

2001 - REPORT ON MEDIA AND AGROBIOTECHNOLOGIES

Major findings of the study

Osservatorio di Pavia

A recent survey on biotechnologies and the public opinion in Italy, “Biotechnologies between Innovation and Responsibility”, carried out by the Bassetti Foundation, points out that the consistent exposure of a sample of individuals to scientific contents on the media does not ensure, as such, any better information on the biotechnology issue. The relation between the media and information on biotechnologies thus appears very complex. It is not easy, in fact, to identify the causal link between the attitude of the public opinion and of the media or their mutual conditioning relations. A one-year analysis of communication on newspapers and the TV about GMOs points out to a few elements, deemed useful to define the terms for a possible debate:

*GMOs in the agro-food sector have a **negative connotation**, or are presented as “**bad**” per se*

This connotation results from

- β The association of GMOs with issues such as the foot and mouth disease, BSE, the greenhouse effect, or nuclear technology. These are unrelated and different themes, however all characterised by a strong risk-evoking power. Agro-biotechnologies seem to suffer heavily from the breach of the trust pact between science applied to the food sector and consumers, which resulted from the “mad cow” crisis. The association with BSE is in fact the strongest and most resistant among those characterising GMOs. It is not a mere chance that in the second half of the year, for want of topical events directly related to GMOs, the closest focus was made on TV broadcasts dealing with food safety, and describing a path that starts from the risks related to meat consumption and ends with genetically modified vegetables.
- The recurring use of terms such as *Frankenstein food*, *monster food*, etc.

The debate on GMOs applied to agriculture (below referred to as GMOs) is not so autonomous from the journalistic viewpoint as to allow a constant focus on the theme throughout the year, and most of the analysed information relates to three “**emergencies**”:

- β statement by 1,500 scientists following the prohibition by Minister Pecoraro Scanio to carry out open-field tests;
- β the case of Monsanto’s “suspicious” seeds;
- β “radioactive pasta” (in this case GMOs are implicated because the first warning on the press – in Italy - aroused the suspicion that “genetically modified” wheat varieties were used for the production of pasta).

The poor interest of the media in GMOs is demonstrated by the fact that, apart from these “emergencies”, which were recorded in the first half of the year and gave place to a relevant amount of information, articles and TV issues on this topic are definitely occasional and isolated. In the second half of the year, the issue of agro-biotechnologies was only occasionally tackled in specialised medical and scientific reports, "Tg3 Leonardo" and "Tg2 Medicina33", in environmental reports, "Tg3 Ambiente Italia", and sometimes in infotainment broadcasts, including "Unomattina" and "Cominciamo Bene".

For the three emergencies, the topics specifically related to GMOs are no longer central and tend to be confined to a background position: the scientific content of information is always secondary to the news

*GMOs are only **generally discussed**, often within the framework of general arguments that only seldom focus on the specific implications of individual applications*

The **main objects of debate** in the first six months result from the needs related to the news of the same period, rather than from an autonomous debate on the use of biotechnologies in agriculture. In the second half of the year, the same topics are debated, at least in TV broadcasts, thus showing that the debate never gets down to a level of actual confrontation, but is rather characterised by pre-defined positions and talks

The topics that are most widely debated include: *Scientific research, Consumer protection, Rules and regulations, Communication and information*; these, however, are only incidentally related to GMOs.

Topics like *Dynamics in the agricultural and industrial sector* or *Productivity and quality* are only a minority (even for the representatives of the Executive power);

*As to the **Actors**, these are relatively few in number; the debate strongly focuses on very few individuals.*

Politicians and journalists are the main actors. The behaviour of the political world deserves a close scrutiny, especially with respect to the comparison between the two parts of the year, characterised by politically opposite governments. Within the *politicians’* group, the main actors are ministers of Agriculture *Pecoraro Scanio* and *Alemanno*, green-party

leader *Grazia Francescato*, and other representatives of the Green Party, as well as ministers of Healthcare (later of Health) *Veronesi* and *Sirchia*; other actors in the political world, including other Government representatives, are only occasionally or marginally involved. This points out to the fact that interventions from the political world are only performed by those that either have a strong, almost institutional position with respect to GMOs, politically defining their identity, or by those that are forced by their institutional duties to focus on GMOs, as is the case of the ministers of Health and of Agriculture. Interestingly enough, the dialogue between both ministries did not change when the new Government came into force. While the ministers of Agriculture, Alemanno and Pecoraro, express mistrust and caution, the ministers of Health tend to be positive and reassuring. In practice, the political world seems to be reluctant to take a position on the issue of agro-biotechnologies. The above-mentioned breach of the trust pact between consumers and scientists finds no link in the political world. Especially in the first six months, when the voting campaign was under way, the political debate:

- Gives a generally **negative** connotation to biotechnologies and their application to agriculture;
- Is strongly **polarised**, discussed by the media as an almost personal confrontation between two ministers that are more characterized by their relevant ideology than by the proposed Government actions;
- **Does not create a common arena for confrontation between the parties**, nor provides any opportunities for a mediation or an agreement on the general principles of research or testing, or on the rules for confrontation.

The two roles that would be crucial if biotechnologies were the real core of communication, namely those of *scientists* and *experts*, account for a global 16% attendance to the strongest debates, and are not crucial for their development in the second half either. It is worth noting that a problem exists with the foundation for the title of “expert” with which some actors are introduced on TV;

The *agricultural sector* is definitely underrepresented throughout the period under study, so that agricultural associations appear as unimportant actors in the media-based debate on biotechnologies;

Communication on agro-biotechnologies on **television** is characterised by differences between genres of broadcasts, rather than between networks. When scientific information is provided within the framework of the news or of infotainment shows, its **quality is poor** - the analysis of communication carried out by the Scientific Committee highlighted recurrent errors and omissions. Its quality is higher when discussed within the framework of specialized reports

The **TV newscasts** obviously closely focus on the news, as well as on their internal agenda, which does not include agro-biotechnologies. The interest for GMOs is thus only aroused on special occasions, when no “information” is provided on GMOs but rather, from time to time:

- with respect to the political agenda, the confrontation between different points of view within the Government, between ministers Pecoraro Scanio and Veronesi, is described: such confrontation concerns staminal cells, the “mad cow” case, electromagnetic pollution, **as well as** GMOs;
- with respect to economy, the daily confrontation between market protection and national production sectors on one hand, and the compliance with community rules and the action of laws on globalisation on the other is described; within this framework, GMOs **too** are included among the “external elements” by which the different national components are measured;
- with respect to the news, the organisation of the G8 summit in Genoa is described and, thus, the objects of opposition by the *No Global* movement; these **also** include the introduction of GMOs in agriculture as tools for exploitation by multinational companies.

Specialised medical and scientific **reports** focus on “the latest” in agro-biotechnologies. The educational approach and the wide room granted to researchers and experts characterise these shows for their basically positive communication. The opposite applies to reports on the environment and the agricultural world. GMOs are negatively characterized, being perceived, and therefore described, as unrelated to the interests of the Italian agricultural world.

Infotainment shows too are characterised by a substantially suspicious attitude towards biotechnological applications in the food sector. The focus, in fact, is closely made on nutrition and food safety. GMOs are basically referred to as an external threat to a nutrition characterised by **quality and typicality**, effectively represented by inviting displays of various specialties.

*The dominating language of media communication reflects the **ideological clash** and the **polarisation of the debate**:*

- **Strongly suggestive terms**, including for example *fundamentalism*, *unitarianism*, or *obscurantism*, are used by both “poles” of the dispute;
- The same is true for the “positive” word **freedom**: freedom of research – as demanded by scientists – meant as the freedom from ideological and political conditioning; freedom of research – as demanded by environmentalists – meant as the freedom from the conditioning of economic and financial centres;
- The same contrast is observed in the use, by the environmentalist universe and, vice versa, by the scientific world, of terms that tend to “valorise” **natural** elements as opposed to **technological applications**;

In short, the language reflects an **attempt to deprive the “opposing” actor of its authority**, rather than the pursuit of a rational argument focusing on basic issues, such as the assessment of the socially sustainable risk or the cost-benefit ratio.

A brief note on scientific rigour and correctness of information

Francesco Sala and Fabio Terragni

The analysis of the year 2001 press articles and TV reports on the use of GM plants (“genetically modified organisms” or more precisely “transgenic plants”) in agriculture and the food sector has pointed out that the quality of the information on genetically modified organisms is still insufficient. Only a few articles and TV reports have shown scientific rigour and correctness; the others are characterised by serious and frequent errors and omissions.

OPINIONS BEFORE FACTS

The issue (GMOs in agriculture and food) is particularly relevant and rouses violent controversy. Perhaps this has also contributed to creating a situation where the scientific content of the information is systematically confined to the background; it is secondary to the news, to a series of statements, to protests and to economic and political interests. In this situation, opinions tend to prevail on facts, and it is often difficult even for expert readers to identify or understand the object of the controversies.

An example will be provided by the following cases:

- β The suspicious contamination from GMO seeds of cargoes composed of maize and soya seeds imported into Italy from the U.S.A. and declared “traditional” (i.e. non-GMO) by the producer;
- β The accusation made by a German daily newspaper, that a variety of durum wheat obtained under exposure to ionising radiation was used for the production of pasta.

In the first case, the information always reports the charge of contamination but hardly ever presents quantitative data (this only happens in a few tv reports, some days after the case has begun). However, the condition and the responsibilities would be very different if the cargoes in question had contained 100% transgenic seeds (fraud) or if the amount, as it turned out to be later, had been lower than 1% (casual contamination).¹ It is not clear whether Italian regulations provide zero tolerance or 1% tolerance. Where does the fraud begin?

¹ “The Nas seize transgenic seeds all over Italy. 3135 quintals of these seeds have entered our country” **Corriere della Sera, 30/3/2001** (as well as other newspapers and tv programmes): the news item is thus perceived as if the seeds were 100% GMOs

In the second case, Italian newspapers report vehement statements for several days without citing in full the source of the controversy (the text of the Frankfurter Allgemeine Zeitung) or the description of the methodology under accusation. The latter is presented as dangerous for human health, and is perceived by the reader in different ways according to the various articles: exposure to ionising radiation just prior product marketing, production of mutant plants through exposure to ionising radiation or DNA modification obtained with genetic engineering operations (GM plant). Only a few people, including experts, manage to understand from the articles or the tv reports that at the centre of the controversy is a variety of wheat that was obtained by exposure to ionising radiation. This took place at least 50 years ago. Since then, the plants haven't been treated with ionising radiation anymore.² This methodology is widely used for genetic improvement: a great number of vegetal varieties that are currently grown were created in this way. From a scientific point of view the methodology presents more risks than those arising from GM plants because radiation mutagenesis only permits to control the number of modified genes selected in the new variety. Therefore, it has gradually been replaced by more recent methodologies.

Confusion reigns for several days and the few (although correct) statements made by researchers aren't sufficient to make clearness.

KNOWLEDGE AS A BASIS FOR CORRECT EXPLANATION

The mistakes and inaccuracies of an editor lacking specific preparation are not surprising. The authors of the articles and of the Tv reports that were examined are seldom specialised journalists. Besides, a specialisation does not necessarily provide the knowledge of all the scientific facts related to a news item. The analysis of the articles and of the Tv reports, though, **too often** gives the unpleasant impression that the journalist prefers opinions to the objective presentation of news with an essentially scientific basis. At times it is difficult even for a field expert to understand what topic is being discussed (the above-mentioned case of the wheat is a typical one).

Sometimes the journalist fails to understand and, as a consequence, reports in a wrong way the statements made by experts, or reports huge conceptual errors without being aware of them. These serious mistakes cause confusion in readers and could be avoided with basic notions on the subject or with a revision made by an expert. A phone call is often sufficient.

² "A great part of the durum wheat used in our country for the production of pasta would be treated with radioactive substances" **Messaggero**, 9/5/2001. "Agricultural products that, since 1963, have been transformed into new, previously unknown species with the aid of radiation" **Messaggero**, 9/5/2001. This is false: no new species are created with radiation but only mutants of the same species!

OPINION AND PREJUDICE

Whereas the reports inside news programmes have generally shown greater attention to the balance between sources and opinions, the situation is different for tv reports (the so-called specialised programmes) and for the daily press. The latter seems to ignore the golden rule of telling facts before reporting opinions and starts right away by presenting the views of the people who "cause" the news item, i.e. mainly the critics of agro-food biotechnologies, who often call press conferences, hold demonstrations or break into scientific laboratories.³

In tv specialised reports, sensationalism **too often** prevails on the necessity to ensure the objectivity of information. The people interviewed are presented as experts. Apart from a few exceptions, these "experts" don't have proper scientific preparation and their statements, made with pseudo-scientific language, are scientifically false. The majority of the people interviewed are chosen among activists and critics of GM plants, perhaps for the sake of the show.⁴

Besides, some of them clearly promote the interest of one side when, for instance, they criticise agrobiotechnologies to highlight the importance of biological agriculture.

In these specialised reports, the short statements in favour of GM plants almost always come from industry people, who have little credibility because they represent particular economic interests. No voice has been given to any of the public researchers who held the demonstration for biotechnological research last May. The public **seldom** receives direct information on which GM plants are produced in Italy, on the quality/GM plants ratio and on the reasons why researchers consider them of public interest. The result is that, after these specialised reports, tv spectators don't succeed in forming a personal opinion based on scientifically correct information. They are simply conditioned by usually irrational and unfavourable prejudices against the use of GM plants.

The situation improves in the tv reports (including news programmes) of the second half of the year 2001: more space is given to facts and less to the opinions of people with insufficient knowledge of the sector. The scientific rigour of "Tg2 Medicina" and "Tg3 Leonardo" recent reports are worth mentioning. On the contrary, "Uno Mattina" is more concerned in attracting the audience than providing accurate information.

³ As to the raids into the scientific laboratories of the ERSA at Pozzuolo del Friuli, on **3/3/2001 Tg1, Tg2, Tg5 and TMC News** state that activists took away samples of transgenic maize, whereas they wanted to verify if they were transgenic. No researchers of the laboratory were interviewed. No mention was made of the fact that burglaries and raids into laboratories are an *illegal* action and that laboratory experimentation of GM plants is *permitted* in Italy.

⁴ For instance: "Despite the huge investments - said national president of Legambiente Ermete Realacci - twenty years of research have successfully produced only two new genes for modifying vegetables... This line of research has turned out to be a substantial failure" **Giorno, 9/4/2001**. This does not correspond to the truth: since 1985 hundreds of different genes have been introduced, in many dozens of cases plants of agronomic interest have been obtained; the current environmentalist protest has made it practically possible to exploit only 6-7 of these genes in agriculture.

OBJECTIVE INFORMATION

If, as stated by a scientific female journalist who was interviewed in one of the analysed reports “good scientific information should enable tv spectators to form their own opinions”, a few simple tips can be given for the improvement of the quality of the information on this burning topic:

- **Give facts before opinions:** information makers should try to show in a clear and simple way the scientific contents of the object discussed in the article or in the report, for instance with a technical note. The latter should be simple but extremely accurate.
- **Understand the topic before writing an article:** although it is not necessary for all journalists to become researchers, it is essential for the authors of articles to have basic notions that will enable them to understand and to explain the scientific fact they write of. It is a false statement to say that scientific accuracy hampers the reader’s (or tv spectator’s) comprehension. When necessary, a “real” expert can help to describe the most complex concepts in simple words.
- **Search for a balance:** it appears that space to various and different voices should be given when it is necessary to tackle a scientific issue.

While ensuring this balance, however, the conductor should avoid giving equal space and importance to internationally recognised experts and pseudo-experts, who lack sufficient basic preparation and would present slogans, false facts and irrational prejudices as scientific data. It could be difficult for the audience to recognise the real expert and to acquire correct information.

Quantitative data presentation

Osservatorio di Pavia

GENERAL FINDINGS

In 2001, the first year analysed by the Osservatorio, the focus of the press and the tv on agrobiotechnologies had an uneven distribution in the first and the second half of the year. The information was mainly concentrated in the first half of the year on three “emergencies”, caused by GM plants:

- The scientists’ protest, following minister Pecoraro Scanio's prohibition to carry out GMO open-field tests;
- The seizure of Monsanto’s seeds, due to suspicious contamination from GMO seeds
- The alarm on “radioactive pasta”, thrown up because the wheat varieties used for the production of pasta are suspected to be “genetically modified”.

In the three cases GMOs are no longer central and become a pretext for macro-topics that are already on the agenda of newspapers and news programmes. The communication on GMOs is thus characterised by paradoxes that are also confirmed by the analysis of the second half of the year.

In a corpus of articles and tv reports devoted to biotechnology-related facts, GMOs are in a marginal position and not at the centre of communication. So the media do not give “information” on GMOs but:

- In the political agenda, they report the confrontation between the different opinions shared by ministers Pecoraro Scanio and Veronesi inside the Government; this confrontation is about staminal cells, the “mad cow” case, electromagnetic pollution and **also** GMOs;
- As to economy, they report the daily confrontation between the safeguard of markets and national productive sectors on one hand and the compliance with UE regulations and the action of the laws of globalisation on the other. In this context, GMOs are **also** part of the “outer elements” tackled by the various national groups;
- As to the news, the main item is the organisation of the G8 summit in Genoa and, as a consequence, the issues of the No-Global movement’s protest. Among them is **also** the issue concerning the agricultural use of GMOs, as a means of exploitation by multinationals.

Individuals belonging to the Politicians' group are the major agents of communication; however, GMOs do not become the object of a political debate, where a confrontation of different positions on the protection of common interests takes place and the pros and cons are weighed. This plan of confrontation does not exist, and the major political actors are shown as representatives of often conflicting cultural worlds and not in their institutional roles.

The most competent roles, (i.d. scientists and experts), and those who should have the greatest practical interest in GMOs, (i.d. the biotech industry and the agricultural sector) are underrepresented by the media.

“Consumer protection”, is a well-present topic, also because of the type of emergencies covered by the world of information. However, the media fail in their duty to safeguard the spectator/reader-consumer, and do not inform them of their content. Contrary to what would be expected from a “transparent label” they do not provide readers and spectators with the necessary means for a conscious choice.

THE CORPUS

THE PRESS

First half of the year

The ten daily newspapers that formed the object of the analysis mainly focussed their attention on three GMO-related events:

- the protest of the scientists who signed the Manifesto for freedom of research;
- the seizure of seeds in Monsanto warehouses at Lodi and the following arson inside the factory;
- the controversies roused by an article in the German newspaper Frankfurter Allgemeine Zeitung, which said that Italian pasta had been produced with a genetically modified variety of wheat.

The three emergencies amount to 72% of the articles. All the newspapers follow this distribution (see Table 1.1); the newspapers with the largest circulation offer the highest number of articles. Among them, the articles in La Repubblica and La Stampa are remarkably large.

Second half of the year

The number of articles falls remarkably. The corpus comes down to 32 articles. The insufficient coverage also in the presence of news, for instance the European regulation on GMOs, seems to confirm the hypothesis that the agrobiotechnology issue is not an autonomous news item.

TELEVISION

First half of the year

The object of the analysis was made of 85 reports, which were broadcast on the seven national tv channels in news programmes or in reports made by the editorial staff of the news programmes. In these reports, only the portion that clearly concerned GMOs was analysed, to an amount of 95 minutes of relevance. Tv communication also focuses on the three above-mentioned events. Three news programmes are the protagonists in the production of GMO-related communication and account jointly for 76% of the total. TG3 with 29% pays particular attention to the case of Monsanto's seeds thanks to its local editorial staffs, in this case TGR Lombardia, whereas TG1 with 24% and TG2, with 23% comply with their role of institutional information makers.

Second half of the year

Similarly to what happens with daily newspapers, the absence of news related to GMOs causes a marked drop in the number of reports that news programmes dedicate to the topic. Thus the data shown are the aggregation per channel. In fact, differently from the first half of the year, most of the information is contained in medical and scientific specialised reports and in infotainment programmes. Also in this half of the year (see Table 17.2) RAI3, 59%, shows the greatest attention to the agrobiotechnology issue.

THE TOPICS

THE PRESS

First half of the year

The topics are mainly related to the events that focussed the attention on GMOs (see Table 3.1). Whereas the macrotopics *scientific research*, 19%, *Consumer protection*, 10%, *Health*, 9%, *Communication*, 9%, are occasionally related to GMOs, only *Contamination* receives wide coverage among the issues with the closest relation to the object of research. If newspapers had focussed their interest on a correct political and scientific debate, the same space would have been given to more GMO-relevant issues such as *Technological Development*, 2%, *Gene Patent* 2%, *Productivity/Quality*, 4%, which are, on the contrary, absolutely marginal in this period. Also *Dynamics in the Industrial Sector*, which in this case includes both the agricultural sector and the biotech industry, is underrepresented; this indicates that little interest is aroused by GMOs as the result of a production process.

Second half of the year

Due to the small sample of articles and to its composition (25% from Sole 24 Ore), *Dynamics in the Sector*, 15%, is the main topic (see Table 3.2). The percentages of *Gene*

Patent, 12% and *Regulations*, 15%, are due to the fact that the UE regulation is the only real news item of the period.

TELEVISION

First half of the year

The most frequently GMO-related topic is *Protest and Consent*, 23% (see Tables 19.1 and 19.2). The interest of television in GMOs seems to lie essentially in their being the object of the No-Global movement. Also in this context GMOs appear as a link to a metatopic of information, in this case Youth Protest and the Seattle Movement, a hot topic during the preparation of the G8 summit in Genoa. The main aspect in tv news programmes (an appealing one for the need of tv communication to create a narration) is the equivalence between GMOs and multinationals made the No-Global movement. Before the summit in Genoa, the report of the protests in Trieste, Ravenna and the arson at the Monsanto in Lodi contain iconic images such as the spray paint writings that read "No GMOs" or "Monsanto killer". In fact, all news programmes focus their interest on GMOs because they are the target of the No-Global movement. Even the case of Monsanto's seeds seizure gains importance as a news item only after the raid and the arson in the Lodi warehouse, for which would-be ecoterrorists are held responsible. Apart from *Genetic Contamination*, 14%, all the topics that are most relevant to GMOs are absolutely marginal. Remarkably, they disappear completely from **tv communication**. Food is almost exclusively related to the reports on "genetically modified" pasta. Therefore, news programmes amplify the daily newspapers trends.

Second half of the year

Scientific research and *Consumer protection* are the two main topics. The former, 16% (see Table 19.2) is determined by the weight of medical scientific reports, the latter, 16%, by infotainment programmes, where doubts on food safety lead to the demand for greater safeguard. It is remarkable that *Protest and Consent* remains well-present also in the second half of the year, thanks to the focus on the demonstrations of environmentalist leader Bové. However, the progress of the G8 summit in Genoa does not increase the focus on GMOs, the object of No-Global movement's protest. This reinforces the suspicion that the interest demonstrated by news programmes in the previous six months was a tool for the creation of suspense for the G8.

THE AGENTS

THE PRESS

First half of the year

Newspaper and **Politician** are the authors of more than 50% of the GMO-related communication (see Table 4.1). **Scientists**, 12% and **Experts**, 4% who are the most qualified classes of agents for the debate, are underrepresented.

If we analyse what the class of Actors speak about, it is interesting to note that Politicians tend to underestimate the topics closely related to GMOs (for instance Genetic Contamination - see Table 2.4). This is a sign that GMOs in Politician's discourses are used as a tool to speak about something else. As to the individuals in the Politicians' group, the two major actors are ministers **Pecoraro Scanio** and **Veronesi** and Green leader **Grazia Francescato**. If the attention paid by Minister of Health Veronesi on the *health* topic appears relevant, the poor attention paid by the Minister of Agriculture to such topics as *Dynamics in the agricultural and industrial sector* and *Productivity and quality* is astonishing. The little concern for industrial dynamics is confirmed by the thematic profile of Assobiotec president Dompé, who is also underrepresented on these topics. This is another proof that the needs related to the news determine the objects of the debate and the most specific topics are confined to the background. The events associated with GMOs are used as a tool to deal with topics that are already in the news but relate to other causes.

If we analyse the presence of single subjects inside Politicians' and Environmentalists' classes, who jointly account for 38% of the communication on GMOs, we see that the Green and Environmentalist-oriented component has a predominant weight, more than 50% of the total.

Second half of the year

GMO industry and scientists (see table 4.1) gain percentage points compared with environmentalists' positions, as is shown by the positions of Dompé and Vignani among the Agents (see table 6.2)

TELEVISION

First half of the year

The news programme editorial staff, 62%, therefore the news, is the main agent of tv communication (see table 20.1) and turns out to be a more autoreferential medium than the press. Only the **Politician**, 17%, goes beyond 10%, whereas experts and scientists have little space, which demonstrates that the scientific aspect of GMOs is definitely marginal in tv information.

As to the individuals (see Table 24.1), spokesman of Monsanto, Ferri (261 secs) is the subject with the highest amount of direct speech, together with minister Pecoraro Scanio (241 secs). As to direct speech, however, the representatives of Greens and Environmentalists play the leading role among the first ten actors. There is also an interesting presence of interviews with common people.

It is also interesting to see who speaks in the Politicians' and Environmentalists' groups. In the news programmes interviews these roles are almost completely played by Green-oriented individuals. The political world is thus absent, with the exception of one single party, and does not seem to be interested in a debate on the GMOs issue.

Second half of the year

Experts and scientists gain positions compared with Politicians and News programme, thanks to the composition of the analysed corpus. Agricultural sector and GMO Industry are still heavily underrepresented. On the top of the Agents' list are De Petris, Alemanno and gastrosophist Grasso; all of them have negative views on GMOs.

ELEMENTS OF EVALUATION

Even though GMOs are confined to the background of the media communication, they receive an **essentially negative connotation**. This is first observed when considering the elements of value for newspapers, where the majority of articles have negative values, and even more on television, where positive values are almost absent.

THE PRESS

First and second half of the year

Important signs come from the analysis of the tables related to evaluation (see table 9) and to the elements of safety and advantage (see tables 10 and 11). **Scientist, experts and GMO industry people** give positive evaluations and underline the elements of **safety and advantage**. **Environmentalists and Associations**, on the contrary, show a negative attitude. The data relevant to politicians are more surprising, since they show a prevailing negative attitude: in the first half of the year (see table 8.1) Pecoraro Scanio's profile for topics and evaluation is the same as Grazia Francescato's, Ivan Verga's and the Greens'. This suggests that Pecoraro Scanio did not separate his political affiliation from his role as a minister. It is interesting to notice that a positive attitude from Monsanto, Duhamel, does not counterbalance the negative one of Pecoraro, Francescato and Verga. This is due to the defensive tone of their statements, which are almost always related to the seizure of Monsanto's seeds.

As to the communication of the Agricultural sector, it lacks elements of safety and advantage and positive evaluation of GMOs (see tables 9.1 and 9.2). This suggests that,

in the media representation, the sector does not perceive GMOs as a central element of possible development, but rather as a threat.

TELEVISION

First and second half of the year

The focus made by television on GMOs is essentially negative (see tables 18.1 and 18.2). Only TG1 seems to have a well-balanced profile. If we analyse the evaluation (see table 25.1) for each role, we will notice interesting data.

- the representatives of GMO industry, i.d. Monsanto's spokesman and Monsanto itself, have no positive evaluation. This results from an essentially defensive communication, but also to the fact that the pros and cons of GMOs are never discussed.
- in news programmes, minister Pecoraro Scario's profile is more balanced, less similar to the Green's and Environmentalists' profile than in the press.

Common people, when interviewed, give negative evaluation and express alarm concerning GMOs. Thus, in the representation made by tv news, the public opinion is against GMOs and scientists, and takes side with Greens and Environmentalists, who faithfully represent their needs in the media.

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Osservatorio di Pavia

The Osservatorio di Pavia, founded in 1994 by Cares, has since developed into an internationally recognised institute of analysis and research on mass communication.

The mission of The Osservatorio di Pavia is to safeguard social, cultural and political pluralism in the field of mass media. The Osservatorio di Pavia is an independent non-profit organisation which follows the ethical benchmarks of scientific-methodological approach.

The Osservatorio di Pavia has always worked in collaboration with the Università degli Studi di Pavia, with whom it has developed a complex methodology for the observation and the analysis of political communication in the mass media. This methodological effort has led to a long-term co-operation with the RAI - the Italian national broadcaster - for which the Osservatorio di Pavia has carried out media monitoring since 1994. The data produced by the Osservatorio di Pavia is currently utilised by the Parliamentary Commission on the RAI and the Telecommunications Authority.

Since 1996 the Osservatorio di Pavia has also carried out qualitative research on specific aspects of mass communication. The IULM, the Università Cattolica of Milan, the Ministry of the Treasury, the Ministry of the Environment, the National Institute of Health, the ENI, the CNEL and Abacus are among the partners of the Osservatorio di Pavia. Thanks to the experience achieved in the national context, the Osservatorio di Pavia has gained international credit as a major centre for the protection of freedom of expression, the observation of mass media and international democratisation processes, mostly in collaboration with the Ministry of Foreign Affairs, the OSCE/ODHIR, the UE, the Council of Europe (COE) and Italian and foreign NGOs. The experience of The Osservatorio di Pavia has also enabled it to undertake educational and training activities and it is one of the founders of the Forum on International Justice and Human Rights of the Università degli Studi di Pavia.

Activities

Permanent monitoring of political pluralism

From 1995 Television monitoring of political pluralism on RAI channels

From 1997 Television monitoring of political pluralism on MEDIASET and TMC channels

From 1999 Monitoring of the agenda setting on RAI and MEDIASET prime time news programmes

Election monitoring

2001 Monitoring of the referendum campaign on RAI channels - September 2001 referendum

2001 Monitoring of the election campaign on RAI local news programmes and on RAI, MEDIASET and TMC channels - May 2001 parliamentary and local election

2000 Monitoring of the referendum campaign on RAI channels - May 2000 referendum

2000 Monitoring of the election campaign on RAI local news programmes - April 2000 local election

1999 Monitoring of the referendum campaign on RAI channels - May 1999 referendum

1999 Monitoring of the election campaign on RAI and MEDIASET channels - June 1999 European election

1998 Monitoring of the election campaign on RAI local news programmes - June 1998 local election

1997 Monitoring of the election campaign issues on RAI local news programmes - November 1997 local election

1997 Monitoring of the election campaign on RAI local news programmes - May 1997 local election

1996 Monitoring of the election campaign on RAI, MEDIASET and TMC channels - April 1996 parliamentary election

1995 Monitoring of the referendum campaign on RAI, MEDIASET and TMC channels - June 1995 referendum

1995 Monitoring of the election campaign on RAI, MEDIASET and TMC channels - April 1995 local election

1994 Monitoring of the election campaign on RAI and MEDIASET channels - June 1994 European election

1994 Monitoring of the election campaign on RAI and MEDIASET channels - April 1994 parliamentary election

Training and courses

2002 Training activity for the monitoring of political pluralism on behalf of the Co.Re.Rat of the Consiglio Regionale del Veneto

2002 Organisation of a project entitled "European observers: the training of election observers under a common European approach"

2001 Founder member of the Forum on International Justice and Human Rights of the Università degli Studi of Pavia - Centro Interdipartimentale di studi e ricerche in filosofia sociale

2001 A high school course entitled "Education about the Media"

2001 Seminary for ISPI Summer School in Milan on media monitoring during electoral observation in other countries

1998 Seminary for the Scuola Superiore Sant'Anna of Pisa on media monitoring during electoral observation in other countries

Tematic research

- 2002 Analysis of the relationship between minors and television on behalf of the Co.Re.Com of the Regione Toscana: monitoring of the programmes in the children's programme time slot of Tuscan local channels
- 2001 Observatory on GMO-related communication in the press and on television
- 2001 Quantitative and qualitative research on television information on medicines and non-conventional therapies
- 2000 Quantitative and qualitative research on television information on medicines and non-conventional therapies
- 2000 Analysis of the image of the Versace brand in the Italian and U.S. press
- 1999 Analysis of the representation of death in television news programmes
- 1999 Analysis of parliamentary communication on television
- 1999 Analysis of the image of the National railways in the press and on television
- 1999 Analysis of communication styles in children's programmes
- 1999 Analysis of the 1998 European election in the major Italian newspapers
- 1999 Monitoring and content analysis of T3: a qualitative analysis of the 19:00 edition
- 1998 Analysis of the presence of sport in TG1
- 1998 Analysis of the Albania Case
- 1998 Analysis of the Di Bella Case
- 1998 Analysis of the image of TELECOM ITALIA in the press and on television
- 1998 Analysis of the information on the '98 finance bill
- 1998 Analysis of the image of the Provincia di Milano in the press and on television
- 1998 Analysis of the image of the European Union in the press and on television
- 1998 Analysis of television and press information on environmental issues
- 1997 Analysis of content and style of RAI local news programmes
- 1997 Analysis of the information on the '97 finance bill
- 1997 Analysis of the communication on industrial plants construction with high environmental risk in the daily press
- 1997 Press and video review on the Eurostar Case
- 1997 Press review on drug-related issues
- 1997 Analysis of the programmes on "Teleippica"
- 1996 Analysis of content and style of RAI local news programmes
- 1996 Analysis of formats and styles of conduction in electoral television programmes
- 1996 Analysis of the information on the '96 finance bill
- 1996 Analysis on the presence of Lega Nord in prime time news programmes
- 1996 Analysis of the representation of violence on television

Research on communication and gender

- 2002 Drafting of the Media Guidelines for Integration of Observation of the Participation of Women in Election in ODIHR Election Observation Methodology
- 2001 The representation of women in entertainment and fiction television programmes
- 2000 Report on the visibility of women in television communication in the years 1997-99
- 1999 The image of women in television news programmes
- 1999 The visibility of female candidates in 1999 European election campaign

1999 The visibility of female candidates in 1996 election campaign

Research on communication and multiculturalism

2001 Observatory on multiculturalism

2000 Observatory on multiculturalism

1999 Analysis of the relationship between immigration and crime on news programmes

1997 Representation and visibility of immigrants in RAI and MEDIASET programmes

International Activities

Since 1997, the Osservatorio di Pavia has regularly carried out consultations on the request of international organisations (OSCE/ODHIR, UNDP, European Union, Council of Europe), national institutions (Ministry of Foreign Affairs) and has collaborated with NGOs. The Italian Ministry of Foreign Affairs encouraged and supported this activity and funded the first three media monitoring missions which were undertaken on behalf of the OSCE.

Parliamentary Election - Albania (1997)

In June 1997 two experts from the Osservatorio di Pavia monitored the coverage of the election campaign by the Albanian national television. The results were published in the Council of Europe's final report on the situation of the Albanian media.

Presidential Election - Republic of Serbia - FRY (1997)

Four experts from the Osservatorio di Pavia and 12 trained local assistants monitored the national channels of the Serbian Republic within the OSCE Observation Mission for presidential elections on the request of the Italian Ministry of Foreign Affairs

Parliamentary Election - Republic of Montenegro - FRY (1998)

Four experts from the Osservatorio di Pavia and 14 trained local assistants monitored the public television of the Republic of Montenegro within the OSCE/ODHIR Observation Mission for parliamentary election on the request of the Italian Ministry of Foreign Affairs.

Parliamentary Election - Republic of Slovakia (1998)

Five experts from the Osservatorio di Pavia and 23 trained local assistants monitored the public television of the Republic of Slovakia within the OSCE/ODHIR Observation Mission for parliamentary election on the request of the Italian Ministry of Foreign Affairs.

Since 1998 the Osservatorio di Pavia has provided media advisors for the core staff in the following election observation missions:

International Organisation	Period	Election	Country
UE	1998	Parliamentary Election	Cambodia
OSCE/ODIHR	1998	Constitutional Referendum	Albania
OSCE/ODIHR	1999	Presidential Election	Kazakhstan
OSCE/ODIHR	1999	Presidential Election	Slovakia
UE - UNDP	1999	Parliamentary Election	Indonesia
OSCE/ODIHR	1999	Parliamentary Election	Georgia

OSCE/ODIHR 1999 Parliamentary Election Kazakhstan
OSCE/ODIHR 1999 Parliamentary Election Uzbekistan
OSCE/ODIHR 2000 Parliamentary Election Kyrgyzstan
OSCE/ODIHR 2000 Local Election Montenegro
OSCE/ODIHR 2000 Local Election Albania
OSCE/ODIHR 2000 Local Election Macedonia (FYROM)
OSCE/ODIHR 2000 Parliamentary Election Belarus
OSCE/ODIHR 2000 Parliamentary Election Azerbaijan
OSCE/ODIHR 2000 Parliamentary Election Serbia
UE 2001 Presidential Election Peru
OSCE/ODIHR 2001 Parliamentary Election Albania
OSCE/ODIHR 2001 Parliamentary Election Bulgaria
Council of Europe 2001 Local Election Kosovo
UE 2002 Local Election Cambodia
UE 2002 Presidential Election Congo

Experts of The Osservatorio di Pavia have also participated in the following election observation missions with different roles:

International Organisation	Period	Election	Country	Role
OSCE	2000	Local Election	Kosovo	Supervisor
OSCE	2000	General Election	Bosnia Herzegovina	Supervisor
OSCE/ODIHR	2000	Parliamentary Election	Serbia	STO
MAE	2000	Presidential Election	Peru	Deputy Head of Mission
OSCEE/ODIHR	1997	Local Election	Bosnia	STO

The Osservatorio di Pavia is also active in the field of co-operation to development and carries out analysis and research on foreign media.