognise that the EU's response to the tragedy was very limited (€5,000,000) and

there was no other option other than to study new and broader ways of compensating Galicia financially for the huge damage caused by the oil spill.

While the President of the Government was still pushing the reckless strategy of diverting a large part of responsibility onto Gibraltar as the supposed destination of the Prestige, President George W. Bush of the United States of America did his friend the favour of saying 'Nunca máis' ('Never again') in Galician, as if he wanted to emphasize the beginning of another strategy. Put into practice in mid-December, this strategy was to fail within the first two weeks due to the government's inability to take over the popular protest organised by the civic movement *Nunca Máis*, which on 1 December 2002 had 200,000 demonstrators out on the streets of Santiago.

This movement had the virtue of converting the social stupor caused by the tragedy into an authentic civic interest group which allowed many Galicians and Spaniards to outwardly demonstrate their criticism of and displeasure at the way the crisis was being handled. It also obstructed the populist trickery of the Xunta and Aznar's government from breaking up public shows of discontent and heading up the demonstrations of the affected parties instead of sticking to their own bunch of ineffective and irresponsible overseers of the sinking and its immediate consequences. On 22 November, the fishing village of Muxía was overwhelmed by a massive oil slick which turned its sea-front promenade into the 'ground zero' of the disaster. However, the government didn't start to grasp that they were 'surely lacking in resources' for cleaning up the tar until ten days later, by which time the movement known as *Nunca Máis*, which made its first public appearance on or around 26 November, had Galician society up on its feet ready to fight.

Thanks to this movement it was not possible to indulge in demagoguery with the King of Spain's visit, or place Fraga and the Xunta behind the Prince of Asturias when, seized with a reckless and trivial vision of the moment, the former organised the grotesque reopening of the Museum of Contemporary Art in Vigo. Thanks to *Nunca Máis* the locals grew wise to the different standpoints of radio and TV news broadcasts, and came increasingly round to the idea that civil society was going to be the most significant part of the fight against a disaster that had not been predicted nor assessed with the slightest objectivity.

Not much later a further wave of protests created around a succession of demonstrations, cultural events, conferences, posters, interviews and other forms of communication culminated in a demonstration that took place in Madrid on 15 February 2003. Despite attempts to denounce, investigate, politicise and divide the *Nunca Máis* movement, it clearly revealed the keys to the success of a civic movement that brought us the finest and most hopeful moments of that unfortunate time. Weighed down by his remarkable disregard for a problem which by then exceeded all forecasts, Manuel Fraga himself had gone to Madrid on the previous 26 December to plead for 'positive discrimination for Galicia' before the executive committee of the PP. At long last, he was intoning a 'mea culpa'.

Civil society taking the initiative

Until the end of 2002, when the evidence proved too strong for the PP's obstinacy, it had become increasingly more apparent that the only concern of the government and the Xunta de Galicia was to lessen the political effects of the tragedy, deny its economic and ecological implications and convert it into a natural disaster that fate (and not mismanagement) had dealt Galicia. While the tar covered beaches, towns and cliffs, and volunteers began to wrestle with the oil slick of their own accord, Fraga remained reluctant to visit the affected areas and attempted to convert his initial negligence and subsequent shunning of popular protests into a heroic 'office war' against an unexpected misfortune.

Once public outcry had made his abandonment of places, property and people apparent, Fraga's visit to the Costa da Morte, Galicia's infamous 'Death Coast', was set up as a paternalistic and arrogant event, more typical of the medieval attitude flaunted by Count Fernando Pérez de Andrade, nicknamed 'the Good', upon entering Betanzos and tossing coins to the poor, than of that of a democratic governor who in addressing his political responsibilities, approaches problems with the full knowledge of the origin and destination of the public resources that he manages. The president arrived in Caión as if he were a miracle-working saint who drove the tar back as he doddered forward, boasting to the people that 'while others came to talk, I am here with money in my pocket'. His visit added fuel to the flames and was a clear demonstration that far from being prepared to head the fight against the spill, the Xunta and the Madrid government were still lacking a realistic view of the tragedy and were unfit to face it.

The following day (2 December 2002) saw the aforementioned visit of the King, which the government wanted to use as a powerful shield against growing popular anger. However, far from contributing to the diversionary tactic that Aznar had dreamed up, fishermen and shellfish harvesters from the Costa da Morte took advantage of Juan Carlos I's visit to increase the volume of their protests, complaining to him about the scarcity of resources for clean-up operations and describing their split from an absent Xunta and a central government that limited itself to flying over the affected areas and describing them from a distance with an optimism bordering on grotesque tragicomedy. The King's visit, however, lost much of its value when he followed in the footsteps of the government and, in an express attempt to protect and explain the outrageous absence of Aznar, also condemned the 'demagogical photos'. Seen in light of the news at that time, this was an obvious criticism of the attitudes of opposition leaders Rodríguez Zapatero (PSOE) and Xosé Manuel Beiras (BNG), and support for a model of common response that ought to forget all the mistakes and responsibilities for the crisis and give back the government the moral legitimacy it needed to direct the clean-up.

Obviously by then the volunteers were arriving in their thousands all along the Costa da Morte, way before the army appeared on the scene and Civil Protection systems came into action. During the public holiday period of 6–8 December, the

tidal wave of volunteers reached figures of 10,000 people coming to scrape tar off the Costa da Morte's beaches and cliffs. The government was powerless to prevent this presence from becoming the most effective way of spreading the strategy it had adopted with regard to the Prestige and its abandonment, clearly visible in the desperation of people working in dangerous and extremely precarious conditions. This was in contrast to an almost idyllic reality that the government wanted to represent in the form of the compensation paid due to the ban on fishing activities and fleeting ministerial visits, always surrounded by police escorts such that heavy policing was raised to the category of political protocol by José María Aznar himself when he visited the maritime control tower at A Coruña, as if he were a feudal lord enjoying the safety provided by a fortress and an armed retinue.

However, it has to be said that the government's strategy of distancing itself from the tragedy was very well thought-out and could have been a political success if the authorities had not misjudged the situation once again and instead of focusing their efforts on the harbours along the Costa da Morte, had noticed the unique and unstoppable movement that was gathering pace in the Rías Baixas to the south. This was to radically transform the domestic and international image of the Prestige. With a market share of 60% of all fishing and shellfish-harvesting activity on the coasts and estuaries of Galicia and a strong business structure which had made significant investments in the production and sale of products mussel and oyster rafts and fish farms, the fishing community of the Rías Baixas felt totally abandoned; left to their own devices to fight against the foul and viscid fuel-oil which threatened to totally annihilate their livelihoods and investments. All this without the fishing authorities properly examining the situation, and without modern resources, the army, the navy or Civil Protection agencies being able to stem a tragedy that the official spokespersons were in denial about, but which those affected were able to touch with their own hands along the seaward coastline of the Atlantic Islands National Park.

So, contrary to the efficiency and feasibility criteria established by engineers and political authorities, this was why the fishermen's guilds and their members throughout the Rías Baixas and the business community and mussel farmers of Aguiño, Noia, Muros, O Grove, Portonovo, Combarro, Bueu, Cangas, Baiona and A Garda prepared their boats and crews to go out to sea and tackle the slick. It was 2 December 2002, and in little more than 48 hours they had managed to put together some magnificent equipment that would enable them to do what the state government was not doing, nor even thought could be done.

From the standpoint of the management of public interests, the attitude of the organisation of fishermen in the Rias Baixas produced the effects listed below:

1. It demonstrated that government paralysis also affected ideas, and that the relentless philosophy of the Prestige being a natural disaster being preached and favoured by the authorities was akin to voluntary suicide for the Galician fishing and shellfish sector.

2. It also demonstrated that the response was effective and with a combination of local knowledge and concentration of efforts in strategic areas, it was possible to halt the progress of the slick and prevent it from reaching the estuaries.
3. It clearly confirmed the lack of resources and of the decisions needed to obtain them. In addition to providing ideas, labour, boats and tools for collecting the oil, they also had to risk making investments that the authorities would be slow to compensate and equip themselves with instruments and tools (cranes, skips, lorries and container drums) which the authorities were not managing to provide.
4. The actual dynamics of the work left no doubt that the organisational model of the Rías Baixas was fundamental in understanding the ways of reacting to and managing the disaster adopted by those affected. It became clear that it was those who were most deeply involved in politics, organisation and management who most rejected and criticised the government's response to the disaster.
5. The organised civil response was responsible for the immediate deployment of the army and Civil Protection organisations in the Rías Baixas, for improving the way volunteers were managed and for favouring the active commitment of a wide spectrum of Galician society and its business community.

The exemplary action of the fishermen and businesses of the Rías Baixas also demonstrated that the State had forgotten its responsibilities in its biased defence against the effects of the Prestige, to the extent of forcing civil society to take on a significant role in managing public interests. Slowly but surely, the initiative of those fishermen who scooped up the fuel-oil with frying pans, pitchforks, cattle prongs and many other tools invented or adapted for the occasion became the positive face of the ecological and economical disaster. The government could no longer prevent the images on television from presenting these men and women as the true heroes who, left to their fate by the authorities, gave the impression of being almost invincible, afloat on the sea that provided them with their livelihood.

Confirming the worst hypotheses regarding the government's handling of the tragedy, a report by the American Bureau of Shipping (ABS) published in late February 2003 stated that the decision to tow the Prestige for more than 120 miles would have substantially exacerbated the initial damage sustained by the tanker, together with the structural changes as a result of stabilising manoeuvres: "the Prestige would not have split in two if it had not been exposed to rough seas for a long period".

With the Bahamas as the flag state of the Prestige, the Bahamas Maritime Authority also reported along the same lines as ABS, although it expressed itself with greater force. It was evident to the Bahaman experts that the tanker did not suffer irreversible structural damages even after Captain Ioannis Apóstolos Mangouras had performed stabilising manoeuvres and corrected its list (to only

6 degrees) by filling one tank with seawater, at the cost of a loss in buoyancy. They conclude that "...it is now quite clear that, if decisive action had been taken at an early stage to move the ship to a more sheltered location, the ship and its cargo would almost certainly have been saved and any pollution would have been minimal". The Bahamas Maritime Authority considers the fact that the *Prestige* spent six days at sea after the accident to be irrefutable evidence of the residual strength of the tanker, which would have enabled any rescue manoeuvre to have been performed. They end by stating that "...once the decision was taken by the shore authorities to order the ship out to sea, without making any provision to prevent any further damage occurring, the ship was likely to sink eventually unless the weather abated very quickly".

The third great criticism of the Spanish maritime authorities came from France via the French Marine Accident Investigation Office (BEA-Mer), linked to the Secretary of State for Transport and which was created after the *Erika* oil tanker accident. This report also attributes a large portion of the blame for the accident to Spanish maritime authorities as they kept the tanker at sea in adverse weather conditions after the vessel had already suffered the first incident of its journey and to the stresses produced by the manoeuvres to right the listing ship as ordered by the captain. The French authorities also criticised the lack of available means to tow the *Prestige* and the lack of an appropriate predetermined destination for a tanker in distress; a succession of failures which led the *Prestige* to its worst possible end.

As stated already on more than one occasion, it does not take an expert in ship-building or an experienced deck officer to realize that the course followed by the already stricken *Prestige* was not the right one. Neither does one need a PhD in Government Science to see that far from conforming to a rational decision based on the full version of events and adequate consultation, there were only piecemeal decisions which only sought to shift the problem and transfer all responsibilities with the same irrational criterion as that used to guide the tanker, and with no comprehensible objective other than 'to lose' total control of the vessel within the Portuguese maritime rescue area. The simple reasoning of political commentators anticipated the same failures which now appear in expert reports from France, the United States and the Bahamas with total accuracy. In no way can these be silenced by the single abstract and uncritical version of the Spanish authorities who, far from explaining what they wanted to do with the tanker, can only manage to repeat that they did the best possible job given the circumstances, whilst obliging civil society to take the initiative.

In the midst of the confusion and inefficiency described, for many Spaniards seeing the images of the fishermen scooping up fuel oil with anything they could get their hands on, it was a time of discovery of an almost forgotten sea: the Atlantic Ocean. Its images of majestic cliffs, giant frothy waves and mysterious mists lifting to reveal indescribable landscapes came as a double surprise. Yet, these images were above all a vision of fishermen who moved around in the sea like mermen and who, in contrast to all the news regarding overfishing and the continuous pollution of

coastal waters, appeared to be prepared to look after it and clean it up as only those who are conscious of a vital mutual dependence can. Civil society had taken over to defend the sea and the dignity of a people that felt subjugated and abandoned, initiating a political process that threatens to change the recent history of Galicia.

A political divide unexpectedly healed

After converting the elections into the litmus test for mismanagement of the disaster, and assuming that the social protests against the Prestige case would end in a severe electoral punishment for the PP, many political analysts agree that the outcome of the 25 May election are very difficult to explain, both in Spain and in Galicia, especially considering the atmosphere of discontent and protest against the PP governments generated by the Prestige disaster and the Spanish participation in the invasion of Iraq. Perhaps it is only difficult to understand, however, if you are unable to grasp two of the hypotheses that rationalise the behaviour of voters. Despite attempts made to forget them, they continue to resurface as if they were basic lessons for the people to go over time and again like an infant schoolteacher.

The first of these hypotheses consists of recognising that Galicia is deeply conservative, in the most time-honoured sense. We Galicians are frightened by change, we do not need wider political horizons, we do not recognise the values of progressive ideas and we do not trust anything that does not come with backed with the guarantee of customs and habits that are as poorly reasoned as they are generally inefficient.

The second hypothesis is that Spanish society is a long way from the values of solidarity, truth, democratic transparency, peace and the guarantee of democracy itself being considered as indicators of voting behaviour. All of these apparently undeniable principles buckle as soon as matters generally taken as baseline are reviewed with simple performance criteria (foreign policy, security, counter-terrorism, the future of the European Union and the territorial and financial structure of local government). People want to be distracted from the problems, they want a discourse that will exempt them from having to weigh up more complex situations, they don't want to hear voices contrary to the usual numbing political rhetoric and, as long as the economy is being taken care of, they want to be left alone to live their own lives.

It could also easily be acknowledged that the very stating of these hypotheses implies a certain disappointment in the results, which in no way validates the possible errors in creating and assuming pre-election expectations. However, the statistics of the Centre for Sociological Investigation (CIS) in Spain stacked the level of public disapproval of the Iraq war at 92%, marking a trend that for any participating observer accustomed to analysing the social and informative context was already evident on the streets of Galicia and all of Spain. For this reason, it can be said that, beyond the potential and minor confusions that could exist between wishes and reality, the results of the municipal and regional elections of 25 May 2003 display a certain degree of voting schizophrenia, unless the two hypotheses at

the beginning of this section are wholeheartedly accepted. This is because although the Prestige disaster can be taken as a management failure which did not necessarily involve a change in political preferences, it is not that easy to explain why the opposition to the war and rejection of the government's belligerent attitude, which led to an illegal and unnecessary war and subsequent occupation, has not left the slightest trace in elections called in the middle of a military campaign and held during the general chaos that overwhelmed Iraq and the total falsehood of the arguments used to justify the aggression at the summit of Terceira Island (Azores).

Since, speaking in political terms, it seems evident that the PP has been the great beneficiary of the results of municipal elections which marked the turning point of the Prestige disaster, far from the cold figures that caused the initial euphoria within the PSOE. This is because Aznar's leadership came out stronger than that of Rodríguez Zapatero, because it was once again shown that the PSOE is unable to articulate a clear opposition; because only the PP has an agenda which is on top of the country's big problems; because the oversimplified discourse of the PP is better received than the timid and toned-down socialist opposition; and because this was the worst case scenario for a reaction at the polls in which the PP did undeniably well. This time it can truly be said that the PP (7,872,874 votes) had suffered a sweet defeat, while the PSOE (7,972,995) had scored a bitter victory.

Nevertheless, strictly sticking to events in Galicia and despite the result of the May 2003 elections leading us to think otherwise, I do not consider it necessary to change the idea that one of the main effects unleashed by the sinking of the Prestige was the shattering of the populist myth of Fraga. Many people continued to see Fraga as someone who could obtain things that political rationality denied, or as a necessary intermediary with the power of central government, still seen as the guarantee of a wellbeing that the political weakness of the region is unable to gain through ordinary political channels. However bad the spectacular vision of the tragedy was, with powerful and irrefutable images and the massive sums in promised investments as a result of shocking political management, the vision of Fraga was far worse. Caught out like a naughty schoolboy hunting in Toledo and obliged to respond to the inevitable accusation of inefficiency and irresponsible abandonment, another side of him was revealed as a run-of-the-mill and inexpert politician, unable to recover from his own self-inflicted knockout.

Once exposed, and truly fearing for a position that was slipping from his grasp and threatened to leave him defenceless in front of the only judgement that mattered to him, that of history, Manuel Fraga put into practice the well-known and universal strategy of throwing meat at the wild beasts by paying for someone to blame and for heads to roll. This was how the political career of his beloved Xosé (Pepe) Cuiña was shamefully cut short (on 16 January 2003) and who was not even given the courtesy of an additional twenty-four hours to leave the Xunta under the cover of a wider reshuffling without arousing the suspicions induced by an surprise

political sacking. The Xunta reshuffle was officially announced on 18 January 2003, a day after the *Diario Oficial de Galicia*, the regional government's official bulletin, confirmed the tremendous clash between Fraga and Cuiña and on the same day it also delivered the head of Carlos del Álamo, the third hunter who, together with Pepe Cuiña, had gone hunting in Toledo with Fraga.

Suddenly, in the space of only two months, the party which everyone considered the best structured and with the biggest and most qualified management, was completely at the mercy of the storm generated by the Prestige, without the rumoured successor who people had been betting on for ten years or other replacements who could guarantee sufficient votes at election time. The party managers were severely discredited, with widespread mistrust amongst local and provincial organisations, which the press personified as what they referred to as Xosé Luis Baltar's 'coup'. The 'PP fiefdom' of Galicia (an appropriate name if ever there was one) was threatening to come down like a house of cards, with its strong dependence on the group of Mariano Rajoy's personal friends, who today monopolise the same certificates of loyalty and competence that were valid when Aznar was in power.

Having said this, and remembering that political wounds are similar to rheumatism in that they are both aggravated by the damp and changes in weather (both of which are typical of Galicia) it should also be acknowledged that the end of the political crisis generated by the Prestige took an unexpected turn in its last stretch. Instead of confirming the serious debilitation suffered by the Xunta and Aznar's government, the local and regional elections of May 2003 ended up being a miraculous combination of events which, applied to PP politics like a poultice, inexplicably cured the deep wound caused by the Prestige. Fraga was left fighting for his political life, coming away from the Prestige in the bad shape he will be remembered for in the future, yet nothing similar seems to have happened to a party which in the same situation has reoriented the succession of Aznar with exceptional brilliance and put the inevitable succession of Fraga back on the right path.

Even though just narrating the events of the disaster constitutes in itself a resounding affirmation of irrationality and negligence that leaves very little opportunity for adversarial debate, it is seemingly evident that Galician society is reconstructing the events which happened between November 2002 and May 2003 to make them seem more ordinary. Even the scientific evidence of an ecological disaster of gigantic proportions and unpredictable consequences is about to dissolve into a social perception which is clearly ready to weigh up the surreal advantages generated by the economic consequences of the disaster (compensation, subsidised unemployment benefits, disaster tourism, research and study projects, marketing campaigns, etc.) or by the delayed reaction of the government and public administrations against the accusation of confusion and passivity which characterised the first stage of this unfortunate event (the 'Plan Galicia', a greater presence of Galicia on the political agenda and in the media, the opportunistic interpretation of the electoral results of 25 May 2003, etc.).

'Let's just get on with things' ...in the case of the Prestige as well

To break with the sensation of omnipresence in the media created in academia and the more socially aware sectors of Galician society, I will begin by recalling that although it is true that 61.7% of Galicians regard the sinking of the Prestige as a significant problem¹⁰ and that 31.9% of the total population considered the ensuing ecological disaster to be the biggest problem that Galicia faced in the spring of 2003, our mentality as political analysts obliges us to read this data inversely. This would mean that after everything that happened between 13 November 2002 and the municipal elections in 2003, there is still a surprising 38.3% of Galicians who think that the events surrounding the sinking of the Prestige are not a particular problem, while 42.2% of Galicians feel very little affected or not affected at all by the problem caused by the tanker. This is tantamount to saying that Galician society clearly opts for a reading of the event closer to that of a natural disaster, which is to a certain extent inevitable, rather than evaluating the management of the crisis and the public policies implemented. This process would have to take into account the lack of foresight in the system of rescue and control and the mistakes made in a decision process which, at the very least, appears filled with inexplicable omissions, flagrant misinformation and bizarre contradictions. The cost of the dives made by the bathyscaphe Nautilus came to over 100 million euros. The cost of the plans being headed by the oil company Repsol to rescue or control the cargo of the Prestige (still at an experimental stage as of October 2003) vary from 115 to 230 million euros, depending on whether they involve two concrete casings to bury and stabilise the remains of the ship, or an extraction process of unknown efficiency to empty the tanks in the vessel's bow and stern, which sank separately.

In terms of the economic impact, the forecast cost of cleaning up the Galician coast and the total sum of compensation to fishing and shellfish sectors due to the ban on activities amounts to over one billion euros. This is in the absence of a definitive evaluation from experts or the authorities, who seem unable to come to an agreement. If to this we add the costs that cannot be evaluated or compensated, the total cost of the sinking (according to calculations made at the beginning of March 2003) is approximately four billion euros. And nevertheless 38.3% of Galicians do not consider it to be a problem and 42.2% of the population does not feel directly or severely affected by the disaster. If we qualitatively analyse the perception of the sinking of the Prestige within Galician society, it can be seen that awareness of the disaster, according to the data from the Barómetro Sociopolítico de Galicia polls performed in Galicia in March 2003, reveals the following traits:

1. It is linked to large population clusters¹¹ (63.8%) or, above all, to medium-sized populations (72.9%), while awareness is lower in small clusters (58.7%) and amongst scattered populations (60.9%).

¹⁰ Source: Barómetro Sociopolítico de Galicia, March 2003.

¹¹ For the effects of this study large population clusters are municipalities which have more than 50,000 inhabitants, medium-sized population clusters have between 20,001 and 50,000 inhabitants, while small clusters have

2. The perception of the problem is closely related to the negative impact on coastal activities (fishing, shellfish harvesting, tourism), whereas profiles are weaker and more diffuse for those living inland (64.5% Pontevedra; 62.0% A Coruña; 60.1% Lugo; and 55.3% Ourense).
3. Awareness of the problem is higher with younger age groups of the population, and shows a clear decrease with older age groups (77.7% for those aged 18–29; 67.6% for those aged 30–49; 52.0% for those aged 50–64; and 48.2% for those aged 65 and over).

A framework for the social and political analysis of the Prestige disaster can be construed from the characteristics above. It can be summarised as a problem of post-modernity which nevertheless affects a modern society. This is equivalent to recognising that a significant part of the problems to be found in the politically correct discourse on the disaster, which form part of the media's version of the sinking, hardly have any influence on the behaviour of the political actors. Far from providing us with a rational and coherent explanation of certain crucial events (such as the municipal elections of 2003), they end up adding to the feeling of a paradox which comes from a quick glance at the aforementioned electoral results and the behaviours within the labour, business and social frameworks.

The majority of the Galician electorate knows full well that the Prestige was the cause of the largest ecological disaster in our history, but lacks the criteria needed to evaluate the importance of the environment and establish the actual impact that an ecological disaster can have on the network of interests and incentives that move their social environment. In the same way, every Galician feels, or knows, that the initial action of the Xunta and the central government was late in coming, but does not know to what extent the action could have been better in comparison, nor the importance of managing a ('natural') disaster within the full set of a government's political actions and objectives. Reflecting further on this, when attempting to reason about the information on and consequences of the tragedy, it is evident that the majority of Galicians are able to explain the causes and effects of the Prestige accident and they can also rightly evaluate public policies which are directly or indirectly related to the disaster. Nevertheless it must not be forgotten that the attitude of the citizens who feel the need to maximise the political and social resources around them does not depend so much on their reflective awareness but more on an internalised experience that acts on the values and objectives which define and condition these interests. Therefore, it should come as no surprise that a social mobilisation as intense as that which rallied Galician society against the handling of the Prestige disaster and the war in Iraq, finally ends up giving the sensation of having yielded to the active policies designed and put into practice by the government.

between 2001 and 20,000 inhabitants. Municipal districts with less than 2000 inhabitants are included under the heading 'scattered population'.

The reason behind this paradox, as profound as it is difficult to evaluate, is to be found in the crisis of change that Galician society is undergoing (and was in the process of when the Prestige sank). Our society is now at a point where the conscious reflection of its most active sectors is already leaning towards postmodernism, while the subconscious experience which guides the immense majority in trying to maximise the political benefits within a previously assimilated evaluative context is linked to modernist values. Perhaps then, the facts have to be considered not only from the standpoint of the objective inconsistency between attitudes of the postmodernist minority and the modernist majority, but also from that of the personal factor of inconsistency that determines whether the same person can follow cognitive postmodernist criteria (i.e. in favour of peace or the environment) while acting according to clearly outdated political criteria (so they can receive a subsidy or get a farm track paved).

Whichever the case, the final outcome of this process presents us with obvious political and electoral inconsistency, to the extent that after the evident rift created by the Prestige between local and central governments and the general public, or between those handling the tragedy and those who felt it like an open wound in the context of their social and political actions, the elections of 25 May 2003 produced an outcome that has closed the said wound, reinstated the PP and the government's previous image and shifted the crisis onto the opposition parties and the social majority, who together now hold all the questions that have remained unanswered.

A brief look at the electoral aftermath of the Prestige

Many thought that the change was going to be radical, and that the Galician electorate after the Prestige disaster was not going to be anything like it had been previously. We ourselves wondered in our previous publication, let us remember once more, whether this was going to be 'the tragedy that stirred up Galicia', insinuating (although not saying) what we believed should be the inevitable logic for a political event as intense and tangible as this. That is the reason why there was a feeling of uneasiness, for it was as if Galicia was still asleep, or as if there were no value or criticism capable of imposing itself on (or even scratching the surface of) voting habits. However, it has to be said that not everything remained as it was, and, although it is true that the results obtained by the PP in the whole of Spain make the social movement against the Prestige and the invasion of Iraq appear to have been in vain, a more thorough look beyond the quantitative aspects proves that the People's Party in Galicia did indeed suffer a harsh setback, only comparable to events in Catalonia, Aragon and the Basque Country, albeit this time with a better lead.

Looking to exploit their electoral success, the PP gave excessive importance to the electoral results in places like Muxía, as if a localised and politically isolated event in a small town council could represent and explain an electoral process as

wide and complex as that of May 2003. It was also as if the conservative response of the voters in Muxía could not possibly have the same explanation as that of other elections in Madrid, Valencia, Malaga and Mallorca.

Therefore, to clarify the changes that took place, the four most significant differences in post-election Galicia are as follows:

1. In the face of a clear attempt to win back control of Lugo City Council, with ex-minister Manolita López Besteiro as candidate, the absolute majority of José López Orozco broke with twenty years of PP majority, demonstrating that the system of patronage set up by Francisco Cacharro Pardo and gladly tolerated by the PP, can in fact be overcome. The rest of the province of Lugo, with many deprived areas and more non-workers and dependents than working population, also broke the conservative's spell by strengthening progressive councils such as that in Sarria and by breaking absolute majorities which in some cases dated back to the municipal elections of 1979, in towns like Viveiro, Ribadeo or Monforte.
2. In the province of Pontevedra, where the PP was looking for a result to allow them to forget about Cuiña, the *de facto* coalition of socialists and nationalists is governing Vigo, this time with a majority formed around the PSOE. In Pontevedra the BNG has snatched first place from the PP, being able to govern either in coalition with the PSOE or alone, as the most voted-for party. In Vilagarcía and Redondela the leftist majorities have been consolidated. The PP has lost its majority in medium-sized towns such as Bueu, Mos and Moaña, while others such as Baiona, Pontearreas and Nigran continue to be ruled by independent parties that have split away from the PP. Even in Porriño, where the almighty José Manuel Barros held the majority inherited from Gonzalo Ordoñez in the first municipal elections of the post-Franco era has been defeated (in a cruel twist of fate) by the son of the mayor who in 1979 avoided total disaster for the Democratic Coalition (CD).
3. In the province of Ourense, where the PP holds out behind the parapet of the political model developed by Xosé Luis Baltar, the PP did not gain its longed-for majority in councils of the importance of Verín, O Barco, O Carballiño and Ribadavia, as well as being crushed, as usual, in Allariz.
4. Also telling are the results in the province of A Coruña, where the lists of the PP were reinforced by resounding names such as Manuel Fraga Iribarne (A Coruña) and Gerardo Fernández Albor (Santiago). Unable to turn forecasts around, the conservatives conceded first place in Santiago, were at the mercy of Juan Fernández in Ferrol, hardly gained anything from the total downfall of Francisco Vázquez in A Coruña, and were beaten for the first time in Ames and other medium-sized municipalities. They also lost the control and presidency of the provincial council.

Although it cannot be said to have been an electoral disaster, it is significant that the PP in Galicia lost 4% of votes with respect to the elections in 1999. As well as leaving the party behind a hypothetical BNG-PSOE coalition (which had not happened since 1979), it represents one of the few perceivable exceptions to the strong and stable electoral outlook for Aznar's government. Overall the party was scarcely 1% below the figure for the elections in 1999 and although this means that the Galician PP could save face by quoting the results from the general elections, there is no doubt that Fraga's party suffered a blow that can only be explained by the effect of the Prestige disaster.

Compared to what happens with general elections and the elections held in a single self-governing region, where the outcome can be summarised and explained in a single figure, municipal and regional elections held at the same time allow the chance to for very different analytical perspectives and evaluation criteria to be adopted. Certain figures can be compared and qualitative items introduced which cannot be expressed in mathematical terms. Therefore, just as the office of mayor of Madrid is considered a political and electoral reference which is much greater than its numerical face value, so too is the loss of the urban vote experienced by the PP in Galicia, which can be seen to prolong their defeat to a greater extent than the total figure of votes or the indiscriminate total of mayors and councillors would suggest. In this sense it should be noted that on top of obtaining results which are significantly worse than in the rest of Spain, the PP in Galicia also suffered a major qualitative fall-off in votes, as in addition to losing much of the urban and semi-urban power which made it a widely dominant party, it has also lost symbolic positions which will favour the overhaul and diversity of the current leadership structure.

Looking at the political situation before and after the municipal elections of 2003, it can be said in formal terms that the political panorama has changed very little. A certain amount of public unease can be perceived as a result of the evident clash between the large numbers of people opposed to the government and the results which, handled simplistically and with the demagoguery that politicians tend to make use of through the media, seem to validate and legitimise the attitudes of the government. However, in a mature democracy political change tends to be slow and rarely presents itself with the forcefulness which disbanded the Union of the Democratic Centre (UCD) or the immediacy with which the French elevated and then voted out Lionel Jospin. Behind every person's political opinion there lie many conscious and subconscious motivations which are frequently contradictory and must be resolved in one single act. Similarly, behind each reasoned judgment of the situation there lies the significant weight of a political culture built up of habits and values over a long period of time, which cannot and should not be forgotten as the result of the impact of a single piece of information. I therefore believe that, while recognising a certain amount of astonishment at the May 2003 results, something can also be considered to be happening, although it can only be perceived with clarity in the gradual changes in political culture that slowly enable the democratic system to mature.

Where does that leave Fraga and his political regime?

The 2003 elections must have been a sad time for Fraga Iribarne, as they were proof that his political days are counted and his name no longer figures in prophecies for the future.

Fully aware of his poor performance in the Prestige disaster and given his inability to bounce back with an updated and constructive discourse, for Fraga the PP campaign trail was akin to a trip back in time to the period of the Spanish transition to democracy and a pitiful exhibition of the decadence of a leader who, as is so often the case, did not know when to call it a day before his own history caught up with him. Perhaps for this reason the whole of Galicia gives off the air of a succession administered from a distance by Mariano Rajoy. If for any reason this all sounds slightly like a *déjà vu*, it also foretells a change in Galician politics which seems to be closer than official calendars would let be known, although the next elections cannot be not far away. Nevertheless it must be realised that the dwindling stature of Fraga (as a logical result of his intervention in the Prestige case) in contrast to the unexpected growth of the PP (also related to the Prestige and the war of Iraq) is not an insurmountable contradiction, but provides an explanation to many of the questions that arise from a scrutiny of the electoral results. Fraga was, in the darkest days of the oil spill, the very representation of the powerlessness and enraged arrogance of someone caught red-handed, and he was unable to lead the intelligent and orderly reaction that the party displayed under the leadership of Aznar on the eve of the elections. This explains why the even the party's reaction was to park all the mistakes on one side (Fraga, de Mesa, López-Sors, Cuiña, del Álamo), while attributing the victory to those who put themselves on the line (Rajoy), who kept their composure and prepared the political response in Plan Galicia (Aznar) and even those who had the sound judgment and right connections to find themselves in the new team (Palmou and Arenas). Fraga lost points, but the PP gained them, in an unquestionably shrewd combination, allowing us to distinguish the format and the moment of the handover that ought to take place in Galician politics shortly before the end of the current term.

The serious consequences of a poor precedent

From a political analyst's perspective, the PP's success is also extremely interesting considering that it has come about without a single rectification, recognition of a single mistake or even a single apology. It almost seems as if Fraga and Álvarez Cascos's hunting trips in Toledo and the Sierra Nevada formed part of the response strategy to the tragedy or of an ever-vigilant attitude towards incidents affecting the public interest. Since the weathervane began to turn, and since the Martín Villa's communications policy made it seem that the government had rectified itself without actually rectifying anything, the radical reconfirmation of

all decisions and stances became the hammer used to beat the opposition with the same force and to the same rhythm as a blacksmith striking hot iron.

In addition to other aforementioned social and political circumstances, a series of events also had to occur at the same time for this strategy to be possible and lead to the desired outcome. Due to the lack of accurate and up-to-date scientific information these gave the impression that many of the opinions and information regarding the sinking were alarmist. Many of the long-term or irreparable negative consequences that had been predicted were redressed in favour of the government with the innocence of butterflies flying into an entomologist's net. Fishing and shellfish harvesting started up again quickly and nobody was able to demonstrate any real health risks or essential market losses, nor any real reduction of fish stocks definitely caused by the oil spill from the *Prestige*.

Tourists also visited the relatively clean beaches and the washed-up tar balls were no more than a mere reminder of the great disaster which the authorities 'had kept in check'. Summer was like almost any other summer and seafood from O Grove, mussels from Raxó and goose barnacles from Roncudo gradually made their reappearance in the markets. It must therefore be recognised that beyond the real measure of the tragedy, the PP's timing of its actions in the period around the sinking was better than that of anyone else, and it applied its vast media and social resources with great efficiency and order. This explains how many of the statements which served at the time to reverberate the echoes of the tragedy and send the masses of people who responded to the call of *Nunca Más* out into the streets, ended up after the turning point of the elections of 25 May reinforcing the idea that 'it wasn't that bad' or that 'nothing is forever'.

It is also now known that far from improvising, the Spanish maritime authorities were repeating a resounding failure in their handling of the *Prestige*, one which, within the chaos caused by the incredible disintegration of the decision-making process, followed the same pattern as that of the Cypriot vessel *Castor*. This vessel had sustained a huge breach along its side while carrying a 26,000-tonne cargo of highly flammable products close to Almeria at the beginning of 2001. At that point López-Sors was also Director General of the Merchant Navy and he also refused to allow the boat to enter a port of refuge and offload its cargo.

Following the explanations given by López-Sors in the Spanish Parliament, it can be inferred that the interpretation of rescue operations that the international community shares out amongst maritime states is only interpreted by the Spanish authorities as a commitment which exclusively affects the rescue of crew members, while the vessel itself can be left at sea or transferred to other countries or private companies specialising in rescue and salvage. This explains how López-Sors could boast of an operation like the *Castor* which, once the crew had been rescued and the vessel itself was 30 miles away from the coast, was towed slowly through the Mediterranean by the company Smit Salvage until it was taken in by Malta and

could offload the cargo without any problems. The IMO protested at the time against the incomprehensible attitude of the Spanish government and the consequences that this type of decision could bring. Nevertheless, the fact that the problematic decision ended in what López-Sors considered a 'success' (the transferral of the problem to third party countries) must have been very present in the minds of the authorities and officials faced with the Prestige disaster, who after rescuing the crew, towed the tanker away and waited for a chance destination (Gibraltar, some thought) to take it off their hands. They did not realise that indecision does not guarantee the same result twice and neither did they stop to think that in the Atlantic there are no hypothetical destinations, or that the November storms off Finisterre would not allow success to happen by chance or rescue and salvage to be cheap.

From an administrative point of view it is clear that this parallel between the way the Prestige and the Castor were handled leads us to rightly think that the management of the first accident was taken as a precedent for the second one, within a philosophical framework which raises the Spanish government's responsibility to a level of extreme seriousness. It is proof of culpable negligence which, as well as causing the most serious case of coastal pollution in Europe, left the Prestige to sink in an almost uncontrollable place, meaning that all subsequent salvage operations are being undertaken with little chance of success and at costs which, in terms of fuel-oil recovery alone, can be considered immense.

Once the Prestige had sunk and the havoc created by the government's disastrous handling of the crisis had become evident, here in Galicia we began to witness a second manoeuvre designed to cover up the tragedy and help it to become forgotten. This was the implementation of Plan Galicia, a single document containing the central government's recovery plan for Galicia over the next 15 or 20 years (amounting to just under 12.5 billion euros). This plan attempted to portray the incident in an optimistic light so as to convince the population that rather than being an irresponsibly managed disaster of tremendous proportions, the sinking of the Prestige was the great historical opportunity seized by Aznar to put an end to Galicia's economic backwardness and compensate for all the deficiencies in planning and consideration, and even the lack of basic efficiency and fairness, meted out by successive governments throughout the 20th century. The government's other line of action focused on the media system, diluting news concerning the Prestige within a jumble of news stories composed of the situation in Iraq, Plan Galicia, Criminal Law reforms and any other news items or controversies which would stop the oil slick from continually reminding Galicians that their future had been seriously affected by the indecision of certain individuals. They created the sensation that the Prestige disaster was a serious but relatively short-lived episode, and that all its negative effects could be made good by one-off policies which, since they were already underway, could turn the impact of the event around.

The trigger is on

In my view, which is certainly influenced by a context of strong political patronage and a society that is scarcely active due to its fragmentation, I am convinced that an event like the Prestige is one of these rare opportunities that provides us with the key to breaking the spell of inertia, making it possible to bring about a rapid change or progress towards a more mature and open political culture. I therefore believe that a reflection on the Prestige disaster, even one as brief as this, cannot end without wondering again whether the catastrophe experienced by the people of Galicia will have created enough of an impact to change their political and voting behaviour or whether it will all be swallowed up by a policy (based on promises and subsidies doled out on a discretionary basis) that is capable of convincing them once again that they are in the best situation possible, and however great the damage suffered by Galicia under Fraga, it would have been even worse if the current opposition had been in power instead of the PP.

Based once again on the results from the opinion polls performed by the Barómetro sociopolítico de Galicia in March 2003, the first impulse is to say that the disaster will definitely not have created as much of an impact as the polls lead us to think, and that in strictly political terms the Prestige disaster is already a thing of the past. If we analyse the sinking of the Prestige in terms of political responsibility, 60.8% of Galicians believe that one or more of those directly responsible for the disaster should resign, which expressed positively means accepting that a number of serious and avoidable errors were committed by politicians and civil servants when making their decisions and implementing them. It is therefore difficult to explain how this same population that so clearly believes in the existence of political responsibility in the final unfolding of the ecological disaster has voted in the municipal elections of 2003 in a way which leaves such little trace of this.

It should be noted, however, that this propensity to ask for the heads of the politicians responsible displays a very similar territorial and social structure to that observed in our analysis of overall awareness of the problem. Just as we spoke of a postmodernist stronghold from which criticisms were launched against the actions of the Xunta and the central government, it should now be noted that the desire to hold those responsible to account is strongest in the areas that were directly affected and economically more developed, which could well constitute a trigger for change which has in no way been deactivated by the municipal elections of 2003. We must therefore stress that the seed of social and political mobilisation has already been planted in three areas of particular relevance, described as follows:

1. In more economically developed areas (A Coruña 65%, Pontevedra 62.9%, Lugo 52.1% and Ourense 50.7%);
2. In medium-sized and large population clusters (81.4% in medium-sized clusters, 69.5% in large clusters, 53.2% in small clusters, and 47.8% in scattered populations);

3. In younger age groups (78.5% of those aged 18–29, 70.1% of those aged 30–49, 53.3% of those aged 50–64, and 39.5% of those aged 65 and over).

Without a doubt, these figures go some way in interpreting political reality in Galicia, obliging us to consider the existence of a real fracture in society (in terms of strictly political criteria) which is splitting the Galician electorate into two different groups. Although they are completely separate, these two groups are mutually engaged in a framework of transformation in full flow and where it can be supposed that neither the social protest against the Prestige or the Iraq war nor the awareness of the disaster which stems from acknowledging certain values, come anywhere near to representing cross-currents which affect the whole of Galician society.

Far from labelling it as general disaffection of the electorate, of which the *Nunca Más* demonstrations and opinion polls would be a symptom, everything indicates that the sinking of the Prestige must be seen in the context of the coexistence of two social sectors shaped by different political cultures and that, at the time of voting, were not only dealing with different values and motivations, but also had a clearly differentiated way of maximising their individual and social political objectives. However, the facts are more forthcoming given that, far from this being a characteristic specific to Galician society, it seems that the effect of the sinking of the Prestige and the invasion of Iraq places Spanish society as a whole in a fierce tug-of-war between modern and postmodern values, which, beyond the consequences of the political system and the available range of parties in shaping electoral preferences, also indicates the existence of a complex dialogue between two different political cultures. Also, given that the divide between modernity and postmodernity coincides largely with the positioning between the governing right and a left-wing opposition suffering from a serious identity crisis, it can well explain that that concern for the Prestige, or the demand for those responsible to be held to account as mentioned above, is deeply aligned with the ideological positioning of the left and of nationalist movements.

The resignation of the politicians responsible for the Prestige disaster is considered an absolute necessity by 87.4% of BNG voters, 100% of the United Left coalition (IU) supporters and 76.1% of socialist voters, a percentage which drops to 37.4% in the case of those who voted for the PP. The Prestige case is regarded as serious by 83.3% of IU voters, 73.9% of BNG supporters and 68.4% of PsdeG–PSOE (the Socialist Party in Galicia) voters, whereas only 51.6 % of PP voters consider it as such. This therefore leads one to think that, aside from all the circumstances and motivations that come into play in the decision-making process of voters, there is a vertical divide in society which tends to place postmodernist culture (environmentalism, pacifism, feminism and urbanism, especially amongst the younger age groups) on one side, and traditional electoral reasoning on the other, where criteria such as stability of the system and the general idea of welfare that springs from economic progress weigh much more heavily.

In the short term, in the context of the political changes happening in Spain and the autonomous communities with the greatest influence on the overall functioning of the country, perhaps it can be said that the Prestige is already something of the past, or if not, is wearing down the opposition more than the government. Yet if one is to take a political microscope and scrutinise the internal movements of society, everything points towards enormous and significant changes in Spain which have been sped up by processes like the Prestige disaster and the Iraq war. It is very plausible that once the electoral process leading up to the general elections in March 2004 is over, Spanish citizens will be putting the Aznar era behind them and demanding some very different policies from Rajoy (or perhaps even Rodríguez Zapatero). Finally, this is not meant as an election prediction, and even less as a prophecy of change. Political parties are also bodies which are alive and evolve with politics and society and nobody can say for sure that in this race towards modernity it is not the PP which is winning. The possibility exists, so if anyone feels an involuntary shiver because of these words, think of the Prestige, a long-term disaster already relegated to legend and an example of irresponsible management which only wears down those who denounce it. That's Galicia for you!.

Forcarei, 14 October 2003

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3

COMMUNICATION, ANOTHER CATASTROPHE

Ernesto S. Pombo



Abstract

A lack of information, an iron-clad silence, endless denials, false information and permanent difficulties for journalists trying to find out the details of what happened – this is the summary of the communication from Galician and Spanish institutions during the Prestige catastrophe. Popular indignation at the seriousness of the accident was intensified by ignorance of the actual situation. The public authorities did not want to understand the social need to access information as exact as possible and indeed, were not interested in it. And the mass media, divided into two clear groups, one critical and the other condescending, did what they could to fill in the gaps

Keywords: Communication, information management, crude oil, mass media, catastrophe, Prestige.

Communication, another catastrophe

Over ten years after the information about the Prestige catastrophe, the situation is still uncomfortable for those who generated it. A decade later, in February 2013, Televisión Española, the public state television, banned the broadcasting of a documentary about the tanker that sank off the coast of Galicia in November 2002, when current President of the Government of Spain Mariano Rajoy was spokesman, first Vice President and Minister of the President's Office.

The programme, which was going to be shown as part of the "Documentos TV" series, was withdrawn at the last minute by the state television's management. "The Prestige trial is now underway and it is the channel's policy not to interfere in ongoing processes", argued the television's managers. As was disclosed, they adopted this decision during one of the regular management meetings. The programme had already been advertised and with no advance warning it simply disappeared, even from the web site, and was replaced by a repeated documentary.

The information about what happened from the month of November 2002 on, when the Prestige came to the coast of Galicia, has always been uncomfortable for those who handled the catastrophe. From the very beginning there was a clear denial of what was happening and as one thing took place after another, the embankment of lies, half-truths and denials grew and grew.

In terms of purely political psychology, says political scientist Xosé Luis Barreiro, the first reactions by the government and public authorities were defined by downplaying the tragedy, and even though the newspaper *La Voz de Galicia* had been warning of the imminence of a disastrous oil slick since 14 November, both the Vice-President of the Government and the Regional Councillor for Fishing of the Xunta de Galicia (the Regional Government), the Minister of Agriculture and the Government Delegate in Galicia preferred to downplay the problem (Pombo, 2005).

The facts are undeniable. At quarter past three in the afternoon on Wednesday 13 November 2002, the oil tanker *Prestige*, over 26 years old and with a heavily damaged single hull, a flag of convenience from the Bahamas, captained by a 68-year-old Greek, sent out an SOS off the coastline of Galicia. It was carrying 77,000 tons of crude oil. In the middle of a bad storm, a large wave punctured the two tanks at starboard and made the ship keel over 25 degrees. An hour after giving the alarm, two helicopters rescued the twenty-four crew members.

Official information came from the Ministry of Public Works, run by Francisco Álvarez Cascos, who was away hunting at the time. The first communication came in a fax sent to the main media, concise and with no details, half a page long, reporting the incident. There was a blackout on further information over the following twenty-four hours. The official spokesman maintained a suspicious silence, broken only to announce that Spain was bringing legal action against Greece and Latvia.

It was then that the Government Delegate in Galicia, Arsenio Fernández de Mesa, became the official spokesman and the disagreements started between the media and the official sources. This disagreement is still in force today in matters as basic as the role of the public authorities in the catastrophe, whether the tanker should have been taken further out to sea and the effects that the crude oil could have on the health of those who came into contact with it.

The catastrophe was a “test for the government”, and also an extraordinary challenge for journalism in the country. A test of independence, quality and sensitivity, as Manuel Rivas – a writer and one of the promoters of the “Nunca Más” (Never Again) platform – pointed out.

The government’s communication policy – although it could be seen as a no-information policy – over the months the *Prestige* catastrophe lasted bears a notable relationship to their policy after the terrorist attacks in Madrid on 11 March 2002, in which almost two hundred people died. The silences, the half-truths, inaccuracies and even lies led without doubt to the change of government, thanks to this poor handling of information. The Popular Party under José María Aznar was replaced by the Socialists under José Luis Rodríguez Zapatero, and it was the mass media that had to take care of information and social awareness.

And in both cases, the different media groups took up different positions, which were in both cases somewhat outlandish when they said that it was the Spanish secret services, in league with the terrorist Group ETA, who had exploded the bombs on the trains in Madrid, and when they declared that the owners of the *Prestige* had sent the tanker, full of tar, to be sunk off the coastline of Galicia.

As journalist Juan López Rico said, this attempt to downplay the situation via the information policy is really the subject of a study as two factors that impeded the triumph of the lack of information: the response from some of the media that proved to be equal to the task, and the way society informed itself and impeded the suppression of information, as it was disseminated by the presence of volunteers and who soon expressed their dissatisfaction with the regional and national governments (López Rico, 2003).

Galicia and Spain soon discovered the lack of official information, the censorship and the lies spread in an attempt to downplay the impact of the catastrophe. Below are some examples:

“Fortunately the rapid intervention of the Spanish authorities, taking the boat away from the shore, means that we are not concerned about an ecological catastrophe or serious problems for fishing resources”. Miguel Arias Cañete, Minister of Fishing and Agriculture.¹²

“It isn’t an oil slick; just some scattered black patches”. José Luis López-Sors, General Manager of the Merchant Navy.¹³

“All the oil that was going to come to the coast has already come”. Enrique López Veiga, Regional Councillor for Fishing, Xunta de Galicia.¹⁴

“The oil at the bottom of the sea is destined to become cobblestones”. Arsenio Fernández de Mesa, Government Delegate in Galicia.¹⁵

“I am here with money while others have just come to talk”. Manuel Fraga, President of the Xunta de Galicia.¹⁶

“The tides will take the oil away from our coastline”. Arsenio Fernández de Mesa, Government Delegate in Galicia.¹⁷

“The spill is under control. There will be no consequences for the people living in the area or for any marine species thanks to the rapid action by the authorities.”¹⁸

“It has affected a large part of A Coruña, but it is not an oil slick”. Mariano Rajoy, Vice-President of the government.¹⁹

“I haven’t seen any social unrest because of the Prestige”. Jaume Matas, Minister of the Environment.²⁰

Leaving aside other statements like those by Mariano Rajoy calling the oil leakage from the sunken tanker “little pieces of plasticine”, and those by the President of the Galician government Manuel Fraga, who was away hunting when the disaster took place and took several days to return, saying “I am where I should be, God and St. James will help us”,²¹ the lack of information in the largest environmental catastrophe in Spain and one of the most significant on the whole planet has given birth to a multitude of studies by foundations, institutions, universities and private entities; because communication, or rather, the lack of communication, was, after the painful contamination along the Galician coast, the most important chapter in the Prestige disaster.

It made no sense for Francisco Alvarez Cascos, Minister of Public Works, to say that “our information has been exact, exhaustive and based on completely

12 La Voz de Galicia, 17 November 2002.

13 Idem.

14 Faro de Vigo, 17 November 2002.

15 La Voz de Galicia, 19 November 2002.

16 La Voz de Galicia, 26 November 2002.

17 Idem.

18 El País, 15 November 2002.

19 El País, 17 November 2002.

20 Mass media in Galicia and Spain, 22 November 2002.

21 La Voz de Galicia, 22 November 2002.

measurable parameters”.²² Neither did it make any sense for the President of the Government himself, José Maria Aznar, to firmly state that “those who believe that the hull is spilling oil are mistaken”.²³ While some were striving to give an image of normality in the public media and the official platforms they had, others, almost without means but with the help of tens of thousands of volunteers from all over the world, were facing up to the effects of the spills. Tons of oil were being washed up on the Galician, Asturian, Cantabrian and Basque coasts, no matter how much they denied it, no matter how much Federico Trillo claimed that “I have seen perfectly clean beaches”.

The sectors affected and some news media set out on a one-way race in search of information, faced with the lack of official and coordinated data, right from the start. And both went to see the effects on the land itself, and had recourse to Spanish and foreign scientific sources and to prestigious entities like the CEDRE in France, the Hydrographic Institute of Portugal and the University of Lisbon, among others, where satellite maps were issued with real-time information, and proved to be of great utility for those in search of what had really happened.

Faced with this situation, the Ministry of Public Works web site, which stood out for not providing any truthful information, had the idea of creating a link in which it systematically included denials of each and every report published in the mass media that were not allied to their cause.

Since the presence of the Prestige off the Galician coastline first became known, the newspaper leading the information was *La Voz de Galicia*, together with all the media in the Grupo Voz, like *RadioVoz* and *Atlas Galicia*.²⁴ Not even the first information published was to the taste of the Galician and Spanish authorities. Another group of mass media immediately opted for the same line – that of the truth – *El País*, *La Ser*, *Tele 5* and others that defined a clearly differentiated approach from the rest of the media.

On the other side was *Televisión Española* (Spanish Television), one of whose presenters, today Princess Letizia Ortiz, shared information, meals and rest time with the thousands of volunteers who came to the coasts, and with the head of the news department, Alfredo Urdaci, who suffered certain difficult situations in his live broadcasts.

Undoubtedly the most significant took place during the live broadcast of the news on *TvE1* from Muxía, when Urdaci wished to copy the model of other channels and tuned in live to the fresh fish market. But whenever he connected live

²² *El Mundo*, 23 November 2002.

²³ *La Vanguardia*, 3 December 2002.

²⁴ Headlines from *La Voz de Galicia* on the first days of the catastrophe. 14.11.2002: “Drifting oil tanker threatens Galicia with huge slick”. 15.11.2002: “Prestige slick now 37 km long, almost at coast”. 16.11.2002: “Prestige about to break up 62 miles from Galicia”. 17.11.2002: “Slick now affecting major part of coast in A Coruña”. 18.11.2002: “Prestige spills again – huge slick possible”. 19.11.2002: “Erratic course of Prestige threatens Rías Baixas”. 20.11.2002: “Prestige sinks and launches slick towards Galicia”. 21.11.2002: “Storm drives slick much worse than foreseen”. 22.11.2002: “First patches of oil where Prestige sank”. 23.11.2002: “Spain denies slicks in Portugal and France”. 24.11.2002: “Further oil spillage spells worst possible scenario for Galicia”.

and those gathered there saw that the red light on the camera was on, indicating that they were on the air, a group of people behind him started shouting things like “Television, manipulation” and “Fraga and Aznar, come to clean up”, and showing banners with the words “Some seagulls are dirtier than others”, against the background of the seagulls that are the Popular Party’s logo. Urdaci was forced to transfer the programme to the central studio in Madrid and he did not repeat the experience. But from that time on other workers from the station, especially cameramen, were insulted by those affected.

Evidently in the same line were the Televisión de Galicia, always prepared to broadcast the version given by the Xunta (the Regional Government of Galicia), whose editors and cameramen also suffered the anger of those affected on the Costa da Morte, and the media related to the Popular Party and the Government, who silenced everything that might have been harmful to their prestige, even when this involved contradicting what had actually happened.

The TvE trade unions reported censorship and manipulation in the handling of information about the catastrophe. The works committees of the Televisión de Galicia and Radio Galega went on strike, and at the same time issued a public statement saying “we reject the manipulation shown by the public media, not only evident in the Prestige catastrophe, but also permanently in recent years, like with the mad cow crisis and forest fires”.

Fernando Ónega, a maestro among journalists, born in Galicia but who worked all his life in Madrid with the main media, said that the media, as always, were divided into critics of the Government and those who understood that the situation was serious, but believed that the Government was acting well. There was chaos in the Government. Aznar was distant and at times showed symptoms of having an inferiority complex (Ónega, 2005).

The director of La Voz de Galicia at that time, Bieito Rubido, was very clear in his analysis of what happened. He believed that one of the mistakes made was the continuous shooting of the messenger. La Voz de Galicia suffered this when it was publicly accused of lying, despite the fact that many days passed after the catastrophe before La Voz blamed anyone for anything. They had compromising information but they did not use it because they were trying to collaborate, not distract but just report, says the ex-director (Rubido, 2005).

Bieito Rubido also recalls that on Thursday 14 November the headline of La Voz was “Drifting oil tanker threatens Galicia with huge slick” and the Government called us to attention for alarming society. This first misunderstanding was the starting point for others and for a situation that revealed a complete lack of interest from the public authorities when considering the counterweights that work in democracy. The thing is that they scorned journalism, probably because of their lack of faith in democracy. Insulting the messenger was a mistake made by whoever was handling the crisis offices because they suffered a boomerang effect from the media, whose credibility they were undermining, and from society itself (Rubido, 2005).

The foreign media also played a significant role, especially in Portugal, France and Great Britain, whose coasts have suffered similar and even greater catastrophes and so the population feels very identified with and committed to this type of events. Media from all over the world paraded through Galicia, from Australians to Canadians and Austrians to Argentines and Brazilians. Despite the stubbornness of the authorities in denying what was evident, the media and social impact was spectacular.

The situation was such that the Official Journalists' Association, which has almost 2,000 members in the region, complained about what they considered to be real censorship and manipulation of the information coming from public institutions. The complaint was widely echoed and media, private associations and institutions, and especially those affected by the oil slick all subscribed to it.

The report entitled "The Prestige in the Galician press" by the University of Santiago de Compostela was subsequently published, looking at the information sources used at the time and corroborating the lack of forthcoming information, together with the silences and responses. 42.7% of the references were from expert information sources in the institutional field, while experts from scientific and technical entities accounted for just 8.6% and universities 2.9%. From this same analysis it was clear that research centres from other countries, such as the above-mentioned CEDRE in France, the University of Lisbon and the Hydrographic Institute of Portugal, tripled the presence of Spanish scientific entities such as the Oceanographic Institute, the Institute of Scientific Research and the CSIC.

According to a study by the Alternatives Foundation, "censorship and manipulation was not limited to the first days of the catastrophe; after the first weeks had passed, President Aznar sent 3,500 soldiers in an attempt to recover from a completely negative image and once again made use of the mass media, in particular Televisión Española, to announce to the public that he had thereby taken a very positive step. The news was broadcast from navy ships and at all times the message that they transmitted referred to the military deployment on the Galician coasts and their praiseworthy work in the collection of tar on the beaches affected" (Méndez Martínez and Frutos Rosado, 2003), sentenced research by the foundation.

The lack of information and the denials were such that even the authors of the study "The socioeconomic effect of the Prestige in Galicia – Impact on the Galician coastline", Pedro Arias Veira and Miguel Cancio Álvarez, carried out the analysis and understood that the Prestige came to Spanish society, and obviously Galician society too, at a time of special political polarisation (Arias Veira and Cancio Álvarez, 2004). But even so, without forgetting that the lengthy study was carried out by order of the Regional Government of Galicia Department of Fishing, which was the most directly involved in the catastrophe, it was said that the goal should be to tell the truth, exhibit all the available information with the intention of communicating the problem and extracting patterns for collective remedial action in the short term and to anticipate the long term, so that similar events would never

happen again, although the public authorities initially undervalued it (Aryans Veira and Cancio Álvarez, 2004).

Free societies demand to be well informed. No matter how obvious this may be, it is always a good idea to remember it. Information has become one of the most valued goods and also one of the rights that are defended with the greatest enthusiasm in developed countries. Information becomes especially necessary when a society faces a crisis of whatever kind – it is then that the degree of freedom of expression and information the country has is revealed.

If we were to judge Galicia and Spain by the official information from the Prestige catastrophe we would have to say that it did not even reach the minimum levels demanded in a third-world country. And we would also have to recall that it never rains but it pours, because the country had just faced an identical situation with the war in Iraq, when the Government under José Maria Aznar concealed and twisted any information that was unfavourable. Even the accident involving a Yak-42 plane crash in Turkey, in which 75 persons lost their lives, mainly soldiers returning from the conflict, underwent the same treatment.

Perhaps an accurate explanation would be the one given by Dutch insurance expert Klass Reigniger, nominated by the proprietors of the Prestige, Mare Shipping, and the defence of captain Apostolos Mangouras in the trial held in A Coruña in March 2013, comparing the action of the Spanish authorities in the management of the catastrophe with that of “an ostrich that puts its head in the sand and hopes that nothing too bad will take place”.²⁵

In fact, what the Government and the official sources did with the Prestige catastrophe is an exact copy of what happened with the war.

But returning to November 2002, when the Prestige filled the coasts of Galicia with tar which also reached Asturias, Cantabria, the Basque Country and France, some news media and people in charge of handling the tragedy maintained an informative confrontation inappropriate for a time of crisis and the early 21st century. Instead of focusing all their attention on avoiding destruction they seemed more interested in permanently denying the information offered by the media, especially La Voz de Galicia, Telecinco, Cadena Ser and CNN+, that were, as has been pointed out, the ones which stood out as the real spokesmen for what was happening.

Those at the forefront of the public authorities involved in the event lost their credibility with the public right from the time when the drifting ship sent out a request for aid. Trust was shattered at the worst possible time, right at the beginning, and it was impossible to recover it throughout the tragedy. Said managers and certain media were irretrievably distanced.

This author, at the time director of the Opinion section of the newspaper, remembers that the information in La Voz de Galicia and the statements by the authorities show this clear and prolonged distancing from the very first moment.

²⁵ Klass Reigniger, Europa Press, 14 March 2013.

On the morning of 14 November people who accessed the first edition found out that an oil tanker was adrift, threatening Galicia with another huge slick, while the institutions involved were still speaking about a mishap with no major consequences (Pombo, 2005).

The misunderstanding was maintained right to the end, right down to the present. From the first day and while *La Voz de Galicia*, on 15 November, reported that the *Prestige* was causing a 37-kilometre-long oil slick that was threatening the Galician coast, the Ministry of Public Works said that the ship was being towed out to sea and that there was no such risk. At that time inhabitants of Muxía could see the tanker anchored at no more than four miles from the coast.

There were contradictions, confusion, attempts to censor information and denials throughout the whole handling of the catastrophe. There were media that refused to use other sources and reported exactly what was said to them by the Government, downplaying any significant event, including the demonstration held by over a hundred thousand Galicians in the Plaza del Obradoiro in Santiago, under the motto “*Nunca Máis/Never Again*”, created for the occasion.

Why did they display this attitude? Perhaps Bieito Rubido found the answer when he said that in the case of the *Prestige* an enormous concern was shown so that the situation would not harm the persons in charge, and this took preference even over searching for the common good, which is what should have guided the managers of the crisis. Time revealed that it was a mistake and that what really harmed the Government was not taking the lead in the catastrophe, not telling the whole truth and not accepting responsibility from the very start – it should learn from these lessons in the future (Rubido, 2005).

But they did not learn for the future. On 11 March 2004 a series of terrorist attacks took place on four local trains in Madrid, causing 191 deaths and leaving 1,858 people injured, in what was the second largest terrorist attack committed in Europe up to the time. The persons in charge of handling the aftermath and reporting employed the same standards of communication as with the *Prestige* and the war in Iraq. The Jihad attack was attributed to the terrorist group ETA in connivance with the police, and the theory was adopted by the media closest to the Government. They lost their way by trying to make a lie credible, and what was no more than washing powder became a powerful and dangerous explosive.

But coming back to the *Prestige*, because in contrast to the above-mentioned events, the situation of tension and anger was spreading all over Galicia, and despite everything the authorities still did not react or attend to the basic principle of communication, according to which, in democracy, the truth always ends up coming to light. Many years may pass by, but the truth will always come out in the end.

Obstruction and censorship were exercised in very different ways – making it difficult for reporters to obtain documents or gain access to different places, lying shamefacedly right from the start and denying not only information which was not favourable, but also documents provided by prestigious foreign institutions.

As examples of the lies poured out by the public authorities, we shall use three, from the first three days. On 13 November, the official information did not mention that there was already a spill. Two days later, on 15 November, the Ministry of Public Works reported that “The tanker is no longer losing oil”²⁶, but the transcription of the conversations show that the plane Roche, belonging to Segepesca, informed on the same morning that “there is a large slick”.

The bloody-mindedness did not stop there. The Minister of Agriculture, Arias Cañete, said on 15 November that he was not concerned about an ecological catastrophe or major problems in Spanish waters. And the Government Delegate, Arsenio Fernández de Mesa, an optimist by nature, even said that the oil would not reach the coast of Galicia.

Control reached the point of preventing members of the crisis management team from making statements. On 26 November the general director of the Merchant Navy at the time, López-Sors, sent a statement to all the delegations under his responsibility informing them that they “should abstain from making statements, issuing press releases, appearing on television etc, and from having no type (sic) of relationship with the mass media without previous authorisation from the general director. I would be grateful if you could transmit these instructions to all the officials and employees reporting to you and make sure they are strictly fulfilled”.

Analyses conducted some years later lead to the conclusion that in many cases, the informative attitude of those involved in the handling of the Prestige catastrophe depended on purely personal positions. Decisions were taken on the go and there was continuous improvisation and at no time did it appear that there were any predefined strategies for companies and institutions involved in the crisis, where silence, when they believed that the best answer was to say nothing, the transfer of responsibility, the denial and the rejection of what had happened, the acceptance of guilt and controlled proactiveness all held sway.

Communicating always enjoys the advantage that by taking the initiative, the message is controlled and there are no possibilities of making erroneous interpretations, but in the case of the information concerning the Prestige this principle was never taken into account. The newspapers from those days are proof thereof, with declarations by the Regional Councillor for Fishing, Enrique López Veiga²⁷, although some weeks later he admitted what had really happened²⁸, Minister Arias Cañete²⁹, the Government Delegate, Arsenio Fernández de Mesa³⁰ and the Vice-President of the Government himself at the time, now the President, Mariano Rajoy³¹. The denial of what had happened marked each one of their interven-

26 Cadena Ser, Servicios Informativos, Hora 14, 15 November 2002.

27 La Voz de Galicia, 17.11.2002, López Veiga: “It isn’t an oil slick, just a spillage”.

28 El País, 3.03.2003, López Veiga: “Next time I’ll say the oil will come inland to Ourense”.

29 La Voz de Galicia, 16.11.2002, Arias Cañete: “We are not concerned about an ecological catastrophe thanks to the rapid intervention of the Spanish authorities, taking the ship away from the coast”.

30 Press Conference, 19.11.2002, Arsenio Fernández de Mesa: “The oil from the Prestige will be solidified at the bottom of the sea because of the low temperatures and will stay there forever”.

tions, although different sources, which the most involved and critical media used, refuted them day after day.

The position of the Regional Councillor for Fishing, Enrique López Veiga, was somewhat curious: on 17 November 2002, when talking to *La Voz de Galicia*, he firmly stated that one should not speak about an oil slick, whereas a few days earlier, more specifically at 8 a.m. on 14 November, he had informed his most direct collaborators of the need to deploy everything they had, because “boys, there’s going to be one hell of a slick”.³²

But even so, it led some analysts to believe that there were media that defined their own road map, no matter what happened. Some examples are given below.

At the conflictive end of the second week of December, more precisely on 12, *La Voz* published a missile wrapped in a chronicle that seemed to be written on purpose to dynamite the image of the Army. Under the headline “Exhausted soldiers receive supplies with euphoria”, what an anonymous reporter wrote over four columns was truly excellent: Gathering oil is exhausting, whether at sea or on land. This was verified by a group of men who this week drove a van loaded with two tons of food to Fisterra, collected by the Chamber of Commerce of Vilagarcía from shopkeepers and individuals (...). As soon as the vehicle approached the fish market, a swarm of people came up to see what was inside; eighty hungry soldiers, who in perfect order emptied the van in an instant (Díaz, Pousa and Rodríguez, 2003), as reported by three communications managers from *El Correo Gallego*, in a study which attempts to present “an impartial history” of the three months that changed Galicia.

Not only did they focus their criticism on *La Voz de Galicia* in this publication, but also on the other group media and those from without that stood out for maintaining a critical attitude towards the managers of the catastrophe.

“Certain media (*El País*, on 16 December) are harping on the poisonous premise by which civil society has preference over the State in the combat against the oil slick”³³. Media like *El País* did not hesitate to use a headline stating that “two villages in the Rías Baixas had gone on hunger strike”³⁴.

All this leads the authors to conclude that “for the Galician mass media too there is a before – adapted to the classical press model acting like notary of news – and an after – marked by the obsession to take sides – the Prestige. The arm-wrestling that some sectors wished to interpret as political support for one side or the other, but which nevertheless concealed more sophisticated keys, much deeper than the simple and even simplistic game of personal sympathies, was acted out above all in the newspapers. Never had it been so blindingly clear and obvious as in this calamity

31 Press Conference, 05.12.2002, Mariano Rajoy: “Some little threads are coming out, there are in fact four trails that have solidified, they look like vertical plasticine”.

32 *El País*, 15 November 2003.

33 *Idem*.

34 *Idem*.

that journalism is the product of the cultural, social and political conditions of a country and a time”³⁵

Be that as it may, the truth is that the media, both written and audiovisual, developed two absolutely opposed styles of reporting. Those which maintained a critical attitude towards the poor handling of the catastrophe, but above all towards the poor handling of the information about catastrophe, and those which wholeheartedly supported each and every one of the official actions and even went so far as to justify the lack of information or the distortion thereof as due to the difficult moments they were undergoing and the improvisation which they had to make use of.

El Correo Gallego, “the newspaper of the capital of Galicia, hoisted the flag in defence of the image of a proud and bellicose Galicia with special devotion as opposed to the mendicant testimonies that much more powerful media were providing one after the other. The aching, dark and tortured Galicia that Rosalía sang resuscitates in poorly-spirited weepers”, cried the newspaper, before demanding, in the same article, that “Galicia should use the cry of *Nunca máis/Never Again!* not as the slogan for partisan coexistence, but as a unanimous cry of rejection”³⁶, the three analysts finally concluded.

But the truth is that the balance of information could not have been very convincing for those directly involved when it came to assigning responsibilities to other departments.

This is what happened in the study entitled “Prestige: a matter of fact”, written and published by the Regional Government Fishing and Maritime Department. It highlights the fact that one of the most widespread accusations of all those made against the public authorities, in everything related to the crisis unleashed by the accident of the Prestige oil tanker, was that they concealed, twisted or did not provide enough information. This accusation was summed up by that of lying – the great discovery of whoever tries to get political advantage from a disaster – whereas the actual facts categorically contradicted it.

But then the Department which wrote the study washes its hands of all responsibility.

The scholars in the research work conducted by order of the Regional Government of Galicia concluded that the Fishing Department did everything in its hands for the media and society in general to have the most immediate, plentiful and truthful information, even allowing the work of journalists on board their boats and providing photographs that helicopters were taking in the open sea. The roots of the distortion of information lay in the number of personal statements made by people who had no scruples when it came to opting for the political advantage that can arise from an accident of this nature, at the cost of harming the country and its people.

³⁵ Idem.

³⁶ Idem.

The authors of this study are convinced that right from the beginning the information related to the details of the accident and the evolution of the oil slick were centralised on the Government Delegation, while the Regional Government Fishing Department, faithful to its history, had indeed given out all the information available at any given time, the media were helped in their job according to its possibilities, and furthermore, there was no evidence that any other departments of the regional or national governments were acting otherwise.

Even in the court case that is being held in 2013 in A Coruña about how the catastrophe was handled, those in charge have adopted the same stance – namely that at all times they took the decisions that seemed most appropriate and that if it happened again today they would do the same again. The evasive answers reached the point where the Government Delegate at the time, Arsenio Fernández de Mesa, did not hesitate to state in court that he never had any capacity to take decisions, “neither *autoritas* nor *potestas*”, and that he did not give any kind of instructions. “The interest of the Government was to report what was happening without deceiving absolutely anybody. (...) What I said in the press conferences was what the maritime authorities told me”.³⁷

Sánchez Paunero (2005), who worked as communications manager for the Government’s Prestige Commissioner, also insists on this approach. “In spite of the difficulties inherent in the situation”, said the editor of the Efe Agency, “with the Prestige a tremendous effort was made to try and react in line with the demand for information, which was enormous. More than speaking about the number of press releases or cold figures, it would be better to emphasise the dynamics and the positive attitude that was always present when reporting, although the results were not always those that people wanted to hear”.

Sánchez Paunero (2005) resorted to a specific and very significant fact to reveal how information open for all channels changed the desired effect of management of informative transparency. A scientific report was faithfully published talking about leakages in the wreck of the Prestige, accompanied by real images of what was happening. This transparent information, which might initially have helped the evolution of the crisis, was interpreted as all the opposite: an attempt to conceal information. The same thing happened with most of the inspection by the bathyscaphe *Nautilo*.

But perhaps to understand it better we might need the explanation of journalist Lois Blanco, who was in charge of the information on the catastrophe for *La Voz de Galicia*. Governments are not impartial, according to Blanco, but rather they are made up of members of one or more political parties whose rivals are other parties. Hence on countless occasions crises are handled without the independence and impartiality that they deserve. An exceptional situation demands that party interests should not influence the decisions that have to be taken. This way, in addition to greater efficiency, it will become possible to avoid the creation of a

37 Arsenio Fernández de Mesa, Europa Press, 18 January 2003.

breeding ground for the crisis to be accompanied by a clash between parties. A good way to make impartiality more evident is to give technical staff a greater role than politicians when it comes to transmitting information to the public.

The handling of the information was so controversial that the government under José María Aznar tried to solve it in the worst possible way; by trying to influence the main players in the information, opinions and directions of the media in Galicia.

The digital publication Galicia Confidencial revealed, in an article by Xurxo Salgado, that “Aznar’s Executive prepared an extensive communication plan to try and modify their hopeless image after the sinking of the *Prestige*. Early in 2003 they prepared a file on the main Galician newspapers, radios and televisions, as well as their managers and the main journalists in charge of the information about the catastrophe. The purpose was to try and modify the publishing lines of many of them, especially *La Voz de Galicia*.”³⁸

Xurxo Salgado’s work is excellent. He states that “in this strategy the Popular Government also focused its attention on the leaders of opinion in Galician society, as they thought they could be of interest in order to polish their public image. And so they prepared a direct communication plan so that the Government Commissioner, Rodolfo Martín Villa, could interact with them and bring them over to the stance taken by Aznar’s Government.”³⁹

In accordance with this plan, the President’s Communication Office prepared a series of interviews with the main media in Galicia. And after the main Galician newspapers, Martín Villa devoted his time to visiting the audiovisual media. Over the first few months in 2003, the Spanish Government’s Commissioner for the *Prestige* held meetings with the main managers and journalists from the *Ser*, *RNE*, *TVG*, *Onda Cero*, *Radio Líder-Intereconomía* and *Antenna 3TV*.

“Radio and television are appropriate means for gaining access to the segments of population directly affected by the shipwreck of the *Prestige*, as they are people who do not read the newspapers so much”, states the report which Galicia Confidencial had access to, recommending that the interviews “should be in person” with Rodolfo Martín Villa because “he comes over much better when dealing directly with people.”⁴⁰

In any case, as far as this analysis is concerned, one of the essential questions when handling a crisis caused by an emergency or a catastrophe is the correct administration of information, which should be truthful and verifiable. The perception that the official information was dishonest turned against the system itself and helped to create even more alarm and scepticism. The good example of professionalism and independence of the media made it possible for people to gain access to truthful information and for the Spanish media and its journalists to reach

38 Xurxo Salgado, *Galicia Confidencial*, 31 January 2013.

39 *Idem*.

40 *Idem*.

levels like those of the most advanced maritime countries. Ordinary people, volunteers and independent journalists are the foundation of the renewed hopes that the Prestige catastrophe left us.

More than a decade after the event, the conclusion that is reached, checking what happened and the related documents, is that communication was another catastrophe; this was avoidable, but at the same time extraordinarily wanting. And it is surprising that such aggressive defence is given when the information provided in the case of the Prestige does not differ substantially from that of the 11 March terrorist attacks in Madrid, the plague of forest fires and the Gürtel and Bárcenas corruption cases and the supposedly irregular financing of the PP. It is the same as the PSOE (the Spanish Socialist Party) has done on numerous occasions, the latest after the report of the false layoff cases in Andalusia. The PSOE's information policy is similar to that of the Popular Party.

A studied and planned informative strategy seems to be used, although the results always turn out to be catastrophic. First of all the truth is denied. The crisis does not exist. Later it is a question of closing the way for the news that comes to light. And this is usually done with a lie or a half-truth, which in the end leads to a situation in which the whole process of lack of information is uncovered.

Confusion, contradictions, attempts at intervention and denials define the handling of information in this maritime catastrophe, forcing the media that lead the information in Galicia and Spain to resort to their own means and foreign sources that did provide the real information that society demanded at the time. This situation created great tension that caused the polarisation of information and led to an almost absolute mistrust of any official version that was given and even of information provided by the most obliging media with the crisis management.

"The truth will never harm you, unless it harms you and you do not know how to use it", said Howard Rubenstein. But improvisation and half-truths cause irreparable damage. As Túnez (2004), professor of Information Production at the USC (University of Santiago de Compostela) points out, even though crises are unforeseeable, there is no time for improvisation or for silence. All questions have an answer even if the answer is made out to be an evasion of the question posed, even if it is considered that the question is not pertinent. Silence gives a free rein to interpretations, and it also means rejecting a time and a space in the media that might be assigned to publishing the antagonistic players' version in the crisis.

Having reached this point we should highlight the fact that nothing learnt from the handling of information in the crisis caused by the Prestige catastrophe could be applied today. More than a decade later, the improvements in information technologies, in particular Internet, mobile telephones and social networks, have completely modified the scenario.

Events with a different impact which have taken place since the sinking of the oil tanker, like the tsunami in the Indian ocean, the terrorist attacks in London and the civil protest movements have brought grassroots journalists into the light, and civil journalists who report on what happens by computer, in the first person and

narrating the situation they are witnesses to in real time. Most of them are ordinary people who use their mobile phones to inform about the situation, which in the case of the tsunami enabled thousands of missing people to be found and also enabled humanitarian aid, and in the terrorist attacks in London to see images of the exact moment when the explosions took place. It is not necessary to argue that today the Prestige catastrophe would have had a very different impact on society, thanks to the role that social networks would no doubt play. And nobody doubts that this movement of indignation that ended up as a social crisis would have been much more accentuated with the use of these networks.

Even though today's scenario, including the socio-political climate, is very different, it is always advisable to take lessons from what happened in November 2002 and over the following months. As professor and ex-dean of the faculty of Communication Sciences at the USC Xosé López indicates (2003), the main and most basic lesson is the need for the public authorities to handle communication with professional criteria to maintain and improve their corporate image, with plans for both internal and external communication. The operation of these mechanisms, especially those directed at informing people of the work that is carried out, is also the first antidote in the struggle against the effects of any catastrophe. This is so because the best defence is always advance information.

During a study conference held throughout 2004 at the Santiago Rey Fernández-Latorre Foundation in A Coruña, in collaboration with the Regional Government Fishing Department and in which outstanding specialists in communication at times of crisis took part, conclusions were drawn that, as mentioned above, the new scenario that has arisen from the globalisation of content on Internet has rendered obsolete. Yet even so, it could be advisable to highlight some of them, even if it is only to improve the faulty, ill-judged and erroneous communication that the people in charge of managing the Prestige catastrophe gave Galicia, Spain and the whole world.

- The information about a crisis cannot be separated from the actual handling of the catastrophe that causes it, because poor management of the information leads to poor management of the catastrophe.

Those who handle the information must have good knowledge of both the mass media and the social aspect of the happening. They are part of the preventive strategy.

- The initial impact and the evaluation of the possible consequences in the future are determining factors for facing up to an event of these characteristics. The principles of transparency and truth are a key factor to establishing an appropriate information strategy in case of catastrophe. Reporting periodically to the media and to society is vital for obtaining a successful conclusion to the crisis.
- There should be a crisis manual for the current scope; a manual that contemplates answers in all directions, means, social groups, public authorities and information users.

- Action should be taken as quickly as possible, as soon as the catastrophe takes place and in a situation of emergency. It is important to anticipate events, taking the initiative with information and establishing action benchmarks that avoid having to set up reactive strategies. Before journalists ask a question it is necessary to have the answers and make sure everyone else does too.
- It is necessary to take the lead in the crisis from the very beginning, with physical presence in the places affected. The temptation to downplay the catastrophe and deny facts, a trap the agents involved often fall into, takes us nowhere and can end up as a dead weight in the entire management process.
- In a catastrophe it is a necessary priority to have a suitable spokesman and leader, someone who enjoys credibility in society and the media and who is capable of transmitting messages clearly and confidently. This spokesman should avoid the strategy of shooting the messenger, because among other reasons the media are the link between the crisis manager and society.
- Messages should be precise, clear and truthful. The official source should answer all the questions with the greatest possible transparency. Silence is usually interpreted as a symptom of guilt, while sincerity is a sign of credibility and reliability.
- It is necessary to diversify the formats of communication as much as possible
 - press releases, public talks, audiovisual material, testimonies, documentation
 - because communication has to follow a sequence, be coherent and not let itself get carried away either by the events or by pressures. In this aspect an immediate answer on Internet with a specific and dynamic web site seems very useful.
- It is necessary to generate the necessary means to limit the spreading of rumours or unconfirmed information as far as possible, and on the contrary, to generate messages that prove these rumours are false.
- Communication demands the same level of professionalism as other areas in catastrophe management. It is necessary to bear in mind the importance of external communication, but this does not mean neglecting internal communication, where information leaks can take place.
- Social networks are one of the most significant components for communication in a disaster. It is a mistake to try and weaken these networks – on the contrary, they should be promoted, both private ones and those which depend on the media, groups and institutions.

Social networks will play an essential role should catastrophes like that of the Prestige take place again. They will be, undoubtedly, the main element in communication and popular mobilisations. They will be the main media, because as journalist Lluís Bassets (2013) points out, in our time the borderline between the public and the private, between the technology to reach the public in general, the

old masses of the 20th century, and private spectators, the niches or communities grouped together around shared interests, have been eliminated. Before, there were a few vertical advisors who imposed their content selection onto a broad public, while now any media consumer can become an advisor within a more or less limited community.

The basic premise of journalism is to tell people what happens as faithfully as possible, whether or not it is to the taste of the sources, those affected or the media – and of the journalist himself. It is a mistake to demand an attitude of collaboration from the media to reduce or annul the impact of a crisis, just as it is a mistake to refuse to inform or to deny each and every piece of news provided even though they are endorsed by entities of proven solvency.

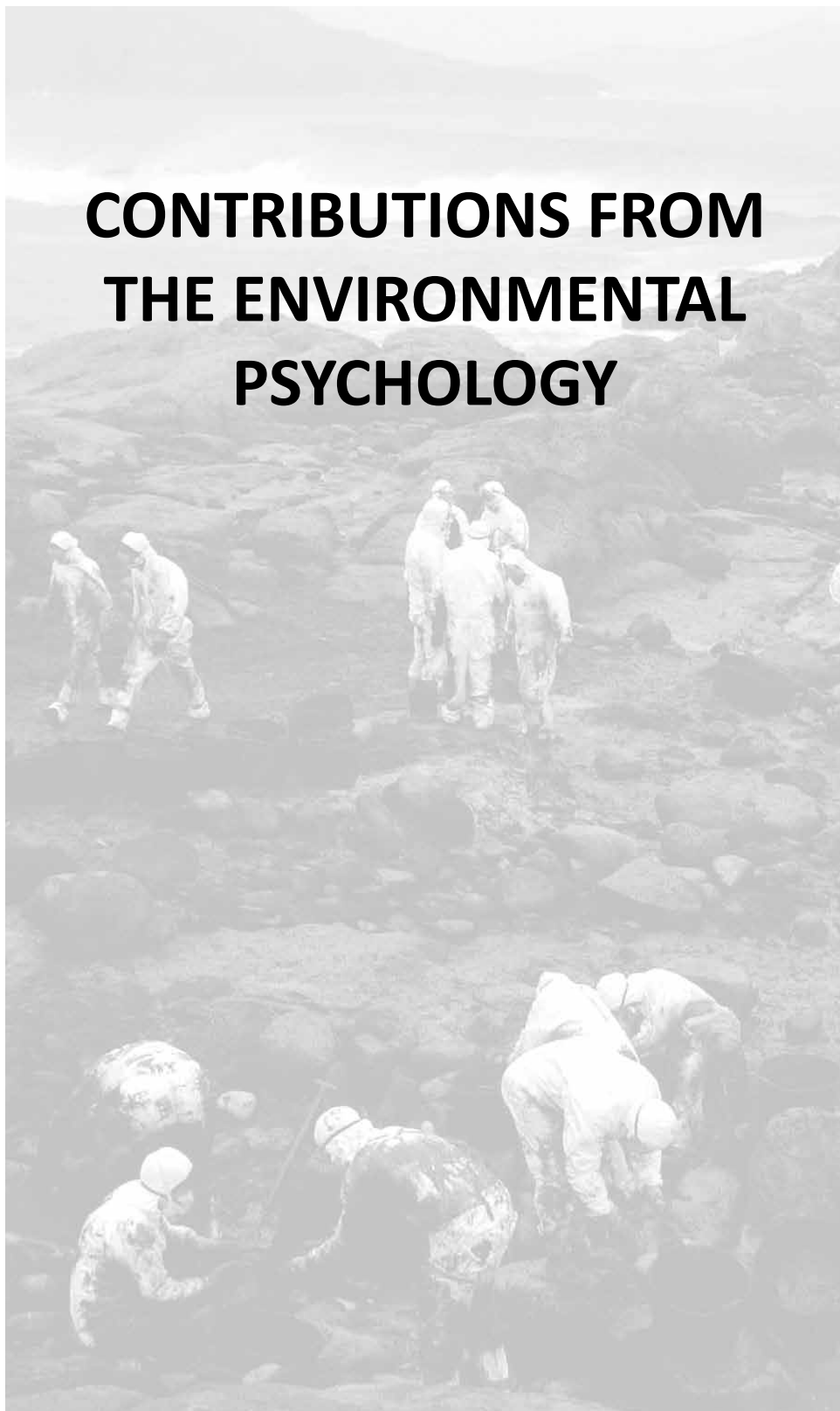
And this is what happened with the Prestige catastrophe. Once again, those who were responsible for handling it were convinced that by denying reality they could conceal, or at least downplay, the most serious environmental disaster suffered in Spanish waters and one of the most devastating in history.

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CONTRIBUTIONS FROM THE ENVIRONMENTAL PSYCHOLOGY



4

COMMUNICATION AND MANAGEMENT STRATEGIES DURING THE PRESTIGE CRISIS*

Ricardo García-Mira & Isabel Lema-Blanco



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Abstract

The growing environmental awareness that characterises modern societies has led to a considerable demand for participation in environmental decision-making, and not always along the lines proposed by governments. Our underlying thesis is that participation and collaboration are interconnected, mutually involved, and impossible to achieve without two-way communication. This study sets out to analyse the communication processes subsequent to the crisis that ensued after the accident to the Prestige, in addition to the needs and conditions that have to arise in order to improve communication and collaboration.

Keywords: Communication, trust, perception, citizen participation, Prestige.

The Prestige disaster

The case of the disaster caused by the oil tanker Prestige off the Galician coast in November 2002 was a clear example of how an accumulation of bad political decisions and the inappropriate management of information about the problem, characterised by the absence of a communication structure integrating the various parties involved in managing the crisis, can have major social, environmental and, of course, political consequences, altering the scale of the problem and its impact at both local and global level.

The findings of our research into the evaluation of the psycho-social impact of the Prestige disaster (for further information, see García-Mira, 2004; García-Mira et al., 2005, 2006), concerning the level of public support for the decisions taken during the handling of the crisis after the vessel went down, reveal that in addition to the obvious consequences for coastal and marine ecosystems in the area, the disaster also created major social and political upheaval.

The research

The purpose of the study was to explore the perception of the inhabitants of the stricken areas and of the volunteers who took part in the clean-up process after the oil slick had reached the coast. An initial sample of 1491 respondents (51% male, 49% female) was interviewed in December 2002, one month after the disaster, this being followed a year later, in December 2003, by a second round of interviews with 1504 persons (49.5% male, 50.5% female).

The handling of the problem

An analysis of the responses obtained from these two samples highlighted various aspects that are worthy of mention. Amongst the variables analysed were people's attributions regarding the action taken by the Government to manage the crisis and its effectiveness, which led, in addition to social upheaval, to a perception of a lack of trust and institutional credibility. Society as a whole passed a negative judgement on how the political authorities handled the crisis, due to their slowness in providing a response to the problem and their lack of sensitivity and concern towards the problem and those most severely affected by it. When a tragedy occurs, as members of the general public we expect our authorities to assume their responsibility for making swift decisions, and at the same time to show a certain degree of empathy with its victims. Failure to fulfil either of these expectations constitutes two serious errors that resulted in politicians being seen as having the greatest responsibility for the problem.

The public response, however, was a different matter altogether, since it was organised swiftly and spontaneously, and was subsequently rated very positively in our surveys. The role played by volunteers was decisive, not merely in terms of coping with the consequences of the spill, but also of provoking a reaction from institutions and the government alike.

Another significant aspect was credibility and trust, which are absolutely vital when it comes to the effective management of a crisis. A lack of trust means that it is hard to convince the public that things are once again safe, for example by authorising the renewal of fishing activities. In this case, the absence of credibility and trust combined with the low degree of effectiveness and perceived satisfaction regarding the government's role in the crisis.

The scores awarded by both volunteers and local inhabitants in 2002 were low for public institutions and the level of information, knowledge and experience. However, in the second round of interviews, which took place in December 2003, respondents were less critical and the scores given to effectiveness and credibility were higher than before.

Perception of how the crisis was managed, one year later

What can be the explanation for the apparent complacency of the general public with the situation a year after the event? It seems difficult that public opinion should change when the majority of the government's mistakes appeared to be so obvious. An initial explanation could be the speed with which the government made financial assistance available. The majority of fishermen saw a significant rise in income, in many cases to levels higher than their usual earnings. The kind of fishing carried out in the affected area is of a predatory nature, less interested

in conserving the environment than in making a profit. When the obvious signs of pollution disappear and signs of 'life' or cleanness return, it is easy to forget what has happened. Another factor influencing this change in perception could be that the Prestige disaster had by then disappeared from the media spotlight. Even the media that had been highly critical of the government adopted an acquiescent stance, partly as a result of institutional pressure and partly because it was felt necessary to convey a positive image of Galicia (in terms of the cleanliness of its beaches, the edibility of its fish and seafood, and so on).

However, it should be said that the similarity between residents' and volunteers' perceptions in 2002 may be nothing more than a coincidence. Volunteers were mainly more concerned with the damage done to the environment, whilst the local population was more interested in their own lives and livelihood.

Finally, the socio-political scenario may also explain this change in the local population's opinion. The societies we are talking about are small, closed and rural, conservative in every sense of the word. As a result, it is difficult to maintain a critical or anti-government stance over a long period of time; once the protest has made its mark and the messages have been got across, things are once again left in the hands of the authorities

Identifying the scale level

During the initial phase, a key issue was identifying the scale level of the problem and the corresponding levels at which to manage the decision-making process, combined with the different ways the general public and politicians conceptualised the problem. Whilst the general public and the media were quick to identify the scope and size of the problem, the government, doubtlessly focused on other local interests, stood back from what was really happening, leaving the affected coastline and the local population to their fate, in a process of threat minimisation common to many governmental reactions. As a result of ordering the tanker to head out to sea, without considering the implications of this decision, what should never have happened in fact came to pass, namely an oil-spill of unprecedented dimensions.

Accordingly, the problem could have been solved at a lower (local) scale level, for which purpose only a local system of social organisation would have been required. However, the decision to move the Prestige away from the coast, combined with the poor weather conditions, led to the vessel breaking in two, sinking and releasing a massive oil spill, which increased the scale level of the crisis. A crisis that Galician society immediately identified as an emergency demanding an urgent response (we only have to remember the action taken by the fishermen of the Ría de Arousa estuary), whilst the authorities' reaction to the seriousness of the problem came several weeks later, in the form of sending soldiers to the Galician beaches.

The worst effects of the Prestige crisis could surely have been avoided if some kind of system of social participation had been activated at the appropriate level,

involving the setting up of communication patterns (two-way) between politicians, scientists, the general public, experts and other organisations that were later to play a role in handling the crisis (e.g. fishermen's guilds, local authorities, pro-environmental NGOs, etc.).

Crisis communication

It can be said that communication strategy adopted by the government during the early days of the crisis conditioned how it was eventually resolved. The government's political reaction became a marketing problem: minimising the problem was a strategic error that was to cost them the loss of the public's trust. Instead of recognising the serious problem represented by the drifting oil slick, and putting themselves on the side of the general public by mobilising all the resources available, the government chose to do exactly the opposite, to minimise a problem for which they, initially, were not to blame: and that mistaken strategy was to have a much greater impact than it could have imagined. Society tends to believe in its politicians, in their ability to solve problems, for reasons of security and confidence. However, in this case the authorities first denied the existence of the problem and then decided to move it as far away as possible, and when the ship finally sank the problem had acquired a totally different magnitude.

The contradictory nature of the information provided by the central and regional authorities, on the one hand, and by the media, on the other, created a serious crisis of institutional credibility. The government tried to minimise the size of the problem, and when the public discovered this lie it reacted in two different ways; one was to participate in protests and demonstrations to denounce their political leaders' neglect or poor handling of the crisis, and the other to take the initiative in the clean-up operations during the first few months.

Both the media and Galician society showed the same reaction to the government's mistaken communication policy: by comparing different versions, giving little credence to official statements and obtaining their information from a variety of sources. The press on the whole reacted with a sense of social responsibility, considering the disaster as a special opportunity to render society a valuable service, increasing coverage and drawing the attention of the different institutions. In this regard, the information provided by social organisations (e.g. fishermen's guilds), pro-environmental groups and official French and Portuguese agencies (available to everyone through the Internet), combined with the intense coverage given by the media, especially the *La Voz de Galicia* newspaper or the TV channel *Tele 5*, which followed a policy of giving the most accurate information they could about what was happening, made it possible for the public to obtain a clear understanding of the nature of the disaster and the menace it supposed, as well as of its effects on the economy, the environment and jobs, providing a solid foundation for the collective mobilisation that ensued.

Furthermore, the initial attribution of responsibility to the government, which by minimising the impact of the tragedy effectively disqualified itself from exercising a leadership role in managing the crisis, favoured social mobilisation, which manifested itself in the creation of platforms for civic participation and the appearance of a variety of groups that coordinated the handling of the crisis from a number of points throughout Galicia.

The collective response

The collective response enjoyed significant advantages, despite the government's attitude of public censure towards the "Nunca Mais" civic movement, which was a major leader of the social protest during the twelve months after the disaster. The government's response, echoed by part of the media, was to attempt to sap the vitality of the social movement that had arisen and weaken the emerging social networks, as well as to divide public response in order to minimise, amongst other consequences, the political impact of the disaster.

A catastrophe can also be seen as an opportunity, because it increases people's perception of belonging to a community, whilst at the same time generating a perception of self-competence for coping with difficulties. In the case of the Prestige, the community expressed this competence, and responded to the collective threat by looking for new channels of participation. What institutions often tend to do is to attempt to restrict such responses, because they perceive these attitudes as a threat, rather than as a need of the community to respond (García, 2003). However, this kind of attitude is exactly what should not and must not be done. Social support networks are one of the most important components for communication and recovery at a time of disaster. A fractured or weakened social network may induce a perception of a low level of ability to face present or future threats.

Credibility and trust

One of the most important aspects in the environmental handling of the crisis had to do with the way in which people's belief and trust in institutions and public TV channels were affected. As Williams et al. (1999) point out, these variable are indispensable conditions for ensuring effective management in the places worst hit by a disaster, in this case the places that received the largest quantities of oil and tar. Public trust and credibility, given their dynamic nature, have a variety of determinants, based on the perception of experience and knowledge, but also on the degree of information revealed public, the honesty, the openness and even the sensitivity of the media to the problem (see Peters et al., 1997, cf. Williams et al, 1999).

Crisis communication theory states that the requirements for a crisis cabinet to act appropriately include honesty, transparency, a prompt response and control of the message, to avoid any contradiction between sources. Not a single one of these principles was observed during the Prestige crisis.

The social construction of risk

The physical environment appears to interact with the social, cultural and psychological environment, so we can say that that people develop their own belief systems regarding the nature of the risk arising from a disaster, as part of the coping process. Similarly, they develop, form and reformulate their perception of their environment to ensure a better fit with their needs and wants. As Berger and Luckmann (1966) have indicated, beliefs are constructed socially and are influenced by the interaction of individual, social, cultural, political and economic factors, as well as by the features of the pollutant itself.

The role of the media

The reaction of the local press to the catastrophe was to act with a sense of civic responsibility, showing Galician society the reality of what was happening. The Galician print media (the most widely read by people in the region) performed an important task of reflection, acting swiftly and checking the data provided by official sources. The newspapers, as a result of having longer to consider what they were reporting, provided constant in-depth coverage of how the catastrophe was unfolding, producing firm, reflexive, analytical news items based on their own investigation, contacts with expert sources and a rigorous treatment of the more technical and scientific issues, all of which enabled people to obtain an accurate idea of the true size of the problem.

This having been said, we should not forget the important role played by the mass media in the social construction of risk. In the case of the Prestige disaster, the media, as interpreters and mediators of the crisis, also helped to form the social construction of that reality (García Mira, 2004).

Civic participation for a more effective management of information

The science–politics interface

The findings of the assessment of the social and environmental impact of the Prestige disaster, apart from the specific objectives of the study itself, highlight the need to establish the proper channels to improve communication between the general public and government, and strengthen collaboration between scientists and politicians. This would appear to indicate that bringing together scientists, the authorities, information management companies, local associations, environmental groups and other NGOs around the same table could produce enormously useful material for not only the management of, but also research into, the public perception of environmental risk.

The Prestige incident illustrates the importance of ascertaining not only people's concerns, knowledge and preferences, and how they can act on the minds of the

general public, politicians and decision-makers, but also the contributions resulting from shared reflection and social and environmental interaction with the issue.

The quest for new participative mechanisms

Modern society is characterised by the high level of education of its members, a number of whom are no longer happy to play a merely passive role in the face of the actions of their political representatives and managers. As a consequence of the increase in information about, and knowledge of, complex themes, we are witnessing the appearance of what some experts refer to as “thematic citizens”, in other words well-informed people who are active in certain themes or political or decision-making spheres, and who thus look for ways of participating in the handling or resolution of problems of this kind. We should see this as an opportunity to introduce new systems for civic participation in complex areas of political management that require knowledge, debate and the involvement of the public in the decision-making process (one example of the latter being the recent experiences of consensus conferences or citizens’ juries).

The ability to reformulate political problems in terms of meaningful scientific questions and hypotheses could serve as a base for fruitful collaboration in the future. This collaboration would include the need to establish controls over a certain kind of scientific output that produces poorly verified reports defending the interests of their sponsors rather than the public interest, which sometimes unfortunately even compete on equal terms with properly verified scientific data. Working with politicians can at times be a complex business, since it is no easy matter to manage all the points of view held by the general public and decision-makers alike, with all their individual preferences. Nevertheless, a modern society urgently requires the creation of spaces for competent social participation, with the possibility of establishing at least one level of decision-making, binding on politicians and citizens alike, and free from the influence of interests other than that of society as a whole.

Conclusion

To conclude, we must ask ourselves: What can we learn from case of the Prestige? The main lesson to be drawn from this disaster is that badly managed information and poor, uncoordinated one-way communication between the authorities and the general public produces mistrust and a loss of credibility and makes it more difficult to manage an environmental crisis. Contradictory and uncoordinated communication between government and the media, for example, creates uncertainty and may be a contributory factor in social protest, as part of the process of attribution of responsibility (see Hallman & Wandersman, 1992), increasing the need to find a guilty party. There is also an increase in the scale of the problem, from local to global.

Our findings allow us to conclude that the loss of credibility and trust have an effect on the coping process, originating from the government's decision to discourage communication, separating society from the decision-makers and thus blocking communication, and therefore participation, which according to our theory are interrelated. The consequences can be seen in the manner in which not only the environmental, but also the social, problem developed and was subsequently resolved.

Finally, it should be pointed out that promoting citizens with competence in environmental actions is important for enabling the general public to become more responsibly involved in developing pro-environmental behaviour patterns, as we have shown in a previous study (Losada & García-Mira, 2003). This requires the existence of efficient two-way communication patterns as a way of approaching participation in, and the management of, problems involving different scale levels. The case we have analysed here reveals that the degrees of freedom to be found within democratic societies can be used to activate participative and truly democratic processes in which these communication patterns between the general public, scientists and politicians at different levels blaze new trails that will lead to a more environmentally sustainable society in the future.

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5

DIFFERING ATTITUDES AND ATTRIBUTIONS BETWEEN VICTIMS AND VOLUNTEERS*

José Eulogio Real, Ricardo García-Mira & Carmen Voces López



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Abstract

The catastrophe caused by the breaking up and sinking of the tanker *Prestige* off the Galician coast in November 2002 was an event with enormous repercussions from a social and political, as well as environmental, standpoint. The purpose of this study is to analyse the attitudes of the victims of this disaster, and how they changed over time, as well as to compare the former with the attitudes of the volunteers who in the first few months after the spill helped to clean up the Galician coastline. The findings reveal evident differences, not only between the attitudes of volunteers and local residents, but also between those of the latter as a result of the passing of time.

Keywords: Attitudes, attribution, volunteers, disaster, homogeneity analysis.

Introduction

On 13 November 2002 the *Prestige*, a tanker sailing under the flag of convenience of the Bahamas and carrying 77,000 tons of heavy fuel oil, suffered severe damage during a storm off the Galician coast. After several attempts to move the vessel out to sea, it split in two and sank. The result was a spill involving several thousand tons of toxic oil, most of which reached the Galician coast, although some washed up on other parts of the coast of northern Spain and western France. The spill continued even after the vessel had sunk to the seabed, making it one of Europe's worst ever environmental disasters.

However, the accident brought with it consequences of a different nature, probably due to the circumstances in which it happened. The initial lack of information about the severity of the threat on the part of regional and national institutions and the Spanish maritime authorities created a high degree of social alarm, since it was clear to the coastal population that a catastrophe was only a matter of time. Most of what little information was available came from NGOs, some media sources and a few French and Portuguese research institutions.

When the tanker eventually sank it became clear that the information provided by Spanish and Galician institutions was unreliable, and that the measures taken by the authorities had not only failed to avert the catastrophe, but had in all probability increased its radius of action and seriousness. That moment also witnessed an episode of spontaneous organisation amongst the general public, not only in protest against the way in which the politicians had handled the issue, but also to mitigate the effects of the disaster. A variety of NGOs assumed the responsibility for managing the crisis and its consequences; the most impressive example of this phenomenon was the arrival of thousands of volunteers from all over Spain and even abroad, who spent months cleaning up the oil-stricken coastline by hand, without having been requested to do so by any kind of institution, and much less receiving any kind of official aid, material or financial.

Three months after the disaster occurred, the government began to take the initiative, this taking the form of sending materials for the volunteers and establishing an emergency plan (known as 'Plan Galicia') to provide subsidies for the fishermen and shellfish gatherers who had lost their livelihood and investment for infrastructure projects in the area. Over time, these initiatives succeeded in reducing the intensity of the public outcry.

Objectives

The aim of this article is to evaluate local residents' perception of the disaster and compare it with that of the volunteers, the great majority of whom came from outside the affected areas. Additionally, in order to evaluate any possible change over time in the perceptions of those who suffered the direct consequences of the spill, a second sample of residents was asked to evaluate the same aspects a year later.

More specifically, the aspects the three groups of respondents (residents in 2002, volunteers in 2002 and residents in 2003) were asked to evaluate were as follows:

1. The extent to which they were affected by the accident (not at all / a little / somewhat / quite a lot / a lot).
2. The extent to which they understood the causes of the accident (not at all / a little / more or less / quite well / perfectly).
3. Who they considered responsible for the accident (nobody / the ship's captain / the ship owner / fate / the Spanish government / the Galician government / the harbour authorities / the EU / others).

Method

A random sample of 1491 people (51.2% male, 48.8% female) was selected in December 2002, one month after the disaster had occurred. Of these, 1246 were residents from the affected areas, and 245 were volunteers from different parts of Spain. A second round of interviews took place in December 2003 – January 2004, involving a further 1504 residents from the affected areas (49.5% male, 50.5% female). In both cases, the confidence level was 99.7% and the sampling error less than 4%. The sampling methodology used was the random route method, with only residents over the age of 18 being interviewed. Respondents' assessments were recorded using an ad hoc protocol specifically designed for the purposes of this study.

Given the mixed nature (categorical and ordinal) of the variables involved in the study, it was decided use Homogeneity Analysis (Gifi, 1981) to analyse respondents' assessments. This analytical method allows for optimal scaling of both the variables being studied and the respondent sample, giving quantifications for both jointly, so that subjects belonging to homogeneous sub-groups will obtain similar quantifica-

tions, whilst those belonging to different sub-groups will obtain different quantifications. The same can be said of the categories of variables involved, with the most similar categories obtaining similar quantifications and those with little or no similarity obtaining different quantifications. Given that the properties of these quantifications enable them to be shown as coordinates in a multi-dimensional space, the results can be interpreted in the form of a spatial map plotting the positions of both the different categories and the different sub-groups as points in the same Euclidean space.

Results

Homogeneity analysis provided a joint two-dimensional solution for both the categories of the three variables being studied and for the three groups of subjects. The goodness of fit was satisfactory (0.75), whilst the importance of the first dimension was slightly greater (0.44) than that of the second (0.31).

The analysis of the measures of discrimination for the 3 variables concerned and the 3 groups of subjects (see Table 1) revealed that the extent to which subjects considered themselves affected was related to both dimensions, although somewhat more to the first of these. On the other hand, the degree of understanding of events was slightly more closely related to the second than to the first. The attribution of responsibility revealed a similar pattern to the latter, whilst the differences between the three groups of respondents were almost exclusively related to the first dimension.

Table 1. Measures of discrimination for the 3 variables studied and the 3 groups of respondents.

	Dimension	
	1	2
The extent to which the accident affected the subject	0.571	0.347
The degree of understanding of events after the sinking of the <i>Prestige</i>	0.369	0.462
Attribution of responsibility	0.338	0.406
Volunteers / Residents 1 / Residents 2	0.475	0.036

Figure 1 shows the quantifications for the three variables and the three groups of respondents in a common two-dimensional space. As can be seen, the respondent subgroups are aligned along dimension 1, with local residents interviewed in 2002 and volunteers to the right of the diagram, whilst the local residents interviewed in 2003 are firmly on the left-hand side of the diagram. The proximity of a response category to a sub-group or another response category indicates that they share similar quantifications, and as a result we can appreciate that the attitude of the

subjects interviewed in 2003 was clearly the opposite to that of those interviewed in 2002, which was very close to that of the volunteers at the time. Indeed, in 2002 the majority of residents living in the areas hit by the disaster and volunteers alike showed their great concern over the disaster and an excellent understanding of its causes, attributing the main responsibility for its occurrence to the Spanish Government. The majority residents living in disaster-hit areas interviewed in 2003, however, showed little concern over the disaster, only a certain degree of understanding of its causes and a diffuse attribution of responsibilities, since none of the items in the attribution category lies very close to the group centroid.

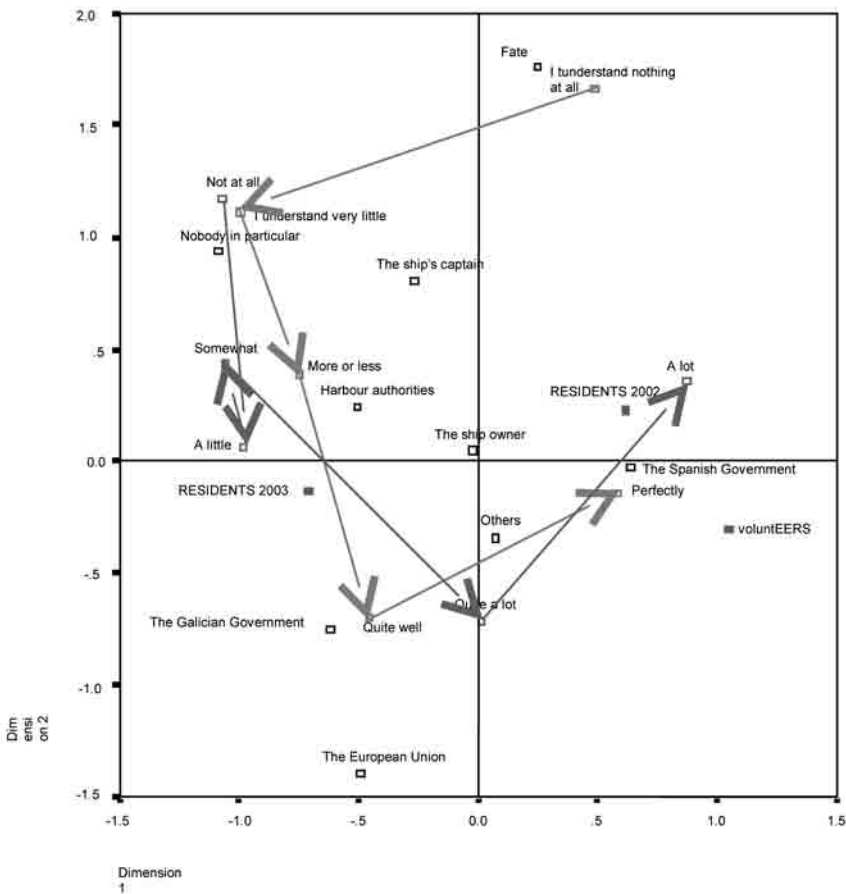


Figure 1. Graphic representation of the quantifications of dimensions 1 and 2 for the three variables studied and the three groups of respondents.

Since the variables corresponding to the extent people felt affected by the disaster and their degree of understanding of its causes were ordinal, the order of categories is indicated by arrows. The distance between the initial categories of both variables (Not at all/a little; Nothing at all/a little understanding) and the three groups of respondents

respondents indicate that these replies were given by a minority of subjects, whose attributions of responsibility were irrelevant (Nobody in particular/fate).

The results, therefore, reveal a clear change in both the attitudes of local residents and their attributions of responsibility a year after the disaster occurred. Since the pollution from the spill had only been partially removed during the intervening period, and that the consequences for the ecosystem were still evident at the time, this change should probably be interpreted not only as being due to an improvement in the situation twelve months after the catastrophe, but also to the financial compensation and reparation policy instituted by the Spanish and Galician authorities.

Conclusions

The findings of this study indicate that under the right conditions subjects can drastically modify both their attitudes and attributions of responsibility. In the case of the Prestige disaster, these conditions would appear to be the financial compensation received by the subjects. If we consider that fishing is one of the main economic activities in the area affected by the spill, attitudes could have been expected to change to a much lesser extent than they did. However, it is worth bearing in mind the low standard of living enjoyed by fishermen in these areas. A policy of financial compensation signifies a reliable source of income without having to endure the hardships inherent to working at sea; this is even more relevant in the area we are dealing with, rightly known as the 'Coast of Death' for the danger it represents to boats and their crews. These conclusions are supported by the findings of another study (García Mira et al., 2004), in which subjects' responses to other variables of the protocol relating to socio-economic aspects were analysed.

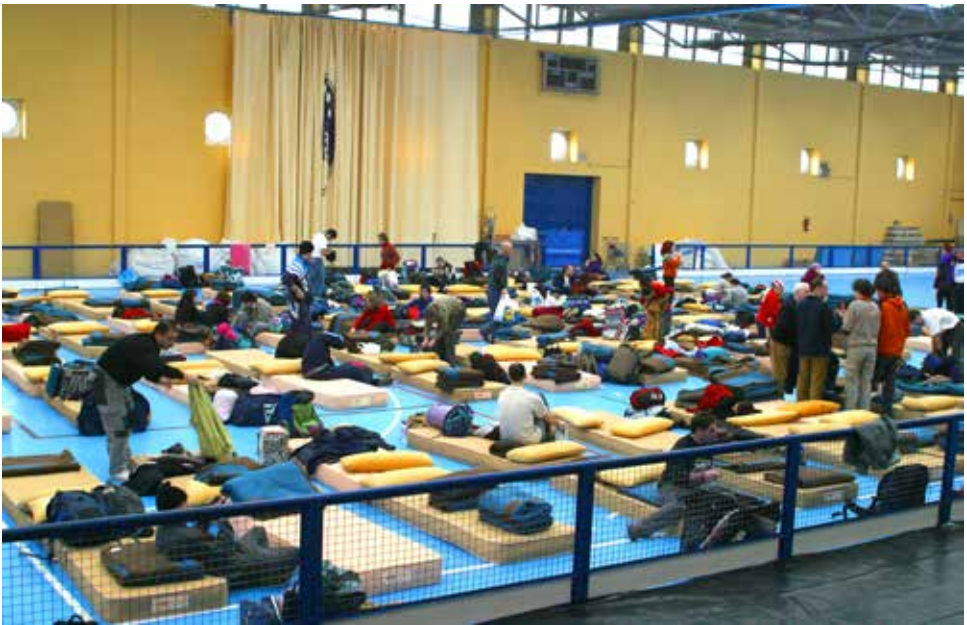
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6

EXPLORING COGNITIVE REPRESENTATIONS OF CITIZENS IN AREAS AFFECTED BY THE DISASTER*

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Abstract

In November 2002 the oil tanker Prestige sank in the Atlantic Ocean, spilling thousands of tons of toxic heavy fuel oil, which reached the Galician coast, as well as the coasts of Northern Spain and Western France. Widely recognised as the biggest ecological disaster in Europe, it caused widespread ecological damage to the affected areas. The social response to this disaster was unprecedented, involving extremely large numbers of citizens. This chapter assesses the degree of social impact of the disaster, as well as the attribution of responsibility, trust and credibility of several public and private organisations and the media. An exploration of cognitive representations of risk is also addressed.

Keywords: Prestige, Social Impact Evaluation, Ecological disaster, Threat Perception.

Introduction

In November 2002, the oil tanker Prestige sank 250 km. off the coast of Galicia in North–West Spain. The tanker contained 77,000 tonnes of fuel oil, part of which is still being extracted from the sea. Large quantities of toxic heavy fuel oil were spilled and blown on to the coast over the following months, with little initial reaction from governmental institutions at both regional and national level.

Several factors are essential in order to understand the social impact of the disaster. First, the absence of information about the threat it represented for the population and the ecosystem, together with the official reaction in the face of the disaster, tending to minimise the risk involved from the first moment. Second, a week before the sinking, the tanker was losing oil whilst only 3 miles off the coast, while the government insisted that it was 40 miles away. Finally, the decision to tow the tanker away from the coast proved to be a mistake, according to experts, because it only meant spreading the damage over a wider area. The combination of all these factors led to a serious loss of trust in the institutions and their credibility.

Galicia had been the victim of previous oil tanker accidents (e.g., Urquiola, Aegean Sea, Casón, among others), but the social and political response was considerably more muted than on this occasion. Why did the Galician population respond so loudly this time? What features have characterised and mediated in the mass community response process?.

On the one hand, the information coming from non–governmental Spanish organisations, ecologists, and other French and Portuguese organisations, as well as the clear positioning of some media towards reliable information, provided a clear understanding of the nature of the disaster and its effect on the economy and employment (the Galician economy is heavily dependant on fishing and tourism), providing a solid basis for social mobilisation.

On the other hand, the initial attribution of responsibility to the Government favoured (a) the development of a social mobilisation through citizen's organi-

sations, and (b) the appearance of several collectives managing the crisis under different models.

The public response, which was well organised, increased the social support and solidarity coming from other parts of the country, as shown by the thousands of volunteers coming not only from all over Spain, but also from other European countries. It placed great pressure on the actions of the Government, demanding solutions for the cleaning of the coast and the economic recovery of the affected areas. The Government response attempted to reduce the vitality of this social movement, and tried to weaken the emerging social networks and encourage the division of the community response with the aim of minimising the impact of the disaster on the local elections which were to be held a few months later, in 2003. This attitude is totally the opposite to what should have been done. Social support networks are one of the most important components for communication and recovery in disasters like this (San Juan, 2001). The fact that the weakening of these networks was intentional is a serious and worrying aspect, because fractured or weakened social support networks can force a perception of a low ability to cope with future threats. Thus, the Government's actions were irresponsible.

Social pressure and protest, backed by some media, were important factors in the further organisation of volunteers, and were decisive in the approval of a plan named "Plan Galicia", which committed future investments and projects for the region.

One of the most important aspects in the environmental management of the crisis was the way in which credibility and trust in institutions and some media were affected. These two variables, according to Williams et al. (1999), are necessary conditions for the effective management in those places most affected by the disaster. When there is no credibility or trust, it is very difficult to convince the citizens with regard to the safety of exploiting the area again for fishing activities. Public credibility and trust, due to its dynamic character, has several determinants, such as the perception of experience, knowledge, honesty, or the sensitivity of the media towards the problem (see Peters et al., 1997, cf. Williams et al., 1999).

The length of time the pollutant is present is an important mediator of the social response process (see Evans & Cohen, 1987; Otway & Von Winterfeldt, 1982; Slovic, 1987; García-Mira et al., 2004). One of the priorities, once the Government decided to play the leading role in the management of the crisis, was the cleaning of the coast, in order to remove the visual impact of the fuel oil on the rocks and beaches. This task is still being undertaken nowadays.

Field Research

A study, which sought in particular to examine the differing perceptions and evaluations of residents and volunteers, was carried out to evaluate the social impact of the Prestige disaster. A distinction was made between responses from residents

and from volunteers, based on the fact that volunteers differ from inhabitants in many respects (higher commitment, better information about the situation, a more objective point of view, not economically affected, etc.). The study had the following aims:

- I. To assess the degree of impact of the Prestige disaster on the local population.
- II. To assess the attribution of responsibility, as well as trust in and the credibility of key public institutions and sources of information.
- III. To explore the cognitive representations of the risk, impact, etc. of both volunteers and residents.
- IV. To analyse estimations of the temporal impact of the disaster in terms of the time that residents and volunteers believe that the economy and the environment will return to its pre-disaster state.
- V. To analyse the incidence of health problems in the community.
- VI. To describe and account for the variations in collective behaviour as a consequence of the disaster.

Method

Sample and instruments

A random sample of 1491 subjects (51.2% males and 48.8% females) was surveyed in December 2002, one month after the disaster. Of these, 1246 were residents in the affected areas, and 245 were volunteers. We followed a random routes method for the selection of respondents, with a reliability of 99.7% and a sample error of less than 4%. The criteria for sampling were that respondents should normally be resident in the Autonomous Community of Galicia (Northwest Spain) and of over 18 years of age. Furthermore, residents were divided into two groups: those living in coastal communities that were threatened, but not harmed, by the oil spill, and those living in coastal communities that sustained major damage. We used a social impact evaluation protocol especially designed for this study which included information on: a) socio-demographic variables; b) perception and understanding of the impact and duration of the threat; c) the evaluation of information received; d) trust in and credibility of the regional and national government, media and other organisations; e) attribution of causes and responsibilities; f) perception of consequences; g) degree of satisfaction with the response of different public and private organisations to the disaster; h) evaluation of the efficiency of response and remedial actions by the regional and national governments, and others; i) impact on health; and k) implications for changes in behaviour. The questions were of both closed and open response format. All interviewers were fully trained prior to conducting the face-to-face interviews.

Results

Perception and understanding of the impact and duration of the threat

The first reactions to the accident were very clear; 46.6% of the population declared that the 'Prestige' oil spill had affected them "very greatly", and a further 37.7% "greatly" (84.3% in total). Volunteers were marginally more affected, as the corresponding percentages were 51.4% and 37.9% (89.3% in total). With respect to the understanding of what had happened, half of the population understood perfectly what was happening (49.6%), to which must be added a further 25.6% who declared that they "understood something" (75.2% in total). As before, the sum of these percentages is higher for the volunteers (62.6% and 18.9%, respectively, 81.5% in total). With respect to what had been most affected by the disaster, both residents and volunteers perceived that "Galicia in general" and "the Ecosystem in general" were the most affected, but the volunteers were much more concerned about the degree of effect on the ecosystem than were the residents (54.1% vs. 42.1%). Both residents and volunteers agreed that the consequences of the disaster would be long term rather than medium or short term, but the volunteers were again more pessimistic than residents (see Figure 1).

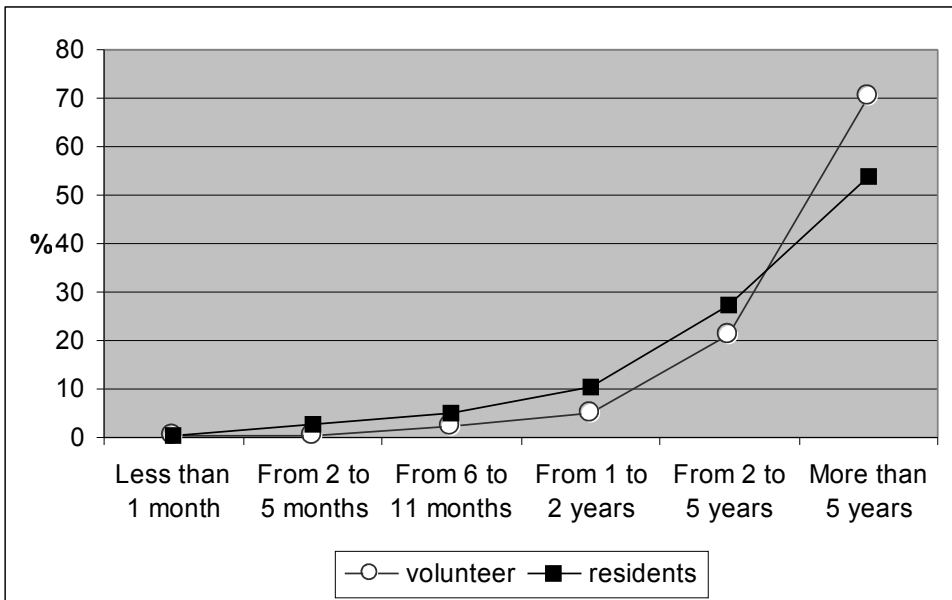


Figure 1. Expected scope of threat for residents and volunteers.

Information about the disaster

When asked if they had been informed about what to do to cope with the consequences of the disaster, only 59% of the residents answered affirmatively. This

percentage rose to 73.8% for the volunteers. When asked about what were their sources, the highest percentages were for TV and the press (78.8% and 58.8% for residents, 66.3% and 41.7% for volunteers, respectively), followed by radio and friends/neighbours in the case of residents (32.8% and 24.4%, respectively), and by other volunteers and ecologist organisations in the case of volunteers (38.3% and 17.7%, respectively). These results show noticeable differences between both groups. Apart from the fact that residents relied more heavily on traditional media than volunteers, both groups relied on other, less usual sources of information: friends and neighbours in the case of residents, and other volunteers and ecological organisations, in the case of volunteers.

Even when the source of information was a traditional one (TV, press or radio), the importance of the different options was not always as might be expected. Whereas for press and radio, the percentages obtained more or less agree with market positions for the different newspapers and radio stations (at national and regional level), the percentages for the TV stations were quite remarkable. The most-watched TV channel, with 73.1% for residents and 88.4% for volunteers, was a privately-owned channel (Tele 5) which ordinarily never comes near this share, especially when compared with the state-owned national (TV1) and regional (TVG) channels, which on this occasion were mostly ignored. We find a clear indicator of lack of trust in the state-owned media, usually the main source of information for the general public in Spain. To summarise, the highest percentages for the media correspond in all cases to privately-owned newspapers, radio stations and TV channels, all of which are characterised by the distance they kept from the Government position, and the interest they showed in providing plenty of information about the disaster, as compared with the scarce and partial information provided by the public (and some private) media, more subject to government control. Whilst this is the usual situation in the case of the press and radio, the unusual results for the shares of the TV channels show that lack of trust was present with respect to the subjects' search for information.

Informative and institutional credibility

The above results are confirmed when exploring the assessments made by residents and volunteers of the credibility of the different sources of information. Whilst the TV channel Tele 5, the fishermen's organisations, friends and relatives and private radio stations were all considered reliable, government institutions (both national and regional) and the state-owned media, together with some privately-owned media, obtained very poor mean scores. Results also showed that volunteers were, in general, more critical than residents.

Further analysis revealed credibility was a function of effectiveness and satisfaction. High and significant correlations between the three criteria were found for the assessments of governmental institutions at local, regional and national levels, at the negative pole, and for the fishermen's organisations at the positive pole (see bold

diagonal values in Table 1). In the case of national and regional government, these relationships were even crossed, such that credibility for one of them was related to both satisfaction and perceived effectiveness for the other (see off-diagonal values in Table 1). This indicates that subjects did not discriminate between the two kinds of government, despite their national and regional character, thus indicating that they were not differentiated as such.

Table 1. Correlations between perceived credibility, effectiveness and satisfaction, for residents and volunteers (in parentheses).

		Credibility			
		National gov.	Reg. gov.	Local gov.	Fisher. org.
Satisfaction	Nat. gov.	.638** (.634**)	.638** (.576**)	.352** (.224**)	.068* (.042)
	Reg. gov.	.624** (.466**)	.685** (.601**)	.345** (.263**)	.061* (.074)
	Local gov.	.309** (.248**)	.354** (.349**)	.569** (.615**)	.207** (.315**)
	Fish. org.	.044 (–.050)	.080** (.026)	.228** (.227**)	.612** (.667**)
Effectivity	Nat. gov.	.682** (.657**)	.679** (.608**)	.327** (.264**)	.021 (.047)
	Reg. gov.	.624** (.533**)	.660** (.663**)	.309** (.347**)	.019 (.080)
	Local gov.	.361** (.243**)	.399** (.354**)	.565** (.671**)	.222** (.359**)
	Fish. org.	.034 (–.019)	.060* (.048)	.180** (.210**)	.586** (.669**)

* $p < .05$ (bilateral); ** $p < .01$ (bilateral)

Attribution of responsibility

Both residents and volunteers identified the national and regional governments as the main bodies responsible for the disaster (residents: 55.5% and 27.3%, respectively; volunteers: 62.5% and 30.2%, respectively). As with previous results, volunteers were more critical than residents.

Satisfaction and perceived effectiveness in dealing with the catastrophe.

Perceived effectiveness and satisfaction were very similar for both residents and volunteers. The latter, together with citizens in general, ecologist organisations, and fishermen's organisations were highly valued. On the opposite pole, national and regional governments, as well as the EU, obtained a very low mean score. To summarise, subjects perceived a general failure in those institutions supposedly in charge of the management of the disaster, whereas non-governmental and co-operation networks generated ad-hoc were highly valued by the same subjects.

As has been shown above, credibility was highly related to both perceived effectiveness and satisfaction. Correlation analysis of the two latter showed that they were also related to each other. As can be seen in Table 2, scores assigned to the different agents involved in the disaster were highly correlated, thus indicating that low perceived effectiveness was associated with low satisfaction (and, in turn, with low credibility). This relation further increases the perceived distance between

the highly valued non-governmental agents, and the poorly valued governmental institutions at every level. It can be noted that the correlations were much smaller when referring to the effectiveness and satisfaction of the volunteers. Inspection of scores assigned by the subjects showed that the explanation for this could be that the perceived effectiveness of volunteer's work showed a higher variability than satisfaction, which obtained the highest scores almost unanimously.

Table 2. Correlations between perceived effectiveness and satisfaction with different social agents for residents and volunteers.

Agent	Residents	Volunteers
EU	.717**	.771**
National government	.797**	.827**
Regional government	.789**	.833**
Local government	.800**	.832**
Volunteers	.494**	.302**
Fishermen's organisations	.649**	.700**
Tragsa	.800**	.778**
Ecologist organisations	.604**	.663**
Ship owners	.746**	.829**
Local companies	.748**	.771**
Neighbours	.755**	.779**

Health risks and behavioural change. Health issues seem important, with most subjects informed being aware of the health risks. As expected, the degree of awareness was lower for the residents (66.5%) than for the volunteers (78.3%), who were in close contact with fuel-oil over long periods. Nevertheless, when asked if they believed that contact with the fuel-oil would damage their health, percentages were high and very similar for both groups (67.3% for residents; 69.2% for volunteers). With respect to protective measures, these were reported mainly, as to be expected, by volunteers (78%). The incidence of health problems, as declared by respondents, was quite high, particularly for the population, if we take into account that they had less contact with the fuel-oil (29.9% for population; 35.7% for volunteers); the number of subjects reporting having visited a health centre was, nevertheless, low for both groups.

With respect to their everyday life, the incidence of the disaster was quite high for residents (26.5% stopped one or more everyday activities; 43.5% started one or more new activities). A high percentage of volunteers (91.3%) reported having started new activities, but these are probably related with the work they were doing.

Elements for Discussion

The slow development of Galicia, in comparison with other regions in Spain, the historical trend it has displayed towards resignation, and the feeling of being a historically forgotten region, probably favoured the use of the population's strategies for coping, such as participating in social protest movements, rather than choosing individual action.

As has been noted elsewhere (García-Mira et al., 2004), one aspect to take into account is that people develop their own belief system regarding the nature of the risk resulting from the disaster, as part of the coping process (Vyner, 1988; Kroll-Smith & Couch, 1993; Rochford & Blocker, 1991). As Berger and Luckmann (1966) noted, beliefs are socially constructed and are influenced by the interaction of both individual, social, cultural, political and economical factors, in addition to the characteristics of the pollutant itself. In our study, we took into account the beliefs about the duration of the pollution, the effects on health, or the scope of the damage. We also used the attributions of citizens on institutional actions undertaken to manage the crisis, which gave rise to a perception of distrust and lack of institutional credibility, aspects which arose as a consequence of a collective construction in itself, or maybe in combination with some kind of individual elaboration (see Williams et al., 1999).

Our results showed a strong and direct relationship between credibility, perceived effectiveness and satisfaction. They were consistently low for public institutions, as the degree of information, knowledge and expertise was assessed as deficient by both residents and volunteers.

In the case of the Prestige disaster, both residents and volunteers were quite pessimistic about the duration of the threat, and this may indicate that impact can increase with time. The incidence of health problems and the changes in everyday habits are also indicators of the social and individual impact of the disaster, mainly for residents.

In this work, we used beliefs on the duration of the pollution, the effects on health, or the scope of the disaster, but we also used the attributions that people made on the action and effectiveness of the Government and the institutions in order to manage the crisis. One of the actions is the financial support given by the Government to fishermen. It is known that the positive perception of this assistance on the part of those affected is related to a satisfactory psychosocial recovery. However, if this financial assistance is perceived negatively, the psychosocial impact can go much deeper. This is an important reason for including support services that integrate not only financial or technological strategies, but also psychological and social ones, in order to manage the consequences of a disaster.

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7

COPING WITH A THREAT TO QUALITY OF LIFE*

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Abstract

The Prestige disaster occurred off the Galician coast (North–West Spain), after the sinking of Prestige oil tanker in November 2002. The breaking up and sinking of the ship in heavy seas resulted in the discharge of thousands of tonnes of toxic and heavy oil. The oil was washed up not only on the Galician coast, but also along the north coast of Spain, and the west of France. A year later, the consequences of this accident on the quality of life of Galician people are only beginning to become apparent. The present study evaluates the inhabitants' and volunteers' perceptions and evaluations of the social impact of the disaster and its effect on the population. This paper also provides a diagnosis of the changing relationship between a damaged environment and a human community, both immediately and a year after the catastrophe. A total of 1491 and 1504 interviews were undertaken in Galicia in two phases of the research amongst people over 18 years old. This paper reports on the changes in the attitudes of the population in several respects: the degree to which they were affected by the catastrophe, their understanding of what happened, their attribution of responsibility and the assessment of the consequences, and finally, their feelings and assessment of satisfaction and credibility of the political institutions, organisations, and the media.

Keywords: Prestige, disaster, trust, risk perception, loglinear analysis.

Introduction and background

On 13 November 2002, a Bahamian registered oil tanker, the 'Prestige', containing 77,000 tonnes of crude oil was severely damaged in a storm 250 kms off the Galician coast in North–West Spain. The ship split in two, sank and spilt thousands of tonnes of heavy and toxic oil, much of which was blown landwards arriving on the Galician beaches as well as the coasts of northern Spain and France. Having sunk, the tanker continued to discharge large quantities of oil for months afterwards. The sinking of the 'Prestige' is generally acknowledged to have been the most serious ecological disaster to have affected Europe. While the environmental damage was immediate, the social and psychological impacts on the population are still being felt one year later and in some cases are now only becoming manifest.

The oil spill had a significant effect, not only from an ecological and human point of view, but also on the economy of the region. Galicia is highly dependant on the sea because fishing and fishing-related activities are a vital part of the GDP of the region. Furthermore, the coast is also important for tourism. Government figures indicate that tourism in Galicia had recovered by Easter 2003 to 80% of the level of the previous year; however, some organizations maintain their distrust in respect of this figure. The fact that the number of visitors and tourists decreased,

the more general impact on the perception of the area as a potential holiday destination (the main percentage of visitors come from other parts of Spain) as well as the impact of the oil spill on the catching and selling of seafood, all contributed to the concerns of the inhabitants of Galicia. The scale of its ecological impact was demonstrated by Carlota Viada, Director of the Conservation Department at SEO/BirdLife, who made a conservative estimate that the 23,000 birds collected in Spain, France and Portugal only comprise 10–20% of the birds affected by the Prestige disaster (RSPB, 2003).

Galicia has been the victim of previous oil tanker accidents (e.g., Urquiola, Aegean Sea, Casón, among others), but the social and political response was considerably more muted on this occasion. One key aspect of the social response comes from both the scarcity of information, and the unreliability of available information. From the time the tanker was in trouble and approached the Galician coast looking for refuge, until it finally sunk in the ocean, neither the national nor regional government nor the ship owners or insurers provided information on the risk to the population and/or the ecosystem. The immediate response of both the national and the regional Governments from the outset was focussed entirely on playing down the level of the risk involved, denying the possibility of any oil spill, and underestimating the importance of the magnitude of the tragedy. It was announced that everything was under control, and the public should have no cause for concern. This strategy was maintained even in the face of evidence to the contrary, supplied for example by the mass media. This resulted in a loss of credibility in the government as well as other official institutions. The only scientific information available to the local population about the nature of the contamination coming from Prestige oil tanker or its associated health effects on citizens came from non-governmental organizations such as ecological groups, the mass-media, and several French and Portuguese research institutions. The Spanish National Scientific Research Centre (CSIC) as well as some Universities also produced reports contradicting the Government's analysis of the potential risk and impact of the capsizing of the oil tanker. All these reports were ignored or openly criticized.

As time went by, it became clear to the general public that the information provided by both the national and regional governments was unreliable, and that there were real ecological and economic threats to the local community. This was later confirmed with the breaking up and sinking of the tanker while it was being towed away from the coast, a decision which was widely criticized by experts because it could only extend the damage to a wider area; this indeed happened. At this stage social action was initiated by the community both in terms of taking practical action to mitigate the effects of environmental damage, but also political action in the form of public protest against government complacency. Several citizens' organizations as well as members of local private companies and a few co-ordinators from different non-governmental organizations assumed the management of the crisis along the entire stretch of the Galician coast. The most striking example of collective action was the presence of thousands of people who

volunteered to clean up the coast by hand (i.e., with the most basic and inadequate tools and without appropriate safety protection) and who received neither institutional nor financial support.

Social pressure and protest, with the collaboration of the mass media, not only forced the Government to take an interest in organising volunteers (albeit three months later), but also to approve an emergency plan to create new infrastructures and develop projects for the benefit of the social and economic development of Galicia such as high speed rail improvements, motorways, etc. Furthermore, most fishermen in the areas were subsidised by the government. Both measures were partially effective in muting the protests, as was confirmed by the local elections held shortly afterwards. Whereas there was a strong political reaction in most Galician cities (where the governmental party lost political control of all councils, with only one exception), such a reaction did not happen in the effected rural areas where all the councils were retained.

When we speak about a toxic contamination event there are three stages through which a risk situation passes: a) non issue, b) public issue, and c) political issue (Reich, 1991; McGee, 1999). Reich defined non-issue as the phase prior to the public identification of the contamination agent. In the public issue phase the situation moves from being a disaster at an individual level to a disaster at a group level; victims try to organize and expand the scope of collective action. The disaster moves from being a public issue to a political issue when it gets into the political domain, involving other governmental or non-governmental organizations, political parties, social movements, and the mass media. The Prestige case moved very quickly into this third phase. More importantly, a year later, it still remains there.

Objectives

Following studies by Pol (2002) on social impact evaluation, San Juan (2001) on the psychology of emergencies, and Uzzell, Pol and Badanas (2002) on environmental evaluation, it was felt appropriate to evaluate the social impact of the Prestige disaster on the population immediately after it happened and a year later. We were also interested in examining the differential perceptions and evaluations of the inhabitants and the volunteers to the developing environmental and political situation. A distinction was made between responses from inhabitants and those from volunteers, on the basis that volunteers differ from inhabitants in many respects (i.e., higher commitment, better information about the situation, more objective view, not economically affected). Volunteers' opinions could only be gathered in the first wave of interviews, because the cleaning work had finished long before the second wave of interviews was carried out.

The study seeks to assess the changes in attitudes experienced by the population in respect of:

- The degree to which the inhabitants and volunteers were affected by the catastrophe
- The inhabitants' and volunteers' understanding of what happened
- The inhabitants' and volunteers' attribution of responsibility
- The inhabitants' and volunteers' assessment of consequences of the disaster
- The inhabitants' and volunteers' assessment of the credibility and degree of satisfaction with political institutions, organisations, and the media.

Method

Sample and instruments.

A random sample of 1491 respondents (51.2% males and 48.8% females) was surveyed in December 2002, one month after the disaster. Of these, 1246 were inhabitants in the effected areas, and 245 were volunteers from other parts of Spain. The second wave of interviews, carried out in December 2003 and January 2004, comprised another random sample of 1504 subjects (49.5% males and 50.5% females), all of whom were inhabitants in the effected areas. For both studies, the reliability was equal to 99.7% and the sample error was less than 4%. The criteria for sampling were that respondents should normally be resident in the Autonomous Community of Galicia and aged over 18 years old. We used a social impact evaluation protocol specially designed for this study which included information on: a) socio-demographical variables; b) perception and understanding of the impact and duration of the threat; c) the evaluation of received information; d) trust and credibility of the regional and national government, media and other organizations; e) attribution of causes and responsibilities; f) perception of consequences; g) degree of satisfaction with response given to the disaster by different public and private organizations; h) evaluation of the efficiency of response and remediation actions by the regional and national government, and others; i) impact on health; and k) implications for changes in behaviour. The questions were of both a closed and open response format; some of the closed format questions required categorical responses (e.g., attribution of responsibility) while others relied on the completion of Likert-type rating scales (e.g., estimations of the differential impact of the disaster). All interviewers were fully trained prior to conducting the face-to-face interviews.

Results

1. Degree affected, understanding of the problem and attribution of responsibility.

The analysis of the responses given by the volunteers and the inhabitants at the different times showed a marked shift in the responses given by the latter. The

inhabitants' responses in 2002 were quite similar to those of the volunteers; 84% declared themselves to be quite affected or very affected by the disaster (volunteers: 90%), 75% had a good or perfect understanding of the problem (volunteers: 81%), and 83% attributed responsibility for the disaster to the regional or national governments (volunteers: 93%). One year later, only 55% of the inhabitants declared themselves to be quite or very affected, only 69% said that they had a good or perfect understanding of the problem (when the circumstances of the accident had already been thoroughly studied), and only 45% attributed responsibility for the disaster to the regional or national governments.

In order to test whether the differences between the two groups were significant, a hierarchical loglinear analysis was performed (Knöke and Burke, 1990; Powers and Xie, 2000). Four categorical variables were included in the analysis: degree of impact (EFFECT), understanding of the problem (UNDERSTAND), attribution of responsibility (RESPONSIBILITY), and sample interviewed (POPULATION). The results showed no 4th or 3rd order significant effects for the variables included. The best fitting model ($\chi^2=453.83$; $df=480$; $p=.799$; see Table 1) included six 2nd order highly significant effects, and all four 1st order effects. Three of the 2nd order effects (EFFECT * POPULATION, UNDERSTAND * POPULATION and RESPONSIBILITY * POPULATION) correspond to interactions between assessments made about the disaster and the type of sample interviewed, thus showing significant differences in the responses made by volunteers, inhabitants at 2002 and inhabitants at 2003. With respect to the remaining three effects, the first of them (EFFECT * UNDERSTAND) revealed that a lower degree of impact was associated with also a lower degree of understanding, and vice versa. The second effect (EFFECT * RESPONSIBILITY) revealed that a lower degree of impact was associated with non-political responsibilities (nobody in particular, fate, the captain of the oil tanker, the harbour technicians, the ship owner), whereas a higher degree of impact was associated with responsibilities at the national and regional levels. The third significant effect (UNDERSTAND * RESPONSIBILITY) showed that a lower degree of understanding was also associated with non-political responsibilities, whereas a higher degree of understanding was associated with political responsibilities, both at national and regional levels.

In summary, it seems clear that, a year later inhabitants of the effected areas seemed much less concerned about the circumstances and consequences of the disaster. Even if the results of the cleaning performed during 2003 had lowered the degree of impact on the local population, they cannot explain the reduced degree of understanding and reduced attribution of political responsibility. A year later, and after a thorough investigation of the disaster, both the degree of understanding and the attribution of political responsibility should have been higher, not lower.

Table 1: Best fitting hierarchical loglinear model for the 4-way table (EFFECT * UNDERSTAND * RESPONSIBILITY * POPULATION).

Effect	df	L-R chi square change	p	Iteration
UNDERSTAND * POPULATION	8	31,287	,0001	5
EFFECT * POPULATION	8	314,405	,0000	4
RESPONSIBILITY * POPULATION	14	143,627	,0000	5
EFFECT * UNDERSTANDING	16	184,599	,0000	6
EFFECT * RESPONSIBILITY	28	126,020	,0000	5
UNDERSTAND * RESPONSIBILITY	28	101,894	,0000	5

Likelihood-ratio chi square = 453.82747; df = 480; $p = .799$

2. Assessment of the consequences, credibility and satisfaction issues.

Given the differences between the samples found above, it was expected that such differences would also be found in the assessments that subjects made about the consequences of the disaster, as well as their assessment of the credibility and degree of satisfaction with political institutions, organisations and the media. To test the significance of these differences, three multivariate analyses of variance were performed for these three sets of assessments.

With respect to the assessment of the consequences of the disaster, a significant multivariate effect for the type of sample (volunteers 2002, inhabitants 2002 and inhabitants 2003) was obtained (Wilk's lambda = .743; $F = 83.413$; df hyp. = 22; df error = 5438; $p < .001$). At the univariate level, significant differences were also found for each of the consequences assessed (See Table 2). An inspection of the mean scores for the three samples revealed that the assessments made by the 2003 wave of the inhabitants' sample had the lowest mean scores, whereas assessments made by volunteers in 2002 had the highest means. Additionally, paired comparison tests (not reported here) showed significant differences between the assessments made by the 2003 sample (inhabitants) and the two 2002 (inhabitants and volunteers) samples. Thus, it can be seen that, a year later the inhabitants of the effected areas tended to minimize the impact of the disaster.

Table 2: Analysis of variance for the different groups (volunteers 2002, inhabitants 2002 and inhabitants 2003). Univariate tests for the attribution of the seriousness of the consequences of the disaster.

Dependent (Consequences)	Sum of squares	Df	Mean square	F	P	Eta square	Power
Economical	592,107	2	296,053	151,945	,000	,100	1,000
Ecological	86,496	2	43,248	64,547	,000	,045	1,000
Social	446,465	2	223,232	174,819	,000	,114	1,000
Psychological	402,191	2	201,096	84,696	,000	,058	1,000
Employment	687,330	2	343,665	287,260	,000	,174	1,000
Emigration	864,344	2	432,172	275,950	,000	,168	1,000
Delinquency	340,920	2	170,460	134,326	,000	,090	1,000
Community life	208,973	2	104,486	79,253	,000	,055	1,000
Tourism	419,606	2	209,803	140,958	,000	,094	1,000
Image of Galicia in Spain	109,532	2	54,766	31,560	,000	,023	1,000
Image of Galicia in the world	112,762	2	56,381	30,748	,000	,022	1,000

Another significant multivariate effect (Wilk's lambda = .898; $F = 10.257$; $df_{hyp} = 26$; $df_{error} = 4830$; $p < .001$) was found for the type of sample when assessing the credibility of political institutions, community organisations and the media. At the univariate level though, no significant differences were found for the assessments of the credibility of local politicians (all below the mid-point of the scale), fishermen associations (all high), a private TV channel (all high) and family and friends (all high, see Table 3). A further inspection of the mean credibility scores for the three groups revealed that the highest means were invariably a feature of the 2003 population, and the lowest means were a consistent response of the 2002 volunteers; with respect to the former group, the means were always close to the mid-point of the scale. Paired comparison tests (not reported here) showed that, with the four aforementioned exceptions, there were always significant differences between, at least, both groups.

These results reveal the agreement between groups when the credibility was already high (fishermen associations, T5 TV, and family/friends) or neutral (local politicians) in 2002. Differences only appeared when the source of credibility was clearly low. In these cases, the 2003 respondents tended to keep their assessments as neutral as possible.

Table 3: Analysis of variance for the different groups (volunteers 2002, inhabitants 2002 and inhabitants 2003). Univariate tests for credibility of different political institutions, community organisations, and the media.

Dependent (Credibility)	Sum of squares	Df	Mean square	F	P	Eta square	Power
Local politicians	7,693	2	3,847	2,397	,091	,002	,486
Regional politicians	154,107	2	77,054	56,536	,000	,045	1,000
National politicians	173,632	2	86,816	67,177	,000	,052	1,000
Fishermen associations	7,645	2	3,823	2,812	,060	,002	,554
Local press	22,487	2	11,243	8,662	,000	,007	,969
National press	62,063	2	31,032	25,430	,000	,021	1,000
Public national TV	118,306	2	59,153	37,189	,000	,030	1,000
Public regional TV	217,239	2	108,619	61,740	,000	,048	1,000
A3 TV	118,479	2	59,240	40,825	,000	,033	1,000
T5 TV	1,833	2	,916	,723	,486	,001	,173
Public radio stations	67,690	2	33,845	22,995	,000	,019	1,000
Private radio stations	27,108	2	13,554	10,580	,000	,009	,989
Friends and family	4,203	2	2,102	1,796	,166	,001	,377

Finally, another significant multivariate effect (Wilk's lambda = .776; $F = 29.747$; $df_{hyp.} = 22$; $df_{error} = 4848$; $p < .001$) was found for the three samples interviewed when assessing their degree of satisfaction with political institutions and other organisations. The differences were also significant at the univariate level for all the items assessed (see Table 4). However, paired comparisons tests (not reported here) revealed that the pattern of the differences was not the same for all assessments. When satisfaction was related to political institutions, the pattern was

as expected (with the exception of local politicians): the highest mean scores for 2003 inhabitants, and lowest mean scores for 2002 volunteers. But when assessing satisfaction levels with other organisations (fishermen associations, ecologist associations, volunteers, local companies, and neighbours), the highest mean scores corresponded to 2002 volunteers and, in most cases, the lowest mean scores corresponded to 2003 inhabitants. In almost all cases, 2002 volunteers and 2003 inhabitants were at opposite poles in these assessments.

Again, we can see a tendency of 2003 inhabitants to try and “smooth” their assessments, thus locating far from both the highest and lowest scored items for the 2002 wave of interviews. It should be noted that univariate effects for single dependent variables were tested after checking that there was a multivariate effect (i.e., for all dependent variables simultaneously). Although we found some high correlations (e.g. between assessments for regional and national politicians), these were not sufficiently high as to imply the risk of multicollinearity.

Table 4: Analysis of variance for the different groups (volunteers 2002, inhabitants 2002 and inhabitants 2003). Univariate tests for satisfaction with the role played by political institutions and other organisations.

Dependent (Satisfaction with role played by...)	Sum of squares	Df	Mean square	F	P	Eta square	Power
EU	107,762	2	53,881	55,092	,000	,043	1,000
National government	135,127	2	67,563	58,711	,000	,046	1,000
Regional government	150,816	2	75,408	61,508	,000	,048	1,000
Local government	8,455	2	4,227	3,111	,045	,003	,600
Fishermen associations	51,855	2	25,927	20,636	,000	,017	1,000
Volunteers	10,274	2	5,137	11,987	,000	,010	,995
Ecologist organisations	9,091	2	4,546	3,658	,026	,003	,676
Ship owners	87,071	2	43,535	30,055	,000	,024	1,000
Local companies	121,434	2	60,717	48,316	,000	,038	1,000
neighbours	366,528	2	183,264	122,988	,000	,092	1,000

Discussion and conclusion

It is not always possible to organise a collective response to a disaster. While some actions are evidence of an organizational response to environmental contamination (cf. McGee, 1999; Abbot Wade, 1991; Brown and Mikkelsen, 1990; Bullard, 1990; Edelstein, 1988; Erikson, 1990; Levine, 1982), others exemplify the difficulties of organizing social opposition (Brown and Mikkelsen, 1990; Couch and Kroll-Smith, 1994; Wisaeth, 1994; McGee, 1999). In the case of the Prestige disaster, the social response was organized quickly and spontaneously. The role played by volunteers was decisive, not only in terms of coping with the consequences of the disaster, but also in obtaining a response from both institutions and the government.

Another important aspect in the environmental management of a crisis is the citizens' credibility and trust. This is an essential requirement in order to carry out the effective management of hazardous waste sites (Williams, Brown and Greenberg, 1999). According to Williams, Brown and Greenberg, if there is no trust, it will be very difficult for Governments to persuade citizens in a convincing way that places are safe and can be used again, in this case for providing the authority to encourage and permit fishing again. In the Prestige case, the lack of trust and credibility, together with the low levels of perceived effectiveness and satisfaction, posed a high load on governmental institutions. Trust and public credibility is a dynamic construct (Greenberg, Spiro and McIntyre, 1991) and most studies suggest that its determinants are very complex. It has been demonstrated that trust or credibility in government is a function of public perceptions of knowledge and expertise, the degree of information disclosure, information receipt, openness and honesty, and media sensitization (Peters, Covello and McCallum, 1997; Williams, Brown and Greenberg, 1999). Assessments made by both volunteers and inhabitants in respect of public institutions in 2002 were consistently low, largely because the degree of information, knowledge and expertise they provided was assessed as being deficient.

The duration of threat has also been found to be an important factor in the response of the community (Evans and Cohen, 1987; Otway and von Winterfeldt, 1982; Slovic, 1987). Studies by Levi, Kocher and Aboud (2001) also reveal that the risk impact on inhabitants' lives depends on the duration of the effects of the danger. In the same way, it has been suggested that the longer-lasting the negative consequences for the victims the more serious the subsequent adverse effects, leading to a reduction in individual, social or community well-being (Baum, Fleming and Davidson, 1983; Edelstein, 1988). Levi, Kocher and Aboud, (2001) argued that, from a community point of view, long term disasters can have a double impact – that which arises from the disaster itself, and the social problems generated subsequently. In the case of Prestige disaster, the inhabitants and the volunteers were quite pessimistic about the duration of threat, and this suggests that the negative impact could be reinforced and aggravated over time rather than reduced. The

incidence of health problems and the changes in daily habits are also indicators of the social and individual impact of the disaster, mainly for the inhabitants.

We have to acknowledge that people develop their own beliefs system about the nature of the threat after a disaster as part of the coping process (Vyner, 1988; Kroll-Smith and Couch, 1993; Rochford and Blocker, 1991). Beliefs are socially constructed (Berger and Luckmann, 1966) and are influenced by the interaction of individual, social, cultural, political and economical factors in addition to the characteristics of the disaster event or contamination itself. In this study, we focussed on beliefs about the duration of contamination, the effects on health, or the scope of the disaster, but we also explored the attributions that people made concerning the actions and effectiveness of the Government and other institutions to manage the crisis. One consequence of the subsequent management of the disaster was that in addition to a social fracture, there was a perception of distrust and lack of institutional credibility. Such outcomes are not limited to an individual response, but emerge as part of a subjective and socially constructed process, or from a combination of both (Peters and Slovic, 1996; Williams Brown and Greenberg, 1999). In the case of the Prestige disaster, further highly salient socio-economic and political factors may have been mediating this process.

Technological disasters are different from natural disasters in various ways that are salient to both risk perception, the management of the disasters and the response by the public to the disaster management. Technological disasters can be easier to predict. Technological disasters similar to the sinking of the Prestige have happened in the past and therefore they could have been anticipated. In such situations, the damage to both the ecosystem and the inhabitants could have been avoided or, at least, minimized. The recovery from social and psychological trauma, once the damage is done, only serves to add to other stressors like dealing with insurance companies, lawyers, contractors, and politicians to obtain economic or legal compensation (Blaustein, 1991; Levi, Kocher and Aboud, 2001).

The effective management of the chronic consequences of disasters such as the Prestige requires the development and implementation not only of support services but also economic and technological, as well as psychological and social strategies. The importance of this integrative approach is supported by previous research (e.g., Bolin 1988), where psychosocial recovery is related to a positive perception of government assistance and support. On the contrary, a negative perception of institutional support only sustains the detrimental and damaging psychosocial impact. The effect of a crisis as the result of a disaster, according to San Juan (2001), depends on three factors: a) the nature of the disaster and its psychological meaning; b) the state of vulnerability and resources in relation to the individual, group and community; and c) the kind of help that the individual, group or community can receive. All these factors were very negative in the management of the Prestige crisis.

How can we explain the apparent complacency of the population in response to the disaster? Initially it appears difficult to account for such a shift in public opinion,

especially as most of the subsequent damage was not easily healed. One might draw on a number of psychological theories to account for this response (Uzzell, 2000). For example, minimising the perceived impact may be a coping strategy to deal with serious detrimental effects to the environment. Likewise, denial and failure to act occur when a person perceives that a threat is uncontrollable. This, in turn, may lead to the reduction of fear and anxiety levels and lessen the negative feelings consequent upon the lack of perceived control over the situation (Perloff and Fetzer, 1986). Some environmental stressors such as noise or pollution may be personally manageable because the stressor is potentially within the bounds of a person's immediate control and personal powers. However, some environmental problems, in particular environmental catastrophes, may be perceived to be outside the individual's or even the community's immediate control and socio-political powers.

Second, most fishermen receive a subsidy from the government because they receive a low and irregular income from fishing which is normally, even leaving aside the present disaster, highly risky. This part of the Galician coast is known as Costa da Morte – the 'Death Coast', because of its dangers to shipping. Subsidies from the government meet the needs of most fishermen and in some cases may even provide them with a wage in excess of what they could earn if they were reliant on a reasonable income solely from the sea. The kind of fishing that is practised in this area (i.e., very profitable and difficult to obtain seafood) is of a depredatory nature in which the beneficial fruits of the environment take priority over its preservation. When visual clues of pollution (e.g., oil slicks) are no longer visible even though they may still be present, for example, on the seabed, and signs of life are seen again on the rocks and beaches, it is easier to forget what happened.

Finally, one might explain this shift in the inhabitants' opinion by reference to the socio-political and cultural setting. These are rural, small and closed societies. They are also very conservative. Being critical of or challenging authority does not come naturally and is not easy to sustain over a long period of time. Once the protest had been made and placatory messages of support had been sent from the government there was a feeling that everything should be left in the hands of the authorities; once this stage had been reached other social and economic pressures start to have an effect on people's attitudes.

The damage from the sinking of the *Prestige* and its subsequent oil spill was substantial – one of the worst ecological disasters to affect Europe. It is clear from our research, however, that clearly it was highly salient for the public too, affecting livelihoods and the quality of community life. But what is particularly interesting from this research is that the public's evaluation changed quite quickly over time. We have suggested that the cause of this might be economic, that is, the population are so financially dependent upon the environment and the government that one coping strategy – both practical and psychological – is to minimise the perceived

impact of the disaster as quickly as possible. The second explanation is cultural, a function of the history and traditions of the people and their relationship with authority. Clearly this is an area that warrants further investigation in the context of other kinds of disasters and in other socio-political and cultural settings.

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8

PSYCHOLOGY, PARTICIPATION, AND ENVIRONMENTAL POLICY–MAKING*

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Abstract

The present paper deals with political decision-making and its consequences in disasters, taking the sinking of the oil carrier 'Prestige' in 2002 as an example. The effects of political decisions of and on perceived risk and duration of the problem, and on attribution of responsibilities and perceived causes, are examined. More specifically, we look at the effects of two different political decisions on the foregoing, showing how they led to significant changes in the local populations' attitudes and perceptions.

The first of these political decisions led to the sinking of the oil carrier. The effects were (1) an increase in the scale level of the problem, from low-scale to large-scale; (2) social mobilization of the population. These were reflected in our findings, identifying poor assessments of the management, political attribution of responsibilities, and distrust in the government. The second political decision was to compensate economically the affected population, once the seriousness of the disaster was fully recognized. This decision led to a significant change in management assessment and attribution of responsibilities, on the part of the population. The implications of our findings for environmental policy-making and their consequences are also examined.

Keywords: Decision-making, Prestige, participation, disaster, attribution

Introduction

In past decades, in Europe and North America, there has been but a modest impact of psychology on environmental policy-making. Some general reasons for this have been discussed by Stern and Oskamp (1987) and by Vlek (2000). Among major reasons put forth are that: (1) many policy-makers are technologically optimistic and prefer 'hard data', and (2) conclusions from psychological research are often too 'soft' and seemingly less reliable than technical or engineering reports. Another problem is the perceived overlap of psychological advice with political decision-making: the latter also deals with people and human behaviour (see García-Mira, Stea & Elguea, 2005).

While the direct applications of their research have not been especially visible, environmental psychologists have contributed much to environmental research. Among environmental psychology's contributions to basic research has been the study of spatial and environmental perception. An applied aspect of this research concerns how the general public perceives socio-environmental problems and their possible solutions: "public perception." A second contribution, largely in the design and planning disciplines, has been the study of communication about environment and environmental issues. Yet a third area concerns overt behaviour, the act of participating in decision making: "public participation". The present paper deals with public policy decisions concerning a particular disaster and their effect on the

perception of the risk posed by the problem on the part of the local and general population. The perception thus generated has, in turn, an effect on participation and mobilization. More specifically, we analysed the perceptions and attitudes of citizens about two different political decisions concerning the same disaster, one at the beginning of the crisis, and another one year later. Both decisions had the same effect, but in opposite directions.

Scale levels of environmental problems

Considering different scale levels of problems is crucial for designing effective structures and procedures for communication and collaboration (see García-Mira, Stea and Elguea, 2005). We may distinguish roughly between large-scale and small-scale problems. In general, for large-scale problems well-organized expertise and long-term goal-setting are required, while small-scale problems may be approached effectively via short-term organizations and quickly solicited expertise. Ever since Barker (1968) contributed to the development of environmental psychology by identifying the importance of participation pressures (and opportunities) in “undermanned [now called “understaffed”] behaviour settings,” it has been known that public involvement typically declines with increasing scale: communication among all parties concerned tends to be more difficult for large-scale than for small-scale problems. Analogous differences in people’s motivation to participate in problem analysis and the design of solution strategies may also be scale-related.

For most large-scale problems solutions may take the form of international regulations and initiatives but, for such problems as global warming, acid rain, or deforestation, understanding and collaboration on the part of citizens is also essential. At smaller scales, for most local and regional environmental problems, citizens’ participation and collaboration is properly part of both problem-definition and solution-generation. Such problems as traffic density; urban sprawl; pollution of air, soil or water; waste recycling; etc., cannot be solved without strong citizen commitment. Public environmental policy can help to alleviate these problems, but may be reduced to irrelevance through non-compliance if not well understood and supported by the general public. This issue increases with scale, as people follow the aphorism “think globally, act locally”, meaning that while they tend to be more concerned about global problems (the environmental hyperopia effect; see Uzzell, 2000; Uzzell et al., 1994; García-Mira, Real & Romay, 2005), they engage in more decisive behaviour on local ones.

Environmental policies developed at more global levels by national or international agencies and not effectively explained are often misunderstood or ignored by local populations. At local and regional levels, misunderstanding can even lead to opposition (anti-environmental behavior) if people see only the disadvantages of pro-environmental behaviour affecting their everyday lives. As an example, a past mayor of Los Angeles was elected on the basis of a campaign promise that

people would not be required to separate their garbage. Sometimes, changes in attitudes, beliefs and behaviours are difficult to implement in the way in which policy makers have become accustomed. Regulations are necessary, but people may search for ways to circumvent them unless offered the opportunity to collaborate in successfully implementing new environmental policies. The importance of public participation in environmental decisions has been recognized, for instance, in the World Commission on Environment and Development (WCED), or Agenda 21. At the European level, the European Council Directive (85/337/EEC amended by 97/11/EC) mandates public involvement prior to the implementation of a project (Johnson & Dagg, 2003).

The scale of an environmental problem should be matched, somehow, by appropriate scales of social organization and management. The impact of Hurricane Katrina on New Orleans (USA) can be considered a classic example of the confusion which can arise when local, regional and national entities do not communicate, and when public participation is not facilitated, or is even prevented. Another example is the 1985 Mexico City earthquake which, as a result of governmental inaction and refusal to accept international aid actually reduced the scale of environmental action to the local level: urban citizens, by necessity, formed local cooperatives to help themselves. As a result of this very effective self-help these cooperatives became the germ of long-lasting citizen groups which have since resisted governmental cooptation.

Desirable changes in approaches to policy

Traditionally, communication between policy makers and relevant public entities has been unidirectional ("top-down") rather than bi-directional. There is no shortage of examples of unidirectional approaches, and the present paper includes one of the most important cases faced by the EU. In the 'Prestige' disaster the unidirectional ("top-down") strategy carried out by the government led to massive social protest. In many places and over many years, it has been the policy makers who decided what to do about an environmental problem, before (or sometimes even instead of) informing members of the public. The latter were supposed to accept, passively, the decisions of elite people who, in most cases, were appointed rather than elected. This has repeatedly given rise to political problems with regard to policy acceptance and public cooperation. It has also often blocked the implementation of proposed and perhaps feasible solutions.

There is tacit agreement about the need for public participation, even among decision-makers, but much less about the guiding principles of such participation: representation of all interested groups and communities, allowing them to contribute and ask questions, taking honest and logical decisions, based both on scientific and social grounds (McCool & Guthrie, 2001; Johnson & Dagg, 2003). However, there is recognition of the practical difficulties that may arise in achieving the objective of effective (not token) participation. First, there are inevi-

table conflicts of interest between actors (e.g.: policy-makers, scientists, industry, and citizens). Second, both environmental phenomena and communities usually manifest four major characteristics: complexity, uncertainty, large temporal and spatial scales, and (in the case of environment) irreversibility (Van den Hove, 2000). Thus, there is a strong component of conflict resolution in participatory approaches to environmental policy-making at the level of communities and larger entities.

The importance of communication and participation: the 'Prestige' oil tanker disaster

The increasing environmental awareness of citizens the world over has promoted considerable demand for participation in environmental policy making, not always in the direction endorsed by government. Our basic thesis is that participation and collaboration are impossible without bi-directional communication. With respect to environmental issues, participation always involves communication and communication always involves participation (Stea, Wisner, and Kruks, 1991).

The case of the oil tanker 'Prestige' disaster off the coast of Galicia (North West Spain in 2002 (see García-Mira et al., 2005, 2006) is a clear example of how ill-informed political decisions can have major social, environmental and, of course, political implications, and how the scale of the problem can vary widely depending on how effectively it is managed. Interesting findings were obtained in an extensive field study concerning public support for decision-making and resulting policy during the crisis resulting from the sinking of the 'Prestige'. The disaster was followed by strong social and political upheaval, in addition to obvious impacts upon marine and coastal ecosystems.

In November 13th 2002, the oil tanker *Prestige*, loaded with 77,000 tons of fuel, sprang a leak 28 miles away from cape Finisterre, in Northwest Spain. The ship was adrift in the midst of a storm, battered by waves 6 meters high and force eight winds. With the exception of three persons, all the ship's crew was evacuated, and the engines turned on. At this point, a disagreement between the captain and Spanish authorities arose; the captain was seeking calm waters to decant the fuel into another oil carrier, while the government wanted to send the ship away from Spanish coasts, into even more violent seas, a decision which provoked the disaster. On November 17th, the captain was arrested by Spanish authorities, and the ship was towed into the open water of the Atlantic Ocean. On November 19th, the heavily damaged structure of the oil carrier could no longer bear the force of the storm, and collapsed. The carrier split in two and sank in deep water, 250 km. away from the Atlantic coast of Spain. By November 20th, the fuel leak had already spread along 295 km. of the Spanish coast. On December 2nd, 200,000 people protested the lack of governmental measures to cope with the disaster, and during the holidays of December 6, a spontaneously organized mass of volunteers (between 4,500 and 7,000) arrived on the Galician coast to help in the task of cleaning. This initiative

was followed later by the government: 2,000 soldiers and 1,300 private workers were also sent to accomplish cleaning tasks. It has been estimated that the ship discharged a total of 20,000 tons of fuel along the Spanish and French coasts. Some additional information about the disaster and its consequences can be found on the European Environment Information and Observation website (http://terrestrial.eionet.eu.int/en_Pretige).

Key issues in this study are related to (1) identifying the scale level of policy making (local vs. regional vs. national), and (2) different conceptualizations of the problem on the part of citizens, on the one hand, and policy makers, on the other.

1. With respect to the scale level of policy making, the problem could have been solved at a lower (local) level. However, the decision to send the oil tanker away from the coast, combined with the resulting need to confront even worse weather conditions, provoked the sinking of the ship and a larger oil spill, thus increasing the scale level of the crisis. This required larger-scale citizen participation, including the influx of volunteers from throughout Europe, as well as the involvement of higher-level social organizations (i.e. EU, multi-national organizations, and private-sector companies). Our results also showed that citizens always evaluated the problem as a large-scale one, both spatially and temporarily, agreeing that the problem would last several years.
2. With respect to the different conceptualizations of the problem, while citizens quickly identified the extent of the disaster, the national government, in all likelihood concerned about other local interests (i.e. local elections), decided to deny the evidence of risk. Thus, the government ordered the damaged tanker to move away from the coast, without considering that this decision could result in widening the oil spill, potentially affecting other countries (as in fact occurred on the west coast of France). Denying the risk had another impact: no effective measures to mitigate consequences of the accident were taken by government until social protest arose. Our own results support this view, indicating interviewees' assessment of responses to crisis management issues on the part of government as poor.

The consequences of the disaster were both political and economic. First, damage in the coastal areas, followed by social pressure and protest, led to the approval of investments in the affected population (mainly fishermen). Second, it led to changes in at the EU level affecting the International Transport System regulations for hazardous cargo. The social consequences of these initiatives were also clear in our quantitative results, as summarized below, with less negative assessments one year following the crisis than immediately afterward.

Objectives of the study and procedure

The aim of this research was to explore the perceptions of the local population in the affected areas, as well as of those who voluntarily got involved in the cleaning

tasks after the oil spill, hereafter called 'volunteers'. Additionally, a second wave of surveys was carried out a year later, with people from the local population only. Volunteers were not interviewed in the second wave of surveys because they had been replaced in the cleaning tasks by soldiers and workers hired by the government.

The goal of the second wave of interviews was to assess the perceptions of inhabitants of the affected areas one year after the disaster, when political actions and economic compensations to the affected population had already taken place. Thus, we obtained three different perceptions of the same disaster from three different samples: (1) the volunteers, who were more concerned and involved in the solution of the problem; (2) the local population, at the very moment of highest social protest immediately following the accident; and (3) the local population one year later, when the consequences of the accident were less visible.

Sample and instruments

In December 2002, one month after the disaster, a random sample of 1,491 subjects (51% males, 49% females) was surveyed. Of these, 1,246 were residents of the affected areas, and 245 were volunteers from other parts of Spain. The second wave of surveys, carried out between December 2003 and January 2004, comprised another random sample of 1,504 subjects (49.5% males and 50.5% females), all residents of the affected areas.

The study variables were: (a) type of respondent (first residential population surveyed, second residential population surveyed, and volunteers); (b) perceived cause of the accident (natural, technological or political); (c) perception of the quality of problem management on the part of the authorities (from "very bad" to "very good"); (d) perception of the time necessary to return to normality (from less than 1 month to 2–5 years); and (e) voting behaviour in the preceding elections. The main results of this study are discussed below, together with their policy implications.

Our objective was to explore the relationships between the type of respondent, their voting behaviour, and perceptions of the accident. Given the different measurement levels of the study variables (nominal and ordinal), homogeneity analysis (Gifi, 1981) was selected for modelling these relationships; more specifically, the HOMALS algorithm (HOMogeneity analysis through Alternating Least Squares) was employed. HOMALS accepts a mixture of nominal and ordinal variables as input, and performs an optimal scaling simultaneously for both variables and subjects, providing quantifications along several dimensions for both of these in such a way that results obtained from subjects of the same group are similarly quantified, and those from different groups, differently quantified. The same can be said about categories of the variables involved: those categories related to each other receive similar quantifications, and those unrelated receive different quantifications. Given that both quantifications (for variables and for subjects) are derived from each other, and that the dimensions of the solution are independent,

they can be represented jointly on an n -dimensional map, and interpreted both visually and numerically. Two categories or groups receiving similar quantifications are situated closer on the map; those receiving very different quantifications are situated far apart from each other.

Results

The objective of the analysis is to obtain the best fit to the data with minimum dimensionality; to achieve this, a three-dimensional model and a bi-dimensional model were tested. The overall fit for the bi-dimensional model was .71, which can be considered both satisfactory and parsimonious. For each dimension, the fits were .40 and .31, respectively, meaning that the first dimension is slightly more important than the second in the solution. Figure 1 shows the quantifications of the study variables; an arrow indicates the order of categories for the ordinal variables.

The strongest differences appear along the horizontal axis; this is because di-

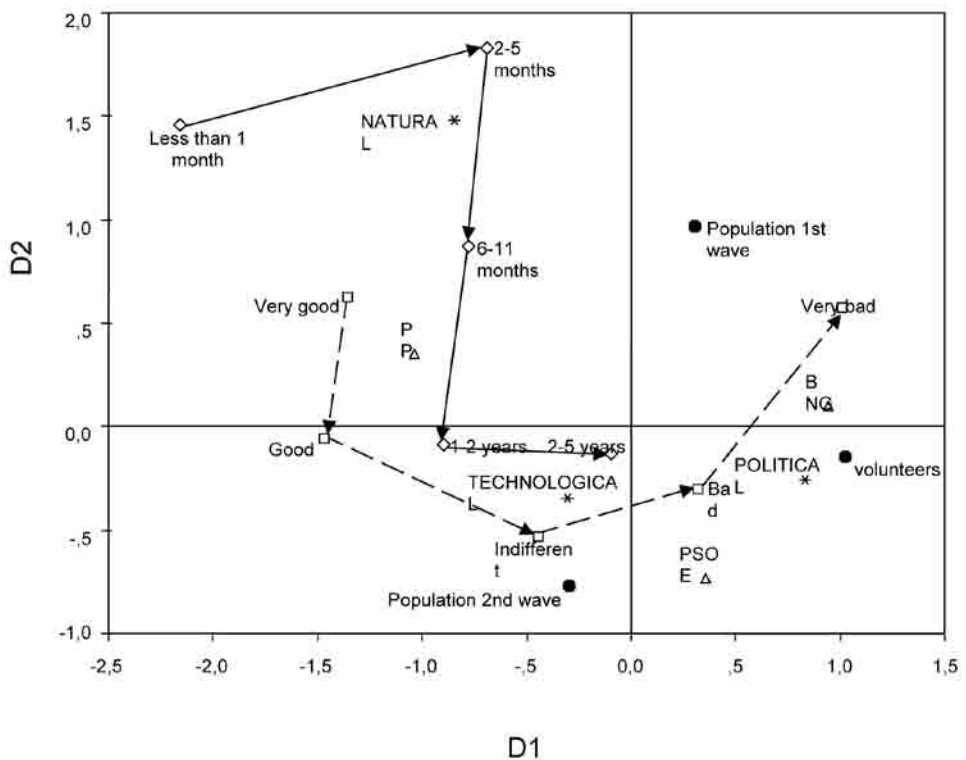


Figure 1. Bidimensional model representing the relationships among the categories of the variables included in the Prestige study. For the ordinal variables, the order of categories is indicated by the direction of the arrows

mension 1 is the most important. The less pessimistic assessments (short time to recovery, good management of the problem, and natural and technological causes for the accident) are situated to the left, while the more pessimistic (longer time to recovery, poor management of the problem, and political causes for the accident) are situated to the right. The first class of respondents, those with more optimistic assessments, is closer to the government party (conservative party – PP), responsible for the decision making process, while the second type, more pessimistic, is closer to the opposition parties (socialist party – PSOE, and nationalist party – BNG). With respect to the type of respondent, it can be seen that volunteers are situated to the right; and that the population in the first wave of surveys made assessments similar to those of volunteers, and so are also situated to the right. Thus, both the volunteers and the local population share a pessimistic view of the problem. But by the second wave of surveys, population responses had clearly changed, and appear closer to the left side of the map, indicating a more optimistic assessment of the situation one year later. These results show a significant shift in the assessments made by the population between 2002 and 2003. Given that in 2003 the oil spill had been only partially removed, and that the ecological consequences were still evident, such a shift in the subjects' assessments may be due not just to the alleviation of consequences of the accident by the later time; rather, the compensation and subsidising policy carried out by the national and regional governments probably also affected the assessments.

These results show how the perception of the problem may change drastically under certain conditions. In the first wave of surveys, the perception of the problem by the local population and of related responsibilities was very close to those of the volunteers: pessimistic and very critical of governmental actions. The latter can be deduced from (1) their low assessments of how well the crisis was managed; (2) the attribution of political causes for the disaster; (3) their relative similarity to the attitudes of the voters of non-governmental political parties. This indicates both pessimistic views about the problem and readiness to mobilize. In the second wave, after the economic compensations were allotted, the local population was still pessimistic about the problem but far less critical of the government, given that (1) their assessments of how the crisis was managed fell in the middle of the scale; (2) their attribution of causes for the disaster shifted to the technological realm; (3) their position moved closer to the governmental party.

Conclusions: Lessons learned

The following lessons, relevant to policy-making, may be drawn from the reported case study:

Purely top-down approaches toward solving environmental problems are often counterproductive

As isolated strategies, such approaches may even elicit resistance among members of the population, as can be learned from countries which have established an eco-tax. In the case of the 'Prestige' disaster, as our results have showed, poor or uncoordinated communication between government and citizens led to distrust. Trust in public organizations and information sources decreases perceived risk and increases perceived benefits (Frewer, 2003). It is particularly important in those circumstances in which people feel low control over potential damage (i.e. the risk of chemical spills impacting the environment or health), as in the case of the 'Prestige' disaster.

Communication between policy-makers and the public is not usually a bi-directional process, but rather (and too often) one-directional and top-down. We have discussed here a prototypical case of the latter situation, where the consequences resulting from such a strategy during the Prestige disaster, due to their seriousness and wide international impact, have special relevance for public administrators.

Environmental psychology can play a key role in the area of public participation, and, more specifically, in the introduction of participative strategies. At a global level, environmental policies of national or international agencies are frequently unknown to, or misunderstood by, most of the public if not clearly explained. At more regional or local levels, such misunderstandings can even result in public opposition.

It should also be emphasized that the promotion of environmental competence among citizens is critical to involving the public in developing environmentally responsible behaviour patterns, as shown previously (see Losada and García-Mira, 2003). Efficient patterns of bi-directional communication are required to approach the management of problems involving several levels of scale. The case analysed here demonstrates that the degree of freedom in modern democratic societies permits activation of participative and democratic processes through which communication patterns among citizens, scientists and policy-makers can open new paths toward more environmentally sustainable societies.

Minimizing apparent risk affects the way citizens deal with threats

The response of the Government in this case included measures designed to reduce the strength of social protest, to weaken emergent social support networks, and to fragment unanimity of community response, in order to minimize the political impact of the disaster.

Action of this sort is exactly opposite to what should have been done. Social support networks are among the more important components of the process of communication in, and recovery from, a disaster. Fragmented or weakened social

support networks can result in a perception of low capacity of a governmental entity for dealing with present or future threats.

The perception of risk on the part of the population is a key indicator of how to direct management of the crisis

An approach based on the Social Amplification of Risk proposed by Kasperson, (cf. Renn et al., 1992) fits quite well in this case. In this approach, the social and economic impact of disasters is determined not only by the direct physical consequences of the event, but also by the interaction of psychological, cultural, social and institutional processes that augment or diminish (intensify or attenuate) the public experience of risk and, consequently, public response and the final socio-economic impacts. The perception of risk is dependent on both exposure and risk management, and public response is dependent on both exposure and risk perception.

According to the foregoing, it seems clear that social protest in the case of the Prestige disaster was motivated by a population experiencing an extended condition of high risk, and that this perception of risk was motivated by both long exposure to the consequences of the disaster (due to delayed response on the part of the government) and poor risk management during the crisis. The Prestige disaster underlines the necessity of appropriate 'risk communication' (Cvetkovich & Earle, 1992, Trettin & Musham, 2000; McComas, 2003). Such "risk communication" would increase perceived trust in the government and, at the same time, would reduce disagreement among policy-makers, experts, and the public. It would also avoid serious social problems such as those commented upon earlier.

The scale of the problem greatly affects its consequences

This relates partly to the last paragraph, as increasing scale of a problem is correlated with increased public perception of risk. In the 'Prestige' disaster there was a change in the scale of the problem from local to global; i.e. a problem initially conceptualized as a damaged ship leaking oil within a geographically limited area, with limited impact on the ecosystem, proceeded upscale because of bad management, producing social and ecological impacts comparable to those of a large-scale environmental catastrophe. Our results showed high estimates of how much time would be necessary to return to normality on the part of the local population in both waves of interviews. Thus, even after the change in public perception of causes of the disaster, and attribution of responsibilities, found in the second wave, the problem was still considered to be large-scale.

Rewards are important catalysts to public perception of problems

This is especially so when socioeconomic factors (such as unemployment, poverty and crime) play a role in the crisis. Rewards can also affect risk perception

(Moffatt et al., 2003), and public trust (Williams et al, 1999; Trettin & Musham, 2000). This is particularly true for the area of this case study, where poverty and unemployment were greatly alleviated by economic compensations, thus reducing concern about the environment.

As this research has indicated, in the second wave of interviews, the public was less critical of governmental management of the crisis. The dispensation of rewards can explain in part the attitudes of the population. Many of the fishermen were compensated by receiving more cash than their usual incomes. When visible signs of pollution disappear and rocks and beaches seem clean and supportive of life again, moreover, it is easy to minimize or even forget, what happened (García-Mira et al., 2006).

Positive perception of financial rewards leads to what appears to be a satisfactory psychosocial recovery (see Bolin, 1988) manifested in increased complacency on the part of the public regarding the situation in question. If the institutional help had been perceived as negative or inadequate, the psychosocial impact would have been different. This raises another question regarding management of the consequences of a disaster, recommending inclusion of support services that integrate economic and technological strategies with psychological and social approaches.

Organising the interface among citizens, scientists, and policy-makers

The findings of the evaluation of the social and environmental impact of the Prestige disaster point to a need to establish communication channels between citizens and government, and to strengthen collaboration between scientists and policy-makers. The joint work of scientists, policy-makers, mass media, local associations, ecology groups, and other non-governmental organisations can produce useful material for research on, and management of, public perception of environmental risk.

The case of the Prestige illustrates the importance of collating environmental concerns, knowledge and preferences, and of understanding how these operate in the minds of citizens and policy-makers. Reformulating policy problems as questions and generating meaningful scientific hypotheses can provide a basis for future fruitful collaboration. This requires controlling processes of report production, preventing dissemination of poorly-supported analyses and conclusions, Misleading, prematurely released reports often serve the interests primarily of those who fund them.

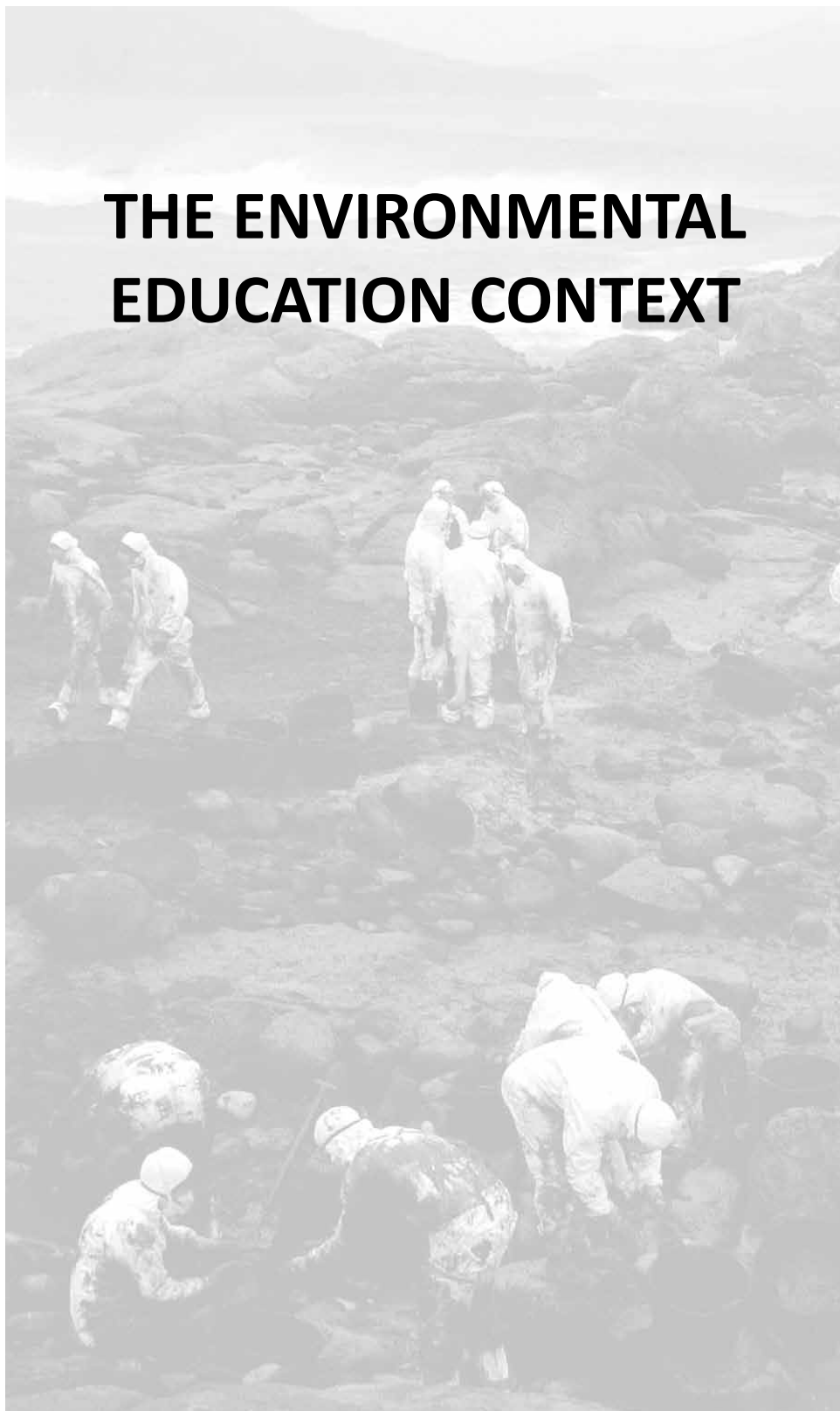
The complexity of working with policy-makers involves the difficulty of balancing the viewpoints and preferences of citizens and public decision-makers simultaneously. However, the proper functioning of modern democratic societies requires the creation of spaces for effective (not token) social participation, and to an extent the establishment of an implementation process for policy-makers and citizens, that is free of the influence of interests other than those of the public.

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THE ENVIRONMENTAL EDUCATION CONTEXT



9

THE PRESTIGE DISASTER: LESSONS IN ENVIRONMENTAL EDUCATION FOR THE GLOBAL SOCIETY*

Pablo Meira Cartea

“The accident is an inverted miracle”

Paul Virilio



Abstract

On 19 November 2002, the *Prestige*, an obsolete oil tanker loaded with more than 70,000 tonnes of fuel, sank off the Galician coast in Spain. Seven days had passed since the vessel had sent its first distress call, a week in which, given the ineptitude and irresponsibility of the administrations in charge, it had slowly leaked its toxic load along the Galician coast. By the time the remains of the tanker had sunk to their resting place 3,000 metres down, the Galician coastline had already received its first oil slick. Even a year after the sinking, the fuel-oil spilt by the *Prestige* continued to wash up all along the Atlantic coast from Galicia to Brittany. Despite the overwhelming evidence, the Spanish state continued to deny the existence of a 'black tide' which was the worst environmental disaster of its kind in Europe and one of the most serious in the world due to the amount of fuel-oil spilt (over 60,000 tonnes), its toxicity, the miles of coastline polluted, the number of people directly affected and the ecological and socio-economic relevance of one of the most complex and productive coastal ecosystems in the world. The Galician coast, especially the *rias* (estuaries similar to the Norwegian fjords), reach net primary production levels of over 9,000 kcal/m²/year: a figure similar to that produced by a tropical rainforest. This is the setting in which the disaster occurred.

Keywords: *Prestige*, community, disaster, globalisation, risk.

Introduction

An environmental disaster such as that caused by the *Prestige* is a totalising and all-encompassing experience for the community that suffers it. It traumatically alters the normal flow of daily life and introduces a feeling of defencelessness, insecurity and vulnerability into the social core that is difficult to explain, especially so when the author forms part of this community.

As well as the evident ecological and economic impact, it also has a social and psychological impact; in fact, a disaster 'does not exist' if the community that experiences it does not perceive it as such. In terms of intersubjectivity and also socially, the sinking of the *Prestige* off the Galician coast has created a collective crisis such as has never before been known in the contemporary history of the region.

Multiple variables would need to be analysed and assessed in depth to explain and understand this crisis, not only local variables linked to the particular history and current profile of Galician society but also those of a global nature associated with the production of risks derived from the development of industrialisation, deregulation imposed by the market economy and the modernisation of society which inspires and legitimises it.

Science and technology, or technoscience (as it is difficult to establish a precise divide between these two fields), play an instrumental and fundamental role in this

project: they offer the tools to transform and control the world in accordance with human interests and requirements, but they also legitimise a discourse and form a 'calming device' based on the confidence and the belief (almost a question of faith) that technoscientific knowledge will allow humankind to overcome any obstacles encountered in its development. Technoscience lies at the heart of the 'expert systems' which advanced societies have created to respond to latent or manifest threats to the project of modernity itself. As we will see, the behaviour and the role of 'experts' and 'expert systems' is an important factor when it comes to understanding the social upheaval caused by the Prestige.

In some ways, the Prestige disaster is also a prototypical example of 'glocalisation': a local event with special characteristics which are not transferable to other regions or communities, but also a crucial event which plainly reveals the inner-workings of the global market to the local and worldwide population and objectifies the risks derived from the success of industrial civilisation in its current state of development. Metaphorically speaking this is the sharp visible tip of the twin icebergs of globalisation and the environmental crisis. Local and global are two planes which here merge and become tangled up, acquiring meaning in the framework that authors such as Giddens (1993), Beck (1998a, 1998b, 2002) and Luhmann (1996) have defined, with certain fine distinctions, as 'risk society'. This concept and standpoint will serve as one of the main threads of this article.

'The most affected are us, the affected' I heard a fisherman say during one of the mass demonstrations organised in Galicia to protest against the disaster. This is undoubtedly true, but beyond the indisputable fact that the oil spill has directed its lethal slick directly towards the Galician coast, the 'affected' are all of us. The spilt fuel-oil did not need to reach other regions of the Spanish coastline, France or Portugal for it to be considered a global issue; it already was one a long time before the Prestige set sail on its last voyage and before its sinking opened its own can of worms. The Prestige is a metaphor of economic globalisation and its iniquitous economic, ecological and social dimensions. As Beck confirms (2002: 97), ecological risks created by contemporary industrialised society dilute the separation between 'us' and the 'other': we are all affected, in reality or potentially, by chemical pollution, nuclear radiation and biogenetic engineering. New threats are distributed 'democratically'; all of us perceive them as such and we can all be (or already are) victims to them although the levels of vulnerability and responsibility can vary in accordance with classical social inequalities (rich and poor, North and South, centre and periphery). Whether we are aware of it or not, it also makes us all to a greater or lesser extent 'responsible' for the generation of those risks.

This text is a reflection from both an insider's and outsider's point of view. From an insider's point of view in that I cannot help but adopt the perspective of those affected, as I feel and see myself as one of them and this carries with it an emotional burden which is difficult to leave behind. It is also possibly unnecessary or inappropriate to do so: reason and emotion are two basic pillars of knowledge and are complementary dimensions in the process of forming environmental awareness,

and even more so when it comes to actually making a commitment to change, as all of us who work in the field of environmental education well know.

An outsider's point of view is necessary to establish a certain distance to facilitate a paradigm shift (never fully completed due to the very nature of social-scientific knowledge) which allows us to find arguments and answers that allow us to see beyond the obvious. An experience from which, or so we think, important conclusions can be reached for understanding (and therefore changing) the way in which contemporary societies perceive and tackle environmental problems. This is also why it is considered important for improving our understanding of the meaning and the task of environmental education nowadays.

As it is absolutely impossible to cover all the facets of the disaster, even those which could have a more direct impact on environmental education or on our understanding of how an environmental crisis is socially constructed and represented, the discussion will focus on three main aspects:

- The glocal nature of the incident;
- Social reaction as an example of politicisation generated 'involuntarily' by the risk society;
- The 'organised irresponsibility' associated with the institutional management of the disaster and the exposure of the fallibility of institutionalised 'expert systems' and their supposed scientific legitimacy.

Local and global

1. The local dimension

Galicia is located in the north-western corner of the Iberian Peninsula. Due to historical events which have no place here, it forms part of the Spanish state, although it was once an independent kingdom and could have been part of Portugal. Galicia is one of Europe's Land's Ends, the westernmost point of the world until a visionary thought to sail westwards. Galicia was the first Old World land to learn of the existence of the Americas, but also one of those that benefited least from their plundering in colonial times. We live on the periphery, the periphery of the centre but a periphery all the same, not only geographically but also economically, socially and culturally. This helps to explain why the region is one of the most underdeveloped in Spain and by inclusion, in the European Union.

Galicia is a sea-facing region covering slightly more than 29,000 sq km and home to 2,737,370 people. It is no coincidence that three out of every five Galicians live along the coastal strip. Its 1,674km of coastline makes it an Atlantic region, not only due to its geography and ecology but also out of pure necessity. The sea always had more to offer than the Castilian plains: a chance to earn a living and when this was not enough, the means of escape to search for it in other waters or to emigrate. In Galicia the sea is not only exploited, but also cared for, and is one of the mainstays of the region's economy. 10% of Galician GDP comes from the

sea, which provides 12% of total employment. This does not include sectors which indirectly depend on fishing, shellfish harvesting or aquaculture (e.g. maritime services, processing industries, transport and commercial networks) or the value of the coast in terms of tourism (hotel and catering industry, construction and leisure facilities, amongst others).

There is a stereotype which exists about Galicia, that of 'Green Galicia': a land of virgin landscapes and 'natural wilderness'. It is totally false. The territory of Galicia (including its coastal shelf) shows the effects of considerable human impact. The richness of the environment and scenery in present-day Galicia are the result of a close relationship between the space and the populations who have inhabited, altered and moulded it over centuries, at least since Neolithic times. This is important in understanding the social impact of the Prestige: the disaster was not natural as the causes were evidently unnatural and the area affected has been totally humanised. It is also one of the keys to explaining the reaction of Galician society: it is not 'nature' which has suffered the onslaught of fuel oil, but 'humanised nature'. This distinction is an important one, yet does not detract in the slightest from the seriousness of the ecological impact of the oil spill.

Since the collapse of the Franco dictatorship and the restoration of the constitutional monarchy, Galicia has been governed by 'the right', morphed now into the People's Party; right-wing politics inherited from the dictatorship which formally assume democratic rules yet, at least in regional 'micropolitics', continue to follow the ways (and principles) of the Ancien Régime rather than Francoism. The First Minister of Galicia, Manuel Fraga, sat in the last cabinets of the dictatorship as Minister of Information and Tourism (in charge of official censorship amongst other things) and Minister of Home Affairs (in charge of the things that ministers of home affairs are in charge of within a dictatorship). This political peculiarity also explains some of the institutional reactions to the Prestige disaster. In short, Galicia maintains certain pre-modern features, characteristic of a society which only made the change from a traditional rural society to a modern society in the second half of the 20th century.

This setting would explain the fatalism and the readiness to yield to instituted power attributed to Galicians, more accustomed to deals or agreements with the authorities to obtain certain personal favours or advantages for the family than to exercising their civic rights (and duties) in a supposedly modern and democratic society. Despotism and political patronage are two forms of political iniquity which express this relationship.

The Prestige has impacted upon this political setup, which was already showing signs of weakening. The electoral majority of the People's Party is won with the rural vote of inland Galicia: traditionalist and conservative, though not in the liberal or neo-liberal sense of the term. The 'modern' left, whether nationalist or centralist, however, dominates in coastal urban areas where the population is younger and has assumed lifestyles and cultural standards which could be considered as postmodern. They are also aware of their civic rights and claim them more freely

and independently. This social duality explains how the epicentre of the response to the clumsy handling of the disaster was located in the Rías Baixas, the most densely populated geographical area in the region and also the most dynamic from a cultural, economic and social point of view.

There is also a latent generational conflict which the Prestige has caused to implode in an obvious manner: the younger urban or rural-urban generations, educated and socialised in democracy and with a educational and cultural profile quantitatively and qualitatively different from that of their predecessors want to assert their vision of the world: that of any other European hypersensitive to totally new environmental risks. For this sector of the population, the Prestige has become a sign and symbol of changing times (or of the desire for change in Galicia).

This (advanced) duality of tradition and modernity has expressed itself in many ways. Public administrations have frequently alluded to fate, providence or destiny to play down and minimise the social and political impact of the disaster. This has been possible not only by referring to the inevitability of the sinking as a quasi-natural phenomenon, uncertain and unpredictable (despite precedents), but also to divine intervention and protection as a means or way of remedying the consequences: 'I offer you the testimony of my unconditional loyalty, infinite gratitude and the hope that St. James, the patron saint of Spain, will come to our aid. He, who was also disheartened, recovered his faith at the feet of the Virgin of 'El Pilar' (Manuel Fraga, quoted in the regional newspaper *La Voz de Galicia* on 29 January 2003). Far from calming social reaction, this type of statement (reminiscent of the Ancien Régime) caused even more exasperation. Giddens (1993: 107), in his description of the nature of threats generated by modernity, states that "a world structured mainly by humanly created risks has little place for divine influences, or indeed for the magical propitiation of cosmic forces or spirits. It is central to modernity that risks can in principle be assessed in terms of generalisable knowledge about potential dangers – an outlook in which notions of fortuna mostly survive as marginal forms of superstition'.

The relatively recent modernisation of Galician society, including the emergence of environmental awareness and environmental risks, is one of the factors which explains why it has taken five oil spills on Galician coasts (from the Polycommander in 1970, in the Ría de Vigo; the Urquiola in 1976 and the Aegean Sea in 1992 in the Ría de A Coruña; the Andros Patria in 1978 on the 'Costa da Morte'; and now the Prestige) as well as the sinking of two ships carrying toxic products (Erkowitz, 1970, with insecticides in the Ría de A Coruña; and Casón in 1987 with 'unknown' chemical products off Cape Finisterre) during the last 30 years for a communal mobilisation like the present one to have occurred. The social movement *Nunca Máis* summarises and symbolises this awakening, reflecting the main demands of this mobilisation and giving shape to the social structure organised around the disaster. If we accept the enlightening idea of Beck (1998b: 156) that 'hazards are subject to historico-cultural perceptions and assessments which vary from country to country, from group to group, from one period to another' and therefore, the

hazard and the perception of what does or does not constitute a threat for the community or individuals is a product of social construction and is as important as the actual facts or the probability that it will directly affect those who perceive it, then the Prestige has come to the right place at the right time.

This spatial and historical convergence largely explains the unprecedented social response not only within Galicia, but also beyond the region, if the mobilisation bringing thousands of volunteers from other regions and countries to the coastal slicks is taken into account. In fact, the volunteers empowered and increased the reflective or self-reflective ability of the Galician population to comprehend the disaster; they acted in some ways as 'external assessors' like the 'others' gaze' which ends up also being our own (or perhaps it is our perspective that penetrates 'the others').

2. The global dimension

Nunca Máis! (Never again!), the slogan which identified the social movement against the disaster, is an outcry against the threats and uncertainties caused by industrial and technological development and also against the impunity with which the global market operates. Somehow, this expression manages to capture the feelings of defencelessness and perplexity that this situation generates amongst the conscious-minded general public in Galicia and elsewhere. Due to the Prestige disaster, global ecological hazards produced by modernity acquire physical form on a local scale. In contrast to the counterfactual nature of environmentally damaging processes with a higher threat potential but whose effects are hardly perceptible in daily life (climate change, invisible and insidious pollution of air, soil or water, degradation of biodiversity), the oil spill caused by the Prestige is a 'real occurrence'. It provides evidence which can be seen, smelt and touched; it is a materialisation of globalisation and its collateral effects on the natural and human environment; it facilitates an 'objective' experience of the environmental crisis and its radically global and globalising nature (Meira, 2001).

This is not the place to enter into a dispute about what constitutes globalisation, nor perhaps is it the place to discuss what distinguishes the current phase of modernity (if we are still in it) from previous stages. Following the thesis put forward by Baricco (2002), it can be said that the one thing that best defines the contemporary world as a globalised entity (more than the generalisation of new technologies, the construction of a global market or the westernisation of culture) is the suppression of rules to give free rein to the circulation and multiplication of money. Capital flows freely, without anything to hold it back. The rules of global play are set by capital interests and market agents: i.e., in terms of neoliberal orthodoxy, there is a total absence of rules (except perhaps those which protect tax havens and bank secrecy, safeguard ownership of resources and patents and govern foreign debt repayment and little more). Rules do not exist, borders do not exist and scruples do not exist, only the drive for profit and the survival of the fittest.

In this context, states and international multilateral agencies (e.g. those that form part of the United Nations system) are continually challenged and questioned on their ability to impose their sovereignty and exercise their authority to protect the general public from the excesses of an increasingly deregulated market.

In terms of how this all relates to the Prestige disaster and looking beyond the actual sinking of an oil tanker, what has foundered off the Atlantic coast of Galicia has been a commercial operation: a business which exemplifies the perverse nature of globalisation as conceived and practised from a neoliberal point of view.

The Prestige was built in Japan 26 years ago and had already far exceeded the useful life recommended for this type of vessel to operate with a minimum level of safety. In short, it was over-amortised. However, according to its navigability licence (last issued by a US classification society), inspections carried out during its last visits to European ports and the insurance contracted (from an English insurance company), the vessel was in compliance with the required codes to sail.

The owner of the vessel is a Liberian company, Mare Shipping Inc, registered with the Liberian International Ship and Corporate Registry, with offices, logically, in... London. Behind this company façade is a family of Greek ship-owners, the Coulouthroses. Also based in London are the offices of the Maritime Authorities of the Bahamas, the flag state of the Prestige; a so-called flag of convenience, which are used to reduce tax costs and to profit from less stringent rules in terms of safety and qualified crew. The master was Greek and practically all members of the crew were from the Philippines. This is a tactic used by shipping companies to save on salaries (seamen from the Philippines or other developing countries are paid a third or a quarter of what unionised seamen in western countries are paid), although this comes at the cost of neglecting safety given the insufficient preparation of these crews, especially in handling dangerous merchandise. The Prestige had also been recently repaired in a Chinese shipyard where some corroded plating was replaced in exactly the same place where the hull started to crack on 13 November.

The 77,000 tonnes of fuel oil that the Prestige was transporting had been loaded in Riga (Latvia). It was of very poor quality, practically a leftover derivative of oil whose use is banned in the European Union, although its passage as cargo is allowed along the EU coastline until it docks in a needier country with fewer scruples, seemingly somewhere in Asia. The owner of the cargo was Crown Resources, a front company registered in Switzerland and with offices in London, which appears to be linked to the Alfa Group, a Russian business conglomerate presided over by Mikhail Fridman, a self-made millionaire who has made his fortune thanks to the breakup of the Soviet Union and collusion with the new Russian authorities, first with Boris Yeltsin and now with Vladimir Putin. Mainly concerned with the transport of oil and oil derivatives, its activity is shrouded in uncertainty, since it almost always operates through tax havens (Gibraltar, the Virgin Islands), performing miraculous financial operations of frequently questioned legitimacy.

This group maintains close links and has common business dealings and interests with Halliburton Oil, the energy services company which was managed

by Dick Cheney until he became the US Vice-President, as well as being one of the principal beneficiaries from the share-out of Iraq's reconstruction and oil after the Second Gulf War. Crown Resources, the owner of the cargo, was wound up and its assets liquidated two weeks after the start of the Prestige disaster; the company simply no longer existed and could not be made liable for any damages. There are still a couple more pieces to this global puzzle: the company contracted to rescue the troubled tanker was Dutch and the plan was to tow it to Cape Verde, where the government there would have issued it the necessary licence to transfer its toxic cargo.

This tangled score of nigh on a score of states, combined with supranational economic interests, plainly demonstrates the absence of effective rules to govern, control and defend the common good against the private interests that move the markets. Another obvious difficulty is in proving liability and claiming compensation from those deemed to have caused or been directly or indirectly responsible for the disaster. Below are the specific characteristics that Beck (1991, 1998a) attributes to contemporary hazards and environmental disasters:

- They are immeasurable. Damages caused to the environment, population or the economy are hard to quantify in monetary terms, or reach such an extent that mechanisms of compensation and damages in place as part of the system cannot cover them (insurance, solidarity funds). It is the state (when there is a state) who assumes the cost of damages.
- They are uncontrollable. Control mechanisms are corrupted by the system or do not work and it is impossible to establish truly effective preventative measures; when establishing stricter rules to improve maritime traffic safety, attempts by states or by international organisations like the European Union or the International Maritime Organisation clash with the states themselves (no mistake), who are protecting the particular interests of economic agents operating under their supposed sovereignty. Pierre Bourdieu (2001: 11), with his characteristic clarity, unravels this paradox: 'it is states that have initiated the economic measures (of deregulation) that have led to their economic disempowerment. And contrary to the claims of both the advocates and the critics of the policy of 'globalisation,' states continue to play a central role by endorsing the very policies which tend to consign them to the sidelines'.
- They are indeterminable. What happened in Galicia could have happened in another place at another moment, and in fact will happen. Disasters like that of the Prestige unfold here, there and everywhere until creating a kind of normality which appears to be contingent, yet they are the inevitable consequence of a particular economic and energy-based model. As Doldán (2002: 40) clearly states: 'capitalism fattens itself up on oil'.
- They are unattributable. Liability normally surfaces, and when it does it is obscured by a completely opaque and intricate entrepreneurial or institutional confusion, if not directly attributed to fate or a human error. Until now in the Prestige case, the master has been the only one to see the inside of a prison,

while insurance companies, classification societies, shipping companies, cargo owners, shipyards, rescue and salvage companies, administrations and the like mutually accuse each other of not having acted correctly before, during or after the accident. And we all know: when everyone is to blame, no-one is to blame. It is necessary to bear in mind that western criminal law is based on the existence of a clear connection between the crime, its cause and whoever caused it. If this link cannot be established and clearly proved, there is little that can be done.

We are facing one of the great ruptures caused by development of the global market: environmental disruption. The Prestige disaster is only a local manifestation of this rupture, whereby the countermeasures are revealed which in theory, should avoid the collateral effects of neo-liberalism on the environment: technoscientific risk control systems fail; national and international legal and legislative systems fail, economic compensation mechanisms fail (it is clear that in this case the polluter is not paying) as does reinvestment of the wealth generated by relief or preventive measures, and the State, as the institution that should safeguard the interests of its citizens, also fails. This is where the deep-rooted causes of the disaster are to be found.

This radical (in the etymological sense of the word) reading of the situation poses one of the greatest challenges for environmental education: how to make this extremely complex reality intelligible to the different sectors of society. It is apparent that the vast majority of Galicians mobilised by the oil spill have reacted more strongly towards the environmental, social and economic consequences that it has engendered than to the deep-rooted causes that enabled it to happen, despite the fact that a succession of similar disasters in the region should bring with it a very negative prior experience of how the system works. For example, fishermen, shellfish harvesters and fish and shellfish farmers are only now starting to receive a minute proportion of the compensation claimed for the Aegean Sea accident which ran aground at A Coruña eleven years ago.

Another great challenge for contemporary environmental education is the intelligibility of the global environmental crisis and its local manifestations, establishing significant links between local and global, between what is environmental and what is socio-economic. This could even be said to be its most important and pressing challenge. With regard to environmental education for sustainability or sustainable development, instead of the 'should be' mantra which surrounds the controversy (which is artificial to a certain extent and in which we ourselves have played a part), education consists of a 'be' mentality: it is about what we are and who we are, here and now as contemporary societies immersed in an accelerated process of economic globalisation. Once again this coincides with Bourdieu's thinking (2001: 76) when he states that scientific imperatives (and here we could also add contemporary educational and political imperatives) establish the need to travel back 'along the chain of causality back to the most general cause, that is, to the locus,

now most often global, where the fundamental determinants of the phenomenon concerned reside, which is the appropriate point of application for action aimed at effecting genuine change' It is no coincidence that the manifesto read aloud in the demonstration organised in Santiago de Compostela on 1 December 2002 ended with the phrase 'Today Galicia is the whole of mankind, shouting *Nunca Máis* [Never Again]!'.

Public reaction: The politicising power of the disaster

One of the most surprising and positive effects for those that have been involved in the Galician environmentalist movement for many years has been the social response to the disaster. It has already been argued that the oil spill, the fifth in 30 years, came at the right time and to the right place given the 'modernising' change in Galician society, accelerated in the last third of the 20th century and empowered by the (partial) eclipsing of the Franco dictatorship and the restoration of democracy in Spain. Nevertheless there are other key aspects which explain the emergence of an active civic movement organised in horizontal networks of great social mobilisation and presence.

In December 1992, shortly after the tanker *Aegean Sea* ran aground at A Coruña, unleashing an oil spill with significant environmental and economic impact but within a more limited geographical area than that of the *Prestige*, a mix of pro-environmental groups and cultural, civic or trade union associations created a public movement under the name '*Mar Limpio*' (Clean Sea). On 10 January 1993 this movement organised a demonstration in A Coruña attended by only 3,000 people: their prophetic chant was '*Nunca Máis*'. This is now the name chosen by the civic platform which was created to bring together those protesting against the *Prestige* disaster even before the Spanish government had decided to set up a specific Crisis Coordination Committee. This movement has become a point of social and political reference in Galicia and further afield. Anecdotally, (yet significantly) it already figures in the CIA website as one of Spain's 'pressure groups'.

Nunca Máis is a civic organisation which groups together more than 400 associations, collectives and institutions of various different types, from inside and outside of Galicia (promoted by groups of Galicians who have emigrated to other parts of Spain, Latin America and Europe) and environmentalist and green groups who have joined the cause. Although the movement contains class-based trade unions, 'traditional' political parties and institutions such as colleges, universities and municipalities, *Nunca Máis*'s profile fits better with that of more recent social movements. In terms of its organisation, it functions as a decentralised network which connects local and district committees to others of a more theme-based nature. Specific 'specialist' committees are created for each action which are then dissolved once the action has been completed.

Galician environmentalism enjoys a significant presence in the movement but it would be a mistake to consider the movement as an extension or enlargement of

it. However, from the point of view of the so-called 'active minorities' (Moscovici, 1981) the role of Galician environmentalists is noteworthy due to their social influence which transcends their minority presence in Galician society and lack of access to institutionalised power structures such as government agencies, the media or political parties. Far from acting like fringe groups, they have become a relevant reference opinion and carry enough social weight to promote public mobilisation and question attempts by regional and state governments to legitimise their inefficient and incompetent actions before the public. The Galician environmentalist movement is made up of a score of smaller groups with no more than 2,250 members between them and an active core of approximately 100 people. Just two associations constitute almost half of these members; the remainder come from a medley of local collectives or specific-interest groups (ornithology, education, marine mammals and others). The presence of large 'multinational' environmental organisations (ADENA-WWF, Greenpeace) is hardly noticeable in terms of continuous action at local level, although in all probability they have more members in Galicia than the local collectives and their media impact is regrettably greater.

As well as environmentalism there are another two central concepts which explain the emergence and power of this movement: identity, in that the clumsy response by the state has heightened Galician national awareness (as a stateless nation administered 'by remote control' by a government which has marginalised it for centuries) and the call for recognition of its own cultural and social singularity; and socio-economics. Given that fishing, shellfish harvesting, aquaculture and tourism make up an important and dynamic sector within the community's economy, in socio-economic terms, Galicia has been directly affected and left defenceless by the disaster.

On 1 December 2003, ten days after the Prestige went down, the huge demonstration organised by Nunca Más in Santiago de Compostela brought together more than 300,000 people (in a city with 95,000 inhabitants) and revealed the power of a 'new social player' which has been pivotal in channelling public indignation (both reactive and traumatic) into a proactive protest movement whose public presence and initiative have overwhelmed its instigators and the authorities alike. The features of the Nunca Más civic platform that rank it amongst new-style social movements are as follows:

- Firstly, its non-partisan nature. The governing party in Galicia and the Spanish state (the People's Party) does not form part of the movement, despite attempts to join on the condition that the movement would not hold them politically responsible or condemn their incompetence in handling the disaster, a demand that was naturally rejected. The rest of the parties in the parliamentary and non-parliamentary spectrum are included however, together with the main trade union organisations that played a significant role in the consolidation of the movement. The majority of the movement,

however, is made up of collectives with totally different ideological profiles and aims: cultural and neighbourhood associations, feminist groups, fishermen's guilds, sports clubs, educational reform movements, ecologists and pacifists, amongst others, as well as by others created expressly as a response to the disaster: examples of these are Area Negra (Black Sand), whose members are drawn from all levels of the education system; Burla Negra (Black Mockery) an umbrella for music and theatre groups; and Colectivo Chapapote (The Tar Collective) which groups together artists and graphic designers.

- Secondly, its mix of classes and plurality. One of the characteristics which Ulrich Beck attributes to risk societies is precisely this socially equalising effect that new global threats have on the population. This effect superimposes and to a certain extent 'annuls' the social, cultural and economic inequalities of traditional modernity. Everyone, regardless of their social status, perceives themselves as threatened, or in this case, as victims of, or affected by, environmental deterioration. Massive public demonstrations, unprecedented for Galicia, can to a great extent be explained by this effect. This mix also means it is not easy to identify a hegemonic ideology, although there is an evident bias towards the traditional and nationalist left as well as the 'new left' (which includes collectives assigned to totally new social movements which question traditional political militancy and the formalism which representative democracies are drifting towards; and which also advocate greater ethical and political coherence between private and public spheres and more committed and participatory forms of expression and actions for social change).
- Thirdly, its civic and moral nature. As stated by one of the spokespeople of the movement, writer Suso de Toro (2002), what started off as an ecological disaster has become transformed into an upheaval of representative democracy and the legitimacy of government institutions, as demonstrated by the metaphors of 'absent state' or 'naked state'. These metaphors describe an inefficient bureaucratic network that cannot protect the citizens it serves and, furthermore, turns against them in an attempt to hide the truth and discredit the social mobilisation as being nothing more than an expression of indignation and self-defence, going to the absurd extremes of labelling this civic movement as 'terrorist' (in the wake of ideological legitimisation spread by the neoliberal discourse after the attack on the twin towers on 11 September 2001). In fact, starting with what are essentially environmental and economic demands, the movement has gone on to claim democratic rights as basic as freedom of speech, transparency and access to complete and truthful information, participation in public affairs, questioning and control of work done by public administrations and demanding that respon-

sibility be assumed by political representatives for their actions or omissions. From initially proposing demands based on repairing the damages caused by the disaster (compensation, improved maritime safety, the clean-up and recovery of coastal ecosystems) it has extended its remit and incorporated other demands linked to the democratic regeneration of society. What was originally an essentially reactive movement has become a proactive movement.

- Lastly, its expressive and creative nature. The use of original mobilisation strategies with strong symbolic content signifies a break with conventional forms of action. People who have acted as public spokespersons for the Nunca Máis movement had never previously been involved in political action in Galicia or elsewhere: these include the writers Manuel Rivas and Suso de Toro, the actor Luis Tosar and the singer Uxía Senlle. The fact that their moral legitimacy and public credibility comes from their work as artists and their cultural commitment to Galicia, rather than from any attributes related to politics or business, is an indication of the atypical nature of the movement. This expressive component is plain to see in the creativity poured into all the actions related to information, demands, communication and mobilisation that have been carried out and is one of the defining features of the Nunca Máis movement. Along with the more conventional events, and at times even as part of them, there has been a plethora of exhibitions, concerts, recitals, posters and publications, performances, theatre performances and manifestos which have allowed the movement to penetrate deeper in society and obtain a greater media presence, even managing to overcome the fact that practically all the public and private media were belligerently against any questioning of the government's conduct.

The Nunca Máis movement has not been the only example of social activism spurred on by the Prestige. In response to the oil slick, the fishing community (fishermen, shellfish harvesters, goose barnacle pickers and fish and shellfish farmers) organised themselves into associations and ad hoc groups once the absence of the state and the subsequent void had become apparent, in a radical and heroic expression of civic dignity. While the governments were caught up in their own incompetence and worrying about how to minimize the media impact of the disaster, seamen took it upon themselves to invent home-made tools and adapt fishing tackle to gather up fuel oil. They created monitoring systems to track the location and drift of slicks and organised the support logistics (which also helped to channel much of the volunteer movement), sometimes even picking up fuel oil with their bare hands. This social network managed to effectively 'stop' the oil slick from entering the Rías Baixas (the Vigo, Arousa and Pontevedra estuaries), which is the most valuable area from an environmental and socio-economic perspective, and to minimise its effects on other coastal areas. In this instance, the main priority

of the social mobilisation was to protect livelihoods, but it has also led to bolder and more complex demands such as the democratisation and modernisation of the fishermen's guilds (which date back to the Middle Ages), freedom of expression and questioning of the use of these guilds as instruments of political and social control by the powers that be.

The third significant factor influencing the politicisation associated with the disaster concerned the volunteers from Galicia or elsewhere who came to offer their efforts and declare their solidarity in the struggle against the oil slick. Before the state or regional government had decided to mobilise their civil and military resources, sand and pebble beaches, cliffs and salt marshes were filled with volunteers of both sexes helping to clean up the waves of fuel oil that were hitting the coastline.

This wave of solidarity was initially (during the first two months) channelled through the fishermen's guilds, some local councils (the only level of government that rose to the occasion, although not in all cases) and the arrangements put in place by pro-environmental groups and universities. Work protocols were drafted during the first few days and were vital in ensuring that cleaning tasks did not further damage the coastal ecosystems and in protecting volunteers from the toxic fuel and the risks inherent to the work being done. These protocols were created from the swiftly accumulated experience and the transfer of information from other similar disasters. Significantly, the protocol elaborated by ADEGA, the largest and most influential Galician environmentalist group, was the one that was finally adopted (almost word for word) by the government itself. Without exaggerating, Galicia currently has the best trained 'experts' with the most experience of post-spill clean-up operations among its scientific community and volunteers.

The work of the volunteers has objectively played a very important role in the clean-up of the oil. The majority of these cleaning tasks, given the vulnerability of the sands and the dune systems in Galician beaches and the difficult relief of coastal formations (pebble beaches and cliffs) cannot normally be performed by mechanical means. Only people working by hand (once again by hand) can carry out this work without causing irreparable damage. However, the volunteers played another role, as significant as the one just mentioned: they helped to shape the social representation of the disaster. From the standpoint of environmental education, this has been their most far-reaching contribution, one which deserves a deeper and more detailed analysis in the future.

Firstly, the volunteers acted as eye-witnesses to the oil slick. They were the hands, eyes and noses used to testify to the rest of the world in Galicia, Spain and abroad that the disaster was of massive proportions, in contrary to the adulterated and toned-down version conveyed by official sources and the media at their service. It has also been an essential factor in exposing the desertion (especially in the first few weeks) and inability of the government to respond appropriately to the magnitude of the problem. In this way, the volunteers have been a fundamental variable in providing 'objective criteria', 'publicity' and the reporting of the disaster in the

media, with their oil-covered white overalls, safety glasses, rubber gloves and boots becoming an icon, a sign and a symbol of the most positive side to the disaster.

Secondly, the volunteers have also helped to activate the social response growing within Galicia, especially in areas such as the Costa da Morte. Due to its low level of socio-economic development, coupled with the existence of a poorly structured society in thrall to power and the scourge of a dwindling population (the result of mass emigration and ageing), the initial response was much more fatalistic, resigned and passive.

In accordance with the risk society theory and accepting that risks are socially constructed, there is no doubt that the social movement has contributed to the 'construction of the disaster' and in particular, has acted as a dialectic counterweight to the 'construction of the non-disaster' undertaken by those with governmental responsibility in order to safeguard their hegemonic power. High levels of public participation appears as a positive factor in all disaster prevention and relief handbooks, but here the regional and central governments perceived it as a threat, which it actually was: revealing the virtual nature of the State and its incompetence and inability to protect the public; reinforcing the collective perception of the danger, not only the risk; and showing the extent to which the threat can come from inside the system itself. The medium and long-term development of this movement remains to be seen, as does the effect it may have in the medium and long-term on other social and political aspects, especially in Galicia. Nevertheless, it is obvious that 'hazards dramatically undermine 'bureaucratic rationality' thereby opening gulfs between state authority and the democratic awareness of citizens' (Beck, 1998b: 177). Furthermore, it is possible that many Galicians have discovered their sense of civic duty because of this disaster.

Organised irresponsibility and the frailure of expert systems

The Prestige has also revealed how when the institutions and systems of risk prevention and civil protection that are a feature of advanced societies are faced with critical events, they struggle to protect the health, surroundings, and interests of the general public who have entrusted them with this responsibility; even with the application of preventive strategies, and then relief intervention once the threat has unfolded into a real disaster. In the light of the Prestige, environmental policies (local, regional and international) appear as mere representations loaded with a peculiar rhetoric and designed more to 'transmit a sensation of safety to the population' than actually provide or guarantee it. While standards, regulations and other management instruments such as ISO-14000, blue flags and the like multiply in the European Union and its member states to keep such relatively trivial matters firmly in check, activities with catastrophic risk potential are hardly controlled or regulated at all.

It could be said that, 'under the dictate of necessity, humans have graduated from a kind of crash course of the contradictions of hazard management in risk

society' (as Beck states in his analysis of the Chernobyl disaster; 1998: 164) Perhaps Francisco Álvarez Cascos (Minister of Infrastructure in the Spanish government and the senior figure responsible for the handling of the accident during the seven days in which the Prestige remained at sea) was thinking of this when he declared to the European Parliament that the catastrophe was 'the Spanish Chernobyl' (in an attempt to convince the MEPs to concede special funds for natural disasters which were subsequently denied); but of course in Galicia and Spain they (and he himself) continued to officially deny and minimise the severity of the situation.

The resulting situation in Galicia fits perfectly with what Beck describes as 'organised irresponsibility'. As this author suggested at the end of the eighties 'official policy oscillates between the use of power and impotence' such that 'each disaster hidden [or each disaster that they pretend to hide] from public opinion serves to expose and ridicule the politicians themselves' (Beck, 1991:35). More recently he wrote: 'Hazards are the instrument, not yet discovered or utilised [in Galicia they have yet to be 'utilised'], of de- and anti-bureaucratization. They blow up the façades of (in)competence. They tear down Potemkin villages, entire city states predicated on welfare and responsibility'. (Beck, 1998b: 135). In that case, how does the exposure of the ineptitude of the regional and state governments with regard to the disaster reveal itself in recent and current situations in Galicia?

There is a telling statement in this regard. It was made by Rodolfo Martín Villa, a few days after taking up his post as the central government's Commissioner for matters relating to the Prestige: 'At this point I don't have a very clear idea of how the decisions were made at that time (the sinking), but even if I did, and as a result it could be deduced that the responsibility lay with some public authority, I would have to keep it quiet, as I would be damaging national interests' (El País, 4 February 2003). There are at least two aspects worth highlighting in this statement: firstly, the explicit declaration of 'ignorance' on behalf of the government about how the crucial moments of the accident were managed during the six days of the distressed tanker's erratic voyage off the Galician coastline; and secondly, the public affirmation of being prepared to commit a crime (in terms of breach of a legal duty) by hiding information that could prove that certain public managers were responsible for how the disaster developed, with the paradoxical argument of saving the State the financial costs which could arise as a result.

'Ignorance' is no more than a semantic resource to hide other realities: the lack of foresight, incompetence and improvisation that the government demonstrated before, during and after the disaster. The decision to send the boat out to sea appears to be a determining factor: it is the mistake that unleashed a series of subsequent blunders. Although it appears to have been Mr López Sors, Director General of the Merchant Navy, who 'technically' signed off this decision (as a Merchant Navy captain), according to what can be gleaned from the initial legal investigations, at no point was the Contingency Plan for Accidental Maritime Pollution (passed on 21 January 2001) activated, although contrary to what was said at the time it did in fact exist (implying an even greater level of incompetence and irresponsibility). In

fact, between 18–19 September 2001, maritime salvage and rescue agencies carried out a simulation in which the mock scenario was a collision between two vessels (a freighter and a tanker) in the Finisterre shipping lane, 60 miles from the coast and in practically the same place where the *Prestige* had finally changed course. As a result of the collision, the freighter had caught fire and the tanker was adrift with a hole in its side through which it was pouring out its load. The decision adopted in this simulation was to tow the tanker to harbour, surround it with oil booms and offload the cargo onto another vessel: exactly the contrary to what happened when the simulation became reality. When a journalist questioned Mariano Rajoy (Deputy Prime Minister of the Spanish government and in charge of hammering out the official version of the disaster in the media) on the reasons why they chose to ignore this simulation, his reply could not have been more illustrative: “In the simulation performed 14 months ago, no decision was made to tow it into port, but the decision was made to perform a simulation which consisted of two tankers crashing into each other, which caused a series of injuries and it was taken to a harbour [sic]’ (El Mundo, 10 December 2002)

The rationality behind the damaging decision to send the boat back out to sea is questionable. It is evident that the operation was not based on rational criteria or procedures of a scientific–technical or indeed any other kind of nature. However, the government has insisted that there are reports written by experts which scientifically justify the sending of the vessel out to sea, although such reports have either not been produced or have been refuted by the very experts called upon to offer the umbrella of their authority and prestige. In fact, the attempt to legitimise the final decision in this way has met with a fairly unanimous response throughout the scientific community in Galicia, Spain and the rest of the world: the only possibility of avoiding the disaster on the same scale would have been to have taken the distressed tanker to a port (A Coruña is thought to have been the best choice) or a sheltered area and once there, control the initial spill (which would have limited its impact to a shorter strip of coast) and proceed to tranship the load. Even the slightest knowledge of the behaviour of the sea and the weather on the Galician coast in winter, which as well as being available from the scientific community is also part of the lore of the local fishing communities, would have enabled the eventual decision to have been ruled before it was taken.

As well as this appeal to expert authority, other arguments used to subsequently legitimise the decision to send the boat away from the coast are the alleged refusals by the authorities and inhabitants of the coastal communities to which the tanker could have been diverted: an option with a knock-on political cost. An argument which reveals another of the paradoxes of this disaster; a typical case of NIMBY (Not In My Back Yard), whereby the government anticipates and avoids the environmental impact of a potentially dangerous decision on a single community. As it turned out, however, the pollution spread itself ‘democratically’ along an extensive stretch of coast, including those communities in the areas which would have been suitable places to bring the ship in. To the extent of our knowledge, no

actual enquiries were made to the local authorities in places that could have offered shelter to the *Prestige*.

A further argument wielded by the government has been the imperative need to take an urgent decision without time “to think”. This does not hold up well, especially since the tanker remained afloat for the best part of a week, the majority of the time in extremely harsh seas but also with calm intervals which would have favoured other options. Neither does the supposed lack of cooperation from the master of the *Prestige*, given that command of the vessel could have been assumed at any point by the authorities in the face of an evident risk of an ecological disaster, as was in fact done on the second day after the initial incident occurred. It is essential to remember that in this regard, international protocols for maritime emergencies endorsed by the International Maritime Organisation and the Law of the Sea recommend (as it seems the captain tried to do) that ships be brought in to shore to facilitate rescue efforts and minimise the environmental impact of a possible sinking.

The ‘hidden’ explanations for this evident example of bureaucratic irrationality and irresponsibility point elsewhere. The first is the lack of technical means and rescue equipment to be able to tow the tanker safely, control the spill on the coast and pump out the fuel. The insufficiency and inadequacy of oil booms available at that time is also noteworthy, as is the lack of oil spill recovery vessels (despite precedents) and that the tugboats included in the maritime rescue plan were not powerful enough to tow heavy tonnage vessels like the *Prestige*. In fact it was not until Day 5 of the incident that a Chinese tugboat contracted by a private company which had been awarded the rescue contract (the Dutch company Smit) arrived with sufficient strength to tow the stricken ship. Such scarcity of resources leads back once again to neo-liberalism at the service of dismantling the State: with the objective of ‘zero deficit’, the government of the People’s Party has followed a policy of systematic reduction and privatisation of public services in all areas. Maritime salvage and rescue has not escaped this disruption: in 1997 the budget for the Maritime Rescue Plan was cut by 50%, meaning five boats instead of ten were allocated to the whole of the Atlantic coast. Another lamentable case of the link between local and global, and an example of the aforementioned ‘naked state’ or more subtly, ‘the government against the state’ (López and Sartorius, 2002).

The subsequent behaviour of the regional and state administrations revolves around this lack of resources: the attempts to deny the disaster (‘The tanker is no longer leaking oil’, Ministry of Public Works, 15 November 2002; ‘At 60 miles’ distance the risk is not high’, Enrique López Veiga, Regional Minister for Fishing, 16 November 2002; ‘It’s turned out reasonably well’, Mariano Rajoy, Deputy Prime Minister of the Government, 20 November 2002); minimise it (‘It can’t be a slick if it’s just some black spots scattered around’), López Sors, Director General of the Merchant Navy, 17 November 2002; ‘It is not an oil slick, it’s just some localised patches’, Mariano Rajoy, Deputy Prime Minister of the Government, 23 November 2002); distort reality (lying) to justify the lack of means and the incompetence

(‘The oil at the bottom of the sea will set like concrete’, Arsenio Fernández de Mesa, Government Delegate in Galicia, 19 November 2002; ‘Everything is going smoothly’, Manuel Fraga, President of the Galician Government, 26 November 2002; ‘There has not been one minute [when the situation was] out of control or uncoordinated’, Álvarez Cascos, Minister for Public Works, 27 November 2002); dodge responsibilities (‘There may have been some mistakes, but only those who work make mistakes. The others are there for the camera’, ‘There is still no government that can change the direction of the wind’, Manuel Fraga, President of the Galician Government, 1 and 2 December 2002); or accuse the victims and protest movements of politicising the situation.

What has been established by the more aware sectors of the general public in the case of the Prestige is the extreme fallibility and vulnerability of expert systems. Looking at Giddens’ (1993) interpretation of this concept, he states that expert systems can be defined as structures of ‘technical accomplishment or professional expertise that organize large areas of the material and social environments in which we live’ (Giddens, 1993: 37). Their mission is to identify which dangers are the most threatening, offer reliable guarantees for protection and build up the trust of individuals and society so that such threats do not affect their wellbeing. Technical measures would provide the instruments to achieve this. It is true that scientists and technicians are part of expert systems, but these systems also extend to other types of components, including bureaucratic–administrative structures, laws and rules and monitoring and control systems, amongst others.

The health system or civil protection agencies can be considered as examples of expert systems. Regardless of their functionality and effectiveness in times of individual or collective distress, expert systems play a fundamental role in reducing the perception of risk in societies and fostering the sense of safety amongst the population. The confidence they instil rests largely on the collective belief that these systems will operate according to an objective rationality based upon scientific and technological knowledge which is shared by the professionals that work in them (Theys and Kalaora, 1996); in fact, this is its main legitimising basis. As demonstrated by the Prestige disaster, it is not always like this: the reliability and functionality of the expert systems can be interfered with. In practice this always happens to a greater or lesser degree as a result of economic or political interests that distort their functionality and creating situations which leave the public defenceless, although the public is not conscious of this being so until the risk has become a disaster. As was the case in Galicia, the appearance of a catastrophe reveals this fallibility and causes the public perception of safety to waver, giving way to feelings of helplessness and vulnerability. The same subjective impression which legitimises the existence of the expert systems and justifies the belief in its effectiveness undermines them in a disaster. In these cases the loss of confidence is inevitable and devastating for the authority of the Administration and questions the power of whoever is governing it, even beyond the electoral and constitutional legitimacy which may be invested in a representative democracy.

Paradoxically, the Galician or Spanish techno-scientific system played a marginal role in the handling of the disaster or at least in its institutional management via the expert systems put in place (maritime rescue, environmental protection). There has been no confrontation between the Science-State pairing (one of the historical alliances giving rise to modernity), contrary to the dictates of social rationality or to the public perception of the disaster. Quite the opposite: given the subordinate role it was relegated to by official authorities, the reaction of the scientific community has been extremely critical, slamming the non-scientific character of the decisions taken which range from absurdly sending the vessel out to sea to the initial disorganisation and disorientation of the tasks to protect and clean-up the coast. In contrast to what some authors describe as typical behaviour for modern societies in similar cases (Perry and Montiel, 1996; Gutiérrez, undated), the perception of the problem by the scientific community has been convergent with the social perception and divergent from the official version in this case.

This clash between the scientific community and the institutional 'expert systems' was aggravated by another local factor. The importance of the sea for the Galician economy and society means that the three Galician universities and other higher research centres have highly qualified scientific teams specialising in disciplines directly involved in the disaster (oceanography, marine biology and ecology, chemistry and chemical engineering, naval engineering). They possess a huge amount of experience and accumulated knowledge 'thanks' to the successive oil slicks on the Galician coast, amounting to 300,000 tonnes of spilled fuel over the last 30 years. Few places in the world have a greater scientific background relating to the dynamics, impact and recovery process of coastlines affected by pollution with oil derivatives.

The scientific community has aligned itself, in a show of active commitment and participation, with the social collectives that have risen up against the disaster and its incompetent management. The governing bodies of the three Galician universities (Vigo, A Coruña and Santiago de Compostela) publicly adopted and supported the demands of the *Nunca Más* movement; many Galician and Spanish scientific communities expressed their dissonance with the irrational and non-scientific management of the disaster in the media and national and international science forums. From this point of view, this echoes what Beck has already identified as a typical dynamic of risk societies: 'the greater the difference between established, technologically based safety claims [and the experiences of insecurity in accidents and disasters] the greater the contradiction as collectively experienced between risk calculations and real hazards: the brilliant steel walls of competence, put up by the technology-centred risk administration in order to contain hazards, collapse and expose to view the bureaucracy, which has now become politically malleable' (Beck, 1998b: 162).

The role of experts has been fundamental, yet they have not legitimised or confirmed the official position. Instead, they have exposed it by questioning the supposedly scientific and scientifically-validated basis upon which the decisions

were made. The marginalisation of the local scientific community, the silence imposed on official scientific sources in charge of monitoring and the insufficient credibility of the data supplied by the actual Administration regarding the slicks meant reliable information had to be sought from foreign scientific bodies (mainly the Portuguese Hydrographic Institute and the CEDRE, a French organisation created to study this type of marine pollution).

To a certain extent there has also been an alliance between mobilised society and the scientific community. Many experts, both in the field of Natural Sciences and Social Sciences, have placed scientific rationality at the service of social rationality. In this way they can be defined as 'critical intellectuals' in that they have engaged in the conflict with their 'specific authority and the values associated with the exercise of his or her craft, such as the values of the disinterestedness and truth, in a political struggle – in other words, someone who enters the terrain of politics but without forsaking [their] exigencies and competencies as a researcher' (Bourdieu, 2001: 38). This explains how the exhaustive search undertaken by the regional and state governments for experts of 'recognised prestige' to subsequently validate and justify the decisions made would repeatedly end in failure. One example of such behaviour occurred on 6 January 2002 when Kathy Scanzel, a biologist working for ITOPF (International Tanker Owners Pollution Federation Limited, a far from neutral body created by oil multinationals to 'combat' maritime oil pollution) declared in an official press conference that 'half of the fuel leaking from the (sunken) Prestige will evaporate' (*La Voz de Galicia*, 7 January 2003); the following day, Guy Herrouin, from IFREMER (French Research Institute for the Exploitation of the Sea), rejected this possibility: 'The fuel that is pouring out of the vessels' tanks does not evaporate or volatilize'.

Environmental education challenged by the disaster

The most recent form of environmental education, used as an educational response to environmental problems, has been around for a little more than three decades since its origins in the late nineteen-sixties and early nineteen-seventies. During this period the Polycommander in the Ría de Vigo (1970) and the Urquiola in the port of A Coruña (1972) caused the first in a series of oil slicks along the Galician coast. 1972 was also the year that saw the Stockholm Conference, the first official high-level forum in which prevention was mentioned as one of the principles of environmental management and the role of education as a tool in response to environmental problems (in theory, at least) was recognised.

Since the first environmental policies were proposed and applied in an attempt to go beyond a merely protection-based focus, education has always appeared as one of the instruments which have been formally identified as key elements in forging a new relationship between human societies and the environment: one based on respect for the ecological limits imposed by a planet with finite resources that allows human needs to be universally and equally satisfied.

In spite of the fact that environmental policies proposed in recent years usually give prominence to environmental education, particularly after the Rio de Janeiro Summit in 1992, it can easily be proved that other management instruments or practices (inserted into increasingly cumbersome expert systems in terms of their administration) receive more attention and economic, legislative–legal and techno–scientific resources. In addition, the social influence of environmental education is unclear and difficult to calibrate due to its nature and because educational actions and practices from separate areas (schools, ‘informal’ education, specialised spaces, mass media) are lumped together under this one heading and implemented by a whole host of different agents (teachers, environmental groups and ecologists, journalists, governmental and non–governmental organisations) and consider environmental and educational ideas and models which also often differ. We agree with Sauv   (1999: 13), who states that ‘the global record [of environmental education] is far from impressive’, but it is also true that Western societies are increasingly more sensitive to environmental issues, even though lifestyles or the types of society have not significantly changed and the difference in the level of collective awareness is not exclusively due to a more formal kind of environmental education.

In Galicia the sinking of the Prestige may well be acting as a trigger, revealing a new collective attitude towards the environment and its conservation. The oil spill has exposed, amongst others, the following weaknesses in policies and the instruments of environmental management currently available:

- laws and regulations for the transport of hazardous materials that are either not enforced or allowed to be broken with impunity;
- control and inspection mechanisms that fail to ensure the reliability of the system;
- the non–existence or inefficiency of contingency plans in response to ecological disasters;
- insufficient resources to combat pollution;
- the ineptitude and irresponsibility of managers and expert systems;
- a lack of transparency and concealment of the truth.

However, an active and responsible civil society is emerging from amidst the chaos, armed with a high level of environmental sensitivity and above all capable of identifying the relationship between the ecological damage caused by the Prestige and the economic and social consequences it brings.

It would be na  ve to attribute this social upheaval to environmental education and even more so to think that the now–mobilised majority of the population clearly understands and possesses an in–depth knowledge of all the ecological, economic, social, political and even cultural implications of the disaster. There is a communal awareness of the damage inflicted, heightened by the disastrous handling of the crisis by the authorities and the misinformation imposed from above in order to minimise the social perception of the disaster and limit any resulting political costs.

Broad sectors of Galician society have also discovered that environmental policies lack any real weight and are easily crushed by market demands, with the conscious complicity of whoever has been democratically elected to power but exercises it for spurious interests, maintaining it at 'any cost' being the first and most shameful priority of all.

Three years ago, a territorial environmental education strategy was put in place in Galicia by the very same autonomous government that has been sadly exposed here. It had an ambitious aim: to produce a document which would serve as a stimulus and guide in promoting environmental education, which the text itself had described as minimal and out-of-date. Its main (and most audacious) aim was to extend a 'culture of sustainability' at the very heart of Galician society. The recommendations made in the document for different agents and educational settings were as ambitious as they were necessary, but cannot be faulted. However, the same void in environmental politics revealed by the Prestige has turned the Galician Strategy for Environmental Education (or EGEA in Spanish) into a purely formal 'action': a text designed to fill the emptiness of the Regional Ministry of the Environment with purely rhetorical content.

It is to be hoped that there will be a 'before' and an 'after' the Prestige disaster in terms of environmental education in Galicia. A more environmentally sensitive society, more aware of the relationship between environmental threats and the dominant socio-economic model and less naïve in assessing the role of administrators and expert systems is also expected to demand and construct environmental education to benefit a social, cultural and political regeneration that is as necessary, if not more so, as the ecological and economic regeneration of the affected areas. This is of local scope, but as it has been pointed out, this disaster exhibits itself as an interwoven fabric in which it is difficult to discern the local from the global from the either of the dual perspectives of social and scientific rationality.

The 'Nunca Máis!' slogan implies the need to build a society with a more critical, aware and solid culture of democracy. As we have already argued in other articles (Meira, 2001; Caride and Meira, 2001), environmental education is, or should be, another instrument of social mobilisation and change acting on the most significant factor in the search for balanced and democratic environmental management: the human factor. In this sense it is a purely political pedagogy, and therefore environmental educators are also political agents. Sooner or later, the values and practices shaped by a kind of environmental education that is fully aware of its political role become counter-values and counter-practices: in other words, values and practices which contradict and enter into conflict with prevailing social values and practices, at least in 'advanced' societies. This is what has happened in Galician society, hit by disaster once again.

The consequences of this contradiction have also manifested themselves within the purely educational field. The Prestige has become a centre of interest and pedagogical work in the vast majority of Galician schools. The creation of a collective made up of teachers from all levels of the education system, Area Negra, is one of the

consequences of this educational movement. Significantly, its founding manifesto refers to the need to train the 'general public to intervene in political debates'. In tune with the rest of society, many schools have expressed their indignation with the disaster, its far-reaching effects and the incompetent way it was handled through pedagogical activities, specifically designed class materials, wall displays in classrooms and schools and participation in public demonstrations. This reaction is wholly consistent with the pedagogical principles of cross-curricular education which is supposedly how environmental education is meant to be delivered in the Spanish education system, in addition to other basic principles such as the importance of the learning experiences, linking schools to their surroundings and interdisciplinary education.

The Galician education authorities (formal education is the responsibility of the regional government) responded by issuing an official memo which threatens disciplinary action for any state school teacher or management team who, according to the criteria of the authorities themselves, use the school to 'indoctrinate' pupils and publicise political ideas which do not respect democratic 'diversity'. This is nothing short of censorship and use of the state apparatus to restrict teaching and learning liberties. It is also another example of the politicising effect of the disaster: in fact, the government memo has merely served to stimulate school activities dealing with the disaster and increase their public visibility.

Epilogue

The disaster continues. Almost a year on, the spill continues to reach the coast. The coastline is still polluted and continues to receive pollution, although according to the official version of the situation the beaches are clean and the fishing industry has returned to normal. Rigorous scientific reports estimate that biological and ecological regeneration of the affected area will take at least a decade, provided there are no new spills (González Laxe, 2003). The central and regional governments have systematically blocked proposals to create inquiry committees in the Galician, Spanish and European Parliaments which would have offered transparency and answers regarding the management of the crisis and made it possible to determine political responsibilities for an action which by any reckoning, scientific or otherwise, was incompetent. But the Prestige no longer grabs headlines in the national or international media and has even partially disappeared from regional and local media (which are more inclined to present official propaganda).

There is still plenty to do, think about and say in the sphere of environmental education in Galicia, starting with the channelling and strengthening of this new civic power to help its medium to long term consolidation and enable this new sensitivity to spread to other local and global environmental problems. Although it may seem so, we are not advocating a type of environmental education which assumes an eco-catastrophic discourse (Grün, 1997); on the contrary, we want to make the most of the social, critical and at the same time constructive and proactive

power that the disaster (which chose us) has unveiled. Like Jonas (1995: 356), we consider that 'fear forms as much part of responsibility as hope', yet it is not the kind of 'fear' or 'apprehension' that inhibits and paralyses action (one of the iniquities of the risk society), but the kind that encourages it: driving it and channelling it to seek environmentally and socially acceptable alternatives. It is a 'fear' of the real, not of the imaginary, and it is a 'fear' which triggers individual and communal mechanisms of survival and solidarity.

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ENVIRONMENTAL EDUCATION IN TIMES OF CATASTROPHE: THE EDUCATION RESPONSE TO THE SHIPWRECK*

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Abstract

In November 2002, the *Prestige*, an obsolete oil tanker, sank and spilled her cargo offshore Galicia (in the northwest of the Iberian Peninsula). This accident originated a social experiment, unwanted but valuable to understand how the catastrophic experience of the “manufactured risks” is socially represented. The present article analyzes the response of the regional education system to the catastrophe from two viewpoints: a) of its comprehension in the context of the critical and proactive social response to the official intent of representing a “non-catastrophe”, and b) of the role of Environmental Education (EE) as a pedagogical praxis whose political dimension is revealed as indispensable. The thesis we shall defend is that the political nature of EE, many times just implicit and others explicitly denied, is recognized here as the fundamental axis in the response of the education system and of other education agents. In this sense, the catastrophe has not been just ecological but also, and foremost, social and political by questioning the economic globalization – its profound cause – and by putting in evidence the vulnerability of the administrations, incapable of preventing or mitigating its impact on the environment and on the human communities. In this scenario, EE contributes to the reflection about the origin of the catastrophe as an unforeseen consequence of the “advanced modernity”, in conformity with the analysis by Ulrich Beck of the “risk society”, and of the politizing potential of the successive catastrophes –the tip of the iceberg– in which the new social ethos is manifested and constructed.

Keywords: Environmental Education, Risk Society, Environmental catastrophe, Political education.

Introduction

On November 19th 2002, after drifting for a week from North to South, moving along the whole Atlantic coast of Galicia (part of Spain, Northwestern region of the Iberian Peninsula), the *Prestige* found her destiny more than 3000 meters below the surface. As a reminder, she left us more than 50,000 tons of heavy fuel oil that washed the coast in successive waves, from the Portuguese border to the French and Spanish shores of the Bay of Biscay. The Galician coast was, by far, the most affected, receiving an estimated 30,000 to 40,000 tons of oil. This is the starting point of this text, and also its point of arrival. It is, without a doubt, a maritime catastrophe comparable to others that feature in the annals of modern environmentalism, such as that of the Torre Canyon (1967) or the more recent Exxon Valdez (1989). But it has also been a tragically enriching “experiment” offering keys to understand the perception, social representation and reaction of “advanced” societies to the catastrophic expression of the “manufactured risks” – to use the phrase coined by Giddens (2000) – typical of the contemporary world and that, in general, appear as fuzzy, invisible, hermetic threats to the whole of society.

In the civic reaction of a large part of the Galician society, many social actors and agents have played a central role in identifying and making visible the threat – like the child in the famous H. C. Andersen story *The Emperor's New Clothes* – and in the proactive response to it: some of the communication media (here included the intensive use of the Internet), a large part of the local scientific community, the ecologists and environmentalists, the professional and company interest groups more closely related to the sea, people from the arts and culture etc. From this assemblage of mediators, the interest here is in exploring the role of Environmental Education and that of environmental educators, particularly those that have worked inside and from within the education system, in the collective task of constructing a rational and democratic response to the catastrophe. We intend, furthermore, for this approximation to highlight some of the identity problems that seem to affect Environmental Education, problems apparently overcome by what presents itself as a new frontier: the Education for Sustainable Development.

The political identity of Environmental Education

In the first texts published in Spain about the identity of an Environmental Education (EE) then still being gestated (Strohm, 1977, Cañal, García and Porlán, 1981) it can be seen that the political approach was essential in the formulation of the pedagogical strategies whose conception was needed to face up to the “environmental issue”. That was the dimension, the content or the conception most visible, sometimes in competition, sometimes seeking complementarity with the other important reference in those pioneering essays of theoretical grounding: the recourse to Ecology as a science of synthesis transcending the scientific–natural field to participate in the social representation of the imbalances in the relations with the surroundings, and which could contribute with “rational” keys to their solution. The state of the issue was not much different in Europe and, in fact, in the world. For instance, Allan Schmieder (1977: 25) in a monograph edited by UNESCO in 1977 significantly entitled *Trends in Environmental Education* stated that “the philosophical belief that we have to pursue nothing less than a fundamental reform in the way in which our society faces the problems and makes decisions is inherent to any Environmental Education”. The careful reader shall not overlook the fact that, while it can be analyzed from a philosophical perspective, this is essentially a political task and belief.

The political nature of EE has been diluted to the point of being explicitly questioned by those who defend an ideologically neutral education, objective and free from values, which would limit itself to translate the “best available knowledge” about how nature works – a kind of Didactics of Ecology – into a mercenary and reductionist interpretation of EE, which we have had little doubt in qualifying as “neoliberal” (Meira, 2001). The expression of this conception is an educative practice explicitly apolitical in environmental issues, which must grant the individual the

“freedom” to act accordingly, in the trust that his/her behavior will be reasonably pro-environment if he/she has the most appropriate information.

Nowadays, the discourse of EE focuses on the notion of sustainable development. In the official genesis of this concept, clearly political, we find the Rio de Janeiro 1992 Conference, the Earth Summit on Environment and Development that took place in the Brazilian city, where the main world leaders gathered to negotiate a strategy to face simultaneously the imbalances in development and the environmental crisis. Their deliberations were consolidated in several documents, the most important from an education viewpoint being the Rio Declaration, conceived to supersede the supposedly obsolete Declaration of Stockholm, and the Agenda 21, a more action-oriented, strategic document. In parallel with the main event the World Forum of NGOs and Social Movements also gathered.

Although less publicized for obvious reasons, around thirty alternative programmatic documents were approved at this forum, among which the Treaty on EE for sustainable societies and for global responsibility, whose Fourth Principle states forthrightly that “Environmental Education is not neutral, but ideological. It is a political act based on values for social transformation”. A clear position that contrasts with the ideological asepsis that characterizes the official documents of the Earth Summit. Although it may seem strange and paradoxical, the most important in the Rio Declaration or in chapter 36 of Agenda 21 is not what they say about a certain way of understanding EE, but what they do not say: chapter 36, dedicated to education as an instrument to build sustainable development, does not deal, in fact, with EE, but with it refers to as “education for sustainable development”. The only two direct mentions to EE in the text are made to cite the Tbilisi 1977 Declaration, which is noted as a remote antecedent. Indeed, it would be worth reading carefully this Declaration and the documents that supported it, to capture the weight of the political dimension in the origins of EE, vividly present in that foundational stage and actually even within the United Nations.

Going back to the Rio Earth Summit, it should be remarked that another significant document, the Rio Declaration, does not even include the word ‘education’ in its text, which refers to communication and information but not to education. This subtle effort of an official deconstruction of a trajectory, that of EE, which in 1992 accumulated twenty years of experience, may be seen in a number of different ways, but from a contemporary viewpoint it can only be understood as resulting from a confrontation, more tacit than explicit, between different conceptions of what EE must be like, a confrontation set against an ideological background and in which the definition of the type and depth of the changes that the praxis of EE must aspire to is at play. A confrontation to which, sadly, many environmental educators, perhaps the majority of them, remain oblivious and also naïve.

In these last years many expressions have been used to talk about EE: it has been qualified or described as “education in values”, “education for coexistence”, “ecopedagogy”, “education for citizenship”, “civic education”, “global education” etc. We could ask ourselves if behind this search for adjectives that emphasize its

identity, we are not simply shunning before the field of action of political education. That is to say, that the central issue is how to facilitate that citizens become conscious and active agents in society – which now is also the global society – so that they will know their rights and learn to act accordingly, giving them the abilities and cognitive, emotional, and social instruments to participate actively in public life and in decision-making in all levels. We talk generically of a political education, even though the objects upon which we project and express it may be gender equality, intragenerational equity, the respect for cultural diversity or enjoying a quality environment now and in the future.

In the decade since the Rio Summit, the shift from the United Nations system for EE to the Education for Sustainable Development (ESD) has given rise to a few controversies about the

theoretical and strategic meaning of such change. Since the Earth Summit many of us educators have spent more than a decade like greyhounds in the tracks chasing the hare of Sustainable Development. This is no gratuitous rhetorical figure. As we all know, the greyhounds never catch up with the hare, which by the way is not even a real hare, despite looking like one. The greyhounds think they know what they are running for – to capture the hare – but in fact they do it to facilitate a gambling business, which, it is said, is far from negligible. The main players never question this purpose, needless to say that the greyhounds lack the faculty to do it, although the latter are the ones that carry the can when they do not win (something that is bound to happen sooner or later). Neither do they have the possibility of choosing a different game, or a different “playing field”, given the fact that they are not free to run or not. Their world is the racetracks, and they cannot even know if their world is just one among many possible worlds.

I do not know if many players in EE see themselves in this metaphor or at least see elements in it that describe their role or the role that seems to be given to EE in the so-called advanced societies. I can see too many similarities.

To begin with, we have not chosen the playing field created around Sustainable Development. Let truth be said, we have accepted, with no little enthusiasm, to play in it. Even though after what happened — or rather, not happened — at the 2002 Johannesburg Summit, and after only punctual successes or apparently localized victories – as the Prestige – maybe it is time to realize that little can be expected from the hare of Sustainable Development. In fact, it can be easily seen that the final recipe from the wellknown Brundtland Report (WCED, 1987), which made the concept official, was more of the same: a sustainable economic growth that would allow financial resources to be released in the North and in the South to face simultaneously the environmental crisis and that of development. The key therefore is that everything hinges on – and hence Sustainable Development is accepted and applauded by the World Bank, the IMF, neoliberal governments, multinationals etc – deepening the deregulation of markets, and on what, often cynically, is referred to as the “true democracy”.

The task of EE — or if we prefer, of ESD — looms in this scenario as extraordinarily difficult, at least in the more developed countries: how does one convince the Western population that their lifestyle and the economic model that supports it produce unwanted effects that, paradoxically, threaten the levels of welfare achieved? How can the same fraction of the population, a little over 20% of the world total, accept the changes necessary to overturn the environmental risks and those derived from the unfair distribution of the planet's resources? Except for naïve or neoliberal educators (and they exist), a great deal of the reason for the existence of EE in the contemporary world hangs on these questions.

The first task, to raise the awareness of the relevance of environmental problems, is partially completed. Public opinion polls show to what extent Western populations “identify” and “are aware” of the importance of a whole series of environmental problems already incorporated into the common culture of any citizen (climate change, deforestation, ozone layer etc) or reveal themselves to be concerned about the “future” of the environment, but even more concerned with other, more daily threats such as the strike, health, or social security (Jodelet y Scipion, 1996). The levels of knowledge and conscience are, in general, quite low, and do not translate into substantial changes in lifestyles or in behaviors related to collective decision making (the vote, participation in environmental groups, the active demand for change in environmental policies etc). The “environmental culture” of the vast majority of the population is still very superficial, despite the fact that the scientific information available and made public on the ecological discontent grows exponentially.

Two psychosocial processes help to explain the difficulty in developing a “deep environmental culture”. In the first place, the most serious environmental threats have a counterfactual nature. We know a climate change exists, for example, because science has told it, mainly through the media. We accept there is an important problem almost as if it was a question of faith, but we fail to identify how it could affect us in the long run, or how the coming generations could be affected, and neither do we accept our share of the “responsibility” for its genesis. We lack the sensorial capacity to detect that the Earth's climate is changing, and we even get confused when we attribute to this change the occurrence of certain atypical atmospheric phenomena, which are part of the meteorological normality, mistaking weather for climate.

Secondly, the social and technological complexity inherent to the processes of manipulation and transformation of nature in the advanced societies prevents us from being conscious of how our individual and collective — that is, of the social aggregate we belong to — behaviors are related to the degradation of the biosphere. The environmental or social genealogy of the products and services we consume and of the residues we produce remains largely hidden. We may be aware of the existence of environmental problems, but not of their etiology or of our role, individual or collective, in their causes. Moreover, when we get a glimpse of such complexity it becomes difficult to think that an individual action in favor of the

environment might really alter the established order. Globalization has increased the opacity and complexity of problems, contributing to the feeling of impotence of the more conscious citizens. Thus, we are capable of showing genuine indignation for episodes of contamination such as the *Prestige's* or other tanker ships, but we hardly recognize that our energy model, or equivalently the lifestyle of any Western citizen, is based on the availability of crude oil transported in large scale through the oceans. It is easy to take on the role of the victim, but extremely difficult to assume – even if indirect – responsibility. Ulrich Beck puts it forcefully: “The race between perceptible wealth and imperceptible risks cannot be won by the latter (1998a: 51).”

There is a third additional difficulty. In practically every document that marked the development of EE in a little over three decades of history (Belgrade, Tbilisi, Moscow, Rio de Janeiro, Thessalonica etc) there is an insistence on the fact that the social change required to meet the environmental crisis also requires a change a deep change of values. This can be another way of concealing the political substance of EE behind an apparently ethical controversy. When passing from the generic proposal of a change of values to identifying which values must be changed and by what other values, the nature of the proposed change becomes evident. Nothing is clearly identified in those documents: one talks of respect for life, of protecting Nature and, from 1992 onwards, of sustainability as the new guiding value. But when working with a minimum of coherence in any educative environmental action, it is easy to clash against the functional values present in advanced societies and in the context of market economy: against parsimony in the use of natural resources, the overt consumption imposes itself as of the keys in the functioning of the economic machinery; against the need to redistribute environmental benefits and burdens, the selfish dynamics of the market imposes itself; against the praise for participation and transparency in public affairs, the passivity of citizens and the opacity of the administrations and economic agents impose themselves etc.

In fact, the practice of EE, when it transcends the more superficial approaches (naturalists, conservationists...), enters quite easily in conflict with reality, that is to say, with the market, and with the culture and political framework that gives it institutional support. That is why we have characterized EE as an eminently civic and political education (Caride y Meira, 2002) to which, for example, the democratic govern of society is equally or even more relevant than the ecological understanding of the environmental crisis.

In an effort to give meaning and content to the discourse of Education for Sustainable Development, two terms are employed profusely in Anglo-Saxon pedagogy attempting to define two basic principles that should be kept in mind within this approach: “empowerment” – translated into Spanish, particularly in Latin America, as the grotesque “empoderamiento” –, which really talks about “taking over the power” or about the “ability to exert power over that which affects us”, and “ownership” – which means “incorporation”, in the sense of incorporating reality in symbolic and material terms –, (Tilbury, 2001). Both are concepts whose genealogy

is political, and both prescribe an educative action whose strategic sense and objectives have a political character. Their incorporation into the theoretical–methodological arsenal of EE in the 1990s is due to some Anglo–Saxon authors committed to the Critical Pedagogy paradigm (Fien, Robotton, Sterling etc). It is not clear if they are newfangled ideas, either in the theoretical field or in that of pedagogical praxis. It certainly is a bit of an extravagance of history that these two terms have found special favor in Latin–American EE, precisely in the cradle of Popular Education which, bolstered by the works of people such as Paulo Freire, advocated in the 1960s and 1970s – foundational years for EE – Education as a platform and instrument for citizenly conscientization (“incorporation”?) and political mobilization (“empowerment”?), viewing the emancipated subject as an agent that assumes and understands his/her reality and can act freely to transform it.

The object of EE, as we understand it, is very far from such perspective. The most straightforward would be to defend that its main purpose, the one that gives it meaning as a praxical discipline, is to transform the environment. I do not believe it to be the case. We can also understand that it seeks to transform knowledges, values and behaviors relative to the environment. These are also purposes of EE, but not exactly those that give it all its meaning and identity. Going one step further, Lucie Sauvé (1999, 2004), even though presenting a particularly critical discourse against the “neoliberal” bias embedded in the ESD project, understands that the purpose of EE is to transform the relations with the environment. I do not share this interpretation either.

The object and objective of EE are, respectively and from my point of view, the social relations and the transformation of social relations. Its direct object comprises the social relations; the knowledge of the environment, the behaviors and values are indirect objects of the main educative task, and its instruments. What we seek, or should seek, with EE, in an implicit or explicit manner, is to transform society, and to transform the social relations, because we know that they contain a distortion that brings as its consequence the ecological degradation of the world we live in. Our material as educators is ultimately the way in which we represent ourselves within the world – and not just the world as surroundings or “external” medium – and the way we relate with each other, as individuals and as communities, to incorporate it, to satisfy our needs, and to distribute the resources it gives us. The political substance of EE is expressed and manifested inescapably in how we represent (cognitive, symbolic, ethical and cultural levels) and regulate (economic, legal–normative, productive and reproductive levels) these relations.

In the risk society made real, Environmental Education is made political

Paul Virilio offers us an illuminating statement: “A catastrophe is like a miracle, but reversed”. That is to say, it is a revealing fact that helps us to suddenly perceive and understand aspects of social reality that normally go unnoticed, and that are seen under the light of an extraordinary event in a more distinct, clear and manifest

way. The analogy with a miracle as manifestation of something occult, of that which is not easily accessible in the plane of normal life is here particularly appropriate.

During my lifetime I have directly experienced three black tides. Looking back at the reaction they caused, both from me and from my surroundings – the Galician society – I find out that the community changed its position and perception about this kind of event. They were three very serious “incidents”, especially in ecosystems as productive as the Vigo Estuary, which is largely responsible for the sustenance of almost half a million people. This spot of the Galician coast suffered the wreck of a tanker, the *Polycomander*, in 1970, whose spill left marks that can still be noticed. I was about ten at the time, and I remember vividly seeing from the window of my house the ship in flames near the Cies Islands, which protect the entrance to the estuary. But “nothing happened”, it was just another maritime accident, a regrettable and unpleasant event whose ecological impact was ignored, and whose socioeconomic impact was underestimated. The sea, so goes a deeprooted belief of the Galician maritime communities, “can cope with anything”. Indeed, the burnt up ship was made to float again and was kept in service for a few more years under a different name.

In 1992 I saw a second black tide: the spill of the Aegean Sea, grounded in the A Coruña Estuary in the northwestern tip of Galicia. This incident already caused some social complaint, stimulated by an ecological movement that stretched beyond its possibilities, and by the defensive reaction of some groups of fishermen already wary from past experiences (*Urquiola*, *Andros Patria* etc), who manifested themselves, even if not massively, to have the responsible pointed out, to demand preventive measures and to call for financial compensation. The motto *Never Again*, now converted into the banner of the social movement in response to the latest tragedy, was born at that moment.

And then the *Prestige* came at the end of 2002, and an unexpected social response was triggered with a mobilizing capacity inside the Galician society and with an influence outside the local context that astonished all, within and without, starting with those same mobilized citizens, and continuing with those responsible for dealing with the incident, especially those responsible for preventing such incidents, dealing with them properly, and mitigating the damage they cause once the black tides begin to sweep the shores. People that acted incompetently and that tried to distort what had really happened, not to avoid spreading unfounded panic, but to protect themselves from the political costs that could be derived from the blunders made when managing this crisis. It is worth recalling that the State Government at that dreadful day was in the hands of José Maria Aznar, and that Manuel Fraga Iribarne was in charge of the regional Government, both politicians of the Spanish Popular Party.

Something must have changed to make the social reaction before those three events so substantially different. The catastrophe of the *Prestige* came at a moment when the Galician society, or at least a significant fraction of it, had already achieved a certain degree of maturity in what we could qualify as “environmental

culture". Moreover, it has been a disaster that has impinged on the whole Galician coast. It has, directly or indirectly, threatened the livelihood of a good part of the population, whose microeconomics and everyday life are intimately related to the sea. It is also an event difficult to understand and assimilate given its magnitude and the feeling of vulnerability and helplessness that the behavior of the authorities responsible for the emergency apparatus— at first erratic, then sly — has generated.

The feeling of threat, of being the victim of a catastrophe out of all control, grew and transformed into collective indignation when the cover up maneuvers of the public institutions and authorities whose mission and obligation was supposedly of guaranteeing a certain degree of protection were exposed. It has also been an emotionally devastating event; one has to recall that the sea has in Galicia, apart from a significant economic weight — accounts for 12% of the region's IGP — a symbolic relevance that places it among the identity traits of the Galician cultural imaginary.

The social intelligence had readily understood that the administrations were doing next to nothing to respond in an effective way to the threats, that the accident with the tanker had been managed very poorly, and that a series of inappropriate or hasty decisions — devoid of any rationality — had allowed the oil spill to hit the coast heavily. From this point of view the Prestige acted as a "heuristic detonator" that made an important sector of the society appreciate clearly the critical nature of the threat, notwithstanding the general confusion and the illusion of "no problem" or "no catastrophe" projected by the administrations in charge of its management, and of the corresponding communication media.

In the face of the disaster, not only ecological but also political, it was necessary to put in action all social, intellectual, cultural, and educational resources that could help overcoming proactively the initial trauma; that created by the disaster itself, and the one engendered by the poor reaction of those who had the technical, economic and political means to avoid it or mitigate its effects. Some sociocultural keys can be identified to help understand the activation of that social response (Meira, 2004):

- the identity key: given the weight of the singularity of the Galician country, a community or nation integrated into the Spanish state with its own language and culture, and also given the symbolic and cultural role that the sea has played in the permanent construction of such identity;
- the environmental key: one of the hypotheses we have been working with is that the "third" of the Galician society mobilized in a more active way is largely nourished by what we could call the generations of Environmental Education. They are those cohorts that have been through socialization and schooling within the last thirty years, with access to a (formal, non-formal, and informal) education in which environmental issues have acquired a growing presence until they have become part of the common

culture. They are generations with a certain environmental awareness, which was activated by the catastrophe. The majority of teachers and educators that have mobilized after the Prestige also belong to these generations;

- the socioeconomic key: it is no coincidence that in the Lower Estuaries – in southern Galicia – the most critical and dynamic social response to the catastrophe and its management was to be found, as it is also not by accident that the citizenly reaction was more feeble and limited in the Death Coast. In the former case we are dealing with the most economically dynamic region of Galicia and the best articulated one from a social viewpoint, with a rich network of autonomous entrepreneurs and small and medium-size companies that live from the sea (seafood, aquaculture, fishing services etc); a collection of productive sectors and social agents with much to lose. In the latter case, we have one of the more dejected areas of the Galician territory: demography in recession, emigration, a frail economy etc. In fact, people in the Death Coast had little to lose, something that made their communities, including the ones most affected by the disaster, more vulnerable to the government strategies to contain the social and political impact of the black tides (injection of subventions and economic aid, subsidies etc);
- the solidarity key: there are no words to express the gratitude to the thousands of people who came from other regions of Spain and from abroad to help removing, literally with their own hands, the oil that came ashore. But it should also be said that two thirds of the volunteers involved were Galician;
- and the political key: many people discovered themselves as citizens in and before the catastrophe. Recalling the Anglo-Saxon terminology previously mentioned, the Galician citizenry took part in an accelerated process of “empowerment”: of taking conscience of the need to assume power, not that of the political parties, but the power – or counter-power – of the self-organized civil society. To this process of discovery and incorporation of reality the iniquitous role of the administrations contributed as an antithesis.

The catastrophe of the Prestige made it possible to distinguish clearly the mechanisms that operate in a risk society profoundly marketdriven in its economic and cultural spheres. The German sociologist Ulrich Beck has examined this kind of situations starting from the analysis of other catastrophes (Chernobyl, Bhopal etc), affirming their “politizing potential” (1998a, 1998b). In the face of a catastrophe, we have to become more reflective, to explain it and position ourselves preventively before it. The risk and the catastrophe turn the modern societies reflective; they situate them before the mirror of the threats associated with the levels of well being achieved. The catastrophe is an epiphenomenon of the risk: the risk can be ignored or one can accept to live with it, the catastrophe, and moreover the first person catastrophe, no. In this process, the citizens and the communities can begin to see themselves as political subjects and not just as passive subjects, victims or harmed.

One of the main virtues of Never Again as a reactive and proactive social movement is that it has never asked for any compensation, but only demands rationality, the use of reason and political transparency in the management of natural resources and of the human-generated threats and, more specifically, of those more closely related to Galicia and to the sea. According to Beck, the catastrophes increase the political awareness of societies, and that was to a large extent what happened in Galicia: we decided that the citizens can also make politics, that we are subjects with capacity to take over and exert power, even though “the system” – the inertia of representative democracy – may tend to identify this field as the exclusive province of the parties and of those who control them. More than a few members of the political apparatus of the party in power (“professional politicians”) have complained about the interference from other actors (citizens, scientists, teachers, artists etc) in a field they regarded as uniquely theirs.

The active role of educators and of Environmental Education

To a large extent, the EE – both the formal and the non-formal – has helped to rationalize the catastrophe. It has done that from various perspectives, which we shall try to illustrate with excerpts from interventions of different teachers of secondary education who took part in six discussion groups in an equal number of secondary schools in the Death Coast during the first semester of 2004, within the context of an ongoing study about the education and social response to the catastrophe given by the school communities in the district most heavily affected by the black tide. All discussions have been recorded and then transcribed.

Before scrutinizing the keys of the education response (see Figure 1) to reveal their eminently political nature, it is necessary to perform a brief contextualization. It all started, as in the whole of the Galician society, with an emotional snap. A teacher tells us in his own words about those first feelings of anger and impotence from which the need arose to construct a more positive response: “In all the years I’ve been working, I’ve never cried so much as I did in the year of the disaster... (...) it was like... like a death... suddenly, such atrocity. For me it contaminated everything (...), I recall many afternoons I just couldn’t stay at home, I went out to walk ... I was sick with the news, (...) I even left classes badly prepared... and I picked up the *El País*, the *La Voz de Galicia*... I recall sickness” (teacher of the Carnota Secondary School, discussion group carried out on 18th June 2004).

- The revelation: the “power of the EE” or the EE generation in the vanguard.
- The Prestige “does not come” in the curriculum... the reality of out there... and it demands urgent and innovative answers.
- The Prestige questions the “symbolic delocalization” with which the EE operates “within an order”.
- In the face of EE “within an order” there emerges the conflict (intra- and extra-school), the contradictions, the opposed positions, the dialectics with reality... many centers create “alternative public spheres”.
- Many teachers become “critical intellectuals” and social “activists”.
- The “Administration” reveals its conception of EE: “the Circular”. The desirable values appear as counter-values.
- EE changes into political education and political action... or is it the other way around?

Figure 1: Some keys of the response to the Prestige “in” and “from” the education system

Such emotional experience was previous to, and one might say necessary to open the way and motivate a more reflective response. The emotivity that filled the environment in many education centers is intimately related to that manifested in the more sensitive sectors of the Galician society: they constitute reactions that cannot be seen separately. In a situation of emergency, of defenselessness, the emotional empathy of those affected was one of the bases to create spontaneously a wide and tight social network where the subjects jumped from one social field to another, from one mobilized group to another, from one social role to another, interchangeably. Many teachers and many schools from all education levels came together in this social network, playing a more active role in the rural areas, where the “school’s” the “teacher’s” often were the only institution capable of generating a critical and alternative image of the situation.

The first element of connection between the EE and the social response to the catastrophe has already been seen: the EE generations have placed themselves in the vanguard. The environmental culture of the Galician society has changed in the last decades.

When facing up to the complex reality of the contemporary world, the younger population incorporate among their main values and representations a certain sensitivity and conscience of the threats derived from the deterioration of an environment subjected to human overpressure. It is, certainly, an incipient and still not very articulated and profound culture, but it constitutes a social and cultural asset activated by the Prestige. A teacher, when reflecting about the reason for such an unexpected reaction, points out this generational variable: “Maybe it has to do with the generations [of teachers] that are working right now at the centers. I have the feeling that we begin to see in the centers a certain prevalence of people in their

thirties, and, you see, we are people that, knowing much, knowing little, knowing what we know, we are very keen on doing things right, and on learning how to do them right, and on improving on everything we can, not just the education for teenagers, but if we can help with a grain of sand to make better the world we live in, let us do it (...) And in previous generations, of people now in their fifties (...) that was not so present" (Teacher from a secondary school in Carnota, discussion group carried out on 18th June 2004).

The Prestige does not come in the curriculum, but many centers and teachers reacted immediately putting in practice an emergency pedagogical action in response to a reality that spilled over the classes, that was impossible to ignore, that was just there: "I don't think it was immediate, when the Prestige happened, I remember I was listening to the radio, it was Sunday (...) I heard it was nothing, that the trickle [a government official actually described in such words the fuel that flowed out of the Prestige to downplay it], and what else... And you could see it all, and you went crazy, the youngsters were here, very nervous. Then I believe that it just happened in the class, we were having a class on visual language [says the Image teacher] and everybody was talking about the Prestige and I thought: – Well, how can I give a class on visual language and just talk about something else, and not make the subject coincide with everybody's concerns, and then we began to think of a way to use visual language to express that preoccupation ..." (Teacher from a Secondary School in Carnota, discussion group carried out on 18th June 2004).

In the immediate pedagogical response given by the teachers and centers of primary and secondary education there are three pedagogical–didactical elements that should be stressed:

- the main source of information, including scientific information, about the catastrophe was the communication media, both those that tried to be thorough and accurate, and those that worked as instruments of disinformation and occultation of the truth; most of the original material for work in classrooms came from those sources: texts, information, opinions, scientific data and explanations, charts, photographs etc. The comparison of points of view between media with distinct "versions" of the catastrophe was a widely employed didactic strategy.
- additionally, many teachers put in practice the same journalistic techniques used by conventional communication media – press, television and radio – as part of their didactic instruments: interviewing the people affected, contrasting information, writing opinion articles, publishing school journals and magazines dedicated exclusively to the issue, carrying out photographic reports etc.
- the use of the NTIC to collect and exchange information, and to communicate with other schools in Galicia and abroad, to exchange specific didactic materials and to plan and develop common tasks and projects.

The Prestige questions the symbolic delocalization with which EE operates within an order. In EE there are more and more actions and experiences that are the pedagogical equivalent of the “no places” of anthropologist Marc Augé (2002): these contemporary spaces with no identity (airports, hypermarkets, stations, museums...), interchangeable and anonymous, “where the individual feels as a spectator and the nature of the spectacle does not really matter” (p. 91). Transporting this idea to the educational–environmental field there are many “no programs” (activities, equipment, didactic materials etc) that talk about generic problems, that trivialize and fragment them, that place them nowhere and that are interchangeable to any social scenario, that do not express in definite the local or global connection of the recipients with the problems. They constitute delocalized education practices and, for this reason, stripped of their strategic meaning. A clear example is given by the educative programs aimed at forming and informing the population on selective collection of domestic waste: they are interchangeable, they tend to reproduce the same model everywhere, and have all in common the fact that they do not question the model of society that produces the waste; they simply aim at the citizens being able to associate the colour of a basket to a certain fraction of domestic waste so as to avoid errors in the separation process. All political meaning of taking conscience and all purposes of transformation of the social reality are lost. In the case of the Prestige both those dimensions could be clearly seen: the local one – we were the victims, it was happening here – and the global – it was a perverse manifestation of the globalization. We had and still have it clear that it was a catastrophe of globalization, of the global market, of which we are all victims but also beneficiaries.

The Areanegra [black sand] group of teachers collected and channeled a major part of the response of the teachers’ community to the catastrophe. A peculiar fact is that the group defines itself more along the lines of the antiglobalization movements than as part of the “classic” movements of pedagogical renewal, which in Spain played a very important role in the innovations of formal education during the transition to democracy in the 1970s and 1980s. The group’s civic–political vocation was clear from the beginning, as was the transcendence of its pedagogical proposals beyond the overwhelming occurrence. In fact, it started working on the

Prestige, but moved on to oppose the war against Iraq, and then to the inclusion in the curriculum of the struggle against gender violence etc. Areanegra is a movement largely integrated by teachers who work for the school community, creating in a few weeks a tight network of response. The network is not just of groups and schools, but also of people, people that act as the nodes of the network: “Differently from other groups of teaching, Areanegra intends to have a global line of action around contemporary themes, starting from the maxim that nothing that is human is alien to us, particularly if we are talking about the education of people, of future society. Personally, I would include Areanegra in the worldwide anti–globalization movement, within this growing number of people that believe that a different world is possible, that stand up against neoliberalism and its conse-

quences: the destruction of the planet, the destitution of the countries, and the growing inequalities, the feminization of poverty (...). We are not a pedagogical renewal movement, but a movement of response to the aggressions inflicted against these values or against human rights (...)" (interview carried out with a teacher member of the Areanegra, 4th April 2004).

In the face of EE "within an order" – that order conceived avoiding any ethical, political, social or cultural questioning of the established reality – there emerge the conflict, the contradictions and the opposed interests. The dialectics that emerges in a social scenario shocked by the black tides allows many teaching groups to constitute "alternative public spheres". Giroux (1997: 36) uses this expression in the context of what he calls "postcolonial pedagogies" to designate those places that stimulate people to educate themselves "in the Gramscian sense of the word, of governing themselves as agents that can locate themselves in history, at the same time that

they determine the present as part of a discourse and a practice that allow people to imagine and desire beyond the existing limitations and practices in society". There were also important internal conflicts in those education centers and groups of teachers that exercised their autonomy, which is always relative, but with which we have to play: conflicts between teachers, between teachers and students, between teachers and parents, between centers and administrations etc.

But such tension is an inseparable and unavoidable component of an educational approach that questions and intends to transform established reality. These conflicts reveal, in fact, that the values defended by EE are actually counter-values, and are not, therefore, the dominant values in the society and market. This key goes unnoticed and does not manifest itself when one puts in practice an EE delocalized and depolitized, a "no places" EE for "no citizens". An anecdote told in one of the discussion groups carried out with teachers illustrates this situation: "In addition to the fact that the center was involved in the mobilization in this case, it got involved in many other things (...) Many activities were carried out in the center, it housed the Never Again platform and also other activity groups, then, just to mention, in one of the discussion forums the mayor of the city said that we were converting him, as if it was an insult! ..." [another teacher continues] "... this was a personal conversation with me over the phone... (...) after the 24 hours closed-doors meeting with the participants, well... after lots of activities, the mayor of the city tells me: – But R., look at what you are doing, you are turning the Institute into a forum of debates... That was an "insult", because he said it as an insult... unconsciously, because if he had thought about it he wouldn't have said it... it was a slip of the tongue". (Teachers of the Muxía Secondary School, discussion group carried out on the 15th June 2004).

In this social scenario many teachers began to play the role of critical intellectuals and social activists. Without giving up their professional roles and the ethical boundaries that come with them, the teachers more committed with "the reality"

changed from “managers” or “mediators” of the curriculum to “intellectuals” in the sense given to this word by sociologists such as Giroux (1990) or Bourdieu (2001). To the French sociologist a critical intellectual is “someone who brings in to the political struggle his specific competence and authority, and the values associated to the exercise of his profession, such as values of truth or of selflessness, or, to put it in another way, someone who steps into the political field without leaving behind his demands and competencies of investigator”; and he adds: “in so intervening, she is prone to disappoint, or better said, to clash in her own universe with those who see in the commitment a violation of axiological neutrality, and in the political world with those who see in her a threat to their monopoly, and in general with all those to whom her intervention is a nuisance” (Bourdieu, 2001, p. 38). A teacher expressed in his own words how it was to take up this position: “I believe it was essential, the participation... I believe that the key manifestation of this was the Human Chain⁴¹; it seems to me that it was a most notable phenomenon, of much more relevance than was attributed to it (...) but in the pedagogical sphere it was already at that time castrated, subtracted of its power. Then, I think the first to react was the education community (...) in this, let us say, sociological level... afterwards, in the economic level the Guilds [reacted] etc. But in terms of conscience, of the critique... I believe the only sector that moved in Galicia was the education. (...) To the teachers, it was the trigger that made many people who were paralyzed wake up... that woke up in them this idea that educating is not just teaching equations... that is, it is something else, it goes beyond that”. (Teacher of the Secondary School of Muxía, discussion group carried out on 15th June 2004).

When the values had revealed themselves as counter-values, when the “official version” already laid dejected at the feet of the “socially constructed truth” in many alternative, critical and interconnected spaces and social networks, the education Administration revealed itself by sending a “circular” to the centers. “The Circular” is a document several pages long containing, only apparently, a legal and normative statement. Its purpose was to demonstrate that the teachers, as civil servants, and the education centers subordinated to the Administration had the obligation of being “objective” and “neutral”, threatening with disciplinary sanctions those that understood it otherwise. Among other legal subterfuges, it qualified the activities and didactic materials about the catastrophe and the social response to it produced by the centers as “publicity and propaganda”, their production and public display being therefore forbidden in the teaching centers. The objective was, of course, different: to provoke self-censorship for fear of penalties, and to give support to

41 The Human Chain was one of the main activities of conscientization and mobilization of the education world organized by Areanegra. It consisted of a human chain formed by secondary school pupils from all over Galicia joining two points in the Death Coast most affected by the catastrophe. It was celebrated on the 12th March 2003 and had the participation of more than 45,000 students and 3,000 teachers, despite the efforts of the Galician School Administration to set hurdles and prevent it from happening. More information about this activity and about Areanegra can be found at www.areanegra.org.

the teachers and other directing teams and centers that had remained loyal to the official “truth”, propagating it in their classes and, particularly, excluding from them everything that had to do with the catastrophe.

Paradoxically, “The Circular” encouraged even further, if that was indeed possible, the political sense of those teachers and members of the education community more committed with the citizenly mobilization. A few statements by Don Manuel Fraga Iribarbe, President of the Government of the Community, about “The Circular” and its “meaning”, taken from a press release distributed by Europa Press speak by themselves: “At the press conference following the meeting of the Counsel of la Xunta, Manuel Fraga recognized that issues like the violations or the beating of children ‘drive him crazy’, but he warned that ‘if there is a grave violation it is to the pupils’ consciences perpetrated by some teachers. I do not have to say which political group they belong to’. Fraga indicated that the Education had forbidden publicity and propaganda at the education centers through a circular after receiving ‘numerous calls from parents, teachers and even principals asking for and end to the use of schools as protest platforms against the war and for the crisis of the Prestige. ‘That’s a shame, an absolute lack of respect for the children, for the parents and for Galicia’, warned Fraga, who explained that he had asked for ‘the complete collection’ of notices displayed at the centers, and that it is clear that they ‘suggest the use of lots of money. It has nothing to do with freedom of expression’, he affirmed (Europa Press, 20th March 2003).

From our point of view the Prestige has put in evidence that EE is an essentially political playing field, even –and particularly– when defined as apolitical and ideologically neutral. If the ultimate aim is that citizens take part in the transformation of society along principles and values of equity, democracy, and sustainability, we must accept the field in which the game takes place. If, as educators, we wish to participate in the social change, we have to accept that the environment is the indirect object of our actions, and that our raw materials are the social relations and representations that those same people and human communities establish about the environment. Whilst accepting this strategic objective, it is necessary to question the visions of EE that intend to define it as a field free of values and ideologically aseptic whose mission is to transfer “scientific” information about what the bio–physical environment is like and how it works, such as suggested, for example, in recent proposals of “eco–literacy” (Capra, 2003: 290–295) or in readings of EE of clearly neoliberal inspiration (Sanera and Shaw, 1996); regrettably, this is and shall be an increasingly common alternative.

In a scenario of social and ecological catastrophe it is more likely that EE will transmute into civic and political education, or perhaps one should say that it is civic and political education that will transmute into EE. This has happened in Galicia at the teaching centers and in other social spaces. In fact, the boundary between the “formal education” and the “non–formal education” has become mostly diffuse. Never Again (*Nunca Máis*) is a civic movement but it is also educative. When

reading its manifestos and in its public actions, one of the foremost lines of action is the permanent interpretation and reinterpretation of reality: the official media tell us it is this, but we can understand it in a different way; they tell us we must stay passive and trust the specialized institutions, but we can take initiative and be proactive. Ulrich Beck (2002: 232) states clearly the starting proposition, which for us is the reaching point: "But why the political can only finds its place and develop within the political system? Who says that politics is only possible under the forms and bounds of the governmental, parliamentary or party politics?"

Perhaps the authentically political disappears in the political system and reappears, transformed and generalized, in a form that must still be understood and developed, as subpolitics, in all other social fields".

Closing Remarks

The sociology of risk, such as formulated by Beck (1998a, 1998b, 2002) or Giddens (1993, 2000), uncovers that the main feature of the threats afflicting contemporary societies is that these threats emerge to a large extent as unexpected and undesirable effects of modernity's civilizing success. The degradation of the environment is one of these threats. The appearance of these new threats clashes with the aspiration of controlling all the contingent factors that generate insecurity, an essential part of the modern ethos, from the natural phenomena, for which we have equipped ourselves with a full administrative and technical-scientific apparatus of prediction, control and civil protection, to the imponderables that threaten a person's existence – to which respond, in developed societies, the social systems (sanitation, social assistance, education etc).

The new threats, the environmental and others that are being derived from globalization (the economic instability, the North-South imbalances, the migration flows, the international terrorism, the religious clashes etc), open a chink in the feeling of security of the "welfare societies". It is a "perceived risk" of low intensity that brings preoccupation and disquiet, but that seldom motivates to action, either because there are no alternatives in sight, because it is seen as a threat in the long-term, or because the costs of any changes are assessed as intolerable. In the meantime, it is the problems of daily life, of the present, that concentrate most of the effective attention of the citizens (the employment, the security of the citizens, the economic stability etc). That is what explains that at the apex of the Prestige crisis in December 2002 the event, with 28% of citations, did not rank better than a third place in the list of the main problems worrying the Spaniards, according to the Center for Sociological Research, the Spanish government's demography institute (CIS, 2003a), topped by "the unemployment" (64.9%) and by "ETA's terrorism" (46.6%). Only a month after that, in January 2003, and still in the full wake of the catastrophe, the same question (CIS, 2003b) put the event in fifth place (14.0%), below the problems of "unemployment" (62.3%), "the ETA's terrorism" (51.6%), "the citizen's insecurity" (27.0%), and "the immigration" (14.2%). In the

social barometer of July of that same year “the Prestige disaster” already received only 0.1% of citations, occupying the 24th place among the citizens’ concerns (CIS, 2003c). These data refer to the whole of the public opinion in Spain; it would be interesting to have specific results for the Galician population to allow a better judgment.

The doubt raised by these data is if the Prestige is the tree that does not let us see the wood, or if it is the tree that shows us that there is a wood beyond. That is: if society is capable of rationalizing the catastrophe as the expression of a more global and invisible threat, or if it will simply see it as a contingent and decontextualized phenomenon. We could say, for instance, that the Prestige is not, actually, “the catastrophe”, but that it is a local manifestation of the “true catastrophe”: it is estimated in 5 million tons the amount of oil and its derivatives accidentally spilled into the oceans, which is equivalent to saying that the amount spilled by the Prestige corresponds to roughly 1% of that amount (Murado, 2003). Indeed, it is estimated that the main source of sea contamination by hydrocarbons are the emissions by the industry and the urban concentrations (37%), followed by the “normal” discharge resulting from the traffic of tanker ships (33%, due to the washing of tanks, cargo transfers, minor spills etc), and only then, in third place with 12%, the spills from accidents such as that involving the Prestige. This is, therefore, an insidious and imperceptible catastrophe: a part of the background noise that constitutes the new awareness of the risk. It is, above all, the most difficult catastrophe to construct and represent in the educative processes: we cannot face a problem and seek solutions to it if we do not even perceive it, and if its real threat is ignored or sufficiently fuzzy to prevent the triggering of the defense mechanisms activated by the Prestige. This is undoubtedly the big challenge faced by Environmental Education in a risk society.

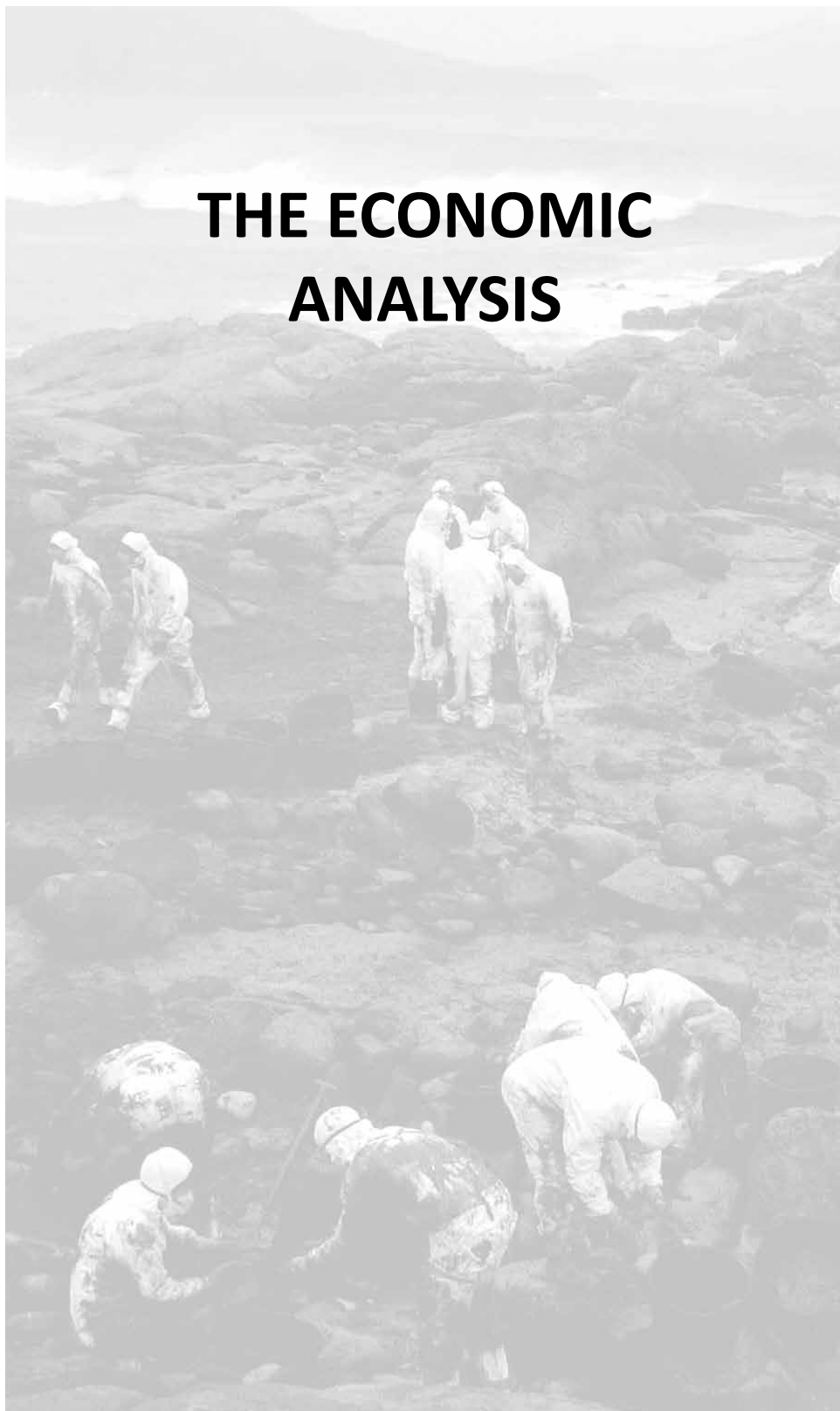
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THE ECONOMIC ANALYSIS



11

THE ECONOMIC ANALYSIS OF CATASTROPHES: THE ASSESSMENT AND CALCULATION OF DAMAGES IN THE FISHING AND TOURIST INDUSTRIES*

Fernando González Laxe



Abstract

Maritime accidents and catastrophes have become frequent in many places on the planet, generating impacts at all levels and manifesting the social vulnerability and risks involving serious impact on living conditions and the lands affected. Exposure to risk is becoming greater and greater and also more expensive because of the after-effects a catastrophe can have beyond the short term, in some cases causing irreversible changes in the economic and social structure both globally and locally.

The Prestige was not the first case of a maritime accident. Galicia is at the top of the list in maritime tragedies in the last twenty-five years. Catastrophes like the Polycommander, Erkowitz, Urquiola, Aegean Sea, Andros Patria and Casson form part of our history. The research carried out here is an attempt to add up the impact and repercussion on the society affected, laying special emphasis on the negative economic impact on fishing and tourism, the foundation of local production and in which the area affected is specialised, with a comparative advantage in comparison to other areas of activity, and a greater level of competitiveness as it forms part of international markets.

This study concerns situations of risk and uncertainty, attempting to contribute elements of support for an efficient response in decision-taking and risk management. Different variables are taken into account, affecting the plausibility, reduction and observability of risk as elements of support for efficient action. Finally, the relevance of information and trust is assessed; likewise the need for a stable information system with a good scientific backing to build up trust in the decisions to be taken.

Keywords: Economic analysis, Risk analysis, damages, fishing, tourism, Prestige

Introduction

Natural disasters and their consequences represent a high cost for society. Recent data show that their impact is proportionally much greater in developed countries than in developing ones, with a ratio of 20:1 being calculated for the former as opposed to the latter.

The social and economic consequences of the damage caused are assessed and discussed in post-catastrophe studies, although there is a variety of methodologies that can be used in each case according to different considerations they involve, namely whether they are initial studies, or intrinsic and specific studies of the individual territory and situation concerned.

Although some natural events can be limited, in the majority of natural disasters it is impossible to prevent the same kind of event happening again

(Picard, 2000). The objectives then consist of achieving protection against the threats a phenomenon implies, either by modifying or eliminating their cause (risk reduction) or mitigating their effects if the event occurs (reducing the vulnerability of the elements affected).

In this regard, the public actions that can be and are adopted prior to the sudden occurrence of a disaster are referred to as mitigation.

Risk analysis

By focusing on the risks facing society we admit that our present-day society is more open to risk and therefore more vulnerable to new situations (Beck, 2002). And risks have a negative effect on the living conditions of populations and on the territories concerned.

We are increasingly exposed to risks and we also know that their consequences go beyond the short term and in certain cases can cause irreversible changes to both the economic and social structure and the environment.

The increasing number of catastrophes also highlights the fact that certain areas are more exposed to risk than others, and therefore attain a higher degree of vulnerability. In this regard, vulnerability can be interpreted as being the propensity to undergo significant transformations as the result of interaction with external or internal processes.

By transformation we mean a change of a structural nature, or at the very least a permanent and far-reaching modification. Vulnerability as a propensity is therefore not absolute, but instead relative to a system in a given context and to a specific kind of change or threat.

In other words, a system may be vulnerable to certain perturbations but robust in the face of others. For this reason, in every risk analysis the following four conditions must be taken into consideration:

- a) sensitivity, or the extent to which the system is modified or affected by disturbance;
- b) response capacity, which can be programmed to adjust or resist disturbance, reduce potential damage and exploit opportunities. Mention should be made here of resilience, the availability of reserves, regulating mechanisms and co-operative links;
- c) exposure of the system to disturbance, in other words the time of, and relationship to, the disturbance, defined as the relationship between system and disturbance, and finally;
- d) impact on the system, which includes the calculation of vulnerability, exposure, possibility of recurrence, magnitude, intensity and, finally, persistence.

In this regard, the UNDP refers to three levels of vulnerability. The first of these, known as structural vulnerability, refers to the parts of the system that sustain the

physical infrastructures affected by a disaster. The second, called neo-structural vulnerability, is taken to refer to elements other than physical infrastructures that affect the internal equipment and elements needed for an installation to function. And, thirdly, there comes functional vulnerability, which refers to aspects relating to physical and spatial design, such as site choice and the organisation of the spaces and places susceptible to disaster (Acquatellas, 2002).

Governments should always bear in mind the different levels of vulnerability not only of infrastructures, but also of sites and equipment, in the face of disaster. Not to do so, or to be unaware of the need to do so, signifies an absence of economic rationality (Lavell, 1998) and brings with it adverse political repercussions, such as the effects deriving from the government's actions in the case of the Prestige catastrophe, for example,

Public intervention in market economies

Economics textbooks usually cite the perfect competition model as the ideal point of reference. Nothing, however, could be further from the truth. Nowadays we not only have a certain relaxation of the initial assumptions that characterise the market economy, but everyday actions also indicate a proliferation of cases of an imperfect economy.

What are we trying to say with this? First of all, we had taken as our point of reference the assumption that the perfect competition model is a guarantee that the economy will produce its goods and services with the best amount of resources, that these are optimally assigned, and finally, that their distribution allows for and reproduces stability and equilibrium.

Under these conditions, the economy takes the form of a competitive framework that provides citizens with maximum wellbeing and enables progress in technical efficiency to be made.

Taking this concept further, we admit that the free market economy can be seen as the most perfect approximation possible to a perfect competition model, where we find the largest number of processes of assignation and redistribution that guarantee the highest level of wellbeing for the population.

Thus, the primary features of economic policies and public decisions move in the direction of obtaining the best performance. In other words, the yardstick is efficiency (in this case, of the means and the ends that have previously been determined as the desired goal).

If we fail to reach the desired levels of efficiency we feel that we have been unable to attain our goals, and therefore our economy, or rather our indicators, will not reflect that ratios we have set or defined as our goal.

But how can this economic reasoning be explained in the sphere of political decisions? On the one hand, if the economy and the markets are perfect, that will mean that they are competitive and their efficiency will be the result of production

and demand functions. The former affect companies, whilst the latter affect consumers, and the maximisation of both will mean greater wellbeing for society as a whole.

Consumers will act in the following way: they will demand a good until its marginal benefit (MB) is equal to its marginal cost (MC), which is the price (P) of the product, and thus we have $MB = P$ (see Figure 1).

Producers, on the other hand, will increase their production of a good until its marginal benefit, which is the price (P), is the same as their marginal cost (MC), or in other words, until $P = MC$.

The point of equilibrium will therefore come when $MC = MB$.

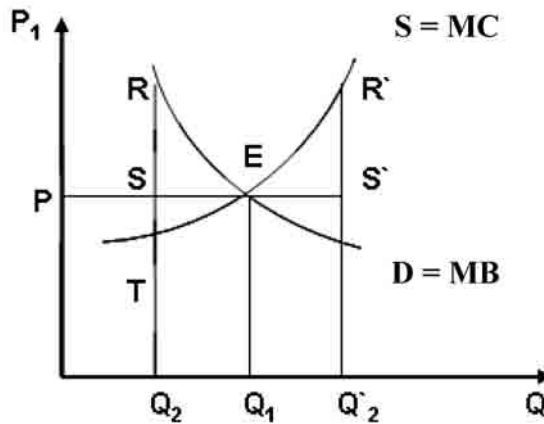


Figure 1. How markets work under perfectly competitive conditions

- Consumers will demand a good until its marginal benefit is equal to its marginal cost, which for them is the price of the product ($MB = P$)
- Producers will increase production of a good until its marginal benefit, which for them is its price, is equal to its marginal cost ($P = MC$).
- The point of equilibrium is therefore E, where $MC = MB$

What happens if the supply and demand curves change? If for a given price P, a smaller quantity Q_2 is consumed, consumers will be failing to obtain a benefit equal to the distance between the demand curve and the equilibrium price ($D - P$) for each unconsumed unit $Q_1 - Q_2$, whilst the total benefit not perceived or produced, known as consumer surplus, will be equal to the area of the triangle RSE, giving them an incentive to increase consumption to Q_1 .

From the producer's perspective, the total loss deriving from a production lower than that of equilibrium will be equal to the area RTE, and reflects the loss of efficiency, with its accompanying reduction in the wellbeing of society.

A similar reasoning applies when the quantity produced and consumed is greater than that of equilibrium.

Thus, whenever the level of production departs from the equilibrium level there will be a loss of efficiency, which will translate into a reduction in the levels of wellbeing of society.

Public action, therefore, attempts to attenuate, mitigate, correct, anticipate and act in situations that imply an ostensible reduction in standards affecting the wellbeing of groups of people.

This gives rise to the concept of the Pareto optimum, in other words an allocation of resources under which it is impossible to make someone better off without making at least one other person being made worse off.

In economics textbooks we say that “a situation A dominates or is superior to another situation B, when on passing from the latter to the former at least one person’s wellbeing is improved and nobody’s is reduced as a result”. Vice-versa, we say that situation B is inferior to or dominated by A, if in the former at least one person is worse off and nobody is better off than in the latter.

From this standpoint, it is sometimes said that the working of competitive markets within a free market economy are Pareto optimal, with each company (producer) maximising its benefits according to the technology it adopts, and each consumer maximising their utility according to their tastes and budgetary constraints.

If everybody acts this way, producers succeed in making the marginal cost equal to their marginal revenue, whilst consumers do the same with the marginal cost (price) and marginal benefit; we can then think of an “efficient production for society as a whole”. We would then have two of the assumptions of Adam Smith’s invisible hand: social and provoked benefits coincide, and social and private costs are equal.

For this reason the champions of liberalism and free play for market forces warn us that inefficiencies or sub-optimal situations arise when the public powers intervene with a variety of regulations that interfere with the workings of the market, and therefore recommend abstaining from any form of intervention in the economy, allowing the market to ensure that society reaches its highest possible level of wellbeing.

Having got thus far, can we say that market failures do not exist? Can we state that there is no public intervention in any sphere of the economy whatsoever?

The answers to both these questions are negative. Firstly, public intervention guarantees the market’s very existence, since the mechanisms it possesses make it possible to allocate ownership rights, to protect such rights and to maintain a coercive attitude through policing and the activity of the courts. Secondly, when the initial equations are not fulfilled, i.e. when purchasers or vendors can influence price and succeed in reducing it below or raising it above the competitive threshold, this means we have situations of monopoly of supply or demand, and in these conditions the role of the institutional regulator in guaranteeing equilibriums and final goals alike is vital. Thirdly, when there is a modification of the equations

linking social benefits and costs with private benefits and costs, we also have situations of insufficient production of public goods, or of negative externalities, which obviously call for corrective action by the corresponding public policies, namely those of quality of life and the conservation of resources in the case of problems with the environment and natural resources. Fourthly, competitive markets only exist when there is perfect information. If everybody only has incomplete or asymmetric information, the resulting equilibriums will be inefficient and, furthermore, we will have created a new element, that of uncertainty. And, finally, the outcome of these cases have a direct effect on the purpose of economic models, which is, as we made clear at the outset, to attain and guarantee maximum levels of social wellbeing.

Market failures make this impossible to achieve, and therefore accelerate and accentuate the uneven distribution of income, revenue and price instability and the inequality of opportunity.

Competitive and suboptimal mechanisms

A further factor to be taken into account is producer decision and consumer preferences. First of all, nobody should be considered to have been deceived (i.e. uncertainty and asymmetric information should not exist). We then classify individuals or groups as outsiders or insiders, according to whether they attempt to insure themselves against risk, or uncertainty, and may therefore adopt a different attitude, maximising their actions to the detriment of other individuals or groups. As a result, information (and its proper distribution) is considered to be fundamental and essential, and its dissemination will improve the wellbeing of society.

Secondly, we have what we call moral risk, which is when an agreement is modified or when there is a preference for greater risk. The consequence is the attenuation and reduction of guarantees and mechanisms that protect certain groups to the benefit of one or more producers or consumers.

Income distribution problems increase to the extent that either market or public action failings have managed to distort the allocation of resources and avoid the processes of polarisation or the dynamics of specialisation, which generate asymmetries in distribution and development opportunities for the different layers of the population or productive and service activities.

The role of the free-rider

A free-rider is a person or agent who enjoys the benefits of a public good without having paid for them. Since it is very hard to exclude anyone from the use of a public good (since the benefits are not exclusive, at least in part), those who benefit from the good have an incentive not to contribute to its production.

When this occurs, whatever the reason for or intention to use goods without paying, or simply by not expressing their preferences, a free-rider is sending a false signal to producers, and as a result public goods are produced in insufficient

amounts or not produced at all, and the allocation of resources is thus sub-optimal for society as a whole.

An analysis of the actions of free-riders is fundamental in societies in which the acceptance of a broad and robust value system is undermined by an excess of individualism or a lack of confidence in institutions, either as the result of historical legacies or of the collapse of the value system itself.

The consequences of their actions are evident. Institutions and markets have to make use of alternative mechanisms, because the mechanisms for the supply of public goods have neither been estimated nor calculated, due to the existence of problems of collective action of varying severity that prevent supply taking place in the amount and conditions needed to attain the maximum wellbeing of society.

The examples of shipping companies that acquire a charter to transport hazardous goods off the Galician coasts at a lower price in an extremely rigid market, or of fishermen who the rules and regulations that apply to the group, have always been part of Galician reality and have been revealed and denounced when a catastrophe has occurred. Our analyses of the accident suffered by the *Prestige* off the Galician coast have enabled us to identify the presence of conceptual matters applicable to the behaviour of free-riders.

Risk assessment models: cost-benefit and cost-effectiveness

The traditional literature in the sphere of investment project assessment recommends the use of cost-benefit analysis, this being a method for comparing the set of benefits or gains that would make an investment advisable with the costs of making such an investment.

This method, however, reveals certain limitations when applied to projects involving a complex human service.

In such cases its explanation not only has to reflect the relevance this kind of content acquires for government (e.g. actions in the sphere of education, social services or health, amongst others), but also the opinions of the different sectors of society regarding performance-measuring indices and the complex classification and prioritisation of goals.

Secondly, it is no easy matter, from a methodological point of view, to attempt to discount future costs and benefits in the decision-making process; and it is an equally complex task to incorporate the risk of situations that are prone or exposed to natural disasters into our analyses.

Discount rates are therefore subject to much discussion, due amongst other reasons to the choice of different ways of incorporating risk into a cost-benefit analysis.

Thirdly, we are faced with the difficulty of estimating human life in quantitative terms, i.e. the expression of human life in monetary units and the complexity of assigning it a value.

Finally, we need to consider the period of time that has to be counted in order to know the effects of applying measures to eliminate or attenuate the negative effects.

Seen from this perspective, a cost–benefit analysis can contribute useful elements to the debate, but also has its difficulties in being specific.

Other schools of thought prefer to talk about cost–effectiveness analysis, a model that whilst still seeking the rational allocation of limited resources uses instruments and procedures that enable expected achievements in the mitigation of risk to be measured, and then compares them with those that could be obtained by other means in similar circumstances, seeing how they match up against the intended goals.

So what are the differences between cost–benefit and cost–effectiveness? In the case of the former, the principle is simple: you compare the benefits of a project with its costs, and if the former outweigh the latter, the project is acceptable. Cost–effectiveness analysis, on the other hand, compares costs with the possibility of attaining, in the most effective manner, goals that cannot be expressed in monetary units, but rather in end products and services.

Thus, by choosing the second of these two alternative methods, an assessor or a politician can define ranges of available alternatives, which requires a diagnosis of the reality of the situation and an ex–ante and ex–post approach to each event or phenomenon that can substantially modify the traditional workings of a society.

But how do we measure this? There are several factors that have to be taken into account when performing any such analysis:

- a) the definition of the universe, or the set of persons and organisations affected by a disaster and receivers of services;
- b) the units of analysis or the object of intervention;
- c) the analysis plan used to synthesise data and define the first decisions on the quantitative plane and in qualitative terms;
- d) the context, which may be both macro (including aspects linked to the political regime, the attitudes of the agents involved, the influence of interest groups, etc.) and micro (concerning the sphere in which the intervention takes place or the actions taken); and
- e) the way information is processed and transmitted.

Our analysis thus needs to be based on quantifiable aspects (which enable us to translate the dimension of the project into monetary units, although this should not be synonymous with importance) but also other aspects that include the ends pursued by society, and which constitute the central dimension of any cost–effectiveness analysis (Huber et al, 2000; Acquatellas, 2002).

A summary of the evaluation techniques and their characteristics are shown in Table 1.

Table 1. Risk assessment methods.

Prevention cost method	In which the time and money needed to mitigate or compensate for environmental or artificial risk indicate a cost lower than that assigned to the risk itself.
Replacement cost method	The cost of replacing or restoring a damaged good or service is estimated to be lower than the value of the unfavourable environmental condition (or conditions) causing the deterioration in the quality of the good or service in question
Travel cost method	Values specific environmental resources (e.g. National Parks) by estimating their demand. The total travel cost (time and money) of arriving there can be considered to be the implicit cost of the visit.
Contingent valuation method	Generates monetary measures of changes in people's wellbeing through the use of questionnaires describing a hypothetical situation, thereby obtaining the amounts a person would be willing to pay in order to obtain or avoid the situation described.

Source: produced by the author.

The first difficulties may arise from information constraints and system operational capacity. If this is the case, the recommended way of measuring benefits and costs would be to use indirect methods to estimate them, based on other experiences, phenomena or situations, or by extrapolating from previous phenomena of the same kind.

The purpose of these initial operations is to focus the assessment, allowing a widely differentiated series of indicators to be established for each of the programmes and actions adopted.

In this initial stage, therefore, we need to have an accurate analysis of:

- a) the characteristics of the threats and disasters;
- b) their geographical location; and
- c) their magnitude

Since in most cases the scientific community has statistics on the occurrence of events, the frequency and magnitude of disasters, the areas affected and the likely return periods, not to consult these or to ignore their existence constitutes a serious error and a lack of responsibility, if not a serious moral offence, which only social deviants are capable of committing.

This initial quantification of elements that have been estimated qualitatively on the basis of reference points helps us to improve our real knowledge of the problem and to analyse the estimated losses.

A sequence for applying cost–effectiveness analysis to disaster mitigation and attenuation projects can be found in Table 2.

Table 2. Applying a cost–effectiveness analysis.

STAGES	PROJECT PROCESS	ACTIVITIES
<i>PRELIMINARARY STAGE</i>	<i>PROJECT IDEAS</i>	<i>ACTIONS</i>
Determine vulnerability	Produce ideas	Gather basic information. Determine the value assignable to the disaster
<i>DIAGNOSIS</i>	<i>PROJECT PROFILE</i>	<i>ACTIONS</i>
Determine needs and resources: Identify the institutional capacity for coping with critical issues	Prepare projects	Identify the catastrophe situation in the area. Determine the acceptable social risk for each kind of disaster. Determine the basic risk and vulnerability data.
<i>PRODUCING AN ACTION PLAN.</i>	<i>FEASIBILITY</i>	<i>ACTIONS</i>
Formulate local strategies and define institutional and legal support programmes.	Formulate projects. Review their technical and economic feasibility.	Identify and perform a technical analysis of the measures. Evaluate the measures. Evaluate the best project and measures options. Final assessment, considering the risk.
<i>IMPLEMENTATION</i>	<i>IMPLEMENTATION</i>	<i>ACTIONS</i>
Comprehensive implementation of the strategy. Institutional, fiscal and legal programmes. Investment projects.	Project implementation.	Monitor procedures to guarantee the operation.

The impact of the Prestige oil–spill on the Galician coastline

Galicia lies at the heart of one of the world’s maritime crossroads (Rodrigue, 2004) Approximately 45,000 merchant vessels pass its coast every, of which 13,000 are carrying some type of hazardous product; in other words, 122 ships per day pass close to the Galician coast, of which 36 involve some degree of risk.

The case of the Prestige is not the first maritime accident to happen. Galicia heads the rankings of maritime tragedies over the last twenty-five years, and catastrophes such as those of the Polycommander, the Erkowitz, the Urquiola, the Aegean Sea, the Andros Patria or the Casson form part of the region's history (see Table 3).

Table 3. Maritime accidents in Galicia.

VESSEL	SPILL	YEAR	CARGO
Urquiola	101,000 T	1976	Crude oil
Aegean Sea	80,000 T	1992	Crude oil
Prestige	64,000 T	2002	Fuel oil
Andros Patria	16,000 T	1978	Crude oil
Polycommander	15,000 T	1970	Crude oil
Erkowitz	286 T (2,000 barrels)	1970	Pesticides
Casson	1,100 T	1987	Chemicals

The experience gained from the analysis of previous disasters has enabled us to undertake a serious non-controversial academic study of the impact of the oil-spill from the Prestige on the Galician coastline (González-Laxe (Ed.), 2003). Amongst its main conclusions we can highlight the following:

- a) Galicia received several 'waves' of varying intensity of oil spilt from the Prestige. This made it impossible to produce an accurate, rigorous and undisputable assessment of the damage and its effects in the initial period (months and years), since a much longer time-frame is involved (in the case of the Exxon Valdez, for example, US scientists estimate the period to be 10–15 years, whilst in that of the Erika this period has been estimated at 10–12 years).
- b) The oil spill from the Prestige affected a broad and extremely heterogeneous swathe of coastline, and in all probability many of its effects on ecosystems and species will be long-lived. Hence, our concern is the need to apply a comprehensive monitoring programme ranging from analyses of the bio-accumulation of toxins to studies on biological changes such as reduced fertility, the appearance of malformations or rates of parasitism, amongst others, which may affect many species (both wild and farmed) inhabiting our marine ecosystem.
- c) Similarly, looking towards the future, one of the most important ecological problems is the difficulty of repopulating the affected areas, due to the possibility that "opportunistic" species may colonise the areas where certain species, such as mussels and goose barnacles, were to be found before the arrival of the 'black tide'.
- d) In the case of the fauna found in the soft inter-tidal and sub-tidal substrata, which is of great biological importance, the pollution from the Prestige

has serious consequences for the benthic fauna that inhabits the various layers (supra-tidal, inter-tidal and sub-tidal) in the affected parts of the Galician coast.

- e) The position of the wreck of the Prestige on the bathyal deeps to the southwest of the Galician shelf and the spillage of its light and/or heavy fuel oil could have a relatively significant and prolonged negative impact on the communities of organisms affected by the vessel's sinking. Hence the importance of emptying its tanks.

A balance of the catastrophe and its effects is summarized in Table 4.

Table 4. Examples of the effects of the disaster.

Affected areas	Ecological imbalances	Implications for the natural heritage	Marine resources destroyed	Effect on economic activities
140 beaches and 4 conservation areas	Productive imbalances affecting activities. Transmission via the supply chain; displacement of effects	Wetlands, natural areas, dunes, habitats and inter-tidal complexes	Surface zone: clams, mussels, goose barnacles. Inter-tidal zone: razor shell clams. Infra-littoral zone: octopus, spider crab, sole, squid, etc.	Fishing, shell fishing, marine cultivation, canning. Affects production, trade and industrial processing activities.

In order to analyse the impact of the Prestige disaster we have to distinguish between those that can be assessed, because they can be quantified in terms of lost benefits, market or otherwise, and those that can only be quantified after several years, due to the inclusion, in certain cases, of valuations of intangible assets (González-Laxe (Ed.), 2003; Loureiro & Vázquez, 2006). A graphic overview of this can be seen in Figure 2.

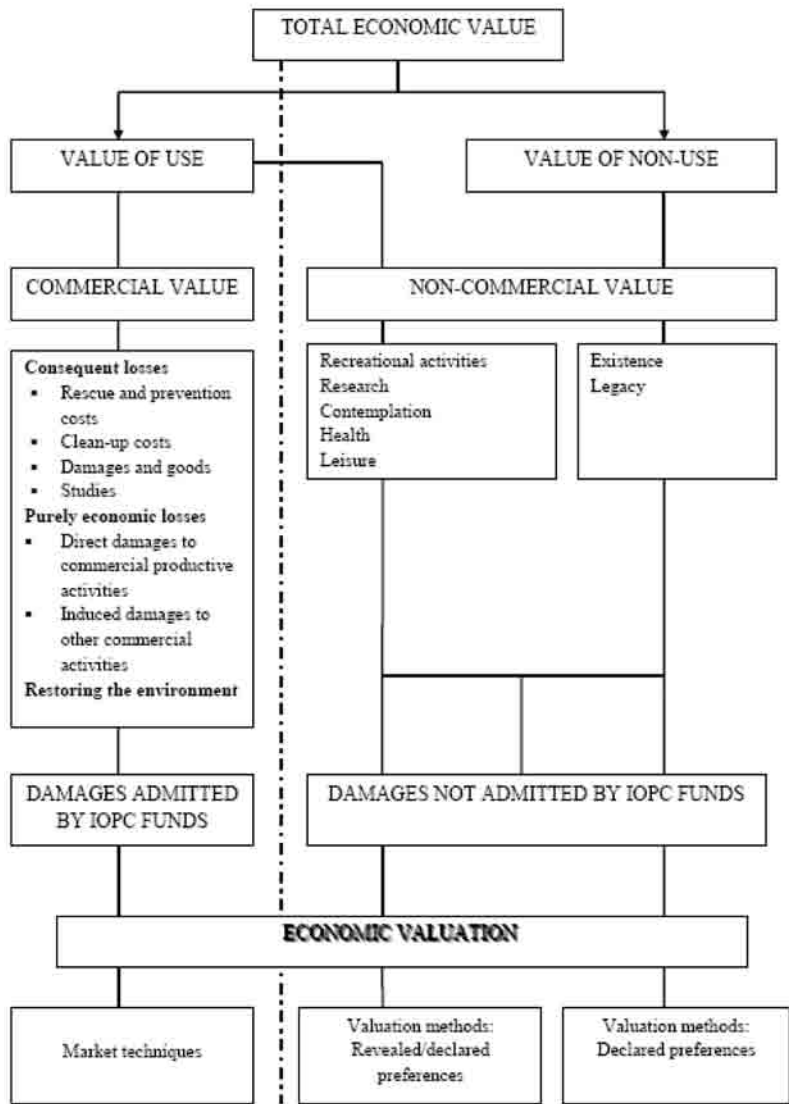


Figure 2. Total economic value

Only private damages are included within the IOPC Funds liability framework. This means that the direct damage done to natural and environmental resources by ‘black tides’ are excluded from evaluation and reparation by civil authorities (Jacobson, 2005; Liu & Wirtz, 2006), which is a clear transgression of the concept of lasting sustainable development that is supposed to be upheld in all the European Union’s documents and principles.

An analysis of the impact and repercussion of the spill on society as a whole should include not only the work done through the clean-up and restoration programmes but also the possible direct effects on economic activity in Galicia.

Briefly, the direct negative effects of an economic nature impinge on activities in the fishing, shell-fishing and aquaculture industries, activities related to these and the tourist industry. It must be stressed that these economic activities form the economic basis of the local productive apparatus; they are the activities in which the affected territory specialises (the specialisation index is manifest and material); they are the production and service areas that enjoy a comparative advantage over other areas; they are the most competitive activities, active in international markets; and, finally, they are the pillar and the nexus of the milieux territoriaux of coastal Galicia. See a clarification of the total costs in Figure 3.

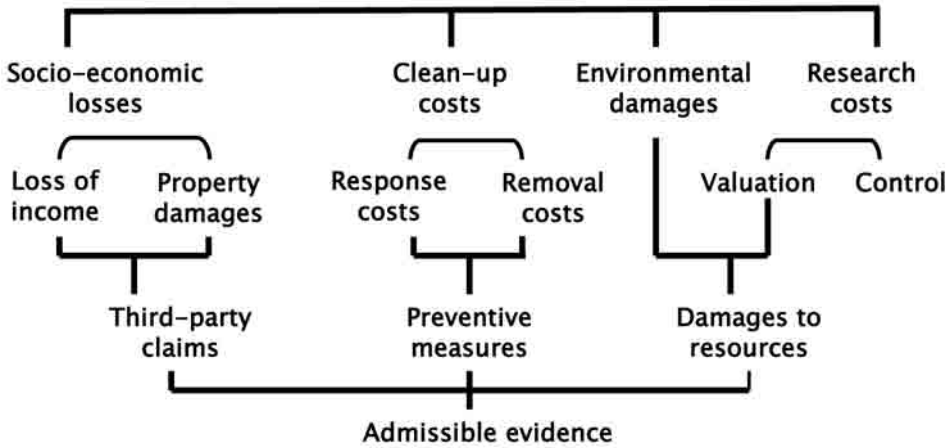


Figure 3. Total cost of hydrocarbon spills and admissible evidence

The principal economic repercussions affected a total potential population of some 34,000, distributed by activity in Table 5.

Table 5. Distribution of the affected populations.

Ship owners	Crew members	Shellfish harvesters	Distributors	Related industries	Related services	Total
6652	11149	5729	2019	4500	3900	33849

Furthermore, another direct consequence of the impact of the disaster are the effects on population displacement, since they accelerate internal migration processes, given that many of the coastal areas affected have extremely low birth rates and a very high aging index. This has contributed to a process of depopulation in certain areas and a speeding up of the processes of change of profession and economic activity.

As far as tourist-related activities are concerned, the repercussions took the form of a 'deterrent effect' resulting from the 'potential inconveniences' that may have arisen in the affected area, and to this possible loss of visitors we can add a

decrease in investment and the modernisation of existing tourist infrastructures and facilities in Galicia.

These measurable economic impacts are then added to the estimated costs of the work done on cleaning-up and recycling, cleaning-up and waste removal, hosing down the affected areas with pressurised hot water and bioremediation and phytoremediation, giving us an initial estimate of the cost of the clean-up and biological regeneration process along the coast, according to the time-line shown in Figure 4.

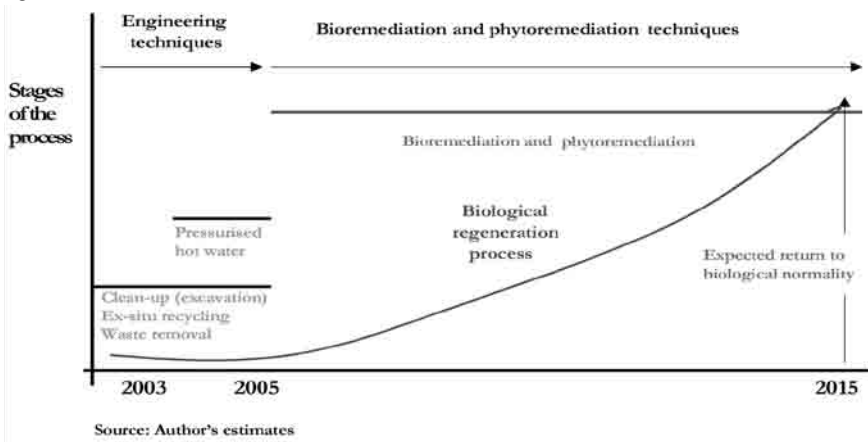


Figure 4. The clean-up and biological regeneration process on the Galician coast (2003–2015)

Our analysis is based on an estimate of the affected surface area and a proportional weighting of the cost of the above process in Galicia and the work done in Alaska as a result of the Exxon Valdés disaster. The conclusions are shown in Table 6.

Table 6. Primary data on the economic impact of the Prestige oil-spill in Galicia (initial estimates)

Concept	Estimate
Km. of coastline affected (with a ban on fishing)	1,000 Km.
People forcibly out of work (only fishing and shellfish harvesting)	30,000 people
People affected directly or indirectly, wholly or partially (only the fishing and related industries)	120,000 people
Gross value added lost (fishing–canning industry and sectoral interrelations)	1,000 million Euros/year
Clean-up and other technical costs (as at mid-January 2003)	950–1,000 million Euros
Investment needed for the economic recovery and stimulus of the affected areas (the Spanish government's Plan Galicia)	12,459 million Euros

Source: Produced by the author from figures provided by official statistics and communications from the Spanish government.

Assessing damage to non-commercial resources is a more difficult task, however. Here we refer not only to the impact on active uses (tourist and recreational activities) of the natural heritage that has been affected, but also to that on its passive uses (biodiversity, the legacy of wetlands, dunes and other areas of particular environmental interest, such as unique habitats for marine birds and mammals, for example) –see Figure 5–.

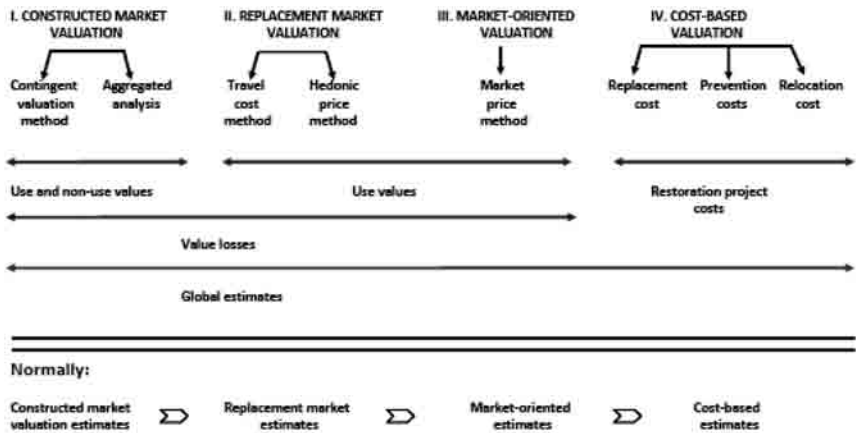


Figure 5. Market valuation models

The non-incorporation of these losses in the institutional framework covering compensation or liabilities means that an estimate is solely of academic value, but nevertheless of enormous political relevance. For this reason, when the damages caused by the Exxon Valdés were assessed this “loss of collective value” analysis was included, and Exxon agreed to compensate for these effects by funding assessment studies and restoration programmes designed to return the affected ecosystems to a situation as near as possible the same as it was before the accident occurred. And in the case of the assessment of the damage caused by the Erika the ‘contingent valuation’ method was used, but the claim was not admitted by the IOPC Funds (Bonnieux & Rainelli, 1991; Thébaud, Bailly, Hay & Pérez, 2004; Hay & Théboud, 2006).

A summary of the accidents and the estimated costs of their economic and social impact is shown in Table 7.

Table 7. Basic data for the biggest European maritime accidents, 1978–2002.

	AMOCO CADIZ	TANIO	AEGEAN SEA	BRAER	SEA EMPRESS	ERIKA	PRESTIGE
Monetary unit	000,000 FF	000,000 FF	000,000 PTA	000,000 GBP	000,000 GBP	000,000 FF	000,000 EUR
Accident date	1/3/1978	7/3/1980	1/12/1992	1/1/1993	1/2/1996	12/12/1999	17/11/2002
Spill (T)	220,000	13,500	80,000	86,500	72,000	19,800	64,000
Km. coast affected	350	200	100	40 km2	150–200	400	1,000
Duration of the compensation process	13 years	8 years	9 years	8 years	>5 years	>3 years	?
Number of claims	No data	100	4,600	2,270	1,200	5,600	27,000 fisherman have presented claims to date
Total estimated cost	4,543–5,215	No data	No data	No data	68–129	5,552–6,447	895 (Government figures)
Compensation claims	4,959	1,168	62,396	154	56	877	
Compensation payouts	965	362	2,952	57	34	159	

Source: Thebaud O. (2004), for all the accidents except the *Prestige* (González-Laxe, 2006).

Risk from the standpoint of economic analysis

From an economic standpoint, risks must be measurable and be studied from three vitally important aspects: a) legislative aspects; b) conflicts of values; and c) discount rate issues. As far as the first of these is concerned, the acceptability of insurability has to be very clearly defined. In other words, reference must be made not only to what is assigned, and can therefore be passed on, but also to the possible transferability options from one entity to another, i.e. the link between insured party and insurer. With regard to the possibilities of monitoring these analyses, some societies are highly regulated, whilst others are more risk-averse and therefore fail to take into account possible manifestations and/or probabilities of risk. The second aspect, that of conflicts of values, implies the taking into consideration of a basic requirement, i.e. social consensus has to be reached regarding the way to attribute a monetary value (price) to certain parameters or indicators that form part of risk, even though they it be difficult to define and measure (e.g. calculations of the value of human lives). In certain cases, like the one we have just mentioned, there is always a wide divergence between expert estimates and the

opinion of the general public. And finally, with regard to discount rate issues, we often find that the income of future generations is not taken into account, which makes it even more difficult to estimate future values.

If these are the downside of risk prevention, the upside has to do with two basic issues. The first of these is the internalisation of external effects, to the extent that each actor/agent has to assume the consequences of their own decisions, and the fact that responsibilities are thus individual makes it necessary, therefore, to determine the rules of play. However, in this regard it is important to make the point that certain risks are irreversible, and thus the risks deriving from a greater competitive pressure can lead to more acute processes with no guarantees of prevention. The second positive aspect concerns the way in which the experts are organised, i.e. their status, their own interests and their behaviour. They produce a wide range of objective analyses, although their geographical atomisation may contribute to creating widely differing codes of practice, making it essential for common standards to be agreed for the presentation of preliminary and definitive results and for risk assessment procedures.

As a result, the first objective of risk management is to avoid ambiguities and reduce pessimistic and heterogeneous hypotheses; the second is to model our knowledge in terms of the probability distribution of eliminating uncertainty, and not to talk about risk in abstract terms.

To this end, knowledge can be reviewed in three different ways: a) *mise au clair* (revising), by means of unequivocal statements; b) *mise au jour* (updating), incorporating new and up-to-date data; and c) *mise au point* (focusing), using the information acquired.

When applying the cost-benefit method the public authorities have to take the principle of precaution into account, i.e. they have to be familiar with and know how to interpret the mathematical translation of collective aversion to risk, since their goals centre around minimising undesired consequences and losses (Jeanrenaud, 2006). In the light of this, public decision-makers have to work with a combination of two factors: a) accepting that the principal of precaution means that we must be prudent and not take any kind of imprudent decisions; and b) lobbies and pressure groups will use other information and data, most of which will be at the service of their own interest. Hence, their strategies should be aimed at distinguishing between preferences and references, with particular emphasis being put on classifying risk, limiting areas of uncertainty and coordinating the processes by which opinions are created, the ways in which they are presented and their review and revision.

Conclusions: the new role of decision-makers

Risk assessment means reducing uncertainties and establishing a procedure for being able to respond as effectively as possible in the preparatory operations leading up to a decision being made and the appropriate risk management strategy

being adopted (Gollier, 2001). For this reason decision-makers, from their own perspective, are looking at a combination of three elements: a) the degree of plausibility of the risk; b) the extent to which the risk can be reduced; and c) the extent to which the risk can be observed. The correct combination of these helps to define the most effective lines of action and behaviour.

However, the proliferation of situations of increased risk compels society to question the degree of confidence it has in its decision-makers. This loss of confidence is due, in most cases, to the lack of information and the restricted level at which what information there may be is disseminated. As a result, in the event of a concrete manifestation of risk we commonly encounter widespread controversy, an abundance of widely differing criteria and analyses, and numerous differences of opinion that together undoubtedly add to the growing difficulty of placing our trust in experts and scientists.

However, the exclusion of the latter from the pre-decision process places a great constraint on the application of coherent methods for finding the best solution and following up recommendations.

The fact that there is no such thing as zero risk, and that we now have trusted, intelligible and analytically unrestricted procedures for measuring it at our disposal, makes it necessary to identify bodies or agencies with responsibility for producing specific proposals and putting them into practice. In other words, what we need are offices or centres with specific responsibility for risk analysis, assessment and prevention.

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12

ESTIMATING THE SHORT-TERM ECONOMIC DAMAGES FROM THE PRESTIGE OIL SPILL IN THE GALICIAN FISHERIES AND TOURISM (*)

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(*) Reprinted from Garza-Gil, Prada-Blanco and Vázquez-Rodríguez 2006, pp. 842-849) ©2006 Elsevier.

Abstract

The Prestige oil spill may be considered as one of the worst in last years, because of the amount spilled (59,000 tons at the moment) and the wide zone affected: almost all the coastline in Galicia (Spanish region with a very important coast fishing and tourist activity) and some points in the North Spain and in the Southwest France. In this paper, we estimate the short-term economic damages from the Prestige oil spills in the Galician fishing and tourist activities. The economic losses arising from the Prestige oil spill exceed those items that can be indemnified under the IOPC system. Their magnitude could reach 5 times more than the applicable limit of compensations in the Prestige case. The consequence is net losses from repeated oil spills and internationally accepted incentives to risky strategies in the marine transport of hydrocarbons.

Keywords: Oil spill effects, fisheries, tourism

Introduction

Over ten events of oil tankers with important wastes have occurred in Europe since 1967. The Atlantic coast is in one of the main routes of the oil tankers and is the most affected zone with nine events (Table 1). And the oil tanker Prestige loaded with a cargo of 77,000 tons of heavy bunker oil ran into problems off the Galician coast (NW Spain) on November 13, 2002. After several days following an erratic path and spilling 19,000 tons, the tanker finally sank 130 miles west off the Southern coast. In the following months, 40,000 tons of oil leaked into the sea with large slicks drifting towards the Galician coast, and later to the Cantabrian and French coasts. This oil spill may be considered as one of the worst in last years, because of the amount spilled and the zone affected: almost all the coastline in Galicia, some points in the North Spain and in the Southwest France. Galicia can be considered the region or ground zero in relation to the damage caused by the black tides from the Prestige.

Galicia, located in the Spanish North West, is a region with a very important coastal fishing and tourist activities. In 2001, the fishing and aquaculture activities contribute with 2.23% of the Galician gross value added and this sector employs around the 33,000 people directly (see Table 2). Regarding on the tourism, for the regional economy of the Galicia the tourist expenses are significant (Consellería 2004; Exceltur 2003), which reach 5.73% of the gross added value of the economy and a percentage something lower in employment terms (see Table 2). The official statistical sources (www.iet.tourspain) on the sector directly associate half of the tourist-recreational uses registered in Galicia to the enjoyment of the coast (beaches, landscapes, gastronomy, etc).

Table 1. Principal events of oil tankers in Europe

<i>Vessel</i>	<i>Date event</i>	<i>Place event</i>	<i>Waste (tons)</i>
Torrey Canyon	1967	UK/France	11,900
Urquiola	1976	Spain	100,000
Amocco Cadiz	1978	France	223,000
Betelgeuse	1979	Ireland	44,000
Haven	1991	Italy	144,000
Aegean Sea	1992	Spain	74,000
Braer	1993	UK	85,000
Sea Empress	1996	UK	72,000
Erika	1999	France	20,000
Prestige	2002	Spain	77,000

Source: European Commission (2000): Report to the Parliament on sea safety of oil transport. (2000) 142/2, 22.6.2000, Brussels.

Table 2. The Galician fishing and tourist sectors in 2001 (current prices).

	Total in Galicia	Fishing and aquaculture	%	Tourism	%
Production (1000 euros)	68,235,608	1,193,475	1.75	3,811,188	5.59
Gross Value Added (1000 Euros)	32,460,588	722,310	2.23	1,859,603	5.73
Employment	1,107,907	34,851	3.15	51,899	4.68

Source: Galician Institute of Statistics. Financial accounts.

The economic effects caused by pollution events have been examined in a number of studies, and progress has been made in our understanding of the magnitude of the costs associated with the release of toxic or hazardous substances into the fish habitats, both from theoretical and applied point of view (Bonnieux and Rainelli, 1993, 2004; Carson et al, 1992, 1996; CESRPL, 2000; Cohen, 1995; Collins et al, 1998; Grigalunas et al, 1986, 1993, 1998, 2001; Hanemann and Strand, 1993; Prada, 2001).

The aim of this article is to present a short-term economic assessment of damages from the Prestige oil spill in the Galician fishing and tourist sectors. The social cost approach has been adopted to show the limitations of the current institutional framework of liability. The paper is structured as follows. In the Section 2, the different components of social costs of an oil spill are discussed. The Section 3 deals with the estimation of short-term economic damages in fisheries. In Section 4, an estimation of damages to tourism is presented. The cleaning and restoration costs are showed in Section 5. The paper closes with a final reflection.

The social costs of an oil spill

The assessment of the social cost of an oil spill deals with a more comprehensive set of damages than the usual assessments carried out for compensation purposes. In the more general approach, private costs and collective or public damages are included (see Figure 1). Private costs are those related to the fisheries and seafood sector (extractive, transport, processing and marketing firms) and to tourism on coastal areas. These are private costs because a limited group of individuals is affected and they are associated to economic activities for which market values are available. The liability framework of the International Oil Pollution Compensation (IOPC) Fund, a convention adopted under the auspices of the International Maritime Organization (IMO), compensates for these losses, once quantification and proof are provided.

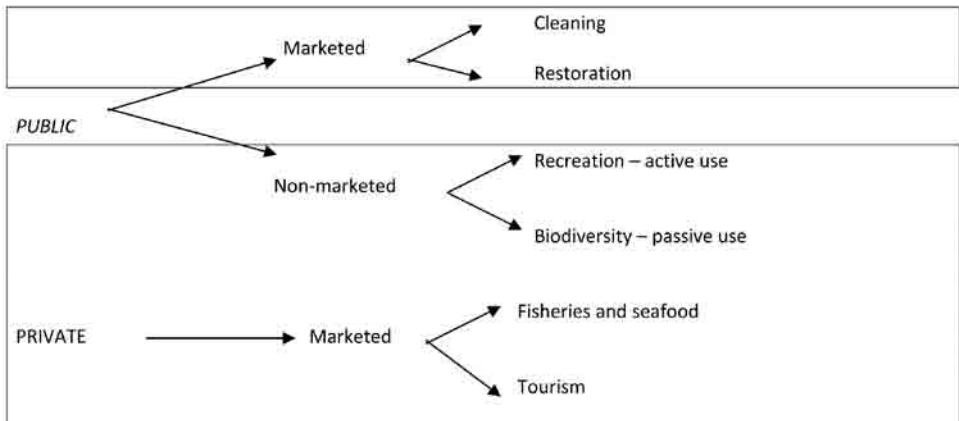


Figure 1. Components of social costs of an oil spill

Collective or public losses are usually identified with cleaning and restoration costs. Direct expenses on these issues are easily available because they are related to services and goods also bought and sold in markets. The IOPC/IMO system compensates for these expenses under the assumption that natural resources and the environment do recover the same state they had before the spill once restoration has been undertaken. Then the costs that can be indemnified by IOPC include the losses on fisheries, seafood sector and tourism only on coastal areas, and the cleaning and restoration costs.

However, lost recreation opportunities for residents (use of beaches, landscape, etc) and passive use losses (cultural, existence and heritage values) are social damages no suitable for compensations because they have not markets to be interchanged and, consequently, market prices not available. Nevertheless, these are non-market valuation methods available and accepted as reliable to estimate collective non-marketed losses. In the current international liability framework these claims are still not allowed, which implies that risky strategies of maritime transport are still profitable.

Economic damages in the fishing sector

We should distinguish the short-term effects valuation of those effects that will be felt in a medium/long-term. In a short-term, the valuation will consist on calculating the economic losses in the fishing income derived of the variations in the captures of the affected species⁴². Thus, for strictly the fishing, it will be considered the captures, monthly preferably, by species (i) and they will be compared with the equivalent ones in the previous year that the pollution took place:

$$V_{it}^{SC} - V_{it}^C = \left[p_{it}^{SC} h_{it}^{SC} \right] - \left[p_{it}^C h_{it}^C \right] \quad \forall i, t \quad (1)$$

where the superscript SC and C indicate, respectively, the situations without pollution and with pollution due to the spill and p denotes the unitary price of the captures (h). Since the fishing costs are not included, probably the figured obtained in this section are overestimating the damages.

With regard to medium/long-term valuations, the Economy depends on the Biology to be able to proceed to this valuation (see Figure 2). So it is necessary to know the situation and evolution of the affected marine resources. In particular, it is necessary to know the losses of adults and juvenile for the different groups of species. They will be bigger in the sedentary species, the loss of larvae⁴³, the possible genetic and behaviour alterations, etc.

The expression (1) is transformed now in:

$$\sum_i \int_{tc}^T \left[V_{it}^{SC}(t) - V_{it}^C(t) \right] e^{-\rho t} dt, \quad \forall i \quad (2)$$

where tc indicates the instant when the contamination takes place; T the instant when that the i species recovers; r denotes the social rate of discount. The results will depend anyway on the future captures that in turn depend of the stock level. The usual thing is to consider to such an effect a relationship of the type $h_i(t) = q_i x_i^\alpha(t) e_i^\beta(t)$ where h_i is the captures of the species i, x_i stock size, e is the fishing effort, q_i is the species capturability coefficient i; and α and β parameters represents the stock elasticities and effort respectively.

⁴² We are only including the differences in income but not in costs. In the compilation process the response from the fishermen was very low, and the final sample was not significant from statistical point of view, specially in the more artesanal or traditional segments. The figures on income used in this section were obtained from official sources.

⁴³ As well as in the case of marketed species as if it forms part of the food-chain through the predator-prey relationship, and rebounding on future recruitments and on the biomass in a medium-term.

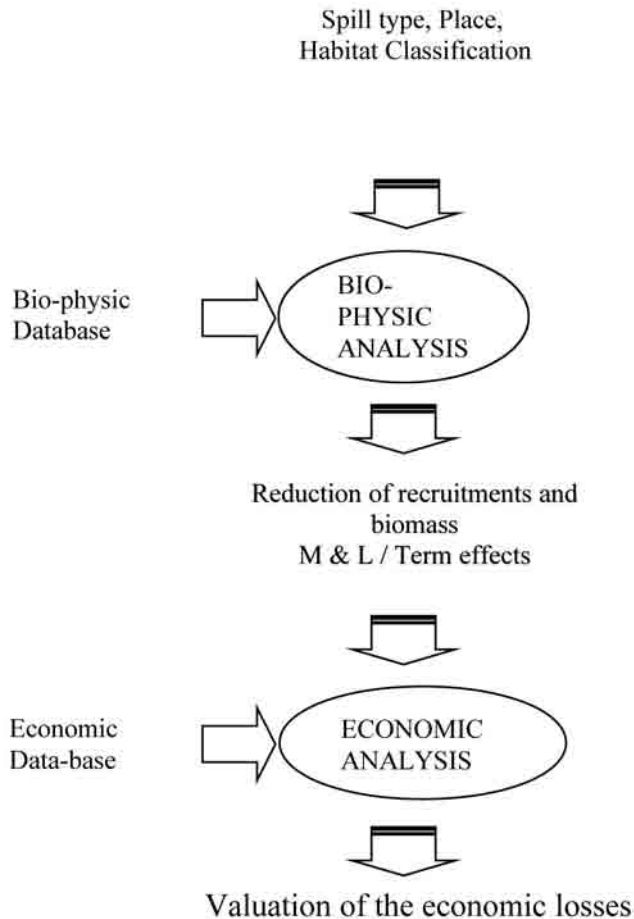


Figure 2. Analysis of valuation of damages

Regarding on the short-term results, given the wide extension of the area affected by the Prestige, and that in the near coast 80% of the Galician coastal fleet is located (Rias of Vigo, Pontevedra, Arousa and the western area of the county of A Coruña), including shellfish-gathering areas as well as most of aquaculture facilities (specially mussels cultivated on rafts), we should estimate a high rate of incidences. The data of landings and income by month for whole species from coastal Galician fleets are showed in Table 3. And the annual aquaculture production, mussel and turbot, is showed in Table 4 (in the turbot case, there are not monthly figures). Because of the spawning crisis in some species (e.g. sardine and hake), storms and rainy weather, and the red tides (in the mussel case) in the three last years (Pazos, 2004), we will use average data for the period 1998–2002 as the reference situation, instead of 2001–2002. So for the fishing activity, we will compare the monthly data of 2003 with the equivalent ones in period 1998–2002; and the data corresponding to November and December 2002 will be compared with the average data for 1997–2001. For the aquaculture activity, we will use the annual data for period 1998–2002 as a reference situation.

Table 3. Fishing Production in Coastal Fish Markets (first sale) in Galicia.

		Reference Period (1998–2002)*		After Prestige Situation (2003)		Difference	
		tons	1000 €–03	tons	1000 €–03	tons	1000 €–03
2002	N	6,551.03	15,554.53	3,451.10	12,237.26	–3,099.93	–3,317.27
	D	4,726.28	18,597.57	525.96	3,375.23	–4,200.32	–15,222.34
2003	J	4,269.32	11,488.47	453.47	1,340.43	–3,815.86	–10,148.04
	F	4,922.32	12,149.19	1,389.06	4,128.26	–3,533.26	–8,020.93
	M	4,770.52	11,646.53	2,181.53	6,842.33	–2,588.99	–4,804.20
	A	5,178.39	10,981.48	2,478.41	7,814.49	–2,699.98	–3,166.99
	M	6,166.98	12,823.27	3,088.36	9,859.50	–3,078.63	–2,963.77
	Jn	6,517.98	13,201.87	3,749.86	9,169.11	–2,768.12	–4,032.76
	J	6,281.84	14,649.41	5,752.29	13,067.21	–529.55	–1,582.20
	A	7,391.74	16,050.32	5,446.34	12,636.22	–1,945.40	–3,414.11
	S	7,169.84	13,163.86	7,226.29	13,939.53	56.44	775.67
	O	6,651.60	14,654.07	6,787.06	16,788.96	135.46	2,134.90
	N	6,551.03	15,554.53	4,927.73	12,950.40	–1,623.30	–2,604.13
	D	4,726.28	18,597.57	3,707.74	19,034.49	–1,018.54	436.92
2002		11,277.31	34,152.10	3,977.06	15,612.50	–7,300.25	–18,539.61
2003		70,597.85	164,960.58	47,188.13	127,570.93	–23,409.72	–37,389.65
Total		81,875.16	199,112.68	51,165.19	143,183.43	–30,709.97	–55,929.26

* The reference period is 1997–2001 for the November and December months.

Source: Own compilation from: Department for Fishing and sea Issues of the Government of Galicia: Statistics of Fishing Production. Technological Platform for Fishing: www.pescadegalicia.com.

Table 4. Aquaculture Production in Galicia

		Mussel		Turbot		Total	
		tons	1000 €–03	tons	1000 €–03	tons	1000 €–03
Reference P. (1998–02)		249,729.85	146,330.00	3,231.70	28,781.10	252,961.55	175,111.10
2003		246,956.10	138,834.30	3,141.20	27,299.70	250,097.30	166,134.00
Difference		–2,773.75	–7,495.70	–90.50	–1,481.40	–2,864.25	–8,977.10

Source: Own compilation from Department for Agriculture, Fishing, and Food: www.mapya.es/jacumar; Organization of Mussel Producers of Galicia (OPMEGA), and Department for Fishing and sea Issues of the Government of Galicia.

From these estimations we obtain a decrease about 34 thousand of tons and

65 millions euros between both periods for the aquaculture and coastal fishing production as a whole⁴⁴. This decrease represents a loss of 10.00% in the produced tons and 17.34% in the corresponding sale incomes. The most significant loss corresponds to the fishing production with 31 thousand tons and 56 million euros. This sharp fall is produced basically in November and December in 2002 and in the first six months in 2003, when many fisheries (into Rias specially) were closed for fishing. In the aquaculture sector the economic losses are lower than in the fishing (3 thousand tons and 9 million euros, respectively). The mussel production (in tons and value) goes down notably in comparison with the turbot production.

Losses in the Galician tourist sector

For the tourist–recreational uses that now we will analyse, it can be useful specially to observe that the majority of the Galician beaches received in more or smaller degree fuel–oil stains during the weeks and months following the shipwreck (CES 2003). For our purposes, we will distinguish three main types in those uses depending on number of overnight staying: excursions (visits without spending nights; then these visits correspond to Galician residents and from North Portugal), weekend trips (visits spending less of four nights) and trips (visits with more of three nights)⁴⁵. At the same time, these tourism flows can come from Spanish regions or other countries. The number of overnight staying and the tourism incomes for Galicia in 2002 and 2003 are showed in Table 5. The year 2002 will be the reference situation in the tourist case.

⁴⁴ On other hand, the affected fishermen and other people closely connected with the fishing activity (sellers, traders personal from producer organizations, ... Approximately 19,000 persons, fishermen included) received subsidies from the regional and central governments during the closed season. This amount was estimated in 52 million euros for 2003 (Consellería da Presidencia, Xunta de Galicia www.xunta.es). It probably helped to reduce the individual effects from oil spill.

⁴⁵ There are 1,599 establishments (hotels, camp sites, inns and rural tourism) that offer something less than 85,000 lodgings according to www.turgalicia.es.

Table 5. Turism flows in Galicia

Type of visit	Reference Period (2002)		After <i>Prestige</i> Situation (2003)		Difference	
	Overnight Staying (million)	Million €-03	Overnight Staying (million)	Million €-03	Overnight Staying (million)	Million €-03
Domestic excursions	16.90	211.25	14.43	170.25	-2.47	-41.00
Rest excursions*	3.60	149.40	3.11	128.97	-0.49	-20.43
Trips from Spain	21.70	883.19	22.35	911.47	0.65	28.28
Trips from other countries	10.30	477.92	8.16	384.62	-2.14	-93.30
Weekend visits	8.60	107.50	8.16	100.20	-0.44	-7.3
Total	61.10	1,829.26	56.21	1,695.51	-4.89	-133.75

* From North Portugal.

Source: Own compilation from: Department for the Economy - Institute for Tourism Studies:
"Touristic movements of Spaniards", www.iet.tourspain.es/paginas.

After Prestige oil spills, the number of overnight staying and incomes decrease in 5 millions and 134 million euros, respectively; these figures represent a fall close to 8% in both of them. Basically, it is due to the domestic excursions and trips from other countries. The number of overnight staying corresponding to these visits fell over 15% and 21%, respectively. However, the visits came from Spain increase lightly (3%), but it is not enough to compensating for the sharp fall in the other concepts. Regarding on the losses in tourism incomes, again the domestic excursions and visits came from other countries go down notably by 19% and 20%, respectively.

Cleaning and restoration costs

In the case of Galicia, the coastal natural heritage affected has been very important. Great part of the coast is integrated by Rias, rich ecosystems in biodiversity but extremely sensitive, that gives place to wetlands, sandbanks and diverse formations of great ecological interest. In February of 2003, approximately 1,000 km of Galician coast had been affected in a higher or lower degree by the oil-spill, among which were 745 beaches. However, the impact is more persistent and it has been much worse estimated in rocks, cliffs, swamps, dunes and seabed, in which it is also more difficult the natural cleaning, and more harmful the human intervention. Great part of these coastal ecosystems is protected officially, as for example the Atlantic Islands National Park (the only Galician national park and one of the 13 Spaniards) and 38 protected species, in danger of extinction.

The current regime of compensations in the IOPC system compensates the environmental losses “until the reasonable costs of cleaning and restoration”, under the supposition that the environment may fully recover the state prior to the incident. In Spain it has been considered the costs of cleaning and restoration in, at the moment, 559 million Euros, something which should be carefully thought because this quantity could only be reimbursed by the insurance of the polluter in hardly a small part. That amount is including the expenses of retirement, transport and storage of oil from the sea, islands and the costal line, regeneration of the littoral and regeneration of the Natural Parks.

Table 6. Cleaning and restoration in some oil spills

Black tide	Type	1000 tons	KM	Cost (M \$ or euros)	Cost per tons (\$ or euros)	I	II
A. CADIZ (1978)	crude	223	350	134	650	50%	37%
E. VALDEZ (1989)	crude	35	700	3,100	70,454	100%	35%
ERIKA (1999)	fuel	20	400	124	6,200	–	15%
PRESTIGE (2002)	fuel	77	1,900	559*	10,666	15%**	–

* Result of the sum of the following costs: 184 million euros of cleaning at sea, 315 million euros of cleaning in the coast, 60 million euros to extract the fuel that remains in the vessel.

** Percentage estimated by IOPC (92FUND/EXC.22/8/1), in Executive Committee meeting of May, 2003.

I. Percentage of the compensation finally paid compared with total cleaning and restoration costs.

II. Cleaning and restoration costs as a percentage over the total estimated damages.

The amount of cleaning and restoration costs of some of the most recent and known black tides are presented in Table 6. The Amocco Cadiz produced many economic studies (Bonnieux y Rainelli 1993), including even the valuation of the work of volunteers and soldiers. The unitary mitigation costs obtained by these authors was about 650 \$ per ton (of 1978). In this black tide, 85% of final payments by IFOP were related to cleaning and restoration costs, despite these costs were less than 40% of the estimated damages.

The Exxon Valdez is the unavoidable reference due to several motives. The main one being the direct payment by Exxon of all mitigation costs (2,1 billion dollars), and the agreement to provide a restoration fund (of 1 billion dollars). Consequently, the cost of this event was the highest of Table 6.

The figure per tonne of fuel in the Erika oil spill was higher than in the Amocco Cadiz, because it was fuel instead of crude and that is more polluting. The black tide of the Prestige is, in several aspects, similar to the Erika: in the type of

hydrocarbon spilt; in the work of volunteers (not paid); and in the difficult task of extracting the fuel remaining in the vessel and giving the correct treatment to the fuel recovered in the coast and at sea.

Final reflections

If we observe the whole of the obtained estimations and summarized in Table 7, the accumulated amount (762 million euros) multiplies almost 5 times the limits of applicable environmental responsibility in the Prestige case (180 million euros).

Table 7. Estimation of losses for Galicia (million euros), 2003

Concept	Loss (Million euros)
Cleaning and restoration	559.0
Coastal Fisheries and Aquaculture	64.9
Tourism	133.8
TOTAL	761.7

The magnitude of the losses that at the moment are outside of the current system of compensation it is, in consequence, considerable. To obviate these items constitutes a social irresponsibility and an incentive to risky strategies in the marine transport of hydrocarbons. Even with the new limit, agreed on May 16 of 2003 (940 million euros), if the economic effects on North Spain and Southwest France coasts would be included in the estimation, the total amount could be higher than that limit.

Finally, this estimation must be made more precise because the costs associated to the tourist–recreational use and in the fishing activity only have been calculated for the year 2003; the expenses of cleaning and restoration probably exceed this year and be prolonged some years more, and on other hand, the losses in values of passive use have not estimated in this paper. As an example, in the case of Alaska, still nowadays, fourteen years later, the effects persist on the natural environment. Nevertheless, the data here obtained can be indicative of the magnitude that the estimations based on real data may reach.

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CRIMINAL LIABILITY



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POSSIBLE CRIMINAL LIABILITIES IN THE PRESTIGE CASE*

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Abstract

This study is an evaluation of the legal and criminal liabilities that at the time it was drawn up should be taken as evidence in the case of the oil tanker *Prestige*, based on the spillage of oil. Differences are established between the criminal liability that could be attributed to the Spanish government on the one hand, and the liability of other agents, with special reference to the conduct of the ship's captain on the other. The liability of the people related to the ownership and use of the tanker is also included in this analysis. The hypothesis put forward in this study is that the State Authorities bear the main responsibility for the *Prestige* catastrophe, as if the evidence set forth herein is confirmed, the Public Authorities' action will be assessed as more serious than that of other agents involved in the handling of the disaster.

Keywords: Criminal code, liability, crime, responsibility, *Nunca Mais*

Introduction

In the following pages I shall attempt to set out, as succinctly as possible, the possible legal and criminal liabilities that, according to the information at present at our disposal, can be circumstantially established in the case of the *Prestige*, as a result of the spilling of heavy fuel oil.⁴⁶

In this regard, I shall distinguish between the possible criminal liabilities attributable to the Spanish government, on the one hand, and the liability of the other persons involved (with particular reference to the conduct of the tanker's master), on the other. That having been said, I would like to point out that I will deal with the former first (and at greater length), since according to legal and penal criteria the State administration would bear – in my opinion – the principal responsibility for the *Prestige* disaster, in the sense that, if the circumstantial evidence that will be presented below is confirmed, its conduct is evaluatively more serious than that of the other parties involved.

Subsequent to the events occurring on and after 13 November 2002 and, more specifically, after the taking into custody on the 15th of the master of the oil tanker *Prestige*, Apostolos Mangouras, by Civil Guard officers at Alvedro Airport

⁴⁶ The article will therefore exclude any other possible related offences, such as the criminal liability that could arise from the failure to appear before the committee of inquiry set up in the Galician Parliament to analyse events in the *Prestige* case. In various newspaper articles published in *La Voz de Galicia* (on 2, 6, 9 and 16 February and 2 March 2003) I put forward the thesis that the non-appearance of the Spanish Government's representative in Galicia and other civil servants and central government personnel who were legally summonsed to appear before the committee constitutes a criminal offence under Section 502.1 of the Penal Code. In the same articles I also arrived at the conclusion that there is clear evidence that the Secretary of State for Spatial Organisation at the Ministry of Public Administration may have been the instigator of the offences committed by those who failed to appear.

(Culleredo, Province of A Coruña), Examining Magistrate's Court No. 4 in A Coruña issued a remand order on the 17th (Preliminary Proceedings 2787/02) against Mr. Mangouras.

After the case was deferred between various courts, the Court of First Instance No 1 in Corcubión (Province of A Coruña) assumed jurisdiction and commenced preliminary proceedings (Summary Proceedings 960/2002) into the possible criminal liabilities arising from the oil spill, which are still in progress at the time of writing.

On 12 December 2002 Mr Gaspar Llamazares Trigo, in the name and on behalf of the Izquierda Unida political party, lodged a complaint before the Office of the Public Prosecutor under Section 264 of the Code of Criminal Procedure against the Spanish government's Minister of Public Works and Minister of the Environment for their alleged criminal liability in the case of the Prestige disaster. This complaint, which was forwarded by the Public Prosecutor's Office to the Corcubión court, was later seconded by a large number of individuals and groups.

Subsequently, the Nunca Más platform and Izquierda Unida itself filed for criminal proceedings in the Corcubión court.

Nunca Más filed its complaint on 28 January 2003 against, on the one hand, those persons connected with the ownership, operation and command of the vessel, and on the other against those persons who, from the Spanish State administration, and as members of the crisis committee, decided the vessel's destination after the accident occurred (the Director-General of the Merchant Navy, the Government's representative in Galicia and the Harbourmaster of A Coruña). And, as is mentioned in the complaint itself, "without prejudice to the liability of other persons that may be determined during the course of the proceedings".

IU, for its part, also included the above-mentioned persons in its complaint, but expressly added the management of Remolcanosa, the tugboat company that took part in the operation to move the vessel away from the coast.

At the time of writing the judge of the Corcubión court has issued a writ of summons, as defendants, against the above-mentioned authorities of the State of Spain, to whom there must be added Captain Mangouras, currently released from custody on bail.

The Spanish Government's liability

Izquierda Unida's initial complaint was filed against the Ministers of Public Works and of the Environment for "an offense against the environment, environmental misfeasance in public office, damage to wildlife, harm to a protected conservation area and hazard". Nunca Más's complaint, and IU's subsequent complaint, refers to the concepts of an offense against the environment and an offense of harm in a protected conservation area.

Is there really sufficient circumstantial evidence to commence a criminal investigation into the actions of certain Spanish government authorities? If the answer

to this question is yes, then what offences might have been committed, and who are the people that the investigation should examine?

According to the information we currently possess, there may indeed be circumstantial evidence of some of the above-mentioned offences having been committed, to which should be added the charge of negligence.⁴⁷ It is clear that the members of the government cannot be held in any way liable for the origin of the accident (this can only be attributable to the ship owners and operators and, if appropriate, the master), but there is nothing to prevent them from being considered criminally liable for their intervention in the events that took place once they had taken on the mission of controlling the source of danger emanating from the initial accident. But, in order to reach this conclusion it will have to be proved that the measure adopted by the Government (namely to move the vessel away from the coast, on an unknown course) was a grossly negligent one that led to the commission of a criminal offence as defined by the Spanish Penal Code.

These course of reasoning is based on elementary interpretative rules in criminal law: a surgeon who operates on a patient who has been attacked will be held liable for manslaughter, if it can be proved that the latter's death is attributable to his lack of diligence, however much he may have acted with the intention of curing the patient and however much the initial injury may have been caused by an attack by a third party, who will only be responsible for the said initial injury. Something similar can be said to apply to the case of the *Prestige*: although the Spanish authorities who took the decision to move the vessel away from the coast may have done so with the intention of minimising the risks of the spill, they must be held criminally liable for all subsequent consequences, if, as a result of their negligent action, the legal and criminal hazard created by the accident increased.

This now having been made clear, let us see what possible offences the Spanish authorities could be charged with having committed.

Some of the offences initially denounced by IU do not merit, in my opinion, the commencement of criminal proceedings: this would be the case of environmental malfeasance (Section 329 of the Penal Code), those relating to flora and fauna (Sections 332 ff.), or to the offense of "hazard" (understanding this to refer to any of those mentioned in Sections 341 ff.). Others, nevertheless, are sufficiently grounded, and were finally included in the subsequent criminal suits brought by *Nunca Más* and by IU itself, namely the offences against the environment covered under Sections 325 and 330 of the Penal Code (in relation to Section 331). To these there should be added, in my view, the offense of negligent harm (Section 267),

⁴⁷ I had already pointed out his circumstantial evidence of liability in an article published in the newspaper *La Voz de Galicia* on 18 December 2002, later extended in others published on 22, 24 and 29 December and 3 January 2003. A summary of these articles, with some additions, also appeared in *El País* on 1 March 2003. This possible criminal liability for gross negligence on the part of the Spanish authorities was also put forward by my colleague Joan J. Queralt, Professor at Barcelona University, in an article published in *El Periódico de Catalunya* on 30 December 2002 titled "La cara oculta del chapapote [The hidden face of the tar]"

which was not included in the above-mentioned suits for the obvious reason that it is an offence that can only be subject to prosecution at the request of the victim.

Let us now proceed to examine the elements of the offences we have just mentioned.

Firstly, we have a case of what is commonly called an 'environmental offence', defined in Section 325, and which, as far as we are concerned, carries a penalty of six months to four years' imprisonment, a daily fine over a period of between eight to twenty-four months, and disqualification from pursuing an occupation or holding office for a period ranging from one to three years for anyone who "in breach of the law or other general provisions to protect the environment causes or whose actions directly or indirectly give rise to emissions (...) in marine waters (...) in such a way as to seriously upset the balance of natural systems".⁴⁸ Section 331, on the other hand, envisages a less severe penalty if the events had occurred as the result of gross negligence.

This would be, as we shall see below, the offence that applies to the ship owner and operator (and, if appropriate, the master), but it could also apply to the Spanish authorities, since after having assumed control of the source of danger, the spill not only continued but also increased inordinately. Furthermore, two features of the structure of this offence dispel any doubt as whether the facts should be included under Section 325: on the one hand, that its consummation is not immediately exhausted, but continues until the cessation of the situation of danger for the balance of the ecosystems concerned;⁴⁹ and on the other, that the punishable action not only consists in "producing" a spill, but also in "causing one", which means that this precept includes a "broad concept of perpetrator", which considerably widens the scope of application of the offence.⁵⁰

Additionally, the proceedings brought by *Nunca Más* mention the possibility of applying in this case the aggravated offence defined in paragraph e) of Section

⁴⁸ The provision quoted here corresponds to the basic type of offence defined in paragraph 1 of Section 325. In this case the aggravated offence (or "basic sub-offence", according to one doctrinal sector) of paragraph 2 of the same section, which envisages a term of imprisonment in the upper half of the range if "the hazard of severe prejudice were to concern human health".

Furthermore, it should be made clear that by requiring an infringement of the regulations protecting the environment, the offence defined in Section 325 incorporates a structure of an "open-ended" law in which the penalty is defined, but not the legislative infringement, and makes use of the "accessory to a regulation" system (and not the "accessory to an event" system) in the relationships between the criminal offence and the regulatory system for the environment. The offence thus requires infringement of an administrative rule, and not disobedience of an administrative act (cf. Silva, 1999, p. 57. On the different models governing the nature of being an accessory, see González Guitián, 1991, pp. 109 ss.; De la Mata, 1996, pp. 61 ss.). In the case of the *Prestige* the fact of the offence being accessory to an administrative regulation is of no matter, since it is obviously related to the prohibition of causing a fuel-oil spill in marine waters.

⁴⁹ On this feature regarding consummation, see: Silva, 1999, pp. 55 s. For jurisprudence, see the sentence of the Supreme Court of 5-5-1999.

⁵⁰ Prevailing opinion has it that Section 325 of the Penal Code includes a broad concept of perpetrator: see, for example, Carmona Salgado, 1997, p. 57; Silva, 1999, pp. 34 s. For jurisprudence see the sentence of the Appeal Court of Córdoba of 18-1-1995.

326 of the Penal Code, which involves imposing a more severe penalty than that provided for in the preceding section, and which arises when in the commission of the act described in the offence defined in Section 325 “a risk of irreversible or catastrophic deterioration has occurred”. However, although there can be no doubt that in the case of the Prestige there has been in fact not only a “risk of catastrophic deterioration” but even veritable harm of such a nature, the above-mentioned aggravated offence does not apply since the aggravated offences defined in Section 326 are exclusively of a wilful nature,⁵¹ and cannot be considered when (as in the case we are dealing with) the only concurrent circumstance to the initial offence is negligence. And, for the same reason, I am of the opinion that neither is it possible to apply to the negligent offence under Section 325 in relation to Section 331 the “hyper-aggravated” offence included in Section 338, which allows for the imposition of “more severe penalties than those respectively envisaged” when the conducts defined in any offence under Title XVI “affect a protected conservation area.”⁵²

Secondly, there would also be another offence against the environment, compatible with the previous one, namely that of harm in a “protected natural space”, with the aggravating circumstance of negligence (Section 330 in relation with 331). Section 330 imposes a sentence of one to four years’ imprisonment and a daily fine over a period of twelve to twenty-four months on “anyone who, in a protected natural space, should do serious harm to any of the elements on the basis of which it has been so classified”. The wording of this offence also gives a broad scope to this provision of criminal law, because unlike the offence described in Section 325 it requires no infringement of administrative environmental regulations (i.e. criminal law being secondary to administrative regulations), nor any specific “manner of commission”. What is being punished in the offence defined in Section 330 is the mere causation of a result (serious harm to protected spaces, conceived of here as the destruction of their ecological value, and their functional or financial value), which can be attained through any manner of commission, whether by action or by omission. Furthermore, it is worth emphasising that the conduct can take place, without any doubt whatsoever, outside the protected space as long as the damage occurs within it.⁵³ Additionally, it is clear the above-

51 See Silva, 1999, pp. 123 s., who correctly reaches the same conclusion on the basis of the provisions of two precepts in the current Penal Code. The first of these is the rule envisaged in Section 14–2 for cases of incorrect classification of an offence, which states that “error regarding an event that aggravates the infringement or regarding an aggravating circumstance will prevent it from being considered”, as a result of which it is obvious that in the case of aggravated offences an avoidable error regarding the aggravating act receives the same treatment as the hypotheses of unavoidable error, i.e. it is not punished as negligence, but instead leads to absolution. The second is the rule contained in Section 65–2 of the Penal Code, from which it can be understood that aggravating circumstances of an objective (or impersonal) nature will only aggravate the liability of those who were aware of them at the time the act was committed.

52 It should nevertheless be remembered that, as we will explain later on, harm to protected natural spaces is already punished through the offence defined in Section 330 of the Penal Code.

53 On the structure of the offence defined in Section 330 see, in particular: Carrasco, 2001, pp. 1059 ff.; De la Cuesta Arzamendi, 1998, pp. 303 ff.; Silva, 1999, pp. 137 ff.

mentioned super-aggravated offence under Section 338 cannot be applied to the offence defined under Section 330, due to the principle of necessity⁵⁴ and also to the fact that the said super-aggravated offence only applies when the offence is of a wilful nature. Finally, an analysis of the diverse nature and structure of the offences defined in Sections 325 and 330 reveals there is no impediment to the two offences being seen as concurrent.⁵⁵

This being the case, it should be made clear that the concurrence of this second offence is of capital importance here, since, when the Ministry of Public Works assumed control of the risk arising from the initial accident,⁵⁶ the hazard for protected natural spaces (and in particular the Atlantic Islands National Park) either did not exist as such or was already within the domain of the Spanish authorities and outside that of the ship operator or the master. This means, no more and no less, that in legal and penal terms that what generated (or decisively increased) the risk of this new offence being committed was precisely the decision to move the vessel away from the coast. And this is regardless of the fact that the ship operator's subsequent conduct could also be punished for this offence, if it is proved that it also helped to increase the risk of the cause of the offence by altering the *Prestige's* course; and also regardless of the fact that the authorities in the Ministry of Public Works again increased the level of criminal hazard as a result of their lack of diligence in their obligation to monitor the operation to move the vessel away from the coast.

Thirdly, we have to add the presence of an offence of negligent harm (Section 267), as the oil spill not only affected the ecological value (the legal interest of the whole community) but also the individual wealth of individuals:⁵⁷ think of the damage done to mussel rafts, shellfish purification plants, fish farms, fishing gear and the like. This conduct is punished as a criminal offence with a daily fine over a period of three to nine months provided the harm was "caused by gross negli-

⁵⁵ Cf. Silva, 1999, p. 135.

⁵⁶ The reasons for allowing the offences to be considered concurrent are evident, since what we have here is the concurrence of an offence of hazard (that of Section 325) and one of harm (that of Section 330). The penalty applied to the offence in Section 330 would not include here the loss of value caused by hazardous conduct projected on objects other than those used to classify the natural space as protected. In this regard, see the convincing reasoning put forward by Silva, 1999, pp. 135 ff., who classifies the concurrence as 'conceptual' (Section 77 of the Penal Code). Similar views on the attribution of a conceptual concurrence of offences are expressed by Muñoz Conde, 2002, pp. 569 ff.; Carrasco Andrino, pp. 1097 ff.; this also appears to be the opinion of Mateos Rodríguez-Arias, 1998 p. 114.

⁵⁷ Although I will deal later with the structure of an offence committed through negligence, it is interesting to note here that in the *Prestige* case the actions of the authorities of the Ministry of Public Works provide us with an evident case of "guilt by assumption", from the very moment in which they assumed the commitment to control the source of the threat. See on this point, in relation with offences against the environment: Silva, 1999, pp. 33 ff.

⁵⁸ Note here that the nature of the legal good protected against the offence of harm is different to that whose protection is sought by penalising offences against the environment. In the offence of harm the dimension of the object of protection is of a purely individual asset and is specified as the detriment caused to the property of a third party (see Orts Berenguer, 1999, p. 535; Muñoz Conde, 2002, p. 459).

gence and to a value greater than 60,101.21 Euros” (Section 267, par. 1) and would be concurrent with any offence against the environment.⁵⁸

It should be stressed that the criminal proceedings brought by IU and Nunca Más did not include this offence amongst the various charges. This is as it should be, because unlike the other offences mentioned (which are public offences and suit can be filed by anyone), the offence of negligent harm can only be pursued “after suit has been filed by the injured person or their legal representative” (according to paragraph 2 of Section 267 itself). Thus, only those who have experienced harm to their property are procedurally legitimated to file suit for this offence. It is therefore rather surprising that the fishermen’s guilds have not done so.

In view of the above it can be concluded that the facts fit the above-mentioned precepts of the Penal Code perfectly. And this is irrefutable, because for the moment we are simply talking about the subsumption or fit of a series of objective data within criminal legislation, which is glaringly clear in this case. It is true that no criminal law expert has upheld the opposite; nevertheless, I have read a lengthy article in a newspaper published in A Coruña, written by a lawyer, in which the said subsumption is called into question. To which it has to be said that to deny the objective “classification” of the facts set out above is quite simply nonsensical.

It is a totally different matter, however, to ask whether such facts, which in principle fit perfectly within the provisions of the aforementioned sections of the Penal Code, can be attributed to certain members of the Government or persons employed in the service of the State, or to others such as the ship operator or the vessel’s master, or to all of them at once.

So, returning once again to the simile of the doctor we used before, we can say that for the moment we can draw two clear provisional conclusions: we know that there is a corpse, and we know that the Penal Code punishes the offence of negligent homicide. We only have to determine whether death was due to the surgeon’s negligence. Let us examine, therefore, the actions of the Ministry of Public Work’s ‘surgeons’.

In its initial suit, IU argued that the decision to move the vessel away from the coast “was not based on technical, but on social and political, criteria”, so that the Government, “acting contrary to the general interest, was unwilling to accept the political risk of taking the vessel into a port or a sheltered estuary”. Nunca Más, in its suit, argued that the circumstantial evidence of criminal liability in the Spanish authorities’ conduct “is based on the taking of a decision without having recourse to the necessary technical reports to justify it, despite being aware of the enormous threat the damaged vessel represented”, and on the fact that they “neither considered nor properly studied the importance of the damage and equipment failures on

⁵⁸ In this regard see Silva (1999, p. 140), who rightly emphasises that “the production of an outcome of bodily harm, manslaughter, damage to assets, etc., ... should be resolved in accordance with the general rules governing the concurrence of offences” (p. 140). As far as the kind of concurrence is concerned, the author leans towards the solution of conceptual concurrence, given that we are dealing with the result of negligence.

board the vessel at the beginning, nor the technical possibility of providing it with a sheltered mooring where it could transfer its cargo"; and furthermore, it adds that "nor did they make a technical study of the risks and consequences of moving the tanker away from the coast in view of its condition and the state of the sea, nor of the correct course and destination in such a situation, nor of the possible solidification of the heavy fuel oil as a result of the vessel's foreseeable and inevitable sinking, nor of the effect of the prevailing sea currents and winds in this season, nor of the consequences of increasing the spillage of fuel oil into the sea that the erratic course authorised by the members of the crisis committee would necessarily entail". Finally, in its suit it concludes that the authorities in the Ministry of Public Works "must have foreseen the consequences of their decision and their authorisation of the erratic wanderings of the vessel over a period of several days off the Galician coast: the massive oil spill, the sinking of the vessel, the enormous increase in the area affected by pollution; and yet nevertheless, and with no technical justification whatsoever, their decision to move the vessel away from the coast caused a series of damages that would otherwise not have occurred".

Obviously, if the judge were to reach the same conclusions, there is no doubt that the authorities in the Ministry of Public Works would have committed the offences we have just mentioned. However, proving the charges brought in the proceedings requires an evaluation of a variety of technical data, according to legal and penal criteria of interpretation, which I am unable to cover in depth in this article.

Suffice it to say that for a subject to have committed criminal negligence he or she must have infringed a "duty of care (or of diligence)", consisting in not having taken the necessary precautions to avoid the occurrence of criminal conduct (in this case, harm to the environment and to property). This duty of care can be subdivided into a series of separate elements.⁵⁹

Before adopting a potentially hazardous decision, the subject must take prior preparatory and informational measures (the need for which increases in cases of prevention of catastrophic risks), which in this case would mean obtaining all the relevant reports from experts in maritime safety (including, of course, 'external' experts, who in this case were never consulted⁶⁰). This is a basic element,

59 References to negligent offence in general in the literature are numerous. In addition to the basic notions to be found in Treatises and Handbooks, it will suffice to mention some of the most recent articles on the topic, included in the bibliography below: Corcoy Bidasolo (1989, 1998); Feijóo Sánchez (2001); Hava García (2002); Paredes Castañón (1995); and Serrano González de Murillo (1991).

60 What is more, the authorities in the Ministry of Public Works took the decision to move the vessel away from the coast as early as the 13 November itself, as is evident from a fax sent at 20.30 hours by the Rescue Coordination Centre in Madrid to the ship operator's agent. This decision was taken, therefore, before the inspector Serafin Díaz had evaluated the condition of the tanker's superstructure (which he did on the morning of the 14th) and before the tow had been made firm.

And, of course, the decision was also made before consulting the experts working for Smit (the Dutch company hired by the charterer to save the cargo), as is evident from the fact that the Ministry of Public Works only showed interest in the technical details of the fuel-oil transfer manoeuvre in calm waters (a manoeuvre the Spanish Government refused to allow the Dutch company to perform during the six days the vessel remained

to the extent that the infringement of the duty to obtain prior information would make the Ministry of Public Work's authorities liable even if they had later made the correct decision with the information available to them at the time, if it were to be proved that, if they had obtained reports from the experts, the decision adopted would have been different, and as a result the adverse effects could have been avoided.

Once the subject is in possession of the technical reports, he or she has to act "with prudence" in accordance with legal and penal criteria (which, it goes without saying, do not coincide with the singular reasoning of the Ministry of Public Works, which has only recognised the error of "not having been a good prophet"): criteria that are based on *ex ante*, not *ex post*, judgements. The technical formula used by the courts in their daily work is simple: recourse is had to a judgement of "objective foreseeability", in which the judge places him or herself at the moment when the Ministry authorities had to decide what to do with the vessel, and asks him or herself what an intelligent and careful professional with the knowledge common to such professionals at the time would have done, if in the position of the said authorities and with the same resources and knowledge they had available to them.⁶¹

Armed with this information, the judge will ask him or herself the following question: what would then be the least harmful solution for the general interest?

afloat) after the tanker had sunk (on 20 November, to be precise), when a meeting was held between the deputy director-general for Maritime Traffic, Safety and Pollution and Smit's experts. It is interesting to note that in this meeting the latter specified in a report that the operation would have taken four days at the most, and that the task of heating the fuel-oil and finding a suitable vessel to which to tranship the cargo "was not a problem", since they had the powerful Chinese tugboat *De Da* standing by in Vigo harbour; furthermore, the same experts had already said that the fuel-oil would not solidify (see the summary of the report in *La Voz de Galicia*, 20-1-03, p. 7; and also *La Voz de Galicia*, 2-3-03). It goes without saying that the content of this report is of transcendental importance in determining negligence on the part of the Ministry of Public Works, since the harbourmaster of A Coruña himself declared before the judge that the transfer of the fuel-oil had been ruled out from the beginning due to the lack of a vessel with similar characteristics to those of the *Prestige*.

A similarly trenchant view is expressed by Fiz Fernández, an chemical oceanographer with the CSIC's Marine Research Institute in Vigo, who visited the wreck on board the bathyscaphe *Nautilo*: in his view, although in cases such as that of the *Prestige* it is essential to obtain information from "experts in the various areas involved before making decisions", "erroneous forecasts were made because of a lack of the right information", both as regards "the decision to move the *Prestige* away from the coast and the forecast that at a great depth the fuel-oil would become too dense to float and that corrosion does not exist on the sea bottom" (see *El País*, 17-1-03).

61 With regard to the "specific rules of prudence" that must be taken into account in order to determine whether or not there has been an infringement of the duty of care, it should be clarified that in fact such rules are to be found, above all, in the laws and regulations governing hazardous activities (in our case those referring to maritime safety and rescue), but it will also be necessary to make use of unwritten rules of common human experience or of technical and scientific good practice, regarding the care, diligence or prudence required when undertaking a hazardous activity (see e.g. Luzón Peña, 1989, p. 499). It is interesting to highlight the latter point, because in the case of the *Prestige* the authorities at the Ministry of Public Works have argued in their defence that (unlike the situation in certain foreign legal systems) in Spain there is no law that makes it compulsory to transfer the vessel to a place of refuge. Obviously, the absence of recognition of this specific duty by no means signifies that in a given case an infringement of the objective duty of care that characterises negligence cannot be said to have occurred. It is important to stress that the Spanish authorities have not been legally or criminally charged with an infringement of the duty to provide assistance or an offence of refusal to assist the damaged vessel, but rather a negligent conduct related to the harmful results for the legal goods of third persons that subsequently took place, to which effect we have to look at the arguments I will expound further on in this article.

Bring the boat closer to the coast in order to transfer the fuel-oil, or move it out to sea? To this end, he or she would have to weigh up the evils: on the one hand, the risk of polluting a specific estuary or paralysing activity in a specific port, and on the other, the risk of polluting an extremely broad swath of the Galician coastline with the decisive additional particularity that in the latter case a new hazard is created for an interest protected by criminal legislation (that of causing harm to a protected natural space, under Section 330), which furthermore, in accordance with the degree of criminality specified in the Penal Code, is of greater severity than the 'environmental' offense penalised under Section 325. But that is not all, since this weighing up of evils would also have to take into account the probability of the vessel sinking in each case.⁶²

This being the case, given the alternatives we have outlined above the option is obviously clear, as numerous independent experts consulted have also pointed out.⁶³

Furthermore, I am of the opinion that, if the authorities at the Ministry of Public Works decide to move a vessel to a port or estuary⁶⁴ and it sinks, they would not

⁶² It is curious to note that the Spanish authorities have defended their argument to move the vessel away from the coast that it ran a serious risk of sinking if it were towed to a place of refuge. However, against this reasoning we once again have to say that the immense majority of experts consulted on the matter maintain that *ex ante* the risk of sinking at this early stage of events was minimum, since there was no doubt about the "vessel's residual strength" after the initial damage, as was proved by the fact that it subsequently remained afloat for six days in very difficult seas. Furthermore, such reasoning runs contrary to the decision taken by the Spanish authorities, because if they thought there was a risk of sinking during the towing of the vessel to a place of refuge, they would *a fortiori* have to have been aware that was a far greater possibility of it breaking up in open seas, and imminently, besides. And this is the conclusion reached by the official inquiries carried out by the French government and the Bahamas Maritime Authority (see the reports published in *El País*, 7-3-03 and *La Voz de Galicia*, 6-3-03): more specifically, in the latter's inquiry it was argued that after the list caused by the initial accident the cargo tanks had not yet suffered any damage (because the initial spill came from the cargo tank deck hatches), a situation that lasted for several hours until exposure to the heavy seas damaged the plates of one of the cargo tanks.

⁶³ To illustrate this statement it will suffice to recall here a few extremely eloquent testimonies. On the one hand, the letter that 422 Spanish scientists (from 32 universities and a further six prestigious institutions such as the CSIC or the Spanish Oceanographic Institute) published in *Science*, in which they argued that moving the vessel away from the coast was the worst possible decision and one which without doubt was the cause of the enormous size of the subsequent slick. On the other we have the declaration of José Manuel Martínez Mayán, a Merchant Navy captain and lecturer in maritime safety at the University of Corunna and one of the only two advisors consulted verbally by the Ministry of Public Works before deciding to move the vessel away from the coast. He says in his declaration that the Spanish authorities only consulted him "if the cargo could be transferred on the high seas", since they "had no intention of bringing the vessel into harbour or a place of refuge". However, in Martínez Mayán's opinion there is not "the slightest doubt" that the preferred immediate decision would have been to tow the *Prestige* to a place of refuge in the Corcubión estuary, where the damage could have been calmly assessed, the vessel could have been made seaworthy and the decision then made as to the best option for transferring the fuel-oil (which, in his view, could have been done either in the Corcubión estuary itself or in another port). Furthermore, Mayán says he "roundly" opposed the decision to move the vessel away from the coast, adding "I do not believe that there is a professional on this planet who would in all honesty advise moving the vessel out to sea" (*La Voz de Galicia*, 6-03-2003, p. 13). This opinion expressed by Mayán coincides with that held by faculty at the University School of Naval Engineering in Ferrol: see in this respect the article by P.B. González, a naval engineering lecturer at the said school, titled "A fatal chain of errors" and published in *La Voz de Galicia* on 9-12-2002, in which, after affirming that the Government's choice to move the vessel out to sea "was the worst one possible", he states that the preferred option would have been to "run the vessel aground on a sandy beach", with express reference to "the beaches west of Cape Finisterre"; further still, this lecturer argued that "only ignorance of maritime matters or the fear of making a mistake can explain

incur any criminal liability: either because there would be an “allowable risk”⁶⁵ or because there would be the concurrent extenuating circumstance of a state of necessity (Section 20.5 of the Penal Code).⁶⁶

However, that is not all there is to the matter, because even if we accept the hypothesis that the decision to send the vessel out to sea had been one of a “diligent professional”, the duty of care would also apply to the task of ensuring that it followed the *a priori* least hazardous course.⁶⁷ This means that even when the vessel was on the high seas there is circumstantial evidence that there may have been an

the paralysing terror of taking risky decisions that certain vicissitudes require of those in charge. There would probably have been a large hydrocarbon spill and damage to a few miles of coast that would have to be cleaned up and the consequences of which made good. This decision was by far and away the lesser of the possible evils, and thus the one that should have been made”. A similar sentiment was expressed by Joan Zamora (head of the Centre for Maritime and Logistics Services) before the European Parliament on 19–3–03 when, after admitting that the Spanish Government’s handling of the incident “was lamentable and appalling”, he said that “it is obvious that I would not have brought the *Prestige* into the Arousa estuary, but I would probably have taken it to the Corcubión estuary”. And if the foregoing is not sufficient, we also have the document drafted by the Ministry of Public Works on a tanker accident drill, released before the *Prestige* disaster occurred (“Conclusions of the rescue and anti-pollution drill. A Coruña, 2001”), which contemplates the measure of sending the damaged vessel to an anchorage point in order to transfer its cargo.

64 It should be stressed that the rescue action was not solely limited to the solution of taking the vessel into port. Indeed, as was pointed out in the previous footnote, the ideal solution would appear to have been to anchor the vessel in an estuary (the experts quoted above express their preference for that of Corcubión), a solution admitted by the Ministry of Public Works in its action protocol. And in this regard, we must mention a further mendacity (this time by omission) committed by the Spanish Government when questioned in Parliament by the leader of IU about the content of this document: the Government limited itself to affirming that the said document on the drill rejected the solution of taking the vessel into port, but misleadingly made no mention of the solution of moving it to an estuary (see the declarations of G. Llamazares reported in *La Voz de Galicia*, 18–3–2003, p. 15).

However, it should also be highlighted that the great majority of experts consulted were of the opinion that, in addition to the optimal solution afforded by the Corcubión estuary, there were other additional options such as the Ares estuary or even bringing the vessel into port, all of which were *ex ante* preferable to the decision to send the vessel out to sea. Galicia has various ports large enough to accept the vessel, amongst them those of A Coruña, Vigo and Ferrol. The only technical opinion requested was that of one of the harbour pilots in A Coruña (and merely a verbal consultation at that, according to him), who, by the way, was not against bringing the tanker into port, but merely pointed out the difficulties the manoeuvre would involve, and therefore clarified that “I agreed to bring the vessel in to port if they exempted me from liability in writing, because my insurance policy does not cover every kind of situation” (declarations to *El País*, 17–12–02).

65 Allowable risk can function as a criterion for the objective attribution of the result, according to some authors, or as a cause of justification, according to others: see in particular the monograph by Paredes Castañón, 1995, pp. 80 ff.

66 The broad regulation of the state of necessity in the Spanish Penal Code would undoubtedly contemplate such hypotheses, since it includes not only one’s own state of necessity, but also that of others, or necessary assistance, in the event of a hazard to the interests of other persons or of the community (see Luzón, 1989, p. 620 ff.). Furthermore, from what has been said previously it is clear that the rescue action (taking the vessel to a place of refuge) would be aimed at preventing an objectively greater evil (the greater probability of the vessel splitting in two at a distance from the coast that would favour the spread of the radius of the subsequent spill, with the resulting increase in damage to the environment and property, and with the added risk of a new offence being committed, i.e. that described in Section 330, more serious than the one initially committed, i.e. the one envisaged in Section 325).

These clarifications are of the utmost importance in refuting the nonsensical line of defensive reasoning adopted by the authorities at the Ministry of Public Works, based on the argument that Spanish legislation in matters of maritime rescue does not envisage the specific obligation of offering a port of refuge. In the face of such reasoning it has to be made clear that from a legal and criminal point of view the authorities in question

infringement of the duty of care (of monitoring) incumbent on the authorities that assumed control of this new hazard.⁶⁸

Furthermore, in order for negligence to be considered an offence it has to be classified as “gross”, a classification that has nothing to do with the psychological structure of negligence, but rather with the seriousness of the infringement of the law governing the duty of care. This must also be evaluated according to legal and criminal criteria, such as the high degree of possibility of the harm occurring, the inadequacy of control measures and above all the nature and extent of the hazard created.⁶⁹ The concurrent circumstances in the Prestige case (a genuine example of catastrophic risk) raise, in my opinion, few doubts as to the “grossness” of the negligence.

are not being charged with an offense of omission of the duty to provide assistance or one of refusing assistance (as would undoubtedly have been the case had the legal obligation to provide a place of refuge existed), but what they are being reproved for is simply the causing of negligent offences subsequent to the initial criminal act and the arrest of the tanker’s master. So from a legal and criminal perspective the only relevant criterion for establishing the possible liability of the authorities at the Ministry of Public Works is the fact that they assumed control of the source of hazard and that they then became obliged to avoid or reduce the risk of causing greater damage to the Spanish environment and to the property interests of Spanish citizens.

67 Although the written order officially delivered to Smit by the Ministry of Public Works in the early hours of 15 November merely stated that the vessel had to move to a distance of 120 miles from the coast, without specifying a course, from the recorded conversations between the Finisterre control tower and the Prestige (with Mangouras still master) it can be deduced that the Spanish authorities had also previously determined a 320° NE course (see the transcript of the recordings published in *El País*, 23–1–03).

After the arrival on board of the Smit salvage team, which carried out a thorough inspection, the Dutch salvage company decided to stop the main engine (which had been restarted by the inspector Serafin Díaz on the 14th, after an inspection “from the helicopter”) so as not to further increase the damage caused by vibrations, since there was already “a long hole in the starboard side, about 15 metres long, as if a plate had come loose”. Maintaining the initial NE heading, Smit asked the Ministry of Public Works to visit the vessel so that the Spanish authorities could see for themselves the serious structural damage to the vessel and agree to have it towed to the port of Vigo, or, if appropriate, Gibraltar. The Ministry, however, did not send any inspectors to the vessel and rejected Smit’s request, without alleging any technical reason for this refusal. It did, however, put forward the possibility of taking the vessel to the south of the Canary Islands in order to transfer the fuel–oil there (see Smit’s declarations published in *El País*, 10–1–03).

Subsequently, and given the Ministry of Public Works’ refusal, Smit ordered the tugboat *Ría de Vigo* to change the initial NE course for one to the south (apparently because Cape Verde had agreed to accept the vessel), with no opposition from the Ministry of Public Works (whether as a result of pressure from France and the UK, or whether for any other reason, but this is in any case irrelevant from the point of view of criminal liability for negligence). This being the case, the Ministry of Public Works allowed the Prestige to sail under Smit’s command on a southerly course (180°) parallel to the Galician coast for at least 9 hours, and when it did finally intervene, it was only to insist on the order for the vessel to keep 120 miles out to sea. The vessel thus finally altered its course to the SW and sank 130 miles off the Galician coast at Finisterre (see *La Voz de Galicia*, 31–12–02), in the worst possible location, namely the so-called Galicia Bank (see the declarations made to *El País*, 17–1–03, by Fiz Fernández, chemical oceanographer at the CSIC’s Marine Research Institute in Vigo).

68 Even so, according to Pablo Serret, lecturer at the University of Vigo and instigator of the aforementioned letter published in *Science*, “even if the vessel had continued on its northerly course it would have been a mistake, because it would have moved the focus of the problem to the Bay of Biscay and the fuel–oil would also have ended up hitting the Galician coast” (see *La Voz de Galicia*, 13–03–2003, p. 11). Furthermore, it is certainly hard to understand if (as the authorities at the Ministry of Public Works have stated) the reason for moving the vessel away from the coast was to transfer the fuel–oil in calm waters, why the initial NW course was permitted in the first case, since it pushed a severely damaged hull into the teeth of the storms.

69 See Cerezo (2001, p. 175), Luzón (1989 p. 516) Mir Puig (2002, p. 11).

In short, in view of all the above we can conclude that there is clear circumstantial evidence that both the increased spread of the oil-slick and the harm done to protected natural spaces can be “objectively attributed” to the decision to move the vessel away from the coast.

It now remains to determine who contribute to the taking of this decision, or in other words, to put names to the persons against whom the criminal proceedings should be brought.

The answer is, in principle, a theoretically simple one: given that the authorities at the Ministry of Public Works (the ministry with the legal competence to decide the destination of the damaged vessel) from the outset assumed the mission of controlling the source of hazard and took the decisions, criminal proceedings must necessarily be restricted to them alone. Therefore, although IU also initially brought proceedings against the authorities at the Ministry of the Environment, the latter (and also those at other Ministries, including the Deputy Prime Minister) should in principle remain outside the circle of possible authors, since (with the information at our disposal) they neither assumed the mission of controlling the source of the hazard, nor intervened materially in the events, and nor were they in possession of the appropriate legal competence at that time.

However, this having been made clear, the judge will have to determine specifically who the authorities were that intervened in the commission of the facts, the on the basis that under Spanish criminal law liability is strictly personal.

This is no easy matter to resolve, because we come up against the oft-discussed problem of determining the identity of the perpetrator of an offence within “complex” hierarchical structures,⁷⁰ such as the organisational chart of a ministry. I will therefore restrict myself to putting forward a number of criteria for attributing criminal liability in such cases.

The first point to make clear is that in order to be considered the perpetrator of the aforementioned offences the relevant criterion is not whether the person concerned belonged formally to the organisational structure of the Ministry, but whether or not he or she materially intervened in the decision⁷¹ to send the vessel out to sea.

Furthermore, the decisive criterion here is the phenomenon of “delegation of powers”.⁷² The Minister of Public Works has publicly stated that, although he assumes “the political responsibility of moving the vessel away from the coast, the decision was entirely a matter for the experts”. Given these words, it should be pointed out that if the minister did indeed delegate his original powers, criminal liability would in principle be transferred to the said experts in the Ministry,

70 The bibliography on this subject is boundless. See, for example, Paredes (1995, p. 137), Silva (1997, p. 11), Martínez-Buján (1998, p. 192), Núñez Castaño (2000), Ragués (2001, p. 243).

71 In relation to offences against the environment, see Silva (1999, p. 28), who mentions jurisprudence in such matters.

72 In relation to offences against the environment, see Silva (1999, p. 30).

namely the members of the “Operations Coordination Centre”, created ad hoc on 13 November 2002, and, if appropriate, to the persons with responsibilities under the “National Marine Pollution Contingency Plan”, whose actions were coordinated by the director-general of the Merchant Navy. These authorities, therefore, to the extent to which they may have assumed the original powers by delegation, would be responsible for the offences unless it can be proved that they in turn had delegated such powers to other expert advisers.

Once competence has been determined, the perpetrators (or co-perpetrators) of the negligent offences committed would be all those who had contributed to endangering the environment or to causing harm to the environment and to goods and property, provided that their contribution “positively and objectively shaped the factual course of events”.⁷³ Furthermore, since Section 325 (which contains an offence of hazard) includes an “extended concept of perpetrator”, charges for this offence, as perpetrators, could be brought against all those whose actions consisted materially of mere participation and who, under a “strict concept of perpetrator”, would not have to face charges since this is a question of negligent actions.⁷⁴ Thus, actions such as wrongly calculating the vessels’ draught, guaranteeing that the vessel would be able to withstand the open seas without breaking up, assuring that the fuel-oil would solidify on the sea bottom, and so on, would doubtlessly be punishable.⁷⁵

Finally, on the question of authorship there is one last question to be asked: does delegation automatically exonerate the delegators (i.e. the Minister of Public Works, or, if appropriate, the director-general of the Merchant Navy) from all liability)? The answer must be no, because a “residual liability” may continue to exist in the delegator (which remains even after delegation has occurred) as a remnant of his or her original duty to keep a vigilant eye on the source of hazard.⁷⁶ Such liability could be applied not only with regard to the offence described in Section 325, but also to that included in Sections 330 and 267, given that the delegator would be liable not only for any actions but also for the omission of any of the special duties of control directly deriving from his or her original position (commission by omission). The

73 See Paredes (1995, p. 153). The initial thesis here is thus that in order to establish perpetration of a negligent offence there has to be an “objective (and positive in the case of result offences) ascertainment of the fact” (cf. Luzón, 1996, p. 509). On this criterion, see Luzón (1989, p. 889), Díaz & García-Conelleto (1991, p. 625 and p. 690); more recently, an in-depth analysis is provided by Roso Cañadillas (2002, p. 338 and p. 532).

74 See De La Cuesta Arzamendi (1999, p. 39) and Silva (1999, p. 39).

75 It is obvious that contributions such as those described in the body of the article had a decisive influence on the decision to send the vessel out to sea. Here I only want to stress the last-mentioned one, given that the hypothesis of the solidification of the fuel-oil was used by the Ministry of Public Works from the outset. And it could not be otherwise, because this is the only way to explain the order for the vessel to move away from the coast on a NE heading. And this was ratified by the harbourmaster of A Coruña in his statement to the judge in Corcubión (see La Voz de Galicia, 30-12-02, p. 5).

76 Cf. Silva (1999, p. 30). The above-mentioned “residual liability” would make it possible to admit authentic authorship even if the subject’s conduct had not objectively shaped the fact, since those who (in my view correctly) admit this criterion understand that in this exceptional hypothesis there is no need for the requirement of the said objective shaping (see Luzón, 1996, p. 511).

judge will of course have to prove that the delegator has infringed the said special duties, these being for example to inform the delegatee and provide him or her with financial resources or to coordinate the functional spheres of the various delegates or the specific duties of surveillance and supervision.⁷⁷

Finally, we have to examine the so-called “civil liability deriving from a criminal offence”.

According to the Penal Code, the commission of a crime necessarily entails the obligation to redress the harm and damages (material and moral) resulting from the said offence (Sections 109 ff.). This civil obligation is directly incumbent upon the person criminally responsible for the offence (Section 116) and, where appropriate, upon the insurers (Section 117)⁷⁸, but there is also a subsidiary civil liability of the State (unlimited, unlike in the case of the insurers) when the persons criminally responsible for “wilful or negligent offences” are “an authority, its agents or persons contracted by it or civil servants (...) provided that the harm is a direct consequence of the functioning of the public services entrusted to them” (Section 121).

The latter provision may be transcendental for Galicia and the other autonomous regions affected by the Prestige disaster, because if the judges find any of such persons guilty, the Spanish State will have to redress all the harm and damages it caused: not only the ‘environmental’ ones, but also the ‘property’ ones done to our fishermen and shellfish harvesters.⁷⁹

It is important to clarify that civil liability for harm to “property” will not only arise when there is a sentence for an offence of harm under Section 267 (only pursuable if proceedings are brought by the victim), but that it will also be sufficient to apply the offences against the environment governed by Sections 325 and 330. The reason for this is that although our fishermen would not be ‘victims’ of the latter offences in a technical sense, they would objectively be ‘wronged’, which legitimises them to bring a civil action during the criminal process and thus to receive compensation.⁸⁰

⁷⁷ Cf. Silva (1999, p. 31). For an in-depth analysis of this infringement of special duties see Luzón (1989, p. 900).

⁷⁸ Section 117 specifies that an insurer’s direct civil liability will have a “limit of the compensation established by law or otherwise mutually agreed”.

⁷⁹ It is important to stress here the transcendence of the subsidiary civil liability of the State in order to refute some of the Spanish government’s declarations. The fact is that since the insurer’s liability is not unlimited there is a clear risk that in the end the amounts paid out in compensation will be ridiculously small, as has been the case in other oil spills. More specifically, the initial estimates of the environmental and economic harm caused by the Prestige “are currently five times the compensation projections made by the insurers and the IOPC Funds”. See the declarations made by A. Prada, a lecturer in economics at the University of Vigo, to *La Voz de Galicia*, 9–3–03, on the occasion of the International Scientific Experts Seminar held in Santiago during the first week of March 2003. For this very reason there was a unanimous proposal from the Seminar to modify EU legislation on civil liability for catastrophes such as major oil spills, on the lines of the North American model of unlimited liability, which was adopted as a consequence of the 1989 Exxon Valdez disaster in Alaska.

⁸⁰ See Silva (1999, p. 147); see also Jordano Fraga (2001, p. 298). On the other hand, what is debatable is whether environmental associations are legitimised to bring a civil action as wronged parties. In Silva’s opinion (p. 149), this possibility would appear not to be sustainable (since their legal position is not comparable to that of victims’

And what would the civil liability deriving from a criminal offence be in the case we are dealing with here? As far as the ‘environmental’ damage is concerned, the principle to be applied would be that of “full compensation”, which involves restoring things to their status prior to the offence being committed;⁸¹ and with regard to the damage to the property of our fishermen and shellfish harvesters, the obligation would be to compensate not only for the actual damage caused, but, and above all, for loss of earnings.

Finally, it should be added that in the case of offences against the environment a precept (Section 339) can be applied that allows the judge to impose a ‘cautionary’ measure (in the trial sense of the term) consisting of “ordering the adoption, at the cost of the perpetrator of the fact, of measures to restore the ecological balance that has been disturbed”; this means advancing redress of the damage even though criminal sentence has yet to be passed.⁸²

Other liabilities: those of the vessel’s master and of individuals linked to its ownership and operation

As I pointed out earlier in this article, the possible criminal liability of certain career civil servants at the service of the Spanish State does not exclude the possibility of also circumstantially attributing liability of this nature to those who, as a result of their conduct prior to the intervention of the authorities at the Ministry of Public Works, caused the initial accident.

Thus, if it can be proved that these individuals infringed the duty of diligence that was personally incumbent on them, they could be held criminally liable for the negligent offences they may have caused.

However, it is essential to analyse the specific actions of each of these individuals, case by case, in order to determine whether they could be held liable for the three offences mentioned above in reference to the Spanish authorities, or only for some of them. Furthermore, we must also study the possibility that they may have committed an offence other than those already mentioned.

In this regard, my analysis will essentially focus on the conduct of the vessel’s master, since of all those who may possibly be responsible for causing the initial accident, he is the only one, for the moment, against whom charges have been brought in the Corcubión court. Furthermore, in his case we have the singular situation that, independently from the offences we have dealt with above, he is also charged with a further offence.

associations, or even that of consumers’ associations in the case of collective fraud), although he does mention that the Supreme Court has admitted it on at least one occasion (see Supreme Court Sentence 1–4–1993, in the case of an offence against wildlife).

81 Cf. Silva (1999, p. 150); Jordano Fraga (2001, p. 298).

82 On the legal nature of this measure, and also on the questions of interpretation it raises, see Silva (1999, p. 172).

The master's liability

Captain Mangouras has been charged (in addition to having accepted to sail in a vessel that failed to comply with the required safety conditions⁸³) with having directly contributed to the spillage of fuel-oil that unleashed the catastrophe, as a result of his conduct during the critical days of 13 and 14 November. This allegedly criminal conduct would essentially be based on two aspects: the initial measures taken to reduce the list⁸⁴ and the decision to leave the vessel to drift close to the Galician coast,⁸⁵ on the one hand, and his hindering the rescue manoeuvre, on the other.⁸⁶ The latter is of particular relevance, since it serves as the basis for the master being charged with a new offence, that of gross disobedience to the Spanish authorities arising from his refusal to obey the orders he received (an offence specified in Section 556 of the Penal Code).⁸⁷

83 This accusation should obviously first be made against those directly responsible for maintaining the said safety conditions, none of whom, for the moment, have actually been charged. At this point I refer the reader to what I will have to say further on about the possible liability of these other individuals. Nevertheless, suffice it say here that in order for the master to be charged with punishable negligence, the objective fact that the vessel lacked the necessary safety conditions is in itself insufficient: it will obviously have to be proved that he had infringed (and 'grossly', moreover) his specific duty of diligence regarding the checking of such conditions.

84 The ruling of the Appeal Court of A Coruña of 3-3-03, in the matter of an appeal lodged by the master's defence lawyer against his being remanded in custody, states that "the sudden emptying of the Prestige aggravated the risk created by him when he prevented the manoeuvres for the prompt recovery of control of the source of the hazard" (F. 4). More specifically, the master is accused of not having followed the protocol on how to act in the event of a serious accident, which gives priority to accurately assessing the damage and only evacuating non-essential personnel (he, however, was left with almost no crew members on board at all). At a later point during the events he is attributed with taking the decision to fill the ballast tanks, which some experts considered to be a mistake, since it produced excessive longitudinal stress in the central zone of the vessel. The correct action would have been to transfer the cargo from centre tank 3 to port tank 3 in order to lessen the said stress (see the aforementioned declarations by Martínez Mayán to La Voz de Galicia, 6 March 2003, p. 13). The report issued by the French Marine Accident Investigation Office (BEA-mer), which reports to the Secretary of State for Transport, considered it a mistake to have filled the port ballast tanks (see La Voz de Galicia, 6-3-03), in virtue of which the conclusions of the said report state that the sinking of the vessel was due to the actions of the Ministry of Public Works and of the master alike.

Other experts, however, consider that the master acted correctly when he filled the ballast tanks in order to return the vessel to an upright position (see for example the article by J.M. Muñoz, chairman of AETINAPE, La Voz de Galicia, 8-2-03).

85 The ruling of the Appeal Court of A Coruña of 3-3-03 also makes critical reference to this circumstance (rejecting Mangouras's reasoning that "running aground in Muxía would have been avoided at the last moment by dropping the anchor, an implausible manoeuvre that would in no way have guaranteed that the catastrophe could have been avoided at that time"), a circumstance related in the ruling to the lack of collaboration in the rescue operations I referred to in the previous footnote (F. 4).

86 This is one of the most controversial points of Mangouras's conduct. On the basis of the first statements made to the investigating magistrate, the ruling of the Appeal Court of A Coruña of 3-3-03 reflects that, between 18.15 and 21.02 hours on 13 November, "after having repeatedly received orders from the Spanish authorities", Mangouras "openly refused" to accept a tow "under the pretext of consultations with the ship operator"; furthermore, it refers to the statement made by the nautical inspector who went on board the vessel and spoke of "something akin to sabotage of the tasks for recovery of the vessel", particularly Mangouras's refusal to start the main engine (F. 4). The ruling also states that "after the tow had been accepted at 21.02 hours, it could not be performed due to the lack of crew on board the Prestige and the fact that the emergency tow had not been rigged, a measure that they had been urged to take before evacuating the crew ...". Finally, with the help of several tugboats, the Ría de Vigo managed to make the tow firm at 13.40 hours on 14 November.

87 Section 556 of the Penal Code imposes a six months to one year's prison sentence on "those who, although not falling under the provisions of Section 550, oppose resistance to the authorities or their agents, or grossly

So let us deal with these charges one by one.

Beginning with the last of the above-mentioned charges, it should be pointed out that the circumstantial evidence of disobedience initially noted by the investigating magistrate and corroborated by the Appeal Court were based exclusively on the statements made by the civil servants at the Ministry of Public Works and an initial transcription of the content of the recorded conversations between the Finis-terre Maritime Control Centre and the master, which do not faithfully reflect what actually transpired.⁸⁸ However, a subsequent transcription of the said recordings, sent to the judge in Corcubión,⁸⁹ and the statements made later by various individuals (in particular the harbourmaster of A Coruña⁹⁰ and executives from Sasemar, Smit and Remolcanosa in connection with the private salvage contract⁹¹) would appear to nullify the existence of an offence of disobedience. Furthermore, if to these recordings and statements we add other significant information, such as the nautical inspector's controversial decision to start the main engine⁹² and the confirmation that it was not Mangouras who dictated the Prestige's course away from the coast,⁹³ the accusations initially made against the master may in fact be much less serious than initially thought.

disobey them, during the course of their official duties". The Spanish Penal Code also penalises "minor disobedience" as a petty offence under Section 634.

88 A single example will suffice: in the first transcription Mangouras was attributed to have said a sentence that would be one of the mainstays of the accusation of an offence of disobedience ("the master replied that he only takes orders from his ship operator and he is going to contact them"); however, what really appears in the recordings is that Mangouras replies that "the tugboat takes its orders from its owners, not mine". See *El País*, 25-1-03.

89 See the content of this transcription in *El País* 22-1-03. From this it can be deduced that the persons in charge in the Finis-terre control tower allowed Mangouras to talk with his ship operator before accepting a tow and that the master of the Prestige never refused one. Furthermore, the Spanish civil servants not only allowed this, but also even took part in the conversations, telling Mangouras that his ship operator had reached an agreement for the Ría de Vigo to tow the Prestige.

90 Who admitted that Mangouras "may not have been aware that he was disobeying his orders". See *La Voz de Galicia*, 26-3-2003.

91 See *La Voz de Galicia*, 11-2-03, 14-2-03, 4-3-03 and 22-3-03; *El País* 25-1-03 and 22-3-03. Although there are some contradictions in the statements made by the representatives of the three parties concerned, there appears to be substantial agreement regarding the following facts: the authorities at the Ministry of Public Works detained the Smit experts in A Coruña Airport for 12 hours until the company obeyed the Ministry's order to send the boat out to sea on a NE heading (see *La Voz de Galicia*, 21-3-03); meanwhile, Sasemar negotiated with Smit the authorisation for the latter to contract the use of the tugboat Ría de Vigo with Remolcanosa. This obviously caused a significant delay in commencing the actions to rescue the Prestige, which even caused the vessel's operator to lodge a complaint with the Ministry for the delay in the operation to save the vessel (see *La Voz de Galicia*, 14-2-03).

92 Although, as we have said, the ruling of the Appeal Court of A Coruña of 3-3-03 mentioned Mangouras's reluctance to start the main engine as "something akin to sabotage of the tasks for recovery of the vessel", we must be aware that subsequently various experts have been of the same opinion as Mangouras when it comes to questioning the nautical inspector's decision to start the engine, since such an action could have hastened the spread of cracks in the vessel, given the extent to which it was listing. See the words of J. L. Velasco, chairman of Tecnosub, the company contracted to rescue the Prestige (*El País*, 17-12-02). It should also be remembered that once they had arrived on board the Smit experts decided to shut down the engine to stop the vibrations in the vessel.

93 Indeed, and in spite of what was initially stated in the ruling of the Appeal Court of A Coruña of 3-3-03 ("at approximately 04.00 on the 15th the accused ordered the Ría de Vigo to set a course ..." F. 4), the truth is that all subsequent information and statements confirm the idea that it was the director-general of the Merchant Navy

The fact is that if, taking as our starting point the premises that have just been established, we now analyse Mangouras's possible liability arising from his contribution to causing the fuel-oil spill, we see that the new evidence not only leads to the disappearance of the circumstantial evidence of the offence of disobedience, but also has an impact on two other significant aspects: on the one hand, the master cannot therefore be charged with the new and more serious offence of harm to a protected natural space (Section 330 of the Penal Code) nor, in the circumstances, the super-aggravated offence covered by Section 338,⁹⁴ his liability being thus limited to the offence covered by Section 325; on the other hand, the possible attribution of this offence cannot be based on wilful liability, but rather on negligent liability. Let us examine each of these in turn.

With regard to the attribution of the offence described in Section 330, we can safely say that in the light of the new information in our possession the subsequent results cannot be objectively attributed to the negligent conduct of the master as being of his authorship, since the said results cannot be thought of as "materialisation of the hazard created as a result of conduct", i.e. they are not the direct consequence of the infringement of due care, in the sense that they do not fit the "protective purpose of the rule". In brief, there is an absence of the necessary "relation of hazard" (or "nexus of unlawfulness")⁹⁵ between the harmful result defined in Section 330 and the master's conduct. More specifically, the reason for this is that such results are attributable to a "sphere of liability of another party",⁹⁶ namely

who on the afternoon of the 14th decided the heading that would take the vessel out to sea (320°, NE), as the harbourmaster of A Coruña, amongst others, admitted in his statement as an accused person, he himself merely "transmitting the order" (see *El País*, 27-3-03; *La Voz de Galicia*, 27-3-03). Furthermore, the decisions taken aboard the vessel from then onwards correspond to the experts from the salvage company Smit, who went on board the *Prestige* at 03.00 hours on the 15th. In short, in the few hours Mangouras was to remain on board the vessel neither would he intervene in the course of the hazard that would from then onwards would lead to the actual harm done to protected natural spaces and property interests.

94 It should be made clear that, although the ruling of the Appeal Court of A Coruña of 3-3-03 referred in principle to the possible existence of this offence, in F. 8 it qualified this statement since "for the objective attribution of the unlawful hazard" it would be necessary to establish whether "as a result of the intervention of third parties within the orbit of the Government (Ministry of Public Works) we are before a case of modified hazard, or, perhaps, of the difficulty in objectively attributing the more serious offence to the wilful or negligent conduct of Mr Mangouras". Thus in the words of the Appeal Court of A Coruña, "it will not be irrelevant (but rather quite the opposite) to know who, where, how, when, why and on what basis took, within the exercise of his or her powers, the decision to move the vessel away from the coast and whether this decisively increased the hazard that had already been caused, as well as to inquire as to the reason for this erratic nautical pilgrimage".

95 Regardless of the various systematic concepts and specific nuances, there is currently a broad consensus as to the need for there to be the above-mentioned "relation of hazard", seen as the verification that the results generated should be exactly those that the rule of care attempts to avoid. See, for example, Cerezo Mir (2001, p. 179; Luzón, p. 382; Mir Puig (2002). For further details regarding this criterion, introduced into the science of criminal law by Gimbernat (1966, p. 135), see for example Martínez Escamilla (1992, p. 234 and 259). For the most recent doctrine see the monographs by Anarte (2002, p. 274) *passim* and Hava (2002, p. 174) *passim*, where subsequent bibliography can be found.

96 On this hypothesis of the absence of objective attribution of the result, which forms part of the criterion of the "protective purpose of the rule", see Roxin (1997, § 11, nm. 104 ff), with particular reference to p. 109. In our doctrine, see for example Luzón (1996, p. 384), who stresses that the criterion of "materialisation of the hazard in the result" is sufficient to exclude the "relation of hazard" in cases of "cumulative causality" and of "second harm".

that of the authorities of the Ministry of Public Works, whose actions replaced the original hazard (that created by the master's conduct) with a new hazard (the decision to move the vessel away from the coast) that enters exclusively within their sphere of liability. Thus, as a result of the original hazard being displaced by the new one, it would be impossible to attribute the subsequent harmful results to the master's conduct, according to the model of objective attribution.

This being the case, Mangouras can only be considered liable for the environmental offence in Section 325 of the Penal Code, and furthermore with the important detail that, on the basis of the new information in our possession, it would be hard to consider his conduct as "wilful" (i.e. intentional), but only as negligent,⁹⁷ as a result of which the applicable penalties would be of lesser severity, in accordance with the provisions of Section 331 of the Penal Code. This latter point is of particular relevance when it comes to evaluating the severity of the master's liability, because if the offence is considered to be one of negligence, then the aggravating circumstances envisaged in Sections 326 and 338 of the Penal Code are not applicable, for the reasons I have given above. Accordingly, the offence attributable to Mangouras, if there is one, would therefore only be the basic one contained in Section 325, point 1 in relation to Section 331, for which the abstract penal framework would be that of three to six months' imprisonment and a daily fine payable during a period of four to eight months.

Furthermore, it is my opinion that the master's conduct would even lack the requirement of "continuity", in the restrictive sense used by Puppe (2001, p. 85 and 119), making it possible to rule out any relation of hazard: indeed, the assuming of full control over the source of hazard by the authorities of the Ministry of Public Works (at a time when there was no direct risk of the subsequent harmful results being produced) would interrupt, in my view, the causal chain of prohibited states, thereby eliminating the aforementioned requisite of continuity. But even in the hypothesis that this requirement were to be considered as not having disappeared, it is my view that we would be dealing with an obvious assumption of "preponderant guilt" (on this criterion, see Roxin, 1997 § 11, nm. 110) of the authorities of the Ministry of Public Works, which would exonerate the master from liability for the subsequent harmful results, given that the grossly negligent actions of the said authorities acquires such preponderance that there can be no justification (from the standpoint of either general or special prevention) for the need to further attribute the final results to Mangouras's initially hazardous conduct.

⁹⁸ The ruling of the Appeal Court of A Coruña of 3-3-03 does not rule out the possibility of appreciating indirect intention in the master's conduct (F. 3). Nevertheless, and however much one may assume a purely legislative concept of intention (as stated in the above-mentioned ruling, which adopts the cognitive approach invoked by the Spanish Supreme Court in dogmatically similar cases, such as that of the "toxic cooking oil case"), with the new factual information in our possession an appreciation of indirect intention in Mangouras's conduct would appear to be hard to maintain. However, the point must obviously be made is that if circumstantial evidence of indirect intention were to be observed in Mangouras's conduct, then there is even more reason to appreciate it in the conduct of the authorities from the Ministry of Public Works. Furthermore, in view of the new evidentiary material, it does not seem unreasonable to me to consider the possibility of appreciating indirect intention in the actions of the said authorities (although this will obviously require a more detailed analysis), if we take as our starting point the aforementioned purely cognitive approach, with which, by the way, I am fully in agreement, on the basis of what I consider to be the most suitable methodological premises for constructing the criminal law system. See Martínez-Buján (2001, p. 113) and the bibliography it cites: a concept of intention based on the perpetrator's commitment to act, based on the legal (rather than psychological) plane on the fact that the decisive question is not to know whether the perpetrator "wanted" to infringe the law, but rather the concurrence of an aggravated risk of violating the legal good that the perpetrator was aware of, because he or she is a person with full knowledge of the techniques used in the industry in question. The mere fact that the individuals we are analysing in the present case are precisely the experts responsible for maritime rescue would provide sufficient basis for putting forward the hypothesis of wilful liability.

The liabilities of the individuals linked to the vessels' ownership and operation

Although, as already stated, no charges have been brought against persons other than those mentioned in the preceding pages, we cannot rule out the possibility of the *Prestige's* owners or those responsible for operating the vessel also being held criminally liable for the offence perpetrated against the environment, as both *Nunca Más* and *Izquierda Unida* uphold in the suits they have filed.

The company owning the vessel and the company operating it⁹⁸ are also considered responsible for having permitted the transport of a highly contaminating cargo in a vessel that did not meet the necessary safety requirements. If this is the case, they could be held negligently liable for the harmful consequences that can be attributed to the said negligence. In principle, I consider that for the same reasons given when analysing the master's conduct, the liability of these subjects would be limited to the negligent offence described in Section 325, point 1, in relation to Section 331.⁹⁹

That, however, would require evaluation of a variety of data about which little more can be said here, since at the time of writing there is no conclusive circumstantial evidence in this regard.¹⁰⁰

Furthermore, I consider that, in spite of the declared intention of the Spanish authorities,¹⁰¹ it appears to be hard to attribute any criminal liability to the classification society¹⁰² or to the executives of the company that chartered the *Prestige's* cargo of fuel-oil,¹⁰³ without prejudice, of course, to any civil liability that may be attributed to them.

98 The shipping company that owns the *Prestige* (Mare Shipping Inc.) is registered in Liberia, with a confidentiality clause that makes it hard to discover the identity of its administrator. The operating company (Universe Maritime Ltd.), responsible for managing charter contracts and other operations relating to the use of the vessel (including the hiring of crew members) has its registered office in Athens, its head of operations being a Greek shipmaster, Michael Marguetis.

99 The possibility of attributing the more serious offence described in Section 330 (in relation with Section 331) to such individuals would require proving that they took part in the decision to move the vessel away from the coast and its subsequent erratic nautical pilgrimage, and that they did so in such a way as to grossly infringe the duty of required care. According to the information we possess, it would appear that such circumstances were not present in the course of events.

100 There is not even any certainty as the cause of the accident. The ruling of the Appeal Court of A Coruña of 3-3-03 attributes the origin of the accident to the "simple coming loose of a plate due to a welding defect" (F. 4), referring later, with a question mark, to the person of the vessel's operator as also being possibly responsible for causing the initial hazard (F. 8). Furthermore, the technical report issued by the classification society ABS (American Bureau of Shipping) states that "the initial cause of the tanker accident will probably never be known", because "the physical evidence was destroyed or lost during the six days the vessel was sailing back and forth". Therefore, "this fact leaves the investigation in the realm of hypothesis or speculation", adding that the theory put forward by its experts runs in the direction of the possibility that perhaps the vessel's structure was weakened by continuous impacts during fuel transfer operations in the months prior to the accident, when the *Prestige* was being used as a 'floating petrol station' in the Baltic Sea. Galician university experts led by the aforementioned lecturer Martínez Mayán also cited this hypothesis. This circumstance would be a further element to add – according to an official French government report – to a "conceptual structural weakness in the internal bulkheads, due to a design not commonly used in tankers of this size" (see *La Voz de Galicia*, 6-3-03).

In any event, the only thing we can add for the moment is that the criminal liability of these individuals for the oil spill would, if applicable, need to be approached from a veritable hypothesis of their being negligent accessories to the fact.¹⁰⁵

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101 The Spanish State has announced its intention to carry out an “authentic legal offensive” in various countries, although it would appear that this offensive will focus particularly on the civil side of the matter. The Spanish State says that it will attempt to hold responsible “all those entities that were aware of the tanker’s condition and even so allowed it to sail” (see *La Voz de Galicia*, 19–3–03). However, it should be made clear that this fact alone is insufficient to automatically make those who were aware of such a circumstance perpetrators of a negligent offence, since this fact would not entail an “objective ascertainment of the fact”, in the sense required in order to be considered the perpetrator of a negligent offence (on the criterion of the “objective ascertainment of the fact” see note 28 *supra*); in such a case, therefore, recourse would need to be had to the structure of commission through omission in order to talk of the perpetration of an offence as the result of the infringement of a special duty of supervision, monitoring or control, which can only be admitted in the case of special rules of care for individuals with very specific duties (cf. Luzón, 1996, p. 511 and the bibliography it cites). And in this context it would also be necessary to analyse the intervention of the company Bureau Veritas, responsible for having issued the tanker with the ISM certificate, certifying the professional capacity of the Prestige’s crew.

102 In a report sent to the European Parliament, the classification society ABS alleges that it is only responsible for monitoring the repairs of which it has been informed and that at all events the responsibility for maintaining and repairing a classified vessel lies exclusively with the company that owns the vessel (see *La Voz de Galicia*, 25–3–03). Nevertheless, the Spanish State has announced that it has filed a civil suit against ABS in the United States seeking compensation to the sum of 500 million Euros (see *La Voz de Galicia*, 23–3–03).

103 In fact, the chartering company Crown Resources itself has filed a civil suit against the company operating the vessel with the Manhattan federal court, NY (see *La Voz de Galicia*, 30–3–03). Queralt (2002), nevertheless mentions the possibility of attributing the vessel’s operator with criminal liability (*El Periódico de Catalunya*, 30–12–02).

104 Negligent accessory perpetration of an offence can be said to exist when two or more negligent actions, performed independently, with no reciprocal awareness or agreement, nevertheless objectively co-determine the fact (see Luzón, 1996, p. 510; Roso Cañadillas, 2002, p. 588). There would certainly in principle be no difficulty in appreciating this kind of perpetration (particularly since the offences concerned include a broad concept of perpetrator, as is the case in that of Section 325), but it could be the case that it may not be possible to objectively attribute the resulting final offence to the negligent action or that the very concurrence of negligences (in which the master’s negligence would also have to be evaluated) would have the effect of reducing the “grossness” of the negligence of one or more individuals.

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CHRONOLOGY



14

THE CHRONOLOGY OF A DISASTER

Ernesto S. Pombo



13/11/2002

14:15 – A selective digital call is received from ship MMSI 308957000, which corresponds to the *Prestige*, a single hull oil tanker sailing under the flag of the Bahamas, 28 miles, c. 50 km, from Fisterra.

14:17 – A clipped MAYDAY is heard.

14:19 – CCR sends out a MAYDAY RELAY.

15:15 – The 24 crew members on the tanker are rescued and only the captain, Apostolos Mangouras, the first officer and the chief engineer are left on board.

17:00 – The 77,000 tons of heavy residual crude oil start to contaminate the Atlantic Ocean. The Government states that their choice would be to tow the tanker further out to sea, whereas Greenpeace is of the opinion that it should be taken to port. The tug *Ría de Vigo*, the only one there is, heads for the *Prestige*. The United Kingdom offers help but the offer is not accepted until 22 November.

14/11/2002

The *Prestige* is four miles from Muxía when the authorities declare it is far away from the coast. At night the tugs take it out to a distance of 65 miles.

As became clear months later, it was the Ministry of Public Works that decided to take the tanker away from the coast. Amidst the confusion, it is announced that Spain has 12 kilometres of anti-pollution barriers.

15/11/2002

The captain is taken to land and arrested on arrival. The first slick is five kilometres away from the Sisargas Islands. At the end of the day it is 11 kilometres away. The *Prestige* is 62 miles away from A Costa da Morte and has to stop because of a storm. It remains there for 12 hours and is then tugged southwards but not taken any further away from the coastline. The slick fighting operation has not yet been deployed, as they were waiting for the “right time”.

The President of the Xunta de Galicia (the Regional Government), Manuel Fraga, states that “the worst danger has now passed”. The Minister of Agriculture, Arias Cañete, says that “the spillage is under control. There will be no consequences for the fishing villages in the area or for maritime species thanks to the authorities’ rapid action”.

16/11/2002

The oil slick has now covered 190 kilometres of coastline. A Costa da Morte, the most affected area, receives its first load of oil. Fishing and seafood gathering are banned from Cape Fisterra to Punta Seixo Blanco, while the *Prestige* continues its journey southwards, at a speed of one knot. At midday it is 48 miles from Cape Touriñán.

“Fortunately, the rapid intervention of the Spanish authorities, taking the tanker away from the coast, means that we are not concerned about an ecological catastrophe or any major problems for fishing resources”, says the Minister of Fishing and Agriculture, Miguel Arias Cañete.

17/11/2002

While Regional Councillor Enrique López Veiga says that “all the oil that was going to come to the coast has already come”, a third tank breaks on the Prestige while it is immobile off Corrubedo, almost at the entrance to the Rías Baixas, at a distance of 60 miles. More oil is detected two miles from the coast. José Luis López-Sors, general director of the merchant navy, states that “it isn’t an oil slick; just some scattered black patches”.

18/11/2002

The Prestige is still heading south, spilling crude oil as it goes. The Government states that it is now in the Portuguese rescue zone and is no longer their responsibility. Portugal denies this and sends a frigate to the area to take the ship away. The slick is still coming to the shoreline of Galicia. The no-fishing area is extended to Cape Priorioño in Ferrol. The Government sets up a crisis team. The sailors and fishermen on A Costa da Morte are made responsible for deploying the scarce anti-pollution means they have. Six days have elapsed since the first warning.

19/11/2002

8:50. The tanker splits in two because of the crack to starboard. It is 260 kilometres away from the Cíes Islands, after travelling 243 miles – 437 km – in six days. Scientists say that the oil will not solidify because it is mixed with diesel oil. The temperature at a depth of 3,600 metres is estimated at 2–3 °C and although this kind of crude oil solidifies at 6 °C, diesel oil requires sub-zero temperatures to do so. The Government takes solidification for granted and says they have put 18 kilometres of anti-pollution barriers into place. The next day Rajoy says it is half this amount.

A tense day of social mobilisation, marked by unbelief and indignation at the public authorities’ passive attitude and concealing data.

20/11/2002

Jaume Matas, the Minister of the Environment, comes to Galicia for the first time, and visits the Beach of Barrañan in A Coruña. Mussel platform workers, seafood gatherers and fishermen from the Arousa Estuary decide to take the initiative and make a proposal to the Regional Government Fishing Department: a protection operation at the mouth of the estuary, alternating their boats with anti-pollution barriers. Nobody answers them and they decide to act on their own behalf.

21/11/2002

The Marine Hydrographical Institute in Portugal places drifting buoys on the main slicks to check how they evolve and make predictions. Manuel Fraga, President of the Regional Government of Galicia, visits the area affected for the first time. The no-fishing area is extended from Cape Poriño to Ribeira.

“The Government has acted diligently. We have been on top of this from the beginning, we shouldn’t forget that the general director of the coastal authority has been here since Saturday”, declared Jaume Matas, Minister of the Environment.

22/11/2002

The spillage is confirmed at c. 20,000 tons with a highly toxic composition. The Regional Government of Galicia Department of the Environment starts to “seal off” natural areas on the coastline of A Coruña and O Grove with “natural and artificial” barriers. Oil is continually washing up on the shores of A Costa da Morte.

Manuel Fraga receives reiterated criticism and says that “I am where I should be, God and St. James will help us”.

23/11/2002

Thousands of volunteers come from all over Spain and Europe to the area affected and find that the public authorities will not provide them with means to help in the clean up. Protests extend all over Galicia. Solidarity is a human tide covering all the country.

Against the critics, the Minister of Public Works, Francisco Alvarez Cascos, declares that “our information has been exact, exhaustive and based on completely measurable parameters”.

24/11/2002

Two anti-pollution boats start to clean oil 150 km from the coastline of Galicia. The Regional Government bans fishing up to Cedeira, 555 kilometres of no-fishing area and 307 for seafood. The “Nunca Máis/Never Again” platform is set up, with well-known personalities from the cultural and public scenes in Galicia.

Mariano Rajoy, Vice President of the Government, expresses his conviction that “at a depth of 3,500 metres and at two degrees, the oil will be solid and there will be no spillages”.

25/11/2002

Two slicks are detected at 70 kilometres from the coastline of Asturias and a third slick comes in to Muxía. The Hydrographic Institute of Portugal confirms that oil is still being spilt in the area where the tanker sank.

26/11/2002

The anti-pollution boats are still cleaning up oil from the surface of the sea.

27/11/2002

Satellite images show that the Prestige is still spilling oil. The Minister of Ecology in France, Roselyne Bachelot, visits the area affected by the slick with her counterpart Matas.

28/11/2002

Le Cedre, the Documentation, Research and Experimentation centre of France for Accidental Water Pollution, publishes the results of its analyses of oil from the Prestige. The presence of aromatic hydrocarbons is now definite. These compounds are extremely toxic and some of them are potentially cancerigenous. Experts say that they will remain in the food chain for many years.

Oil is still spilling at the point where the Prestige sank. The press informs of a “secret” Government report that admits the spillage of 20,000 tons.

29/11/2002

The citizen platform Nunca Máis/Never Again brings 3,000 people together in Muxía to protest against the public authorities’ actions.

30/11/2002

Galicia gets ready to do the little it can against the arrival of another slick. Portugal confirms that the oil is still spilling, although Rajoy still insists it is not from the tanks.

01/12/2002

The largest demonstration to date is held in Santiago. Over 300,000 people flood the streets of Galicia.

02/12/2002

The no-fishing zone for seafood is extended again, including the estuaries of Ferrol and Cedeira.

03/12/2002

The tenth anniversary of the oil slick caused by the oil tanker Aegean Sea. Asturias warns of the imminent arrival of slicks on its coastline. The European Commission demands that member states deploy the safety measures agreed after the Erika disaster, three years previously. They publish a list of ships that could not come into port if these regulations were in force.

04/12/2002

The oil slick is at the Entrance to the Rías Baixas, and reaches the Cíes Islands, Asturias, Cantabria and Portugal. The French navy discovers 200 areas with oil in the Cantabrian Sea and withdraws its ships from Galicia so that they can go to protect the French coasts, the threat to which grows daily. Vice President Rajoy declares in a press conference that the oil has not come into the Rías Baixas. The indignation of almost 6,000 people fighting against the slick reaches its maximum level.

05/12/2002

The Minister for the Environment, Jaume Matas, requests that no more volunteers go to Galicia during the December bank holiday weekend. The Minister of Defence decides to send 500 soldiers to clean up the beaches. The bathyscaphe Nautilo, which has been in the area where the tanker sank for some days, shows images of the oil leaking from the ship's tanks. Rajoy is forced to admit the oil is leaking and says it is like "little threads". The no-fishing zone now affects 913 of Galicia's 1,121 kilometres of coastline.

Buses full of volunteers come to Galicia from all over Spain to spend the bank holiday weekend cleaning up tar.

06/12/2002

France expects the oil slick in less than a week. 150 spots of oil measuring from 2 to 20 metres are moving towards the coast and the French authorities have taken over a little fleet of fishing boats to fight against the slick. Owners and crews have signed contracts guaranteeing them compensation from the state. Portugal mobilises hundreds of civil servants and volunteers to fight against the oncoming oil.

08/12/2002

The Rainbow Warrior, Greenpeace's flagship, comes to A Coruña and is received by 150 boats. 2,000 people are waiting in port with banners and black crapes in sign of mourning and protest against the slick from the Prestige. In the afternoon the ship leaves for the area where the Prestige sank.

09/12/2002

The bathyscaphe Nautilo has found further cracks in the shipwreck.

10/12/2002

Vice President Rajoy is forced to admit that the "little threads of plasticine" are in fact 125 tons of oil spilt per day. There are now 14 cracks in the prow and stern, some of them a metre wide.

11/12/2002

The slick gets round the Cíes Islands and affects the Estuary of Vigo, putting all its wealth at risk. The Estuary of Pontevedra suffers the same fate. So far only the Estuary of Arousa is free from danger. There is a general alert for the arrival of a third slick. In Cantabria seafood gathering is banned along the whole coast, and the no-fishing zone goes from Santander to Unquera.

On board the *Rainbow Warrior*, Greenpeace presents a joint declaration by 100 scientists from the three universities in Galicia, requesting unlimited liability for the industry, changes in energy policies, the reform of maritime transport and the endowment of means and planning for the struggle against pollution. Eleven demonstrations are held at different places in Galicia.

12/12/2002

“You can’t be on top of absolutely everything and you can’t always get it right”, says Mariano Rajoy, Vice President of the Government, in Parliament, justifying the “incorrect” statement made the previous day about who took the decision to take the *Prestige* further out to sea.

The Minister of Science and Technology, Josep Piqué, says in Parliament that the oil still in the wreck of the *Prestige* is “a problem perfectly under control, negligible and irrelevant”.

16/10/2012

Just a month away from the tenth anniversary of the catastrophe, the trial against those responsible starts in A Coruña. There will be mass media, guests, 55 people accused, 70 lawyers and 140 witnesses. Spain is claiming for 2,200 million.

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Josu Ternera huye y el fiscal pide su busca y captura



Josu Ternera

MADRID. - El ex dirigente de ETA y actual diputado de Sozialista Abertzaleak (ex Batasuna) José Antonio Urritikoetxea, "Josu Ternera", no se presentó ayer ante el Tribunal Supremo, donde había sido citado a declarar y vuelve, por tanto, a estar prófugo. El ministro de Justicia, José María Michavila, resumió la situación de una manera contundente: "Ahora habrá un terrorista menos haciendo de diputado". **PÁGINAS 17 Y 18**



El temporal hace naufragar un petrolero en Galicia

Un fuerte temporal de viento y lluvia que azotó ayer todo el norte de España provocó el naufragio de un petrolero a 28 millas de Finisterre, cargado con 70.000 toneladas de fuel y cuyo vertido

amenaza la costa gallega. Salvamento Marítimo pudo rescatar a los 27 tripulantes del "Prestige" y trata de llevar el petrolero a alta mar ante su previsible hundimiento. El viento también provo-

có tres víctimas mortales, que se produjeron al caer dos grúas sobre sendas viviendas en el País Vasco y Galicia. Una mujer murió en Santurce y otras dos en La Coruña. **PÁGINAS 33 Y 34**



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SÁBADO, 16 DE NOVIEMBRE DEL 2002 | A CORUÑA

La Voz de Galicia

LIGA DE CAMPEONES



EL DÉPOR VUEVE A ENFRENTARSE A UN GRUPO DIFÍCIL, EN EL QUE ESTÁN EL MANCHESTER Y ARVENTUS | **COMENSA**

El buque, con una grieta de 40 metros y sin nadie a bordo, apenas avanza desde la mañana de ayer

El «Prestige» está a punto de partirse a 62 millas de Galicia

Los expertos creen que el petrolero perderá toda su carga si se hunde

La mancha se divide y el viento la empuja hacia la Costa da Morte

El combustible es fuel pesado, más difícil de tratar en una marea negra



A BORDO DEL PETROLERO. Los técnicos aguardan ayer los trabajos para estabilizar el buque poco antes de ser evacuados, tal y como se aprecia en la imagen inédita y exclusiva facilitada por la tripulación filipina a La Voz.

Detenido el capitán, acusado de desobediencia y de un delito ecológico

El capitán del «Prestige», Agustín Magalán, fue detenido ayer nada más tocar tierra, acusado de delitos de desobediencia y contra el ecosistema marino. Los expertos esperan

que suministre información valiosa sobre el buque. **2 x 7**



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Quedan en libertad dos de los detenidos por las bombas de Vigo

ENTREVISTA DEL



Niños argentinos se mueren de hambre a causa de la gravísima crisis económica

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Internacional. Nuevo desaire de Castro, que no acude a la Cumbre Iberoamericana. **Editorial y 25**

Sociedad. Puestos en libertad la mayoría de los 22 médicos detenidos en Madrid por prescribir fórmulas magistrales. **43**

Una emboscada palestina acaba con la vida de al menos doce israelíes en Hebrón

- El Ejército de Sharón responde con un bombardeo al barrio donde se produjo el ataque
- La Yihad islámica reivindica el atentado, en el que 30 personas resultaron heridas **Página 22 y 23**



El hambre mata en Argentina. La muerte por desnutrición de cuatro niños en la provincia argentina de Tucumán ha alertado sobre la situación que se vive en aquella nación Iberoamericana. Alrededor de 21.000 niños mueren cada año en

Argentina, buena parte de ellos como consecuencia de una deficiente alimentación y por enfermedades relacionadas con la pobreza, según el ministro de Salud, Ginés González. En la imagen, un niño de cuatro años desnutrido hospitalizado en Tucumán. **Página 34**

Dos documentos confirman que el «Prestige» se dirigía a Gibraltar y desmienten la versión británica

- El capitán fue detenido y la tripulación desalojada del barco, que se encuentra a setenta millas de la costa española y corre el riesgo de partirse en dos y causar un desastre ecológico **Editorial y páginas 12 a 14**

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La mancha de petróleo amenaza con causar un desastre ecológico en Galicia

El vertido del 'Prestige', que se acerca a la costa, se extiende a lo largo de 35 kilómetros

XOSÉ MERMADO. A Coruña
El mar amaneció gris en la Costa da Morte (A Coruña) silencioso a combeniente, mientras un manto de lágrimas se mezclaba con la lluvia que batía las localidades de pescadores de la zona. "Ya está aquí", exclamaba la gente mirando al mar con las primeras luces del día. El fuel

vertido por el petroliero *Prestige* había empezado a invadir playas y acantilados durante la noche. Al mediodía, los principales bancos de peces de la zona, entre los más ricos de Galicia, estaban a merced de un mar espeso y marrón. Las peores condiciones meteorológicas no sólo empujaron el fuel contra la

costa, sino que acercaron a tierra un poco más al *Prestige*, que sigue amenazado con partirse en dos, todavía con 70.000 toneladas de fuel en sus tanques. "El malogrado sería que no hubiese sucedido", confesó el conserje de Pesca de la Xunta, Enrique López Veiga. Sólo faltaba que cambiase la dirección del

viento, y eso fue lo que ocurrió durante la noche. El fuel derramado por el *Prestige*, el petroliero que sufrió una vía de agua el pasado miércoles cerca de Finis-terre, se fue directamente hacia la costa y se extendió a lo largo de unos 35 kilómetros.

Para ir a la página 76
Más información en la página 17

La Cumbre Iberoamericana se renueva ante su impotencia para afrontar la crisis

El presidente del Gobierno español, José María Aznar, propuso ayer reafirmar los valores iberoamericanos, que han perdido relevancia y se han convertido en fósiles inoperantes. Y los 21 jefes de Estado o de Gobierno, reunidos en la República Dominicana en su duodécima cumbre, aceptaron las ideas por unanimidad. Entre las medidas para reactivar este foro se halla la creación de un grupo que revise el funcionamiento de los cumbres y que estará dirigido por el actual presidente de Brasil, Fernando Henrique Cardoso.

Ocho años después de la puesta en marcha de los cumbres, el continente latinoamericano sigue inmerso en la pobreza y asediado por problemas de corrupción política, con algunos países sumidos en profundas crisis, como ocurre con Argentina, o en guerras de décadas, como Colombia.

Páginas 2 a 4

La soldado que denuncia una violación acusa al Ejército de encubrimiento

Dolores Quiñón. La soldado que denunció haber sido violada por un recluta tras haber ganado en el Tribunal Supremo una demanda por trato degradante, acusa ahora a años mundos del Ejército de encubrir los hechos.

En una entrevista con EL PAÍS, la soldado recuerda con detalle lo que sucedió en la madrugada del 11 de mayo de 2000 durante unas maniobras en Cicero. Cuenta que aquellos hechos provocaron una revuelta de los reclutas en el cuartel. Sostiene además que en septiembre envió a la Delegación de Defensa de Lugo un relato perseguido en el que incluía la violación, aunque entonces no recibió respuesta.

Página 24



Un ave marina afectada por el fuel del *Prestige*, en la costa gallega de Malpica. (AGENCIADO PRESS)

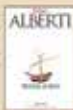
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Páginas 28 y 29

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EL ACTOR NORTEAMERICANO JAMES COBURN FALLECE EN LOS ÁNGELES A LOS 74 AÑOS | 47

El buque se partió en dos a las ocho de la mañana y vertió 10.000 toneladas más de fuel

El «Prestige» se hunde y lanza otra marea negra hacia Galicia

La nueva mancha se dirige a la costa y si el viento continúa impulsándola puede llegar en dos días

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Marineros de las Rías Baixas pretenden formar una barrera con mil barcos

Mientras mariscadores y mejilloneros de las rías de Muros-Noia y Arousa trabajan a marchas forzadas para salvar todo lo que queda antes de la posible llegada de una marea negra, las entidades que agrupan a estos productores han propuesto la creación de

una barrera de contención en la entrada de los estuarios compuesta por cerca de un millar de barcos y las barreras anticontaminación. López Veiga visitó a los afectados en O Grove y les aseguró que los barcos y las balsas no corren peligro. **2 a 13 y 18**

MARÍTIMA

Antonio Couceiro deja el Puerto coruñés para dirigir la concesionaria de Coca Cola **27**

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Arde parte del tren regional nocturno que une A Coruña y Vigo **134**

SÁBADO, 23 DE NOVIEMBRE DEL 2002 | A CORUÑA

La Voz de Galicia

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Voluntarios y técnicos de Protección Civil retiran el fuel que el mar depositó en el Malecón de Muxía

JOSÉ MANUEL CASAL

Las bolsas contaminantes emergen en el lugar donde se hundió la proa

Portugal y Francia avistan nuevas manchas de fuel, pero España lo niega

La marea negra invade de nuevo Muxía y sobrepasa ya Ortegal

La falta de material impide canalizar la riada de voluntarios

El Gobierno suma 10 euros diarios en la ayuda a los afectados | 2 y 12 y 13-5

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podría haberse casado con cualquiera de las participantes del concurso Miss Mundo, dada su gran belleza.

Como respuesta, radicales musulmanes quemaron la delegación del diario en Kaduna y mataron a todos los infieles que encontraron. | 46

BOY, CON LA VOZ



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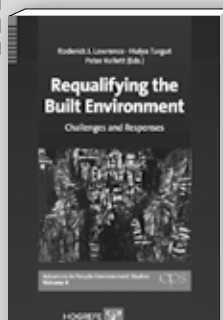


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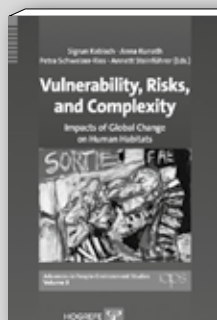
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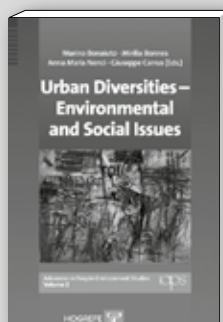
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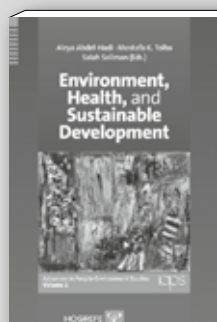
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Ricardo García Mira
María Dolores Garza Gil
Fernando González Laxe
Isabel Lema Blanco
María Dolores Losada
Carlos Martínez Buján
Pablo Meira Cartea
Enric Pol
Albino Prada Blanco
José Eulogio Real Deus
Ernesto Sánchez Pombo
César San Juan
David Stea
David Uzzell
María Xosé Vázquez Rodríguez
Carmen Voces*