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**“Science being done”:
The French Medias Implication
about Biotechnology**

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Abstract

This article pertains to the media coverage of science and more specifically to the coverage on biotechnologies in three daily French press publications: *L'Humanité*, *Libération* and *Le Figaro*. This analysis is more specifically focused on the case of GMOs since this theme represents more than 50% of the articles of our corpus in terms of co-occurrence with the theme of biotechnologies. On the one side, this analysis shows that social movements in France have largely contributed to framing the coverage of this scientific question in the press. On the other side, by basing ourselves on the notion of the “reading contract,” we have established that the different newspapers favored either pro or anti GMO experts according to their editorial policy and the expectations of their readership. This study will show therefore how in regards to a scientific question, all the more so when it is in a context of uncertainty and controversy, the media positions themselves according to the issues that the “science in the making” brings up.

Key Words: media coverage of science, biotechnologies, reading contract, daily French press, GMO

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Introduction

Biotechnologies represent a “set of techniques that are used for the industrial farming of microorganisms, of animal and plant cells and their components” (Douzou, Durand, Siclet, 2001: 3). It’s a scientific domain that has “serious social implications” (Sicard, 2011: 67), that brings up issues related to the environment and health; subjects that interest the media due to the public’s probable interest in these topics (*Ibid*: 64); all the more so in a context increasingly favorable towards scientific media coverage, notably due the request by citizens to have explanations on ecological, health-related, etc. phenomenon (Roquette, 2011: 18-20). Furthermore, the use of biotechnologies goes back to questions on the purposes and risks of the research being done, questions that experts (appointed or not) attempt to respond to without reaching a consensus concerning the reality. Biotechnologies have brought up “for centuries [...] hopes [...] and concerns from public opinion,” concerning, for example, GMOs and gene therapy (Durand, 2007: 11).

The uncertainty towards the risk, as is the case with GMOs, does not neutralize the competing discourses between experts, but, on the contrary, highlights them, even if these opinions come more from normative categories than from readily available scientifically validated knowledge (Roy, 2001: 204-205). As Marie-Noëlle Sicard noted in regards to the treatment of mad cow disease, the difficulty of the subject and the polyphony of opinions on its causes and effects result in a slight personal implication by journalists who go on a “tour of the points of view” except in the case of a “denunciation of failed political power” (Sicard, 2001: 70).

This research triggers us to question the general treatment of biotechnologies in the media. In opposition to traditional philosophy of science that considers controversies as the transitory steps without importance in terms of the mutually agreed upon final results, we share the idea that it is pertinent to follow biotechnologies as a “science in the making” with successive production of knowledge: “the game is in play and the outcome is uncertain” (Gingras, 2013: 109). In this respect, the media coverage of biotechnologies is important input to analyze the journalistic practices that report on this “science in the making,” the expectations and/or the fears linked to biotechnologies and the political and social issues they raise.

Contrary to the idea that journalists do not get personally involved, we present the hypothesis that the media’s coverage of biotechnologies, far from being uniform, depends on the implicit “reading contract” (Gonzales, 1996) between the newspaper and its readers. In other terms, the personal involvement of the journalist is constructed according to the interest given to one issue or another in relation to biotechnologies and on which they gather preferential points of views from experts “appointed” or not (such as associations) according to the communication contract.

To verify our hypothesis, we have proceeded to analyze the contents of 137 articles on biotechnologies published in *Libération*, *L’Humanité* and *Le*

Figaro, between 2009 and 2013.¹ *L'Humanité* is an extreme left-wing newspaper and *Libération* is a moderate left newspaper. Their readers are very sensitive to the social and critical movements in respect to the inaction of the state, even if those of *Libération*, since the actions of May 1968, are more moderate. The articles of these two daily newspapers represent 64 articles (14 articles from *L'Humanité* and 50 articles from *Libération*). *Le Figaro*, which accounts for 73 articles of the corpus is a right-wing, very liberal newspaper, read essentially by top-level management and business leaders. It is very sensitive to the free market, to economic progress and to minimal intervention of the state. We have constituted this corpus by using the database "Factiva." We selected only substantive articles in which the word "biotechnologies" appears to analyze the co-occurrences and not construct the corpus in relation to our knowledge of our domain. The results are very clear: 56% of the articles with the term "biotechnologies" are about GMOs. The other applications of biotechnologies are not mentioned (like the depollution of soil) or in very small or marginal proportions (such as bio-medicine or marine biotechnologies).

We are therefore going to bring up several theoretical questions linked to the media's science coverage, by relying on recognized research done in France in this research field. We will then concentrate our analysis on the debates that GMOs have brought about in France. This presentation of the French context is essential to understanding the interpretation of the results of our corpus in the third part related to the positions of each daily newspaper on this scientific question.

Science in the Media: Some Theoretical Questions

Some studies in the information and communication sciences have brought to light the specificities that underpinned the mediatised discursive frameworks in the coverage of scientific news. In fact, as Daniel Jacobi underlined, it would be pointless to want to constitute the scientific discourse as "a specific category, a bit like the accounts, the descriptions or the injunctive texts" (Jacobi, 1999: 129). The author first distinguishes three types of discourse:

- The primary scientific discourses, like scientific articles
- The scientific discourses with a didactic goal, such as scholarly articles
- The scientific discourses for formal education, of which scientific articles published in the press are part.

¹2009 is the year that the National Strategy for Research and Innovation (SNRI) is put in place and emphasizes the financing of biotechnologies. It is, moreover, the year following the creation of the Higher Council on Biotechnology (HCB) in France. In fact, a study on GMOs, cloning and genetic engineering was published by Patrick Charaudeau and his team in 2008 with a significant newsprint corpus (Charaudeau, 2008).

These three types of discourse differentiate from each other firstly by the writer and his readership. In the case of primary scientific discourse, it is the researcher who is addressing his peers, while in the case of didactic scientific discourse; it is the teacher addressing his pupils. In the third case, the one that interests us it is more particularly, discourses are written by a “mediator” to a heterogeneous public, going from novice to specialist, by mobilizing notably the mass media (*Ibid*: 148).

It is this type of discourse that poses immediately the question of scientific popularization, which implies, according to Daniel Jacobi, to choose (by selecting themes), to transform (by simplifying the results of the research), to modify (by humanizing the face of the scientist by way of, for example, an interview), to restructure (by adopting the tone specific to the text or the news item), to reformulate (by substituting terms that are considered too technical by simpler terms) (*Ibid*: 152 et *sq.*). Nevertheless, as Patrick Charaudeau underlines, there is not a proper mode of communication for the discourse of popularization (Charaudeau, 2008: 17) which he presents as a hybrid model, borrowing as much from the scientific discourse of a didactic nature as from the mediatized discourse.¹ This is explained by the fact that the mediatized discourse has a “double aim of information (making known) and capturing interest” (*Ibid*). The mediatized discourse addresses a “instance of reception” of which the diversity in terms of knowledge results in an adjustment of the coverage of a scientific question, in such a way as to be understood by the largest number—even more so for the media generalists (Charaudeau, 2008: 18; Jacobi, 1999: 148).

Lastly, the analysis of mediatized discourses equally questions the rapport between the journalist and the scientific domain covered and his rapport with the researchers and the experts of the concerned field. In other terms, we should ask about his degree of specialization, his position in relation to the subject and his proximity to the different players. These players can be identified according to their expertise that has a political or societal aim, to reiterate the terms used by Francis Chateaureyanaud. This sociologist distinguishes in fact between experts appointed by institutional authorities and non-appointed experts, such as non-governmental associations, that produce expertise to activism-related ends, among other things (Chateaureyanaud, 2008). To these two types of expertise, we can add the aim of industrial expertise, produced by employees of private enterprises of a given sector. Media access to these different types of experts orients the coverage of a scientific subject in the general media.

The conditions of production of scientific articles in the general media relates therefore back to heterogeneity, hybridization and the relationships with experts that mark the rapport between the writer and the event. These three dimensions are all the more present when the scientific news brings about societal questions.

¹Note that this designation is the same as what Patrick Charaudeau calls the formal education discourse. In fact, Patrick Charaudeau evokes the “educational and cultural” perspective of this type of discourse.

When Science Brings up Societal Questions: The Case of Biotechnologies and GMOs in France

Biotechnologies have a modern connotation that relates back to the “technologies of the future that, like micro-computing and robotics, could transform over time the lives of individuals and the profile of their societies” (Douzou, Durand, Siclet, 2001: 3). This is why they relate so strongly to societal question and to a demand for regulation of their potential effects by the state. However, in a society where scientific expertise has “become one of the major resources for the creation of public policies” (Bonneuil, Joly, 2013: 59) the contradictions between different experts lead to political indecision; even more so because opinion has increasingly contested scientific expertise with political ends since the health and environmental crises at the end of the 80s (*Ibid*).

The questions raised by biotechnologies are as numerous as their fields of application. They can come from a fear of health risks, of threat to biodiversity or of an ethical downward spiral aimed at producing a man-machine, in the manner of what is defended for example by supporters of the “transhumanist” movement. Moreover, some applications are, at least in France, more accepted than others, therefore there have been applications in the healthcare field, notably concerning cancer and Alzheimer research that have respectively been presidential priorities addressed by President Chirac in 2002 and President Sarkozy in 2007. The 3rd Cancer Plan, presented by President Hollande in March 2014, gives much room for genetic testing and target treatments. In the same way as research on embryonic stem cells was finally authorized in France in December 2013 only for research with “therapeutic aims,” the law therefore limiting the risk of eugenic nightmares feared by those that oppose this research. The numerous debates that research on these stem cells has brought about contrast particularly with what happened in a neighboring country, Belgium. In Brussels, in fact, the law has been discussed in traditional arenas (Parliament, advisory committees...) on the basis of expert assessments done by representatives without it provoking social movements (Schiffino, 2004). Therefore, without putting into question the observation that “in most European countries, governmental/public decision-making is generally made in confined circles” (Bonneuil, Joly, 2013: 70), the process by which the state makes its decisions in the scientific domains is largely dependent on the sensitivity of citizens and their ability to mobilize. In this regard, GMOs represent a particularly interesting case study.

Pierre-Benoît Joly and Claire Morris carried out a comparative analysis of the debate on GMOs in France and in Europe that followed the import of transgenic soybean in 1996 in the context of mad cow disease (Joly, Marris: 2003). The authors highlighted that “France and the United Kingdom share a tradition of representative democracy within which the processes of technological evaluation are opaque, closed” but specify that for the case of GMOs, in a context of a crisis of institutions, that the “rallying of associations creates a difficult situation” that obligated the State to have responses by

expanding the consultation on scientific and technological choices, attributed normally to the “democratic elite” (*Ibid*: 200-201). In England, the rallying was influenced by associations for the protection of the environment and an organization for the defense of biological agriculture: The Soil Association. In France, it would be led by Greenpeace and by the anti-globalisation movement ATTAC (*Ibid*: 199-200), with a strong involvement of the Amis de la Terre and France-Nature-Environment (Roy, 2001: 33). In the two countries, the rallying would be aimed at pushing the government to have public conferences and to put in place *ad hoc* consultation institutions, like the Biovigilance Committee in France in 1998 or the Agriculture and Environment Biotechnology Commission (AEBC) in England in 2000 (*Ibid*: 202).

In France, the organization of public consultation took place earlier. In 1997, in fact, Lionel Jospin wanted to put in place a Consensus Conference of which the objective was presented by the former Prime Minister according to a speech quoted by Pierre-Benoît Joly and Claire Marris (*Ibid*: 201):

“In its actual state, the debate on biotechnologies is reserved for the specialists: it is too narrow, too confidential. So that we can take into account the ethical, environmental and social aspects of biotechnologies, new ways to come to decisions must be imagined, the establishment of an approach on the mode of participative democracy is necessary in order to further the information and the open and contradictory debate on the scientific choices by sparking dialogue between citizens and experts.”

A panel of citizens is led to make recommendations on 5 aspects: health, economy, legality, politics and the environment (Roy, 2001: 26) that will result in, among other things, accentuating the role of the Commission of Biomolecular Engineering, reaffirming the precautionary principle and requiring transparency for citizens (*Ibid*: 29). Ten years later, another large-scale public consultation is organized by the Fillon Government in September and December 2007: it was the first Grenelle Environment Forum. At the end of this Conference, in June 2008, parliament voted on the law on genetically modified organisms, article 3 of which forecasted the creation of a new institutional authority, the Higher Council on Biotechnology (HCB) that would replace the Commission of Biomolecular Engineering (CBE). The HCB is composed of two “branches:” the Scientific Council and the Economic, Social and Ethical Council. Its principal objective is to give advice on all aspects of biotechnologies’ impact. The title is, however, misleading since the HCB was put in place by a law relative to GMOs and its mission is primarily concerned with giving advice on that question. It is therefore not surprising if “the term biotechnologies disseminated by the media has entered into everyday language and into the collective consciousness” (Douzou, Durand, Siclet, 2001: 3). It is, of course, at least in France, associated with GMOs. The “National Strategy for Research and Innovation” launched in the context of the “Great Loan” of 2009, foreseeing an important part of its financing to be for biotechnologies in general, did not seem to allow for the widening vision of their applications in the public mind. Moreover, in light of the discussion on GMOs in France since the middle of the 90s, it seems clear that this domain rallies expertise with

political or industrial aims (this is why the ATTAC rallied on the question) as much as it does expertise with societal aims. A second-opinion body, the CRIIGEN was created in 1998 in the wake of the “Call on behalf of scientists, doctors and healthcare professionals for the monitoring of genetic engineering” of which 80 out of 120 signatories were French (Joly; Marris; 2003: 198). The CRIIGEN published in 2007 a report which blamed toxic effects of a transgenic corn developed by Monsanto,

MON863. Greenpeace has largely participated in advertising this study. The results of Gilles-Eric Séralini and his team as well as their calling into question of the European Food Safety Agency (EFSA) was widely covered by the media in France. While the Pusztai Affair in the United Kingdom was not covered in the French media except in specialized journals such as *Biofutur* or *La Recherche* (Joly, Marris; 2003: 197). The debate around the Séralini/Monsanto Affair, also involves French and European Agencies for Food Safety¹ that have sparked much analysis and commentary in the general press. In 2012, another study directed by Professor Séralini sparked the interest of the general media. This time it was about research, published in the journal *Food and Chemical Toxicology*, which was supposed to demonstrate the toxicity of Monsanto’s Roundup and of the corn OGM NK 603. However, this work was quickly questioned by scientists who wondered about the soundness of Séralini’s methodology, they were soon joined by the AFSSA and the HCB that gave a definitive opinion on the bias of the study and the falsity of the results. Finally, in November 2013, the journal *Food and Chemical Toxicology* retracted the article and pulled it from its archives. But it nevertheless begs the question, that had already been at the centre of the debates in the 90s, of the risk evaluation the EFSA and the French government uses to authorize or not the farming of GMOs (Roy, 2001: 36 et *sq.*). The ordeal was therefore the source of new developments in the form of diverse facts, apt at being picked up by the general media. The presentation of the French context in regards to the rallies sparked by the import of GMOs in the 90s allows us to understand their influence on the journalistic coverage of this scientific subject.

Three Daily French Newspapers on GMOs Since 2009: Differentiated Commitment

In the study led by Guy Lochard on the quantitative coverage by the press of questions related to GMOs an “approach that essentially followed events of the phenomenon [...] centred on the organizations that carry out the illegal sabotage of crops [*fauchage illégal*] implemented by advocacy groups” (Lochard, 2008: 48). The theme of illegal sabotage is not at all present in our corpus, that begins after 2008. Only one article in *Libération* alludes to this in an article printed 27/08/2009 titled “‘Voluntary Reapers’ against Mutated

¹The French Agency for Food Safety was called the AFSSA at the time. It was replaced in 2010 by the ANSES.

Sunflower.” In the summer of 2010, a new operation of crop sabotage organized against this type of sunflower and *Le Figaro* dedicates an article to it titled “The Eco-Profile of Mutated Sunflowers.” But this time the journalist explains that these sunflowers had been falsely associated with GMOs by the crop sabotage movement, led, among others, José Bové, a member of European Parliament, who is also at the head of the reapers’ movement. In France, José Bové, who is notoriously opposed to GMOs, is often quoted by *Libération*, little by *Le Figaro*. Guy Lochard has noted in his study “the hypothesis of an ideological proximity between parties concerned [by the crop sabotage] and notably José Bové, leader and figurehead of these events and the media” (Lochard, 2008 : 48). While our corpus contains few articles on crop sabotage, it is not surprising that the former agricultural unionist remains a preferred contact to comment in *Libération* on events linked to GMOs. The daily left-wing paper even offered him a column in its issue dated 10/05/2012 entitled “GMO Debate: from the Scientist to the Consumer via the Farmer.” More generally, the conclusion of Guy Lochard’s study underlines an important point, that is that “the mediatized visibility of the GMO theme and the ways it is treated cannot be explained only by ‘spontaneous’ interest on behalf of the publications and their supporters” (*Ibid* : 59-60). Certainly, the subject of GMOs carries “a highly spectacular potential,” but the interest that it sparks comes above all from the rallying of ecological movements, that develop veritable societal expertise and sophistication in regards to their communicational strategies that make them journalists’ preferred interlocutors.

In this respect, the individuals quoted by *L’Humanité*, *Libération* on the one hand and *le Figaro* on the other denote very clearly their editorial orientation and their reading contract. Schematically, the first two daily newspapers are opposed to GMOs, or at least moderately so (in the case of *Libération*), in contrast, *Figaro*, sees an economic and social opportunity (in relation to the benefits that farmers’ and populations with problematic access to agricultural resources due to soil or climate issues).

Libération and *L’Humanité* report more on comments from experts of a societal aim, like GreenPeace, France-Nature Environnement, José Bové and scientists known for the position they have taken, such as Jacques Testard. In contrast, *Le Figaro* frequently publishes comments by scientists known as being pro-GMO such as Marc Fellous or Marcel Kuntz¹, or even

Bernard Bachelier, who defends the benefits of GMOs in Africa (for example in the interview dated 14/10/2011 “Africa Could Double their Agricultural Productivity”) much more than it solicits the opinion of representatives of social movements. The two newspapers are equally opposed on the precautionary principle: whereas *le Figaro* publishes an opinion column

¹These two researchers were recognized for their criticism of the orientations chosen by the public authorities in terms of GMO research in France. Their position was relayed by the daily newspaper in the articles “There’s no More Research on GMOs in France” (16/07/2013) and “France Continues to Refuse GMOs” (30/01/2011) in which Marcel Kuntz is very present. In the same way, the Marc Fellous interview (21/02/2012) defends the biologist’s idea that France is “sacrificing its research on biotechnologies.”

from two sociologists denouncing the pitfalls of the precautionary principle: (“The Precautionary Principle: An Ideology?”, 11/03/2010) *Libération* published an interview with Member of Parliament Philippe Tourtelier with the title “The Precautionary Principle Remains Threatened” (15/06/2010).

Before going further on in the concrete analysis of the discursive elements showing their position, it is pertinent to come back to the notion of a reading contract. Developed by Eliseo Veron in the 80s, the reading contract highlights the analysis of the production of information in terms of the situation of communication between journalists and their readers. In other words, a newspaper is concerned about treating the information according to the expectations of their readership, even more so in the context where the print media is in the midst of a loyalty crisis with their readers. This reading contract renders the question of the objectivity of information obsolete (Gonzales, Veron, 1996: 53):

“There is an occupational ideology that is associated to the practice of each profession and therefore to journalism, the objectivity, the reality of the fact, etc. Ideology that was, I believe, stronger before and I have noticed, is less and less naively claimed these last few years by journalists. The question of the diversity of the forms of information has become conscious on the journalist’s behalf. There is a realization among journalists and also by the public that there is not only one way to inform.”

In regards to the three daily newspapers of our corpus, the terms of the reading contract were clearly elaborated in the introduction. We must add that through the titles an ideology unique to biotechnologies appears: that of uncontrolled progress of and of potentially harmful effects for Man, held as negligence for economic profit, in opposition to humanist values and respect for nature (*L’Humanité* and *Libération*, to a lesser extent¹); that of a terrific economic opportunity, one which France is denying itself for irrational and illegitimate reasons, therefore augmenting its delay in the world competition linked to innovation (*Le Figaro*). The emphasis on these two positions shows, through the example of GMOs, an opposing view of the place of biotechnologies in France: the alarmist tone of the first two that denounce the development of new techniques as too rapid while the tone of *Le Figaro* questions the consequences of the France’s delay. However, contrary to what we could assume, the great loan and the National Strategy for Research and Innovation has not sparked negative comments in *Libération* and *L’Humanité* on the fact that biotechnologies represent an area largely financed by the plan. Similarly, of the rare articles of our corpus interested in the health domain or

¹For example, *L’Humanité* published an article titled “The Market of Genetic Risk: Who Profits from GMOs?” (02/11/2013) and a column by Gérard Le Puill titled “Agronomy is More Important Biotechnologies” (26/02/2010). *Libération* published an anti-GMO column by Jacques Testard titled “Human Vegetized” (14/10/2011) and then “Monsanto, a Leader Not Mowed Down by the Crisis” (13/02/2009). While *Le Figaro* titles an interview with the director of the HCB “Biotechnologies, a Tool of Progress” (20/07/2013) and includes this quote by pro-GMO biologist Marc Fellous: “Our country is sacrificing its research on biotechnologies.”

marine biotechnologies, *Libération* underlines the benefits of these progresses.¹ On the other hand, GMOs and the Séralini/Monsanto affair show evidence of an obvious fracture line. The publication of the results of Professor Séralini then the negative opinion of the HCB on their validity represents facts that the three daily newspapers related. But *Le Figaro* distinguished itself by insisting on the scepticism of scientists and relayed largely the doubts of the ANSES and the EFSA.² In particular, the opinion of the HCB does not spark the same comments. Of course, the corpus shows that *Libération* abandons the topic earlier than *Le Figaro*. However, *Libération*, like *L'Humanité* insists on the fact that the HCB recognizes the long-term interest of this type of study and raises questions on the conditions of risk expertise linked to GMOs³, put in perspective by the example of *L'Humanité* with the recent “Banati affair” (example from the article entitled “The European Plan Put into Question,” 23/10/2012). On the side of *Le Figaro*, the accent is put on the nullity of the study and the fact that it does not put the mandated expertise into question, while underlining that long-term studies have already done without being that probing supporting therefore the idea that the choice to prohibit GMOs in France remains unfounded.⁴

The Séralini/Monsanto Affair, if it supported by scientific facts, did not benefit from the same treatment, allowing for the analysis to highlight the specificities of the mediatization of a scientific question according to the reading contract.

Conclusion

This study shows that on the one hand biotechnologies are associated with GMOs in France due to the debates raised by these new cultivation techniques in the French public space; debates that reoccur as experts continue to contradict each other on the subject, which represents a “science in the making.” In this respect, our results have allowed us to discern three strong tendencies:

¹*Libération* titled two articles “Europe will Grow by the Sea,” 25/10/2013 and “Man, Flesh and Bionics” (18/11/2013) on prosthesis. *Le Figaro* published an article by a researcher at INRA titled “Why are GMOs Accepted in Pharmaceuticals and Contested in Food?” (03/05/2012). Significant to the position of *Figaro* on this question, the column by economist Nicolas Baverez, is titled: “Innovation is the Motor of Capitalism in France” (16/07/2013) and the article titled “France Puts the Breaks on Innovation” (20/01/2012).

²Cf. for example the article titled “GMOs on the Defendant’s Bench Again” (20/12/2012). The newspaper demonstrated similar scepticism towards the first study of the CRIIGEN (“Two Divergent Opinions on Genetically Modified Corn MON810,” 23/12/2009).

³In “Gilles-Eric Séralini. GMO Not At All” (20/10/2012) and “GMO: A Point for the Partisan Team” (23/10/2012) for *Libération* (the word play being characteristic of the newspaper’s headlines) and “GMO Corn: Experts Want More Studies” (23/10/2012).

⁴For example, the journal published interviews with ANSES and EFSA respectively highlighting that “Séralini’s Study Doesn’t Question Anything” (23/10/2012) and “GMOs Authorized in Europe do not Present a Health Risk” (15/11/2012).

- The differentiation of the coverage of GMOs in three newspapers is felt first in the choice of experts interviewed and whose remarks are transcribed, among experts who have pro or anti—GMO political or societal aims. A very clear tendency is noted in regards to *Figaro* on the proportion of mandated experts who were called upon. But all three newspapers make reference regularly to the HCB.
- The media coverage of GMO is linked to an underlying ideology in regards to biotechnologies: a source of social and economic progress for some; a source of uncontrolled risks for Man for others.
- In fact, the newspapers in our corpus position themselves according to a reading contract between the newspaper and the readership, according to the latter's political sensitivity.

These results are in accordance with comments made by Marie-Noëlle Sicard who stated that journalistic practices are oriented in their coverage of scientific questions by issues already put in place by social players whose point of view is part of the media analysis while this analysis in turn aids and promotes their rallying. (Sicard, 2011: 75). Elsewhere, they credit the fact that the “[scientific] discourse constructed by the media body is made in accordance with the aim of its communication contract.” (Charaudeau, 2008: 19).

We can, however, gain new perspective on the institutionalization of journalists' sources. By creating the HCB, have the political players not participated in the neutralisation of the concurrent discourses of the diverse social players? Another study led by the author within a research group has, in fact, shown that the State institutionalized societal questions linked to cancer (Lafon, De Oliveira, 2012) by creating institutions whose discourses integrate and compete with those of individuals' who are active in the fight against cancer (creating, most notably, the National Cancer Institute). GMOs would be therefore another subject in which the State will invest itself in order to integrate its discourse into the public space and into a societal question structured by other social players.

References

- Bonneuil Christophe, JOLY Pierre-Benoît (2013), *Sciences, techniques et société*, La Découverte, Paris.
- Charaudeau Patrick (dir.) (2008), *La médiatisation de la science. Clonage, OGM, Manipulations génétiques*, Editions INA / De Boeck, Paris.
- Chateaufort Francis (2008), “Les mobiles de l'expertise,” *Experts*, n°28, pp. 1-4.
- Lafon Benoît; De Oliveira Jean-Philippe (2012), “Le cancer et la maladie d'Alzheimer, des chantiers présidentiels. De la gestion moderne des maladies aux stratégies communicationnelles des présidents Chirac et Sarkozy,”

- Communication*, [Online], Vol. 30/1 | 2012, uploaded March 14 2012, Consulted April 06 2012. URL: <http://communication.revues.org/index2863.html>, Université de Laval, Québec, Canada.
- Douzou Pierre, Durand Gilbert, Siclet Gérard (2001), *Les Biotechnologies*, Presses universitaires de France, Paris.
- Durand Claude (2007), *Les Biotechnologies au feu de l'éthique*, L'Harmattan, Paris.
- Gingras Yves (2013), *Sociologie des sciences*, Presses Universitaires de France, Paris.
- Gonzales Pierre (1996), "Production journalistique et contrat de lecture: autour d'un entretien avec Eliseo Veron," *Quaderni*, n°29, pp. 51-59.
- Jacobi Daniel (1999), *La communication scientifique. Discours, figures, modèles*, Presses universitaires de Grenoble, Grenoble.
- Joly Pierre-Benoît, MARRIS Claire (2003), "La participation contre la mobilisation? Une analyse comparée du débat sur les OGM en France et au Royaume-Uni," *Revue internationale de politique comparée*, vol. 10, n°2, pp. 195-206.
- Lochard Guy (2008), "Comment les médias mettent en scène une question scientifique ? Le traitement quantitatif de la presse." in: CHARAUDEAU Patrice (ed.), *La Médiatisation de la science. Clonage, OGM, Manipulations génétiques*, Editions INA/De Boeck, Paris, pp. 47-60.
- Roquette Sébastien (2011), "Science et medias : un changement de logique," in: *Sciences et medias*, coll. Les Essentiels d'Hermès, CNRS Editions, Paris, pp. 9-38.
- Roy Alexis (2001), *Les Experts face au risque : le cas des plantes transgéniques*, Presses Universitaires de France / Le Monde, Paris, 2001.
- Schiffino Nathalie (2004), "Biotechnologies et démocratie. Statut et évolution de l'expertise dans la prise de décision politique," in: JACOB Steve, GENARD Jean-Louis (eds.), *Expertise et action publique*, Editions de l'Université de Bruxelles, Bruxelles.
- Sicard Marie-Noëlle (2011), "Les journalistes scientifiques: régulateurs dans un espace d'opinion," in: *Sciences et medias*, coll. Les Essentiels d'Hermès, CNRS Editions, Paris, pp. 63-78.