WATER CRISIS IN SÃO PAULO: NEWS COVERAGE, PUBLIC PERCEPTION AND THE RIGHT TO INFORMATION

LAURA ALVES MARTIRANI¹ ISABELA KOJIN PERES²

Social communication and public awareness

The science of public or publicistic communication (*publizistikwissenschaft*), which emerged in Germany at the start of the 19th century, was redefined by Walter Hagemannⁱ as "research into the way the media expresses public awareness" (cited in RÜDIGER, 2012, p. 114). This concept emphasizes the close relationship between social communication and public perception, given that, within the public sphere, it is mass media that produces content of which we are aware.

Based on this premise, the aim of this article is to study the process of constructing information in the public sphere concerning the issue of water availability in the São Paulo region. This research was carried out using the Google News tool and involved searches for articles containing the following keywords: Sistema Cantareira [Cantareira System – a water supply system in the state of São Paulo], estiagem [drought], água [water], falta de água [water shortage], Sabesp [São Paulo Estate Sanitation Company] and seca [drought], published by different media outlets from the beginning of the drought in late 2013 to early 2015.

The Google News tool identified groups of articles that have similar titles or cover similar topics, published around the same time. It also provided information on how many times articles were accessed and their date of publication. In this way, it enabled us to explore groups of inter-related publications and investigate possible differences in approach, providing a broad overview of the content of these publications. We further developed our research using the searches, contents and sources contained in the articles. In this way, we identified the main points of interest so as to study the information that circulated through different media outlets on the water crisis. According to Bourdieu,

^{1.} Associate Professor at the Department of Economics, Administration and Sociology, Luiz de Queiroz College of Agriculture (ESALQ) and the Inter-unit Postgraduate Program in Applied Ecology run by CENA (Centre for Nuclear Energy in Agriculture) and ESALQ/USP (University of São Paulo), email: lauramar@usp.br

^{2.} Environmental Management Graduate and Master of Science on the Inter-unit Postgraduate Program in Applied Ecology run by CENA and ESALQ/USP, email: ikperes@yahoo.com.br

"journalistic products are much more homogeneous than we believe them to be.(...) When comparing the covers of French weeklies two weeks apart, headlines are found to be more or less the same" (1977, pp. 30-31). Bourdieu calls this mechanism circular circulation: "the fact that many journalists, who, in addition to sharing many similar characteristics (...), read each other's work (...) leads to a closure" (op. cit. pp. 34-35). The concept of "structured orientation" proposed by Robert Hackett complements this idea, given it seeks to describe "the various types of systematic orientation and relationships which unavoidably structure news accounts" (HACKETT, 1993 cited in PORTO, 2002, p. 2).

A culture of abundance, environmental negligence and the water crisis

Despite being one of the world's richest countries in terms of biodiversity and water reserves, the distribution of water within Brazil is rather uneven. The state of São Paulo, where 22% of the countr's population live, is home to just 1.6% of the surface water available in the country. This is equivalent to 2.209 m³ of water per resident per year, whereas the average amount of water available in Brazil is 35,000 m³ per resident per year (CONSULTORIA TÉCNICA [Technical Consultation], 2011, p.1).

The drought which began in 2013 and lasted until February 2015 was considered to be the worst in 71 years and left the Southeast region of the country on the verge of water supply collapse (PEGORIM, 2014). According to an article published in October 2014 by the newspaper O Estado de São Paulo, the drought had already hit 70 cities in the state, including São Paulo, Campinas and Americana (TOMAZELA 2014). The municipality of Itu was much more severely affected d rationing left some neighborhoods without water for up to 55 consecutive days (CAPRIGLIONE, 2014).

In recent decades, issues such as population growth and rapid and unplanned urbanization along with the expansion of agricultural areas and the intensification of industrial activities have resulted in environmental degradation, particularly in terms of water quality and quantity. Some of the reasons for this are the clearing of vegetation cover, occupation of watershed areas, a greater demand for water and an increase in the volume of effluents discharged into water bodies. According to a study by the SOS Mata Atlântica Foundation, of the three thousand kilometers of watercourses in São Paulo, most are canalized and approximately 95% are polluted (G1, 2015).

As well as issues relating to population growth and the low availability and poor quality of water in the São Paulo region, there has been an increase in *per capita* consumption. According to Leite (2014), "ten years ago, a resident of Greater São Paulo used an average of 150 liters of water per day. Today, consumption stands at 175 liters, 65 liters above the amount recommended by WHO World Health Organization]".

In a study on environmental perception conducted as part of an undergraduate research project involving 50 people (25 students and 25 residents of Piracicaba), Peres and Martirani (2009) identified a lack of specific knowledge on: the sources of water consumed by the population, the demand for and availability of water, the environmental impacts of domestic use, the types of pollutants found in water, the state of rivers, as well as a lack of knowledge of public policies.

Gabriela de Paula produced a doctoral thesis entitled "Water: perceptions and engagement. A case study in the Metropolitan Region of Campinas" (2002), where she argues that the level of information on this topic is very low. According to Paula,

It is important to convert the lack of information on this topic into knowledge and engagement, because this is the underlying reason for the lack of public awareness regarding the scarcity of water resources and the lack of responsibility seen in the attitudes of each citizen, companies, organizations and administrative bodies towards this issue, particularly in terms of caution (p. ix).

In an article published by the magazine *Caros Amigos*, the public prosecutor Eduardo Santos said that "we must develop a sense of urgency in terms of the environment and water" (cited in SECCO, 2014, p. 30).

As Brazilians, we believe that water is an abundant resource, that it is something that will never run out. This is a belief held by everyone from politicians and businesspeople to ordinary citizens. Perhaps the time has come to work on deconstructing this belief. In the meantime, we see people in power talking, but not acting (ibid.).

The false perception that water is abundant, together with environmental degradation and a consumerist attitude have created a climate of widespread misinformation, negligence and inaction around the issues of water conservation and management. This is reflected in a culture of waste and neglect in terms of water consumption, conservation and management, as well as a lack of investment in more efficient uses and in protection of water.

The inclusion of the crisis on the media's agenda, news framing and public perception

With the onset of the drought and the water crisis that ravaged the Southeast region of Brazil – considered to be the worst in the last 71 years (PEGORIM, 2014) – issues of public water supply and availability, particularly in the Metropolitan Region of São Paulo (RMSP), became a priority on the agendas of the country's main newspapers and news programs. This prominent coverage continued throughout the entire crisis, involving a wide range of communication outlets. In addition to editorials and special reports, such as multimedia products, opinion polls, special issues and videos, this also led to the emergence of mobilization and social communication groups. They included the following: Coletivo de Luta pela Água [Fight for Water Collective] for whom "Water is a Human Right! Not a commodity"; Aliança pela Água [Water Alliance] network, "a civil society coalition whose aim is to contribute to building water security in São Paulo" (2014); Lute pela Água [Fight for Water]; Assembleia Estadual da Água [State Water Assembly] and Conta D'Agua [Water Bill] - "a communications collective bringing together various independent media outlets and other movements and organizations so as to provide an alternative narrative to the traditional media" (LONGO, 2015). The involvement of the Movimento dos Trabalhadores Sem Teto [Homeless Workers' Movement] (MTST) must also be highlighted with regard to their activities in unison with these groups.

The way the media brought this issue onto their agenda meant that the growing public awareness of the seriousness of the situation was such and occurred so quickly that a survey carried out by the Datafolha Institute found that:

the majority [of the adult population in the city of São Paulo] (71%) are well informed about the issue [lack of water in SP], 25% are fairly informed and 4% are badly informed. Compared to a survey conducted in August of that year, the number of well-informed people on this topic increased from 60% to 71% (DATAFOLHA, 2014).

As Niklas Luhmann observed, "whatever we know about a society, or indeed about the world in which we live, we know through the mass media" (LUHMANN, 2000, cited in SERRA, 2007, p. 160).

In this way, the media's agenda of disseminating the water crisis and the prominence in the social sphere of issues involving water supply led to changes in the population's habits. According to the survey mentioned above, 98% of São Paulo residents began to turn off their taps when washing up, 97% when brushing their teeth, 95% take shorter showers, 86% stopped cleaning pavements and yards, whilst 60% stopped washing their cars (DATAFOLHA, 2014). The survey also revealed that "88% [of São Paulo residents] believed the city was at serious risk of suffering long periods without water in the coming months" and that:

34% of São Paulo residents claimed they were stocking up on water in order to avoid supply problems in their homes. (...) However, two out of three (66%) residents admitted they intended to start storing water from that moment onward (DATAFOLHA, 2014).

A few months later, in early 2015, there was an outbreak of dengue fever in the country. The state of São Paulo saw the highest number of cases in Brazil. In an article published by *Agência Brasil*, the Minister of Health, Arthur Chioro, stated that the main factors considered responsible for the huge increase in the number of dengue cases were climate change and inadequate water storage in the home (MACIEL, 2015).

Mattes reported in the magazine Caros Amigos that the number of permits for opening artesian wells increased by 83% in the second half of 2014 (2014, p. 4).

In an interview with TV Estadão, a 60-year-old teacher from the city of São Paulo stated:

We can't predict what is going to happen now, but it's going to be a disaster, it really is, don't you think? The way things are now, with this unbearable heat, any rain that falls just evaporates. Do you think that the amount of water in the Cantareira system and in the other reservoirs is going to increase? It isn't. It really worries me. There's nowhere else for us to get water from" (TV Estadão, 2015).

If the crisis continues, "I'll go back to my city. It's in the Northeast but there's still water there", a resident of the Paraisópolis favela told *TV Estadão* (2015). "As I'm from Amazonas, I'll go back to my home state", explained another interviewee. "I may be forced to move. (...) You can't live without water!" stated a third (TV Estadão, 2015).

According to Peter Berger and Thomas Luckmann, social communication helps to create a minimum level of common, shared understanding of social reality (cited in SOUSA, 2006, p. 527). Altheide and Snow argue that "social communication behaves as an agent able to participate, on the one hand, in the formation and successive reconstruction of social reality and, on the other, in the construction of frameworks for individual action" (cited in SOUSA, 2006, p. 527).

The "framing effect" hypothesis, developed in the 1970s, states that there is a tendency for recipients and the media to think in a similar way in the long-term (MAR-TINO, 2009, p. 43). The public uses the frames employed by the media and is not aware of possible distortion effects because they are constructed and shared simultaneously. However, it is important to consider, as Mauro Porto notes, "the complex and contradictory nature of the media's messages" (2002, p. 19). Indeed, this is all the more essential in this era of digital and electronic communication and of the expansion, democratization, diversification, pluralization and the dynamicism of systems used to produce, transmit (including sharing) and receive messages.

Porto (2002) proposes two main types of frames for journalistic material: news frames and interpretive frames.

According to this author, news frames are "patterns of presentation, selection and emphasis used by journalists to organize their reports". This category includes "episodic" frames which emphasize events (ib., p. 15); "human interest" frames which "focus on individuals and result in the personalization of media coverage" (ib., p. 12); and "thematic" frames which "highlight more general analytical levels or contexts, going beyond 'facts" (ib., p. 10).

By contrast, "interpretive frames" are:

patterns of interpretation that encourage a particular assessment of topics and/or political events, including definitions of problems, the assessment of causes and liabilities and the treatment of recommendations. These interpretations are promoted by various social actors that include government representatives, political parties, social movements, unions and professional associations. (PORTO, 2002, p. 15).

The main difference between these two types of frames relates to their source: in general, news frames are "created by journalists, whereas interpretive frames are developed by political and social actors (...). The rules of objectivity and impartiality tend to discourage journalists from presenting interpretations in news reports" (ib., 15-16), so they tend to quote "other actors to promote particular interpretations of the political reality" (ibid.).

In the coverage of the water crisis, we were able to observe that major media outlets, such as TV Globo's news program Jornal Nacional, adopted "episodic", "human interest"

and "thematic" news frames. The "episodic" approach prioritized weather forecasts and the monitoring of the levels of the Cantareira System's reservoirs. This perspective is similar to the "horse race" frame used in journalistic coverage of elections to assess the performance of candidates in the polls (ibid.). In this case, what was similar was that every change in the level of reservoirs, even if only by a millimeter, was reported. This frame favors a perception process that attributes greater responsibility for the water crisis to weather events than to social actors. José Augusto Valente noted that "the press (...) outsourced the responsibility for the low levels in the reservoirs to God" (VALENTE, 2014). "Human interest" approaches addressed the issue of the lack of water, initiatives to save and reuse water and collect rainwater from the consumers' point of view. "Thematic frames", on the other hand, focused on topics related to the weather, supply infrastructure, sewage system problems, urban expansion, illegal occupations and water losses, among other issues.

By contrast, more independent media and those representing social movements adopted interpretive frames. By involving public prosecutors, NGOs, researchers and experts, these media outlets adopted critical stances toward the government of São Paulo because of its lack of planning, investment and transparency and also because the state government did not adopt a clear and explicit rationing policy and finally because, in addition to negligence, it denied the crisis during 2014, a period which coincided with Geraldo Alckmin's re-election campaign as governor of the state of São Paulo.

According to an article published online by the news outlet *Rede Brasil Atual* (RBA), in a meeting organized by São Paulo City Council's Environmental Committee held in February 2015, the Green Party councilor Gilberto Natalini stated that "the São Paulo government was in part responsible. They couldn't dance to a different tune" (GOMES, 2015).

According to another article published by RBA:

the lack of effective measures to contain and mitigate the effects of water scarcity, as well as the lack of planning and prevention for at least ten years, together with the state government's refusal to acknowledge and be transparent about the crisis throughout 2014 may be considered by the courts as a state responsibility crime (OLIVEIRA & GOMES, 2015).

In the same article, João Alberto Amorim, International Law professor at the Federal University of São Paulo (Unifesp), pointed out that the report *Cenários* Ambientais 2020 [Environmental Scenarios 2020] released by the Water Resources State Department in 2009 had already highlighted the severity of the water situation for 2015 (ibid.). Basing himself on a law linked to the protection of public morality (Law n⁻ 1079, 1950), he noted that:

The inaction of the São Paulo state government and Sabesp\s administration (...) may constitute a breach of the responsibility law, since inaction can be defined as and be one of the basis for the so-called

state criminal liability as perpetrated by state governors and state secretaries, among others (ibid.).

According to the Unicamp [University of Campinas, State of São Paulo] professor Antonio Carlos Zuffo, quoted in an article published by the magazine *Caros Amigos*, the 2004 Upper Tietê Basin Plan already pointed out that the system was operating at its limits (SECCO, 2014, p. 19).

For Daniel Buarque, a journalist specializing in matters related to Brazil's international image, the international media also blamed the government: an article in the US newspaper Los Angeles Times read "officials downplay water crisis as residents suffer (...) poor planning and political manipulation by authorities have exacerbated the crisis". The December 2014 issue of *The Economist* stated that the "government responded late to a drought in Brazil's industrial heartland. (...) Unless the rains are unusually bountiful, a disaster looms in 2015" (BUARQUE, 2015).

Even though the state governor was re-elected with 57.31% of the votes in the first round, a Datafolha survey (2014) found that:

66% of residents say that the state government is largely to blame for the threat of water shortages in São Paulo, 23% believe that it is slightly to blame and only 10% believe that it is not to blame. 1% did not give their opinion on the subject (DATAFOLHA, 2014).

The company responsible for water supply and sanitation in São Paulo, Sabesp, is managed under a mixed economy model in which 50.3% of shares are controlled by the government of the state of São Paulo and the remainder, 49.7%, is traded on the São Paulo and New York Stock Exchanges (MATTES, 2014, p. 5). Júlio Cerqueira César, an engineer and retired professor at the School of Engineering of the University of São Paulo was quoted in an article published by the website *Viomundo*:

Until the end of the 1980s, Sabesp (...) was managed and operated by sanitary engineers who knew that its objective was public health. (...) In the 1990s, Sabesp adopted the Neoliberal model and began to pursue profits at any cost, (...) it dismissed the sanitary engineers and lawyers and economists took charge. (...) In 2000, it listed its shares on the New York Stock Exchange. Ten years later (...) Sabesp's shares saw the largest increases in value on the New York Stock Exchange for the whole decade (in LEMES, 2014, p. 6).

According to a multimedia special edition by the newspaper *Folha de São Paulo* entitled "*Tudo sobre – Crise da Água*" [Everything about the Water Crisis] (LEITE, 2014), between 2008 and 2013, Sabesp invested 37% less than the amount earmarked for infrastructure works.

As well as the lack of investment in infrastructure works, such as expanding the collection and sanitation network, and dealing with water losses, Sabesp was criticized

by social organizations, including *Aliança pela Água* network, for offering discounts to the largest water consumers through fixed demand contracts, and therefore, not encouraging these major consumers to adopt measures to reduce their consumption.

According to the *El País* newspaper, after Sabesp received a request, based on the Law on Access to Information, from a municipal Parliamentary Inquiry Committee investigating the company's contracts with the City Hall, it failed to provide the names of its 523 biggest customers and did not disclose the amount they are charged for each cubic liter of water. Sabesp only revealed the total volume consumed by customers on this kind of contract: an average of over 2.25 million m³ per month, representing "3.88% of all the water billed by Sabesp in the municipality of São Paulo" (MARTÍN, 2015).

As a form of protest, and in support of the *Aliança pela Água* network, the NGO Greenpeace Brazil launched the "Água para quem?" campaign [Water for whom?] with the following call to arms:

São Paulo is going through the worst water crisis in its history and water shortage is affecting millions. Despite this, the governor, Geraldo Alckmin, and Sabesp are offering discounts to major consumers and rewarding wastefulness: the more they consume, the less they pay. These discounts must stop! (GREENPEACE BRASIL, n.d.).

The Marcha pela Água [March for Water], organized by the Homeless Workers' Movement (MSTS) brought together fifteen thousand people. It criticized

the lack of transparency in the information disseminated by Sabesp and the state government with regard to the actual situation of the reservoirs and the use of water from the Billings Reservoir. We condemn the punishment of the poorest section of the population who has already been subjected to a water rotation scheme and rationing. We are totally against rate increases and call for the termination of fixed demand contracts for large companies (MTST, 2015).

According to the organizers, "the government has still not officially recognized the selective rationing that is taking place, despite there being countless cases of regions already experiencing the problem" (MTST, 2015). A survey by the Datafolha Research Institute found that in October 2014:

Among the poorest residents, with monthly family incomes of up to 5 minimum salaries, 41% had recently experienced disruptions to their water supplies at home for five or more days. For those on middle incomes, earning between 5 and 10 minimum salaries, this number falls to 36%, whereas for the richest residents, with family incomes equivalent to over 10 minimum salaries, this figure was only 20% (DATAFOLHA, 2014).

As part of the contingency plan to tackle the crisis and reduce water consumption and losses, Sabesp reduced the pressure in the distribution network, resulting in cuts in the water supply which made it impossible for residents to replenish water tanks in their homes. The plan was executed without the population being informed as to the place and time of water shortages (MATTES, 2014, p. 5). This showed complete disregard for citizens, whose right to be informed and plan for the event was breached. According to Carlos Thadeu de Oliveira from the Brazilian Institute for Consumer Protection (IDEC), this action also breached the Consumer Protection Code, the Federal Legislation on Basic Sanitation and the right of citizens to preserve their health and safety (in: A NEGAÇÃO DA CRISE, 2015).

In "A negação da crise" [Denying the crisis] (2015), an online documentary sponsored by NGOs and environmental organizations – the governor's attitude was also framed as negligent, because he did not adopt an explicit rationing policy and left the population at the mercy of the unlikely return of rainfall. "There is no rationing (...) but there are water restrictions", stated Geraldo Alckmin in a television news report reproduced in the documentary. Francisco Lahóz, the executive secretary of the Inter-Municipal Consortium for the Piracicaba, Capivari and Jundiaí River Basins (Consórcio PCJ), stated that "since December 2013, a reduction in consumption of up to 50% had been recommended in a document sent to the Brazilian National Water Agency (ANA), the São Paulo Department of Water and Electricity (DAEE), the Water Basins' Committee and the state government" (ibid.).

Partial results of an on-going online poll on the UOL Noticias website (ENQUETE, 2014) indicate that of the 200,188 votes cast, 85.02% are in favor of rationing, whereas only 16.08% are against (Figure 1).



Figure 1: UOL survey. Source: ENQUETE, 2014.

The makers of "A negação da Crise" (2015) found that, after the elections in October 2014, the water withdrawn from the Cantareira System reduced significantly. In January 2015, however, the government began to consider the possibility of a weekly water rationing scheme, involving five days without water and two days with water.

The documentary also features a "leaked" recording, in which the then CEO of Sabesp, Dilma Pena, acknowledges, behind closed doors, that "Sabesp hasn't been in the media much. I think it's a mistake. We should have been more present in the media, but we had to follow orders, we have superiors" (in: FERRAZ, 2015).

"How can a company that is not publicly controlled and for profit manage a resource that is essential to life?" asks Gabriel Kogan in a piece published by the group *Conta D'Água* (PAGANO, 2014).

In March 2015 at the 28th Session of the UN Human Rights Council, the international NGO Conectas Human Rights, in support of Aliança pela Água, denounced the denial of the water management crisis, the lack of transparency of the São Paulo government and the risks associated with poor water quality, factors which constituted a threat to the human right of access to water and sanitation (ENTIDADES, 2015).

Social communication and citizenship: the right to information

In 2010, access to water and sanitation was recognized by the UN as a human right. Article 8 of Resolution n. 64/292 highlights the importance of States in ensuring transparency in the supply of water and environmental sanitation, with popular participation, whilst paying special attention to vulnerable and marginalized groups (UNITED NATIONS, 2010). It prescribed that accountability and the free circulation of information are essential, as is civic engagement in the necessary decision-making processes in order to ensure good water governance.

The "Carta São Paulo sobre a gestão hídrica em situação de escassez" [São Paulo Charter on water management during shortage periods], drafted during a seminar entitled "Crise Hídrica: alternativas e soluções" [Water Crisis: alternatives and solutions] (PROCURADO-RIA REGIONAL DA REPÚBLICA, 2015) considers that "it is the responsibility of all segments of society, in particular water managers, to overcome the water crisis". However, it also points out that "without comprehensive and clear information on water, achieved through real transparency, society will not be able to learn about the issue and respond to the challenges brought about by the water crisis" (Ibid.). The document's signatories demand:

Guarantee in access to clear, understandable and transparent information, as an instrument of social control over water resource policies, including updated historical data on rainfall and river levels. All bodies and organizations directly or indirectly involved in public administration, together with all organizations granted concessions, must be required to immediately make information on water resources - currently illegally classified as confidential - available via the Internet (PROCURADORIA REGIONAL DA REEPÚBLICA, 2015, p. 7, our emphasis)

According to Paulo Affonso Machado, a law specialist, "the quality and quantity of information directly affect the type and intensity of participation in social and political life" (2006, p. 34). The author adds, "being ill-informed does not prevent people from participating, but the quality of their participation will be affected. Ignorance breeds apathy and inertia in those who would be entitled to participate" (ibid.).

The fundamental right of access to public interest information is guaranteed in article 5, paragraphs XIV and XXXI of the Brazilian Federal Constitution (BRAZIL, 1988) as an essential condition for democracy. As Machado argues, "without appropriate information there is no democracy and there is no rule of law (...). Democracy originates from and lives off the possibility of being informed" (2006, pp. 49-50).

The duty to inform also entails ensuring certain characteristics of environmental information. It should be "(...) accurate, continuous, timely and complete" (MACHADO, 2006, p. 91):

"(...) truthfulness precludes the manipulation of information, misconduct, bad faith and negligence, as we know that, although formal truth may be preserved, substantial truth could be concealed and, in this way, the right to information becomes merely a guise, a mere formality" (ZAFFORE cited in MACHADO, 2006, p. 52).

The Law on Access to Information of 18 November 2011:

Aims to ensure the fundamental right of access to public interest information and foster the development of a culture of transparency in public administration by establishing the obligation to provide updated, authentic and complete primary data and information produced or collected by public bodies and organizations or by private individuals that are linked to public bodies and organizations; information about the activities of bodies and organizations, including information on public policies, organization and services; information concerning public assets, the use of public resources and public tenders and contracts; and information about public policies, inspections, audits, accountability and rendering of accounts (BRAZIL, 2011).

With the onset of the crisis, the communication network formed by the different media outlets triggered a process of information about questions linked to supply issues, constructed and shared in an increasingly complete and in-depth manner. The opportunities for social communication provided by new communication technologies and social media, together with the social mobilization movements linked to water issues, were responsible for a process of information, complementary to that provided by the major media outlets. This critical process asserted the right to information and participation, among other rights and demands. The Minimum Agenda produced by the *Aliança pela Água* network (2015) and the *Luta pela Água*'s Manifesto (2015), alongside various proposals related to rationing, planning, infrastructure works and environmental recovery,

called for greater involvement of society and emphasized the need for more information, dialogue and greater transparency in the management of the water crisis, on the part of the public authorities and the water supply company. Among the ten actions considered urgent, the Minimum Agenda prepared by the *Aliança pela Água* (2015) proposed:

that state and municipal governments, as well as water companies, expand their information campaigns and adopt clearer and more frequent transmission of messages on the importance of reducing water consumption, rainwater harvesting and safe water storage in emergencies" (ALIANÇA pela água, 2015).

In item n. 5, Transparency in Management, it also proposed:

that the state government disseminates information and ensures access to the population regarding when and where are the greatest threats in terms of water shortages ("unofficial rationing") and that the state government and Sabesp work with municipalities in an integrated and coordinated manner. They should also publish an emergency action plan, demonstrating how they will guarantee water supply if the drought worsens" (ibid.).

If, at the start of the crisis, the responsibility for the water shortage in São Paulo was attributed to climate change and wastefulness, with the process of bringing this issue onto the media's agenda and its appropriation by the public sphere, together with the actions of social movements, a shift was observed. This meant that gradually, more and more responsibility was attributed to the public authorities, the state government and the water provider company, with an emphasis on the lack of transparency of the decisions and measures taken.

Social communication and the issue of water governance

According to article 1 of Law n. 9433/97, establishing the National Water Resources Policy (BRAZIL, 1997), water is a public good, a limited natural resource which has economic value. Thus, water management must enable its multiple use. However, growing pressure on water resources has led to conflicts between different users, especially during shortage periods.

In the case of the Cantareira System concession, there is an old conflict between Sabesp, which supplies the Metropolitan Region of São Paulo (MRSP), and users the Piracicaba, Capivari and Jundiaí river basins region (PCJ). The need for Sabesp to look for other sources to supply the MRSP population was taken into account when the concession was agreed in 2004, given that during the renewal process the PCJ Committees demanded an increase in flow from 5 to 12 cubic meters of water per second (PCJ, 2015).

Furthermore, deforestation of vegetation covering water basins, particularly in watershed areas, reduces the quantity and quality of the available water resources, making

the required drinking water treatment be up to one hundred times more expensive (TUNDISI & TUNDISI, 2010).

The lack of vegetation cover also has an impact on the local microclimate, alters the rainfall cycle and evapotranspiration processes, hinders groundwater recharge, causes silting in rivers, increases soil erosion and loss and also harms the local fauna and biodiversity.

Satellite mapping carried out by SOS Mata Atlântica Foundation, in partnership with the National Institute for Space Research (Inpe), found that "only 21.5% of the area comprising the Cantareira System has vegetation cover. Of the five thousand kilometers of rivers that make up the system, there is forest only along 1.190 kilometers (GOMES, 2015).

However, in 2012, two years before the crisis worsened, changes to the Brazilian Forestry Code, Law n. 12,651 (BRAZIL, 2012), were approved after intense and controversial debates. These changes reduced the areas with vegetation cover that needed to be restored, such as riparian forests and spring areas. In January 2015, Law N. 15.684 was passed with much criticism. It addresses the implementation of the Forestry Code in the state of São Paulo through the Environmental Legalization Program (PRA) for rural properties and real estate (SÃO PAULO, 2015). However, the implications of this change for public policy and environmental conservation and, as a result, for the quality and quantity of water were not addressed by media outlets.

As noted by Hackett, "media content can play an important political and ideological role not only when 'objectivity' and/or 'impartiality' are present or lacking, but also when this content is produced based on limited ideological sources" (HACKETT, 1993 cited in PORTO, 2002, p. 2).

Final considerations

This article sought to demonstrate how issues of public supply and the conservation and management of water resources were little known to the population and neglected by media outlets and the government.

The crisis led to these issues being brought onto the public agenda and caused a cognitive and perceptual turnaround of the population in terms of the issue of water availability in São Paulo. It revealed the extreme vulnerability and fragility of the population to the effects of growing environmental impacts and climate change.

We witnessed a massive process of information collection and production, involving different media outlets and the fairly active participation of social mobilization and communication groups and networks.

The communication process employed by the mass media comprised the use of news framing to progressively develop more interpretive approaches, with the participation of various social actors.

Little attention was paid, however, to the structural causes, the formulation, integration and implementation of public policies and to socio-environmental conflicts involving private interests and public assets whose benefits are collective, as for example, the problems involving the changes to the Brazilian Forestry Code.

The independent media, together with social movements and NGOs, enriched the debate, radicalized discourse and pointed out privileges and inequalities in relations with consumers, the lack of transparency and inaction on the part of the Government, as well as their irresponsibility in prioritizing electoral interests and not adopting an explicit rationing policy. Sabesp was also perceived and framed as being negligent for not having carried out recommended or planned infrastructure works, as well as for offering discounts to large clients, penalizing the poorest consumers, whilst not ensuring transparency in decision-making.

The crisis and the process bringing this issue onto the media's agenda illustrated how unprepared the authorities and the water supply and sanitation company were to address the problem of water scarcity. Furthermore, a lack of space for dialogue and transparency were observed, going against the National Water Resources Policy which defines water as a public good and recommends its decentralized management, based on environmental governance, with the participation of public authorities, users and communities, and the empowerment of basin committees, including in decision-making processes.

Note

i HAGEMANN, Walter. Grundzüge der publiziistik. Münster: Regensberg, 1947.

References

ALIANÇA pela Água de São Paulo. **Aliança pela Água,** São Paulo, 2014. **Available at:** http://aguasp.com.br/app/uploads/2014/11/Alianca_pela_Agua_de_Sao_Paulo_5.pdf. Accessed on: 15 May 2015.

_____. Agenda mínima. Aliança pela Água, São Paulo, Oct. 2015. Available at: http://aguasp.com.br/#agenda. Accessed on: 16 May 2015.

A NEGAÇÃO da crise. **Volume Vivo** Online series. Episódio 1. Direção: Caio Ferraz. Production: Caio Silva Ferras; Fernanda Sindlinger. São Paulo: *YouTube*, 2015, video (18 min.). Available at: https://www.youtube.com/watch?v=90mfhpWppHw&feature=sh are > . Accessed on: 2 May 2015.

BORDIEU, P. Sobre a televisão. Rio de Janeiro: Jorge Zahar Ed., 1977, 143 p.

BRASIL. Constitution (1988). Constituição da República Federativa do Brasil Brasília, DF: Senado Federal: Centro Gráfico, 1988. 292 p.

Law n.9433 8 January 1997. Establishes the National Policy on Water Resources, and creates the National System for Water Management, regulated by paragraph XIX, art.21 of the Brazilian Federal Constitution, and amends art. 1 of Law n. 8.001, 13 March 1990, which altered Law n. 7.990, 28 December 1989. Política Nacional de Recursos Hídricos. Brasília, DF: Presidência da República, 8 Jan. 1997. Available at: http://www.planalto.gov.br/CCivil_03/leis/L9433.htm. Accessed on: 16 May 2015.

Law nº 12.527, 18 November 2011. Regulates the constitutional right of access to public information. Law on Access to information. Brasília, DF: Presidência da República, 18 Nov 2011 Available at: http://www.planalto.gov.br/ccivil_03/_ato2011-2014/2011/lei/112527.htm. Accessed on: 16 May 2015.

Laws n. 12.651, 25 May 2012. Addresses the protection of native vegetation; alters Laws n. 6.938, 31 August 1981, 9.393, 19 December 1996, and 11.428, 22 December 2006; repeals Laws n. 4.771, 15 September 1965, and 7.754, 14 April 1989, and Provisional Measure n. 2.166-67, 24 August 2001; and provides for other measures. Available at: http://www.planalto.gov.br/ccivil_03/_ato2011-2014/2012/lei/l12651.htm. Accessed on: 16 May 2015.

BUARQUE, D. "Colapso" e "sonambulismo": mídia gringa viu falta de água em SP antes do governo. Notícias Terra, **Brazil no radar**, 6 Feb. 2015. Available at: http://noticias.terra.com.br/mundo/brazil-no-radar/blog/2015/02/06/colapso-e-sonambulismo-midia-gringa-viu-falta-de-agua-em-sp-antes-do-governo/. Accessed on: 15 May 2015.

CAPRIGLIONE, L. Não beba água, beba cerveja. **Conta D'Água**, São Paulo, 9 Nov. 2014, Cobertura coletiva da crise hídrica em São Paulo e no Brasil. Available at: https://medium.com/a-conta-da-agua/nao-beba-agua-beba-cerveja-815dfe9eb5eb. Accessed on: 2 mai. 2015.

CAMPOS, V.N.O.; FRACALANZA, A.P. Governança das águas no Brasil: conflitos pela apropriação da água e a busca da integração como consenso. Ambiente & Sociedade, Campinas, v. XIII, n. 2, p.365-382, jul./dez. 2010.

CARMO, R.L., TAGNIN, R. 2001. Uso Múltiplo da água e múltiplos conflitos em contextos urbanos: o caso do Reservatório Billings. In: Anais do IX Encontro Nacional da Anpur. Rio de Janeiro: ANPUR. 3, p. 1276-1286.

COLETIVO de luta pela água. Manifesto de criação do Coletivo Luta pela Água. Rede Nossa São Paulo, São Paulo, Jan 2015. Available at: http://nossasaopaulo.org.br/portal/arquivos/manifesto-coletivo-de-luta-pela-agua.pdf. Accessed on: 16 May 2015.

CONSULTORIA TÉCNICA DE ECONOMIA E ORÇAMENTO DA CAMARA MUNICIPAL DE SÃO PAULO. **A água como um bem e o saneamento básico na RMSP**. São Paulo, Camara Municipal de São Paulo, 2011, 24p. Available at: http://www2.camara.sp.gov.br/CTEO/Boletins/Estudo-Agua.pdf>. Accessed on: 16 May 2015.

DATAFOLHA Instituto de Pesquisas. Termômetro Paulistano

Crise da água em São Paulo. **Datafolha**, São Paulo, 20 out. 2015, Opnião Pública. Available at: http://datafolha.folha.uol.com.br/opiniaopublica/2014/10/1535230-para-75-falta-de-agua-em-sp-poderia-ter-sido-evitada-por-governo.shtml. Accessed on: 3 April 2015.

ENQUETE do Uol. Diante da falta de água, você acha que o governo deve implantar racionamento em SP? Uol Notícias, São Paulo, 7 ago. 2014, 10h19. Available at: http://noticias.uol.com.br/enquetes/2014/08/07/diante-da-crise-hidrica-voce-acha-que-deve-haver-racionamento-de-agua-em-sao-paulo.htm. Accessed on: 16 May 2015.

ENTIDADES denunciam crise hídrica de SP na ONU. Conectas Direitos Humanos, São Paulo, 18 mar. 2015, Notícias. Available at: http://www.conectas.org/pt/acoes/politica-externa/noticia/30827-entidades-denunciam-crise-hidrica-de-sp-na-onu. Accessed on: 24 May 2015.

G1. Cerca de 95% dos córregos de SP estão poluídos. G1, São Paulo, 25 Feb 2015(a). Available at: http://g1.globo.com/sao-paulo/noticia/2015/02/cerca-de-95-dos-corregos-de-sp-estao-poluidos.html. Accessed on: 1 May 2015.

GOMES, R. Sem reflorestamento, ações de combate à seca não têm efeito. Rede Brasil Atual, São Paulo,12 Feb. 2015, Ambiente. Available at: http://www.redebrasilatual.com.br/ambiente/2015/02/reflorestamento-e-essencial-para-que-acoes-de-combate-a-seca-em-sao-paulo-tenham-efeito-5256.html. Accessed on: 15 May 2015.

GREENPEACE Brasil. "Água para quem?" Campaign. **Greenpeace Brasil**, São Paulo, s.d. Available at: . Accessed on: 7 April 2015.

HACKETT, R. Declínio de um paradigma? A parcialidade e a objetividade nos estudos dos media noticiosos. In: Nelson Traquina (ed.), **Jornalismo:** *Questões*, *Teorias e "Estórias"*, Lisboa: Vega, pp.101-113, 1993.

LEITE, M. (org.). Tudo sobre Crise da água. São Paulo, **Folha de São Paulo**, São Paulo, 2014, multimedia report. Available at:

http://infograficos.estadao.com.br/especiais/passado-futuro-cantareira/). Accessed on: 1 May 2015.

LEMES, C. Júlio Cerqueira César: Alckmin e Sabesp já fazem racionamento de água. Viomundo - O que você não vê na mídia, Host.Net, 24 mar. 2014, Denúncias. Available at: http://www.viomundo.com.br/denuncias/julio-cerqueira-cesar-alck... mento-de-agua-ha-mais-de-2-meses-ele-e-dirigido-aos-pobres.html>. Accessed on: 2 May 2015.

LONGO, I. A luta pela água em SP. **Conta D'Água**, São Paulo, 25 Feb. 2015 Available at: < https://medium.com/a-conta-da-agua/a-luta-pela-água-em-sp-2bfcb83b2a84?section=%5Bobject%20Object%5D>. Accessed on: 16 May 2015.

MACIEL, C. Epidemia de dengue no país está concentrada em nove estados, diz Chioro. São Paulo, EBC, **Agência Brasil**, 4 May 2015. General Available at: http://agenciabrasil.ebc.com.br/geral/noticia/2015-05/pais-vive-epidemia-de-dengue-diz-chioro. Accessed on: 23 May 2015.

MARTÍN, M. Sabesp ainda esconde a identidade dos maiores consumidores de água. **El País**, São Paulo, 2 Mar. 2015, Brasil. Available at: http://brasil.elpais.com/brasil/2015/03/02/politica/1425335267 024664.html>. Accessed on: 16 May 2015.

MARTINO, L.M.S. Teoria da Comunicação. Ideias, conceitos e métodos. Petrópolis, RJ: Vozes, 2009. 286p.

MARTIRANI, L.A. "Nas águas do Piracicaba": pesquisa e socialização de conhecimentos na produção de um documentário. 2013. 179f. Thesis (associate professorship) - Escola Superior de Agricultura "Luiz de Queiroz". University of São Paulo.

MATTES, D. Água. Má gestão e crise. Revista Caros Amigos, São Paulo, pp. 4-5, dez. 2014. Especial Água.

MTST. Marcha pela água em São Paulo reúne 15 mil e conquista vitórias! Minga/ Mutirão Informativa de Movimentos Sociais, 27 Feb. 2015. Available at: http://www.movimientos.org/pt-br/content/marcha-pela-água-em-são-paulo-reúne-15-mil-e-conquista-vitórias. Accessed on: 1 May 2015.

NAS ÁGUAS do Piracicaba. Directed by: Laura Alves Martirani. Written and produced by: Laura Alves Martirani, Estela de Azevedo e Isabela Kojin Peres. Piracicaba: Laboratório de Vídeo/ESALQ/USP, Programa Biota da FAPESP, 2012. 1 DVD, 54 min., son. color. Available at: <www.youtube.com/watch?v=Z_u3EwrsGOU>. Accessed on: 16 May 2015.

OLIVEIRA, C.; GOMES, R.. O nome do que Alckmin fez com a água de SP é 'crime de responsabilidade'. Rede Brasil Atual^{-n.} 104, 7 mar 2015, Ambiente Político. Available at: http://www.redebrasilatual.com.br/revistas/104/o-que-alckmin-fez-do-abastecimento-tem-nome-crime-de-responsabilidade-4581.html. Accessed on: 17 May 2015.

PAGANO, A. São Pedro não tem ações da Sabesp. **Conta D'Água**, São Paulo, 9 Nov. 2014, Cobertura coletiva da crise hídrica em São Paulo e no Brasil. 19 Nov. 2014. Available at: https://medium.com/a-conta-da-agua/sao-pedro-nao-tem-acoes-da-sabesp-34dec78c6b6e. Accessed on: 2 May 2015.

PAULA, G. O. A água percepções e compromisso: estudo de caso na Região Metropolitana de Campinas. 2002, 281p. Doctoral thesis, University of Campinas, Geosciences Institute.

PCJ condiciona outorga do Cantareira à construção de represas. Sorocaba, SP, UOL Notícias, 13 maio 2015. Available at: http://noticias.uol.com.br/ultimas-noticias/agencia-estado/2015/05/12/pcj-condiciona-outorga-do-cantareira-a-construcao-de-represas.htm. Accessed on: 22 May 2015.

PEGORIM, J. São Paulo tem segundo outubro mais seco em 71 anos. Climatempo Notícias. 31 Oct. 2014. Available at: http://www.climatempo.com.br/noticias/268788/sao-paulo-tem-segundo-outubro-mais-seco-em-71-anos/. Accessed on: 1 April 2015.

PERES, I.K.; MARTIRANI, L.A. Percepção ambiental e recursos hídricos. In: SIMPÓSIO DE INICIAÇÃO CIENTÍFICA DA USP, 17., 2009, Piracicaba, **Anais eletrônicos...** Piracicaba: SIICUSP, 2009. Available at: https://sistemas.usp.br/siicusp/cdOnlineTrabalhoVisualizarResumo?numeroInscricaoTrabalho=4942&numeroEdicao=17. Accessed on: 25 set. 2011

PORTO, M. Enquadramentos da Mídia e Política. In: ENCONTRO ANUAL DA ASSOCIAÇÃO NACIONAL DE PÓS-GRADUAÇÃO E PESQUISA EM CIÊNCIAS SOCIAIS, XXVI., 2002, Caxambu, 2002. **Anais eletrônicos**... Caxambu, 2002. Disponível

em: <http://www.anpocs.org/portal/index.php?option=com_docman&task=doc_view&gid=4400&Itemid=317>. Accessed on: 17 May 2015.

PROCURADORIA REGIONAL DA REPÚBLICA – 3ª. REGIÃO. Carta São Paulo sobre Gestão Hídrica em Situação de Escassez. São Paulo, 26 de fevereiro de 2015. Disponível em: http://www.prr3.mpf.mp.br/arquivos/Not%C3%ADcias/-2015-/RUDIGER, Francisco. A trajetória da publicística como proposta criadora de uma ciência da comunicação autônoma nos países de língua alemã. Comunicação & Sociedade, Ano 33, n. 57, p. 103-128, jan./jun. 2012.

SÃO PAULO. Law n. 15.684, 14 January 2015. Regulates the Programa de Regularização Ambiental - PRA - the Environmental Legalization Program for rural properties and real estate, established by Federal Law n. 12.651, 2012 and regulates the application of Complementary Federal Law n. 140, 2011, in the State of São Paulo. Available at: http://www.al.sp.gov.br/repositorio/legislacao/lei/2015/lei-15684-14.01.2015.html. Accessed on: 16 May 2015.

SECCO, A. Um bem em disputa. Caros Amigos, **São Paulo**, p. 28-30, dez. 2014. Especial Água.

SERRA, P. Manual de Teoria da Comunicação. [S.l.]: Livros Labcom, 2007

SOUSA, J.P. Elementos de Teorias e Pesquisa da Comunicação e dos Media. Porto: s.e., 2006. Available at: www.bocc.ubi.pt. Accessed on: 11 May 2015.

TOMAZELA, J.M. SP tem 70 cidades afetadas por seca, onde vivem 13,8 mi. Estadão, São Paulo, 16 Oct. 2014. Available at: http://sao-paulo.estadao.com.br/noticias/geral,sp-tem-70-cidades-afetadas-por-seca-onde-vivem-13-8-mi,1577466. Accessed on: 3 April 2015.

TUNDISI, J.G.; TUNDISI, T.M. Impactos potenciais das alterações do Código Florestal nos recursos hídricos. **Biota Neotrop**, vol. 10, nº 4, p. 67-75, 2010. Available at: http://www.scielo.br/pdf/bn/v10n4/10.pdf>. Accessed on: 17 May 2015.

TV ESTADÃO. Paulistanos acreditam que a água vai acabar. **TV Estadão**, São Paulo, 23 Jan. 2015 vídeo (3m05). Available at: https://www.youtube.com/watch?v=dIUkDWtrjRs. Accessed on: 11 May 2015

VALENTE, J. A. Não existe apagão de abastecimento de água em SP!. **Blog do Zé Dirceu**. 19 Sept. 2014 Available at: http://www.zedirceu.com.br/nao-existe-apagao-de-abastecimento-de-agua-em-sp/. Accessed on: 2 May 2015.

UNITED NATIONS.Resolution 64/292 (A/RES/64/292) of 28 July 2010. General Assembly. The human right to water and sanitation. [S.l.], 3 Aug. 2010. Available at: http://www.un.org/en/ga/search/view doc.asp?symbol=A/RES/64/292. Acesso: 2May 2015.

Submitted on: 19/06/2015 Accepted on: 19/12/2015

http://dx.doi.org/10.1590/1809-4422ASOC150111R1V1912016

WATER CRISIS IN SÃO PAULO: NEWS COVERAGE, PUBLIC PERCEPTION AND THE RIGHT TO INFORMATION

LAURA ALVES MARTIRANI ISABELA KOJIN PERES

Abstract: Based on materials published by different media outlets on the coverage of water crisis which affected the region of São Paulo in 2014 and on the concept of publizistikwissenschaft, this article seeks to evaluate the process of information construction in the public sphere. It appears that major media outlets embraced 'news' frameworks, while smaller and independent media adopted 'interpretative' frameworks. The former emphasized the problem of climate change and issues related to water consumption, while the latter stressed the lack of transparency of the state government and the sanitation company in managing the crisis and, together with social movements, they brought proposals and made demands. We conclude that although there was a process of extensive media coverage and public awareness of the problem of water supply, some aspects were silenced and that this process remained inadequate in terms of accounting for the structural causes involving security and the governance of water.

Keywords: Water; Media; Public Sphere

Resumo: Com base em materiais publicados por diferentes veículos de comunicação na cobertura da crise hídrica que acometeu a região de São Paulo em 2014 e conceito de publicística, busca-se avaliar o processo de construção da informação na esfera pública. Constata-se que grandes veículos adotaram enquadramentos de tipo noticioso, enquanto veículos menores e mais independentes enquadramentos de tipo interpretativo. Os primeiros enfatizaram a problemática das mudanças climáticas e questões relacionadas ao consumo de água, enquanto os demais destacaram a falta de transparência do Poder Público e empresa de saneamento na gestão da crise, e junto aos movimentos sociais trouxeram propostas e exigências. Conclui-se que embora tenha ocorrido um processo de ampla cobertura jornalística e de conscientização pública sobre a problemática do abastecimento de água, houveram alguns silenciamentos, e que esse movimento se mostra ainda insuficiente para dar conta das causas estruturais que envolvem a segurança e a governança hídrica.

Palavras-chave: Água; Comunicação Social; Esfera Pública

Resumen: Sobre la base de los materiales publicados por diferentes medios de comunicación en la cobertura de la crisis del agua que afectó a la región de São Paulo en 2014 y el concepto de publicística, se busca evaluar el proceso de construcción de la información en la esfera pública. Parece ser que los vehículos grandes abrazaron noticias tipo de marcos, mientras que los medios más pequeños e independientes han adoptado marcos interpretativos. El primero hizo hincapié en el problema del cambio climático y las cuestiones relacionadas con el consumo de agua, mientras que otros hicieron hincapié en la falta de transparencia de la empresa Gobierno y el saneamiento en la gestión de la crisis, y con los movimientos sociales trajeron propuestas y requerimientos. Llegamos a la conclusión de que, aunque había un proceso de amplia cobertura en los medios de comunicación y la conciencia pública sobre el problema de suministro de agua, hubo algunos silencios, y que este movimiento demuestra aún insuficientes para dar cuenta de las causas estructurales que involucran la seguridad y la gobernanza agua.

Palabras clave: Agua; Medios de Comunicación; Esfera Pública