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From Kyoto to Durban. Mass media editorial position about climate change

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Abstract

Introduction: This study analyses the editorial stance of three authoritative Spanish newspapers (*El País, El Mundo* and *La Vanguardia*) with regards climate change in the time span between the climate summits held in Kyoto (1997) and Durban (2011). Methodology: The analysis has taken into account the presence of political, economic, social and cultural factors, as well as any others which may have prevented editorial policies from making a clear contribution to raising public awareness regarding climate-change issues. The initial hypothesis is that editorial strategies do not address the real issue –the causes of climate change and the urgency with which countries emitting greenhouse gases must adopt corrective policies– but rather avoid explicitly recognising the severity of the problem or mentioning possible solutions. Results: It has been analyzed 220 editorials: 95, *La Vanguardia*; 71, *El Paí*s and 75, *El Mundo*. Conclusions: Indeed, throughout the fourteen years covered by the study, the editorial line of the newspapers themselves takes centre stage, leaving little room for interpretations or evaluations supported by the predominant scientific discourse.

Keywords

Journalism; environment; climatic change; sustainability, Kyoto; editorial.

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Translation by María Ferrara Jiménez Barrio

1. Introduction

The amount of disasters generated by climate change is increasing steadily. A simple Internet search on potential dangers and threats plunges us into an ocean of studies and news warning about the numerous and serious consequences derived from climate change affecting the evolutionary relationships between plants, birds or mammals or affecting human health directly, amongst many others. In this context, it is important to realise how the media shape public opinion and contribute to an accurate communication of the problem, thus enabling citizens to evaluate its magnitude and demand the adoption of measures to prevent it. This research shows that overcoming a big challenge for humanity such as climate change will partly depend on the editorial line adopted by the media.

Citizens may be aware of how the media play this essential role, what the message they communicate to the public opinion is, what the pre-agenda values are and, especially, how the editorial line conditions the contents published. The analysis of these parameters reveals whether the reference medium is treating the issue with the necessary seriousness and rigor, whether it is demanding appropriate responses from the corresponding governments or whether it is engaging in an ideological journalism which places political and economic interests above citizen interests and breeds disinformation and confusion. It is worth remembering that, despite the fact that the consequences of climate change and the anthropogenic origin of global warming are well established by scientific consensus, the discourse reaching the public opinion is often distorted by the constructive practices employed by the media [1]. Thus, the initial hypothesis is that no consensus exists in the media, given that their editorial position is more strongly influenced by their ideological affinity with the government than by the need to raise awareness about the seriousness of climate change.

Most studies to date on this topic have delved into aspects such as the treatment of contents and constructive techniques or the adaptation of the scientific message to journalistic discourse. However, there are no analyses of pre-agenda values or of the interests influencing the message. It seems appropriate to study the editorial line of the media, as this is what finally conditions the approach, tone, space, journalistic treatment and other factors which play a role in the process of information production.

This study aims to address this lack, even if only in part. It is framed within the national research project "Communication and climate change. Media strategies to communicate scientific consensus to the public opinion" (reference CSO2010-19725), which approaches two essential issues: social perception of the communication/climate-change analysis in Spain and the drafting of proposals to raise public awareness about climate change issues.

2. Background and context. Kyoto Protocol

Despite the fact that the first expressions of concern about climate change date from the seventies, it is not until the following decade that the first firms steps were taken with the celebration of the United Nations Conference on the Human Environment (UNCHE), in 1972, and with the first World Conference on Climate, in 1979. However, the commitment to fight against climate change was not assumed until the third Conference, held in Kyoto in 1979. The Kyoto Protocol was the result of this meeting which concluded with the commitment to cut down at least 5.2% of anthropogenic emissions of greenhouse gases in the main developed countries and transition economies between 2008 and 2012.

Fourteen years later, in December 2011, the XVII UNO Climate Change Conference was held in Durban, in which up to 190 countries committed themselves to drafting a roadmap in order to cut down their greenhouse-gas emissions, which included beginning a second compliance period for the Kyoto Protocol and launching a new, more effective, process which would come into effect in 2020.

Spain, which has signed the Kyoto Protocol, was only supposed to increase its emissions by 15% in the 2008-2012 period in relation to 1990. However, the actual increase in emissions today is 22.8%. In the last 5 years, Spain has already invested 770 million euros in the purchase of carbon credits, equivalent to 89 million units of C0₂ which can be discounted from its emissions, but this will not stop it from purchasing more rights, given the fact that it is still well above the limit.

2.1. Perception of the problem

The climate change debate has moved to the media and, therefore, to the citizens, despite the fact that their perceptions and knowledge are inaccurate. Related studies reveal serious gaps in understanding and information regarding climate change. Amongst them, "Percepciones y actitudes de los españoles hacia el calentamiento global" ("Perceptions and Attitudes of Spanish Citizens regarding Global Warming"), carried out by the BBVA Foundation in 2008 with a sample of 2000 people, confirms that 9 out of every 10 Spanish citizens are aware of the problem, most of them through the media, and claim to understand it. Up to 85% believe that it is a fact, but only 46.5% understand it completely, despite the fact that there is a high degree of awareness amongst those who deem it necessary to adopt urgent measures (83.5%).

The results of this study coincide to a greater or lesser extent with the degree of knowledge and concern in other European countries. Amongst the most quoted surveys, it is worth mentioning those by Nisbet and Myers (2007), the BBC World Service Poll carried out in 2007 in 21 countries and the Nielsen Global Survey on the Environment and Sustainability of 2011. Most of the people interviewed for the BBC poll considered drastic measures to be necessary. France and Brazil register particularly strong vindication, whereas India and Russia show the lowest levels.

However, the Nielsen Survey warns about a possible decline in demands as a consequence of the profound current economic crisis. This survey was carried out online with a sample of 25,000 people from 51 countries and the data show that citizens' concern has decreased in three points since 2007. 69% of Internet users said they were aware of the problem, as opposed to 72% five years before.

2.2. Editorial Influence

Editorial writing has been unanimously considered a focal element in authoritative press and, even if nowadays this section has low reading rates, the fact that it is the medium's self-expression to the public still makes it relevant (Gil González, 2007). An editorial, together with other opinion genres, defines the ideology and hierarchies of each newspaper, reveals its level of tolerance and, thus, involves a risk by taking sides and exposing the newspaper before the readership. (León Gross and Blanco Castilla, 2009).

Editorials have not lost their importance or prestige; they represent the most stable genre in journalism and, indeed, the most homogeneous in traditional systematisations (Núñez Ledeveze, 1995) and even in the new formulas, appearing always as an opinion text of institutional authorship (Sánchez and López Pan, 1998).

In spite of having low reading rates and of losing ground to other opinion formats like columns or features as an expression of the medium's ideological positioning, the editorial is the text in which the newspaper openly engages in criticism and evaluation in the first person, and not indirectly by means of information content. Thus, its central role in media discourse and its value in order to study the role of the Spanish reference press in the political debate are unquestionable (Teruel, 2012). Editorials are, without doubt, a privileged looking glass to enquire about the identity of the big media and about certain trends in the system.

3. Method

This project, as is the case with the framework project that it is part of, is based on a systemic-constructivist approach close to NIklas Luhmann's communication paradigm, created in response to his concern about the effects of journalistic mediation in the formation of public opinion. This perspective helps identify the problems that hinder the creation of public awareness regarding climate change and the analysis of its origin. Therefore, the empirical section in this project has gathered quantitative data focusing on opinion, contents and values flows, as well as on framing.

The research is based on the diachronic analysis of editorials published by *El Mundo*, *El País* and *La Vanguardia* between the adoption of the Kyoto Protocol in 1997 and the Climate Summit held in Durban in December 2011. These two dates have been considered to be key (proclamation and ratification, respectively, of the Kyoto Protocol aims) in focussing the attention of all the world media. This 14-year-long longitudinal study provides more stable results and adequate conditions for a full analysis of the evolution of the editorial line followed by the authoritative Spanish press with regards climate change and its consequences.

The sample has been accessed through the digital libraries of the three newspapers, using the *MyNews* tool to select the editorials that referred to climate change, either as the main topic or as a secondary topic. The cases in which the mention was residual were ruled out, as they would have altered the results by introducing irrelevant frames for the research at hand. The search and selection of editorials which treated the topic in a transcendental manner was conducted using the words "Kyoto", "Durban", "climate change" and "greenhouse effect". The search gave 71 hits for *El País*, 54 for *El Mundo*, and

95 for *La Vanguardia* referring to climate change as a main or secondary topic. The analysis was carried out on this corpus, rather than on a representative sample.

This research has been carried out by analysts from the University of Málaga and Pompeu Fabra University in Barcelona, who have coordinated their work by means of 2.0 applications, using an online content-analysis file which allowed for simultaneous work to be carried out. This file combines formal elements with content analysis so as to provide a complete overview of how climate change is treated in the editorials of the analysed media, paying special attention to the different approaches and their possible politicisation.

Within the categories taken into account, the starting point has been to analyse the degree of credibility afforded to climate change by each of the newspapers, that is, whether the arguments presented supported scientific consensus. Based on this core category in the analysis file, different variables were designed, referring to the expert sources quoted in each text, the type of editorial and the tone employed, amongst others. The analysis has been complemented with the qualitative study of the discourse, the topic under discussion and the frames used. The aim of this methodological strategy has been to analyse the editorial relevance of the topic and its possible connection to political, economic, social or cultural interests.

3.1. Rationale

Analysing the editorial line of the media has become more necessary than ever, given the fact that in the last few years, the media's interest in the issue of climate change has declined. This has been established by a study carried out by the Reuters Institute of Oxford University, which highlights the "dramatic decline" in the news coverage of this topic. Arévalo (2012) states that, based on official data provided by the UNO, the presence of the European Union (EU) media in climate summits has decreased from 60% to 19% in only two years: the time between COP15, held in Copenhagen in 2009 and COP17, held in Durban in 2011.

Specialised journalists who have participated in the study express a certain feeling of guilt about climate change having become a secondary interest in editorial departments. They consider that the information has been presented in an alarmist tone, focussing more on the devastating consequences than on possible local solutions. Also, climate-sceptics have been given too much space, and politicians have been given the same consideration as scientists, without clearly letting the audience know which of the two collectives is presenting more founded and rigorous views.

Academic concern about the role played by the communication processes employed to transmit scientific consensus regarding climate change is significant in the Anglo-Saxon world, specifically in the United States, Germany and the United Kingdom, countries where plenty of research is carried out in many centres. The results of the studies carried out in Spain highlight some of the characteristics that can be attributed to our media and which positions them at a clear disadvantage in comparison with the Anglo-Saxon media. Mainly, Spanish journalists suffer a lack of specialisation (Russell, 2008) and of reliable sources (Nisbet and Mooney, 2007; Nisbet, 2008; Neverla, 2008). This harms media credibility, particularly in the eyes of the scientific community, while also hindering the development of a well-planned and responsible news policy regarding climate change.

These studies also show that presence in the news is not so much related to relevant scientific warnings or discoveries, but to political events (Boykoff and Roberts, 2007). This makes it impossible

to identify a coherent information policy, as there is no agenda continuity (Roser-Renouf and Nisbet, 2008). From a different angle, it is said that the economic crisis has devalued climate change as a news item (Ward 2008), while topics related to the economic situation and the problems it generates have become more popular. In spite of these deficiencies, it is accepted that it is the media that have made the most decisive contribution towards sparking off the public debate (Reykin, 2005). However, a greater commitment from the media regarding their role would promote this debate, as Xambó (1999), collected by Fernándo Reyes (2002), claimed: the greater the emphasis in the media, the greater the emphasis for the audience.

3. Editorial analysis

The data obtained in this study aim to explore possible pressures and to evaluate whether the analysed media are faithful to a coherent policy that may raise public awareness about environmental degradation. In other words, the intention is to establish whether these media explicitly support the scientific discourse regarding the origin and consequences of this issue or whether, on the contrary, they are defending other discourses. It is likewise important to find out whether editorial attention is circumscribed to specific events or whether it is following the topic. The analysis carried out on editorial opinion will also show whether the chosen media are biased and, if so, if this bias can be conditioned by political, economic or other factors.

4.1. Weight of climate change in the total editorial sample

The first data on the presence of climate change in the editorials of the analysed media show a limited weight with respect to the total number of editorials published. The application of the search criteria (editorials which referred to climate change as their main or secondary topic) and of the relevant locators ("Kyoto", "Durban", "climate change" and "greenhouse effect") produced 220 editorials which could be subjected to analysis, most of them published by *La Vanguardia*. The exact breakdown is as follows: 71 by *El País*, 54 by *El Mundo* and 95 by *La Vanguardia*. With respect to the total number of editorials published in each of these media in the 14 years that have been included in the sample under study (26,061 texts), the editorial weight of climate change is only 0.84% of the total volume of institutional opinion published. The percentages per medium are: *El País* - 0.87%, *El Mundo* - 1.05% and *La Vanguardia* - 0.74% [2].

4.2. El País

A first glance at the analysed texts already projects a different profile for each of the newspapers with regards their concern for climate change. *El País* is very critical with the United States' refusal to accept the conditions established by the agreements adopted in climate summits. Its criticism is greatest during the presidency of George W. Bush as, once Barack Obama takes office, the criticism is toned down and there is a positive reaction to his willingness to introduce certain changes in the fight against climate change.

When referring to Spanish governments, it is much harsher with Jose María Aznar than with José Luis Rodríguez Zapatero. In some editorials it even uses the expression "bad inheritance" while the Spanish Socialist Party (PSOE) is in power, blaming the former government for not having achieved the

established aims. The newspaper interprets that this is the reason why PSOE is having to fulfil all the aims of the Kyoto Protocol by itself.

In general, *El País* expresses its concern for climate change time and time again, and also considers it to be a proved fact. It agrees fully with scientific consensus and leaves no room for scepticism. However, its opinion is only occasionally based on expert resources, which is a significant weakness in its argumentation.

Kyoto is the summit that this newspaper mentions most in its editorials. Nevertheless, it always saves some editorial space for each of the meetings that have been held, despite the fact that in most cases it criticises them for their inefficiency in terms of problem-solving or the reaching of binding agreements.

4.3. El Mundo

El Mundo does not have such a coherent trajectory as El País, but rather follows an evolution throughout the years. At the beginning of the time frame the topic is scarcely present in its editorials (this is the newspaper with less editorial coverage of the topic) and there is a certain disbelief or distrust about climate change being a fact. Its concern and the editorial space dedicated to the issue increases gradually towards the end of the period under study.

As for the position adopted with regards the government, there are obvious changes depending on which party is in power. Thus, this newspaper is very critical with the measures proposed by the Socialist government and more lenient with those introduced by the Popular Party. However, at an international level it does question the actions adopted by the Bush government in the United States.

It is worth highlighting that the Durban summit is not mentioned in this newspaper's editorials. The third Conference, in which the Kyoto Protocol is proclaimed, is the one which is mentioned most and considered most important. Finally, as is the case in *El País*, it rarely refers to expert sources to back up its editorial opinion.

4.4. La Vanguardia

The editorials published by *La Vanguardia* regarding climate change are, in general, very critical with the measures adopted by the Government, regardless of the party in power. In this sense, its editorial stance is the most critical and persistent, as it never publishes neutral editorials, which the other two newspapers do. In 91.6% of the cases it is critical with government policies and it supports them in only 8.4% of the cases.

Although, in general, none of the three newspapers resorts to expert sources in order to back up their opinion regarding climate change, *La Vanguardia* is the newspaper that least does so, not supporting its opinion with objective facts but with mere ideological arguments. At most, it sometimes refers to political sources, but only on very few occasions.

In terms of frames, the most frequent approach is to focus on environmental consequences, followed by presenting solutions to ameliorate the effects of climate change. As opposed to the other two newspapers, this one highlights the economic consequences which not facing the problem of climate change can entail in the medium term and, based on that analysis, is openly in favour of increasing and promoting the use of nuclear energy in detriment of renewable energies, considered to be more costly and less profitable.

With regards the editorial coverage of the climate summits, *La Vanguardia* dedicated space to them, but not enough, as only 27.35% of the editorials refer to them and comment on the agreements reached. In spite of this, La Vanguardia has given more editorial coverage to the summits, and this is related to the fact that there is a specialised environmental journalist amongst its staff who has been a special correspondent in all climate summits.

4.5. Focal point and credibility

As was pointed out in the methodological approach, the editorials selected are those in which climate change is one of the focal points. More specifically, it has been the main element in 70.9% of the texts under study. It is the single subject of 81.7% of the editorials published by *El País*. The corresponding figure drops to 66.3% in the case of *La Vanguardia* and to 64.8% for *El Mundo*. Therefore, although the number of editorials referring to climate change is not large, when it is mentioned it tends to be the focal point.

In terms of credibility, the editorials analysed sometimes go as far as questioning the existence and effects of climate change, even if in only 17.3% of the cases and in significantly different ways in the three newspapers. In *El País*, a questioning or neutral stance is rare, given that 71.8% of the texts state that climate change will take place. However, half of the editorials published by *El Mundo*, do not say whether it will take place or not. Most texts published by *La Vanguardia* say that it will take place and 28% are neutral.

A qualitative analysis of the texts which question this meteorological phenomenon shows that, in the case of *El Mundo*, two types of arguments are employed.

- 1. Despite the fact that violent environmental phenomena are on the increase and that there is an international agreement to study them, this can not be yet referred to as climate change.
 - "(...) Environmentalists, experts and some politicians ascribe this unusual storm to climate change, but it is difficult to ascertain this, given the fact that climate science requires the accumulation of data for several years." ("¿Enloquece el clima?" Editorial, *El Mundo*, 14/08/2002)
- 2. Disagreement with the way in which the Spanish government manages the issue implies considering that the economic cost generated by the measures to protect the environment is excessive.
 - "(...) With this environmentalist fit, excessively dramatic and also lacking concretion, the Prime Minister tried yesterday to pitch global warming to the first line of the political debate, an electoral strategy which could backfire, given the blow received by our country in the form of the latest UNO and EU reports about the degree of compliance with the Kyoto commitments".
 - ("Grandilocuencia ecologista contra la rebaja fiscal de Rajoy", Editorial, *El Mundo*, 28/11/2007)

The degree of compliance with the Kyoto commitments is an argument also used by *El País*, but rather than questioning climate change, it questions the commitment of governments and companies to stopping it, to adopting drastic and significant measures that will contribute to solving the problem. Thus, some editorials do not deny climate change but, instead, focus on the summit or on the protocols adopted, rather than on their consequences. In other words, they refer to the climate summits in political and economic terms but do not explore in depth the environmental problems that should be solved. Nevertheless, despite these deficiencies, the newspaper's commitment is blatant:

"(...) Climate change is one of the most formidable challenges that humanity must face in the near future, but its very nature makes it difficult to combat. Preventive measures include increasing the quota of renewable energies, cutting down the energy intensity of our economies and using transport that depends less on petroleum-derived fuels. Only if the USA and China accept their responsibility, will we succeed in reaching efficient agreements. Let us hope for a change in the coming Durban summit in 2011."

("Un acuerdo modesto", 12/12/2010, Editorial, *El País* about the Copenhagen Conference)

In *La Vanguardia*, most texts warn against climate change, and almost one third of them highlight the measures that should be taken in order to try to reduce its devastating effects. Following this argument, this newspaper's clear defence of nuclear energy is evident:

"(...) Spain has wasted long years on a sterile energy debate which, as opposed to developments in most European countries, has prevented a resolute decision in favour of nuclear energy. An action that is now revealed to be essential. Political indecisiveness in this sense has been costly for the country, and it could become even more so in the future, both in economic and geostrategic terms."

("Largo y caro debate nuclear", 22/01/2011, Editorial, *La Vanguardia* about the announced closure of Garoña nuclear power plant)

This newspaper covers more summits than any other, but there is a significant corpus of texts which has been considered neutral because, even if they include data about renewable energies or EU meetings dedicated to the environment, they do not conclude giving an opinion about the threat of climate change, but have a more informative aim:

"(...) According to the magazine Global Environmental Change, natural disasters have become one of the most serious problems faced by humanity. The reason for this can be climate change, a greater and more precise news coverage and the increase in population. The number of catastrophes considered to be of natural origin has risen from about 30 per year in the mid-20th Century to over 400 since the year 2000. The average number of people affected, requiring aid for medical care, food and shelter during and after the disasters, was approximately 25 million per year in 1960, a figure which rose beyond 300 million in 2000. The average economic loss has increased from 12,000 million dollars per year in 1970 to 83,000 million since 2000."

("Haiti, más que un desastre natural", 22/11/2011, *La Vanguardia* about the Haiti earthquake which affected approximately 300.000 people.)

With respect to the time distribution of the sample, it is worth noticing that most of the editorials in the three newspapers do not coincide with a summit. Only 27.4% of the editorials published by *La Vanguardia* coincide with these meetings. This suggests that this theme is part of the background of the media agenda to a greater or lesser extent, rather than coming to the fore in time with the two events marking the beginning and the end of the time frame used for the study. Therefore, it can also be said that these two events failed to attract the attention of the editorial discourse in the Spanish press.

Considering the tone used in the editorials on climate change, *El País* tends to have a mainly informative, sometimes critical and rarely alarmist tone. Didactic texts only appear very sporadically. This same pattern applies to *El Mundo* and *La Vanguardia*, although critical editorials are most common, particularly expressing an opinion about Government policies regarding this issue.

4.6. Agreement with government policies

NEWSPAPER	NEUTRAL %	NO %	YES %
El Mundo	22.2	48.1	29.6
El País	7.0	88.7	4.2
La Vanguardia	0.0	91.6	8.4

The editorial stance of the analysed media is explicitly against the environmental policies of the different governments in power in Spain and the United States in the 14 years under analysis. *La Vanguardia* and, even more, *El País*, are critical with government policies on climate change in 91.6% and 88.7% of the cases respectively. However, the data presented by *El Mundo* are not as bold in this respect (48.1% of the texts) and are significantly more supportive of the Executive (29.6%). The qualitative analysis of the texts published by the Unidad Editorial newspaper shows greater support for the environmental policies of PP governments than for those of PSOE governments. However, the other two newspapers express complete disagreement with the Popular Party's actions in this field while, on the other hand, supporting the measures adopted by Zapatero's executives.

Some examples can illustrate this quantitative fact:

"Gases sin control": (...) As opposed to other EU countries which have launched programmes to limit the greenhouse-gas emissions of the relevant sectors, Spain has not even designed a plan. Towards the end of 1998, Isabel Tocino, who was Minister of the Environment at the time, presented the draft of a National Climate Strategy, which would have been that needed plan to control emissions. Nobody remembers that draft and the current minister has not presented a new one. Systematic delay is the main characteristic of the Partido Popular's environmental policy. (*El País*, 8/3/2002)

"¿Incumplible Kioto?" (...) The [Kyoto] protocol established, in Spain as in other neighbouring countries, that emissions of this kind of gases – mainly CO_2 – were not to exceed a 15% increase with regards 1990 levels during the 2008-2012 period.

Well, in Spain they have already increased by 36% during the current legislature. At this pace, the Kyoto objective is, by all means, unachievable." (*La Vanguardia*, 02/12/2003)

"La sequía, un problema serio": (...) The Socialist government has merely approved specific solutions for specific problems –such as the measures approved yesterday concerning the Ebro basin–, but has not undertaken an integral plan to manage water, an ever scarcer good. (*El Mundo*, 16/02/2008)

Another important aspect concerning the contents of the analysed editorials is the fact that half of them express concern about climate change and pessimism about the course of events. Neutral texts amount to 34.7% and are mostly found in the Madrid press, commenting on the outcomes of international climate meetings or summits and expressing uncertainty about their real transcendence. However, there is another 12.4% of optimistic editorials, mainly published in *La Vanguardia*, which celebrate the progress made.

4.7. No mention of economic consequences

The analysis of the frames used in each editorial [3] is shown in the table below, which only includes the first nine positions. As can be seen, the predominant frame is criticism of the Spanish government's management of environmental issues. In net terms, it is *El Mundo* that takes this position most clearly and also the newspaper that most highlights divergences in the way in which political actors fight against climate change.

The second most used approach by *El País* and *La Vanguardia* is to show the consequences of climate change or environmental catastrophes. Out of these two, it is *La Vanguardia*, from Catalonia, that suggests measures which could be adopted. Together with *El País*, owned by the Prisa group, it presents joint measures that governments and the private sector should take regarding this issue.

FRAMES USED IN THE EDITORIAL	Total	EM	%	El País	%	LV	%
Criticism of government attitudes	95	27	27.27	20	19.4	48	19.43
Account of environmental consequences or manifestations of dimate change	59	17	17.17	9	9.7	33	13.36
Account of disagreement between political actors regarding CC	48	14	14.14	14	13.6	20	8.10
Suggestion of joint measures that could be adopted	48	10	10.10	5	5.49	33	13.36
Account of government and company actions against CC	45	4	4.04	14	13.6	27	10.93
Positive analysis of the agreement adopted at the summit	18	2	2.02	4	4.9	12	4.86
Negative analysis of the agreement adopted at the summit	14	4	4.04	2	2.20	8	3.24
Account of economic consequences of CC	12	0	0.00	0	0.00	12	4.86
Analysis of different actions undertaken by wealthy and poor countries	21	4	4.04	8	8.7	9	3.64
Total (Including minority frames)		99		91		247	·

It is noteworthy that the editorials published by *El País* and *El Mundo* do not warn about the economic consequences of climate change, despite the fact that they are, together with environmental consequences, the most important. Only *La Vanguardia* refers to them, in 12 of its 95 published texts (12.6%). This lack of editorial interest contrasts sharply with the obvious concern of large scientific sectors and of economic analysts. With respect to how summits are evaluated, these two newspapers tend to be positive, whereas *El Mundo* tends to present a negative analysis.

4. Results

The results of this study show that it is necessary to insist on the media's role regarding information about the problem of climate change and its magnitude and that this information must be based on scientific consensus, in order to make the public more aware and more demanding regarding solutions. This is proved by the fact that scientific consensus exceeds 90%, whereas journalistic consensus is significantly lower, as minority opinions are given excessive relevance. As Díaz Nosty (2009) states, this constructive dialectic of the media periodically reactivates scientific positions that had long ago been invalidated and discarded.

The analysed media must overcome the detected deficiencies in their editorials, as they work as referents, determining to a large extent the agenda and opinion of other written media, as well as of online and audio-visual media. In the latter these deficiencies are even greater, as climate change is trivialised and spectacularised. This is one of the conclusions of a recent study of TV news programmes in Spain (Piñuel and Teso, 2012); the hegemonic discourse is characterised by making a show out of the conflict and by giving the main roles to politicians and governments, so that information does not touch upon the necessary actions and projects but, rather, on political blame.

This trend to polarise the conflict is the main characteristic of the data extracted from the current study, where it is concluded that the media opt for an ideology journalism that exercises criticism to a greater or lesser extent depending on the colour of the government in office. Thus, this confirms Boykoff's warning (2009) that climate change is the most politicised scientific topic of the new millennium and, in this sense, editorials function as vector texts for each medium, platforms for polarisation to speak up, take sides and promote tension.

This option, which no doubt harms scientific interests, not only hinders media consensus regarding climate change and looks down on the existing scientific consensus, but also generates disinformation and confusion in the citizenship. In this respect, it is important to take into account the warning made by Williams (2000), who considers that introducing uncertainty in the discourse on climate change is a tactic employed by intransigent political actors aimed at invalidating general public concern about climate change as a social-environmental problem.

6. Conclusions

- 1. Despite the fact that editorial attention paid to climate change is not relevant, it has remained constant throughout the period under analysis, not only focussing on the summits held.
- 2. Media consensus regarding climate change is not absolute. Whereas *El País* and *La Vanguardia* consider it to be a proved fact, El Mundo is not consistent and goes from disbelief to a greater degree of concern towards the end of the period analysed.
- 3. Political interests and ideological alignment prevail over the need to generate awareness about the seriousness of climate change. In the three analysed newspapers ideological arguments based on political or economic reasoning are more common than scientific, or simply social or humanitarian arguments.
- 4. The criticism expressed to a greater or lesser extent about government decisions made as a result of climate summits is not sufficiently relevant in any of the three newspapers to become the basis of an efficient information policy about the consequences of climate change and the urgency of adopting measures against it.
- 5. The editorial line of the three analysed newspapers does not include the constant contributions made by expert sources, particularly in the scientific and the environmentalist fields.
 - This article is a result of project CSO 2010-19725 of the National Research Plan titled "Communication and climate change: Media strategies to communicate scientific consensus to the public opinion".

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8. Notes

- [1] <u>www.mediatica.org/paginas/proyecto.htm</u>. Web site for the research project "Comunicación y cambio climático. Estrategias de traslación mediática del consenso científico a la opinión pública". (CSO2010-19725)
- [2] There is an average of 2.5 editorials in *La Vanguardia*, 1 in *El Mundo* and 1.6 in *El País*, which would amount to a theoretical figure of 26,061 texts.
- [3] The number of frames that can be defined is infinite, that is why the percentage is greater than 100%.

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