# The science coverage in three newspapers of Para: a longitudinal study

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## Abstract
In this paper, we suggest a methodology aiming to present a longitudinal study able to present a panorama of the science coverage for 130 years by three important newspapers in Pará: *A Província do Pará* (1876-2002), *Folha do Norte* (1896-1974) and *O Liberal* (1946-current). We studied a period of two months every ten years, from 1876 to 2006, in each newspaper, aiming to obtain a long term view through the history of the newspapers and, thus, through most of the history of the press in Pará and in Amazon. We used content analysis and frame analysis. Our results show emphasis in health research, highlight for national science and a concern in putting the facts in context. Controversies and science uncertainties received little attention in the analysed newspapers.
**Keywords:** Science and media. Content analysis. Frame analysis. Pará. Amazon.

## Introduction

In Latin America, and in Brazil in particular, a growing number of studies are being conducted about the relationship between science and media, which is one of the main sources of information about science (NSF, 2012; MCT, MV, 2010; EC, 2007).Examples of these studies are conducted by Medeiros *et al* (2013), Bueno (2010), Teixeira (2007), Jurberg, Gouveia and Belisário (2006), to cite just a few.

However, the bulk of research work conducted in Brazil about the relationship between science and media is focused on the Southeastern region, where nearly half of the country's research institutes and researchers are based (CNPq, 2006). Few studies exist about how the media covers science in the Northern region (BELTRÃO, 2002; BELTRÃO, MORAIS, 2010; MORAIS, 2010), which includes most of the Amazon region of Brazil, and is of undeniable political, economic, social and scientific importance to the country and to the world.

Furthermore, most studies about science and media emphasize present-day issues with historical media studies taking second place (RIBEIRO, HERSCHMANN, 2008, p.18-23).In this sense, Bauer (2012) states that most analyses about the way science is covered by the media, concentrate on short periods of time and highlights that a longitudinal research about how science is treated by the media could stimulate new insights into research on the subject. Bauer (2012, p.36) also affirms that "science reportage in the modern circulation media of print and broadcasting is an integral part of the history of science".

In view of these gapes, we aim to provide a broader view of the coverage given to scientific matters by newspapers in the Amazon region. Our objective was to identify and analyze science stories in these newspapers from a longitudinal perspective, so as to observe these issues over a period of time. Our analysis extends over a period of 130 years and involves three of the most important newspapers

in the state of Pará: *A Província do Pará* (1876-2002), *Folha do Norte* (1896-1974) and *O Liberal* (1946-to the present).[1]

## A brief introduction to the press in Pará

At the beginning of the 19th century, the Portuguese Court had a significant influence on the Province of Grão Pará and it was in this context that the first newspaper of the province emerged: *O Paraense*. Based on ideals of political and press freedom, the newspaper was created in 1822, by Filippe Alberto Patroni Martins Maciel Parente (SALLES, 1992; COELHO, 1993; SEIXAS, 2011a). However, the newspaper was constantly being repressed and eventually closed its doors in February 1823 (SALLES, 1992, p.25).

As the years passed, there was a consolidation of newspapers in the Province of Grão Pará (SEIXAS, 2011a, 2012),while new ones were being created in other towns in the region (BIBLIOTECA PÚBLICA DO PARÁ, 1985), although at a slower pace. Then, in 1876, Joaquim José de Assis, Francisco de Souza Cerqueira and Antônio José de Lemos (ROCQUE, 1976, p.15) created *A Província do Pará*, which lasted 126 years and became the longest-running newspaper in circulation in Pará. *A Província* gained strength and became consolidated jointly with the political career of Lemos, who became the municipal mayor of the city of Belem and remained in positions of leadership for 14 years (SARGES, 2002, p.23).

In 1896, *Folha do Norte* began to circulate, becoming the second longest-running newspaper in Pará, in print for 78 years. Founded by Enéas Martins and Cypriano Santos, this newspaper backed Lauro Sodré, who became a senator, governor of Pará and a great rival of Lemos (SARGES, 2002; ROCQUE, 1976).

By the turn of the 20th century, *Folha* and *A Província* were the leading newspapers in the State and backed several different

[1] This study is part of the research Project "The trajectory of the press in Pará," approved by the MCTI/CNPq Universal Edict Nº 14/2012 and developed at the College of Communication and the Post-graduate Program of Media, Culture & Amazonia at the Federal University of Pará.

political groups. In 1912, Lemos was accused of having conspired in a coup to oust Lauro Sodré and had his house and newspaper plant set ablaze, before being expelled from the city of Belem; the publication of *A Província* was interrupted (SARGES, 2002; ROCQUE, 1976; SEIXAS, 2011b).

After these events, Sodré involved himself in political life without facing much opposition and *Folha* became the journal of the day. *A Província* re-opened its doors in 1920, but again ceased its activities in 1926, due to financial difficulties.

During the 1930s, political issues again affected the press in Pará, due to the opposition shown by the newspaper towards the then federal administrator of Pará, Joaquim de Magalhães Barata (ROCQUE, 1976, p.203-205). In spite of growing opposition, Barata became a senator in 1945. In 1946, to defend himself and the Social Democratic Party, he created *O Liberal*, together with other people linked to politics at the time (BIBLIOTECA PÚBLICA DO PARÁ, 1985, p.271).

In 1947, *A Província* again began to circulate, this time under the direction of the Diários Associados, company owned by Assis Chateaubriand. From that date onwards, *A Província do Pará*, *Folha do Norte* and *O Liberal* became the leading newspapers in the 20th century in the State of Pará, even though the *Folha* began to lose influence in the 1960s.

In 1965, *O Liberal* was bought by Ocyr Proença, who changed the direction of the newspaper's political line of action (BIBLIOTECA PÚBLICA DO PARÁ, 1985, p.273). In 1966, Romulo Maiorana bought the newspaper, bringing in a new era, with successive changes in the way it was produced and introducing offset printing technology to the State of Pará (PINTO, 2006).

*Folha* was also bought by Romulo Maiorana in 1972, but its activities were terminated in 1974 (BIBLIOTECA PÚBLICA DO PARÁ, 1985, p.155). From then on, *A Província* and *O Liberal* continued to be the two leading newspapers in circulation until 2002, when *A Província* closed its doors.

Among the newspapers analyzed in this study, only *O Liberal* remains in circulation today. The Romulo Maiorana Organizations, owned by the Maiorana family, are one of the main media groups in Brazil, with 15 vehicles of Communication (DONOS DA MÍDIA, 2013; PORTAL ORM, 2013). At the moment, the main newspapers in Belem are *O Liberal* and the *Diário do Pará* (1982- to the present).

## Methodology

*A Província do Pará*, *Folha do Norte* and *O Liberal* were chosen for analysis due to their historical, political and social relevance to the people of Pará, as well as the fact that they were printed on a regular basis over a long period of time. *Província do Pará* and *Folha do Norte* are now the two longest-running newspapers in Pará. *O Liberal* is the most recent newspaper, and is the third longest running newspaper in the State.

Our study is based on a discussion about the relationship between science and society, the Communication of science through the printed press and an empirical data analysis from a longitudinal perspective, covering a historical period of 130 years.

We established a time frame of two months for every ten years within each period, beginning with the creation of the first newspaper selected (*A Província do Pará*, in 1876) until the last year that a newspaper was in circulation (*O Liberal*, in 2006), maintaining a scale of ten years. Thus, our sample consisted of editions of these newspapers from the months of January to July, during1876, 1886, 1896, 1906, 1916, 1926, 1936, 1946, 1956, 1966, 1976, 1986, 1996 and 2006[2].All the stories consulted is available at the Arthur Vianna Public Library of Pará.

The periods analyzed for each newspaper are colored grey (see Chart 1):

[2] There were two exceptions to this timescale: *A Província do Pará* first began to be printed in March 1876, so the month of March replaces the month of January of that year; the first edition of *O Liberal* was in November 1946, which means that the months analyzed that year for this newspaper were November and December.

*Chart 1 – Periods related to the newspapers analyzed, based on a scale of ten years*

| YEAR | *A Província do Pará* | *Folha do Norte* | *O Liberal* |
|---|---|---|---|
| 1876 | | | |
| 1886 | | | |
| 1896[1] | | | |
| 1906 | | | |
| 1916 | | | |
| 1926[2] | | | |
| 1936 | | | |
| 1946 | | | |
| 1956[3] | | | |
| 1966 | | | |
| 1976[4] | | | |
| 1986 | | | |
| 1996 | | | |
| 2006 | | | |

This approach enabled us to establish a *corpus* that included the entire trajectory of the newspapers (and therefore most of the history of the newspaper industry in Pará) and gave us an overall view of the press and a background of the way that science had been covered by the major newspapers in the State. Other authors (MARQUES DE MELO, 1987, 2004; ESTEVES, 2005; MASSARANI *et al.*, 2005) have conducted similar analyses about the coverage of scientific issues by Brazilian newspapers and in other Latin-American countries, but using a more limited timescale of weeks, months or a few years – and, in general, involving newspapers from the Southeastern region. In addition, when we analyzed two non-consecutive months, it was possible to see that scientific themes and trends that appeared at different times of the year.

We conducted a visual check of all the pages and in all sections of these newspapers, since other studies had indicated

that scientific-related stories had appeared in various sections of the press (MASSARANI; MOREIRA; MAGALHÃES, 2003; MEDEIROS; RAMALHO; MASSARANI, 2010) and none of these newspapers from Pará had or produced a specific section related to science.

For the purpose of this sampling, we selected stories that directly refer to *science, scientific, research* and r*esearcher*, not including those that were focused on non-scientific public opinion polls, electoral or price surveys or similar matters.

We used a content analysis to systemize the stories found, which Bauer and Gaskell (2002, p.190-191) define as a hybrid technique that is helpful in the process by which we try to understand the complexity of a series of texts, which often involves a statistical treatment of the same. According to Bardin (2002, p.7), a content analysis is a set of methodological instruments applied to the most varied debates, the common denominator of which is the codification of data and the development of models that enable this data to be analyzed. In particular, we used a protocol developed by the Iberoamerican Network for Monitoring and Training in Science Journalism,[3]adapted for the purpose of our study (for further information about this protocol, see Ramalho*et al*, 2012).

This protocol is quite broad, formed by eight lines of analysis. In this paper, we present the findings related to area of knowledge, the sources consulted, where the research was held and where the researchers involved were based at. We will also give emphasis to the frames,[4]which identify the focus given to the messages presented by the media (GAMSON; MODIGLIANI, 1989). We also analyzed variables of the line treatment, namely: contextualizing reported facts and references made about the controversies, benefits and science background.

[3]This Network was created in 2009 with the support of the Iberoamerican Program of Science & Technology for Development (Cyted) and is formed by institutions from ten countries: Argentina, Bolivia, Brazil, Colombia, Cuba, Ecuador, Spain, Mexico, Portugal and Venezuela. The network is coordinated by the Studies on Science Communication, Museum of Life House of Oswaldo Cruz/Fiocruz), by Luisa Massarani.

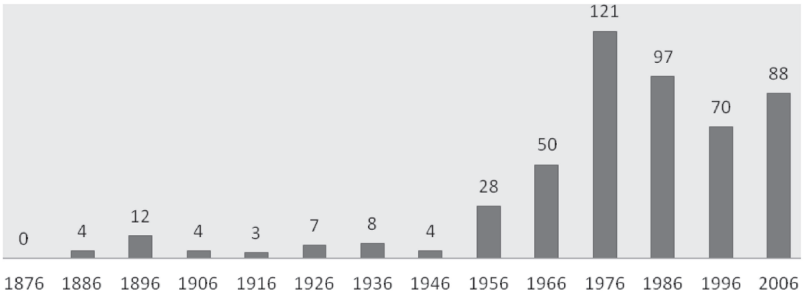
[4] Further information about frames in Massarani & Ramalho (2012).

## Findings

In total, we identified a total of 496 stories that addressed scientific issues, distributed as follows:65 were from *Folha do Norte*, 147 from *A Província do Pará* and 284 from *O Liberal*

No scientific stories were found for the year 1876 in *A Província do Pará*, the only newspaper from our sampling that was in circulation that year; the first stories identified on the subject date from 1886 (see Graph 1)[5].With the creation of *Folha do Norte* in 1896, we noted that the number of stories dealing with scientific issues in both newspapers increased. There was an increase in the number of scientific-related stories in both news papers from 1956.However, the biggest increase in science stories occurred after 1956. In fact, 91.5% of all the sample dates from this time.

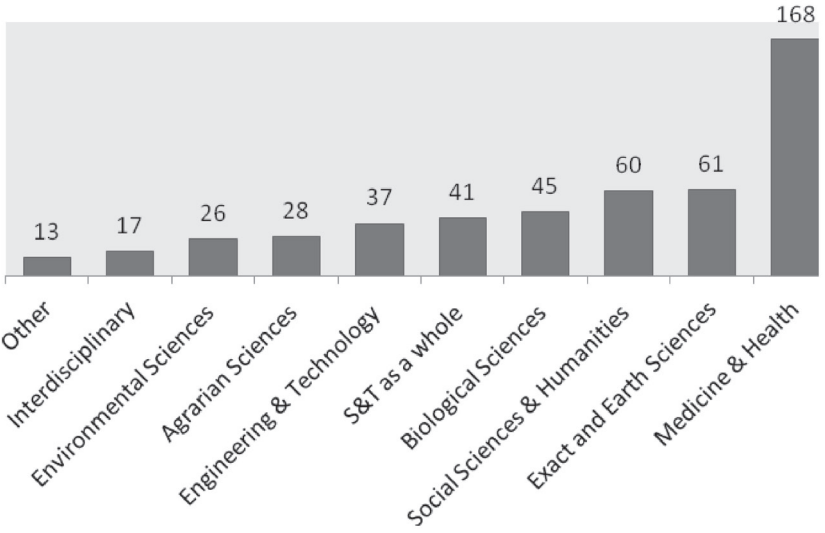
*Graph 1 – Number of stories related to science, by decade*




"Medicine & Health" was the area of knowledge most frequently cited, with 168 cases (33.8% of the *corpus*) (Graph 2).

[5] All graphs were constructed by the authors from research data.

*Graph 2 – Stories related to science, by area of knowledge*




Twenty-five diseases are mentioned in the stories related to "Health & Medicine", including several outbreaks of epidemics in the region, such as cholera, as well as other endemic diseases, such as malaria and yellow fever. The most frequent diseases mentioned were cancer (3.8% of the *corpus*) and Acquired Immune Deficiency Syndrome – Aids (3.4% of the *corpus*). Cancer was first mentioned in 1926. Stories about Aids begin to circulate in 1986 – shortly after the disease was first identified, in 1981 – and continued to represent a significant part of the *corpus* from then on.

"Exact and Earth Sciences" was the second most common area of knowledge, with 61 stories (12.2% of the *corpus*). The main subject was space research (46 stories, 9.2% of the *corpus*). This subject first emerged in 1956 and gained greater prominence over the years. On an international level, greater interest was shown in researching this subject due to the space race between the United States and the Soviet Union during the Cold War period, when various space projects were developed, including the launching of the Soviet satellite, Sputnik, the first satellite to enter Earth's orbit. The press in Pará showed even greater interest in the subject

when the Americans launched their Viking space mission in 1975, which landed on Mars in 1976, to collect soil samples for the purpose of research (NASA, 2013).

The stories related to the area of "Social Sciences and Humanities" (12.0% of the *corpus*) often dealt with issues related to archaeological research or research into indigenous populations and were published in more recent years, becoming a more regular feature of the *corpus* as from 1956. The stories included in "Biological Sciences" (9.0% of the *corpus*) deals mainly with biodiversity, biotechnology and genetics.

The stories included in the "Science & Technology as a whole" opened up areas for broader discussions about scientific matters, both on a national and international level. The stories in this area deal with issues about funding for scientific research and are related to public institutions, especially government research support agencies. During the last three decades covered by our research, the stories on scientific research focused on Brazil and dealt with issues linked to research infrastructure, the provision of grants and other financial support, as well as future investment planning.

Each story could be associated with up to a maximum of three frames, so that we identified 461 stories with at least one frame (92.9% of the *corpus*) (Graph 3).

The most frequent frames were "New research"[6]with 318 stories (64.1% of the *corpus*)."New technological development"[7] (10.2%) and "New scientific methods"[8] (8.2%), which also highlights the fact that this is something new, representing a significant portion of our *corpus*.

It the "Scientific background"[9]frame, scientific information was put in a broader context, for example, by giving an historical

[6] Focus on new research, discoveries announced, new scientific application announced or new drugs.

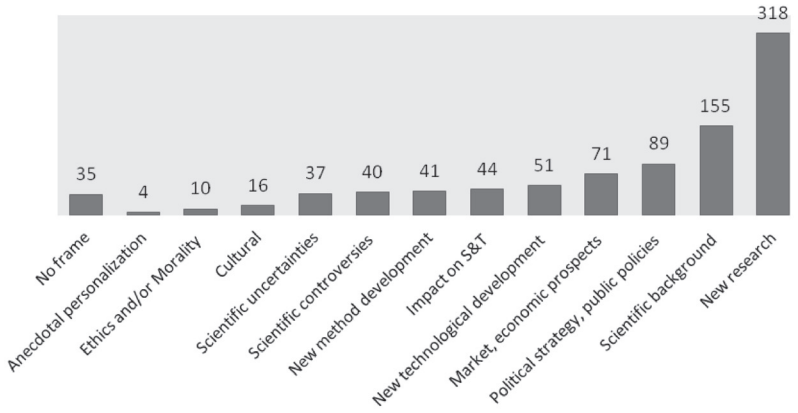
[7] Focus on new experimental developments, technical procedures or new technologies.

[8] Focus on new scientific methods, presenting details of innovative procedures, new uses of medication or treatments.

[9] Focus on general scientific background. Includes description of previous research, recap of "known" results and findings, description of potential scientific applications/uses.

synthesis to the published research. It should be highlighted that many stories that were not labelled in this frame still included scientific information put in context. This was noted in 416 stories (83.8% of the *corpus*).

*Graph 3 – Number of stories related to science, distributed by frames*




Stories classed as "Political strategy, public policies and regulations"[10](17.9% of the *corpus*), often dealt with public S&T policies and government incentives for science. Stories identified as "Market, economic prospects, patents and property rights"[11] (14.3%) involved technological innovation and their market inclusion.

10 Focus on the strategy, actions, or deliberations of political figures, presidential administrations, members of Congress, other federal or state officials or government agencies. Also focus on regulatory rules for research or oversight over research, advantages and/or disadvantages of proposed policy regimes. Includes discussion of legality of policy or research, international scientific regulatory panels or international agreements related to scientific research

11 Focus on economic matters related to scientific research, as growth/development of industry or company, reaction of investors, development of products for market, implications for domestic economy or global competitiveness. Also includes items related to ownership of research techniques or patenting of scientific–related procedures/products.

Fewer stories were framed in the "Scientific controversies"[12] (7.2% of the *corpus*) and "Scientific uncertainties" "[13] (7.4% of the *corpus*) categories. However, nearly one fifth of our sample (101 stories or 20.3% of the *corpus*) dealt with some type of controversy, either involving a strictly scientific issue or one that went beyond the field of science, such as issues about the origins of the world.

The benefits of science were observed in 303 stories (61.0% of the *corpus*) and issues related to the potential benefits of science were mentioned in 254 stories (51.2% of the *corpus*). On the other hand, less than a fifth (112 stories, 22.5% of the *corpus*) of the stories analyzed dealt with scientific risks, while only 12.7% (63 stories) mentioned the disadvantages that science can bring to society.

"Scientists, research institutions, universities" was by far the most frequent source consulted by the newspapers, with 431 stories (86.8% of the *corpus*).This was followed by "Medical doctors" (20.7% of the *corpus*) and "Members of government" (20.3%).

Brazilian research studies (added to those originating in the state of Pará, the Northern region and from around the country) represented the same quantitative level (47.7% of the total number of locations included in the survey) as foreign research papers (49.0% of the total number of locations researched) (Graph 4).

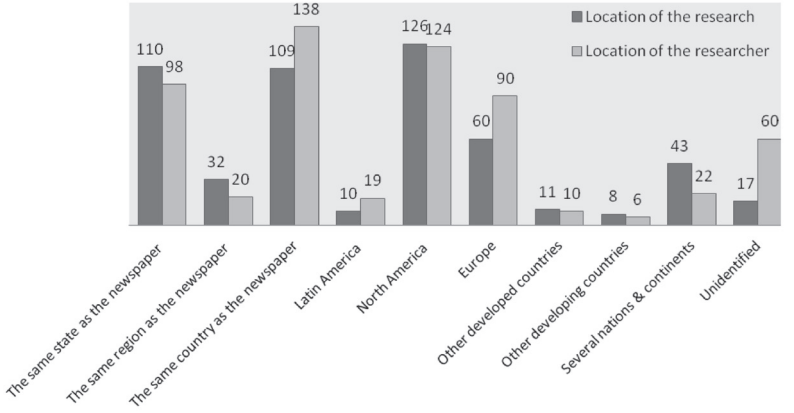
Most of the research covered by the newspapers we studied had originated in North America (25.4% of the *corpus*), mainly recognized North American institutions, such as the National Aeronautics and Space Administration (NASA) and the Universities of Princeton and Harvard.

The state of Pará came in second place as the most commonly cited location (22.1% of the *corpus*).The Federal University of Pará was the institution most often cited in our sample (25 stories, 5.0% of the *corpus*), followed by the Paraense Emilio Goeldi Museum (with 18 stories, or 3.6% of the *corpus*).

[12] Focus on scientific controversies related to science and technology. These highlight different opinions between scientists, which can be indicated by sources that oppose one another, or because these mention different opinions.

13 Focus on scientific uncertainties related to scientific and technology issues. These highlight a situation where there is still no consensus between scientists as a whole, or a certain area which should be cited or mentioned in the story.

*Graph 4 – Number of locations identified in the corpus analyzed*




Brazil was the third location most often cited in terms of research (21.9% of the *corpus*). São Paulo University was the second institution most often cited in our *corpus* (20 stories, 4.0%) of the *corpus*); the Brazilian Agricultural Research Corporation (EMBRAPA) also had a significant presence in our survey (with 19 stories, 3.8% of the *corpus*). The Federal University of Rio de Janeiro and the Brazilian National Institute of Space Research (INPE), among other Brazilian institutions, were mentioned by fewer stories.

Researchers from Brazil and North America were cited in almost equal numbers: 138 stories (27.8% of the *corpus*) and 124 stories (25.0% of the *corpus*), respectively. They were followed by those from the State of Pará (96 stories, 19.7% of the *corpus*) and others from Europe (90 stories, 18.1% of the *corpus*). Latin American scientists were mentioned by only 19 stories (3.8% of the *corpus*).

## Discussion of the findings: waves of intensification of science Communication

Bauer (1998) suggests that there are peaks in science Communication in developed countries, with more intense cycles

occurring over the course of history. Massarani and Moreira (2012) applied this to the Brazilian scenario and also noted similar results, highlighting some of the special characteristics related to specific moments in the country's history. According to these authors, the 1920s was one of the periods in Brazilian history when there was an intensification of science Communication. However, according to the newspapers we examined from the State of Pará, few science stories were published in 1926 (1.4% of the *corpus*). Even so, this data should be treated with some caution, since our analysis of *A Província do Pará* for that year only covered the month of January.

Massarani states that science Communication activities in 1920 prioritized basic science rather than applied science, being "the main reason for this was the fact that scientists wanted to create conditions to develop basic research in the country" (MASSARANI, 1998, p.131). During this period, scientists in Rio de Janeiro were deeply committed in science Communication, since they perceived that science Communication was a tool for helping raise awareness within society and among decision-makers, in an effort to consolidate science in Brazil. We saw no repercussions of such movement in the Pará newspapers during the period analyzed; further studies should therefore be conducted to investigate whether or not this movement affected Pará in any way, even if only at a later date.

On the other hand, between 1956 and 1976, we noted a significant increase in the number of science stories published in the newspapers analyzed. According to Massarani and Moreira (2012), science at that time was designed to help overcome the lack of development in Brazil and was further encouraged by the creation of several government agencies, such as the National Counsel of Technological and Scientific Development (CNPq) and the Coordination of Superior Level Staff Improvement (CAPES), both founded in 1951, as well as the consolidation of federal universities. On a regional level, we should highlight the creation of the National Institute of Amazonian Research (INPA) in 1952, dedicated to environmental and human issues related to the

Amazon region, and the Federal University of Pará itself - UFPA (1957), a source we frequently used during the course of our study.

Most of the stories included in our *corpus* were published in 1976, even though only two or three of the newspapers we analyzed were in circulation at the time (*Folha* closed down in 1974). According to Massarani and Moreira (2012), during the period that began in 1970 and lasted through until the end of the 1980s, journalists played a leading role in science Communication. This was also during a period when greater interest was shown by newspapers in covering science matters on a national level, which led to the creation of the Brazilian Association of Scientific Journalism in 1977. In addition, the José Reis Science Communication Award was created in 1978, by CNPq.

From the 1980s onwards, a reduced number of science stories were published in the newspapers we investigated, even though these still represented a high number in relation to the first few years analyzed. This, also in spite of the fact that the 1980s were notable for the surge and growth of special sections dedicated to scientific issues, which were generally being published in newspapers around Brazil (MASSARANI; MOREIRA 2012).

The year 2006 deserves special mention in our *corpus*, even though *O Liberal* was the only newspaper still in circulation at the time, coming third in the number of scientific works found (17.7% of the *corpus*), expressing the increase of the presence of science stories in our survey.

## Discussion of the research findings: the characteristics of the stories and their narratives

The area of knowledge more often represented in our *corpus* was "Medicine & Health" (33.8% of the *corpus*), which follows the same trend observed in other countries (GÖPFERT, 1996; GASSHER, 2007; VERHOEVEN, 2008; ALMEIDA *et al*, 2011) and in Brazil (ESTEVES, 2005; RAMALHO, POLINO, MASSARANI, 2012). According to Epstein (1995), medicine is

an area that is more open to public debate. Along these same lines, the science editor of *O Globo*, Ana Lucia Azevedo, observes[14] that the public is more familiar with matters related to medicine, which also means that newspapers concentrate more on these issues. This can help explain why health issues are dealt with on a more regular basis by the press, a fact also noted from our own survey.

Since we were working with daily newspapers, we fully expected to find that scientific discoveries would have special prominence in our survey. Thus, we noted that 72.3% of our *corpus* contained at least one of the frames related to new scientific developments ("New research," "New technological developments" and "New scientific methods").A similar trend was noted by Ramalho, Polino and Massarani (2012) in TV news.

Caldas (2010) defends the idea that scientific Communication should be contextualized so as to ensure that scientific knowledge becomes more accessible. In the case of our own *corpus*, we noted that the newspapers made a point of putting such information into context, with a significant percentage of stories (83.8%) containing some type of contextualization about scientific subjects. Similarly, we noted that the "Scientific background" frame was the second most frequently published subject in our survey, representing nearly a third of all stories.

In general terms, the newspapers we analyzed emphasized the positive aspects of science. The benefits and promise of science were mentioned in over half of the *corpus* (61.0% and 51.2% respectively); its drawbacks and risks, in just over one-fifth of the sample. There was relatively little mention of the controversies and uncertainties of science. A fifth of the stories referred to scientific controversies and those that go beyond the field of science; the "Scientific controversies" and "Scientific uncertainties" frames each represented almost 7.0% of the *corpus*.

This trend was also observed by Massarani *et al* (2005), Amorim and Massarani (2008) and Gregory and Miller (2001, p.66), for whom "the mass media representation of science is overwhelmingly positive". This approach suggests that newspapers

[14] In an interview given to the team working on the study published by Almeida *et. al* (2011).

provide a limited debate about scientific matters, in spite of the fact that Nisbet *et al* (2003) state that there is a link between scientific media coverage and the controversies reported and/or generated by them. For other authors, the mass media have played an integral and interactive role within scientific news and discussions, being a disseminator and an actor in science Communication.

## Discussion of the findings: scientific research actors and locations

"Scientists, research institutions and universities" were mentioned in most of these stories (86.8% of the *corpus*), following the trend noted by Almeida *et al* (2011), in newspapers in Latin America, and by Ramalho *et al* (2012), in the TV news *Jornal Nacional*. These figures suggest that scientists are valued as legitimate social actors to speak about science.

Another important question is that studies conducted in Brazil (including those in Pará) were present in quantitative levels similar to those originating from abroad, which is exemplified by the strong presence of nationally recognized institutions. Stories on scientific matters and researchers from Pará were also well represented in our survey. Scientific stories from Pará date from the 19th century and are often related to the Paraense Emílio Goeldi Museum and to UFPA, which were a special feature in the newspapers analyzed, as the most important source of stories in our *corpus*.

## Final considerations

In this study, we focused on how the press in Pará had covered scientific matters over a period of 130 years. In particular, we focused on the three newspapers which had the longest running circulation in the State, which represent (as *O Liberal* still represents) an important part in the daily lives of the people of Pará.

Our data show that science has been a recurring featuring in the press in Pará since the 19th century. This initially began with

a modest presence, before the subject gathered force during the 20th century, especially from the 1950s onwards.

The science stories we examined very often included issues related to health research. We noted that there was an effort to contextualize scientific facts and to include scientific background information, which is an important feature to promote these issues within a broader context. However, these emphasized the positive side of science, with few discussions about the controversies or uncertainties of science – which are part of the scientific construction process per se. There was little mention about the risks or drawbacks of science, which suggests that this journalistic approach was little challenged by the newspapers themselves. However, such limiting factors were not restricted to the media in Pará; in fact, this reflects a trend observed in science journalism in general.

Scientists represented the most common source of information, which shows the level of credibility given to these social actors by the local media. Although there was a slight predominance of foreign issues – mainly from the United States – we noted that a good deal of attention was given to science produced on a local and national level. We consider this to be an important characteristic, since it introduces scientific matters into the everyday reality of the country and the region.

However, our survey presents certain limitations, mainly because we decided to conduct a long-term analysis. The methodology we used made it possible to visualize science coverage in the press in Pará in a longitudinal form. On the other hand, this approach did not allow us to identify specific scientific issues, which may possibly have been left out of our survey. Thus, we would like to emphasize the importance of conducting more in-depth studies into other issues not covered by this research.

Nonetheless, we believe that our study – characterized as an exploratory study about the media coverage of scientific issues by the press in the state of Pará, over a period of 130 years – has brought to light aspects that enable us to form a picture of the still little-known history of science Communication in the state of

Pará and in Amazonas, showing how media coverage of scientific matters were consolidated in the region.

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