

PARADYS PROJECT

Final Report, Italy

Elena Collavin and Giuseppe Pellegrini

April 2004

Elena Collavin is the author of chapters 2, 3, 4, 5, 8.1; Giuseppe Pellegrini is the author of chapters 1, 6, 7, 8.2. Data have been collected by Elena Collavin and Giuseppe Pellegrini.

Acknowledgments:

Marina Sbisà coordinated the Linguistic Unit, providing overarching guidance during the project and several crucial remarks on this report. Alessia Damonte collaborated with the Sociological Unit in the early stages of the project. Massimiano Bucchi and Federico Neresini within the Sociological Unit collaborated with suggestions during the research.

Several persons and institutions in the last three years have helped this research providing data and information. Some people in particular played an essential role in the phase of data collection:

Mr. Massimo Rossi (Mayor of Casalino and Granozzo con Monticello), Mr. Filippo D'Onofrio (Agricultural Development, Piemonte Region), Professor Carlo Lorenzoni (University of Piacenza), Professor Corrado Fogher (University of Piacenza), Professor Eddo Rugini (Tuscia University), Dr. Stefano Dell'Anna (AUCS).

Also:

Professor Giuliano D'Agnolo (Istituto Superiore di Sanità), Carlo Perone Pacifico (Tuscia University), Dr. Luca Colombo (Consiglio dei Diritti Genetici), Dr. Claudio Di Troia (Roma La Sapienza University), Professor Giovanni Tamino (Padova University), Dr. Claudio Bergamaschi (Italian Conference of Agriculture), Dr. Assuero Zampini (Coldiretti), Mauro (Rete No Global Roma), Mr Mauro Mottaran (Casalino Council), Mr Giovanni Giarda (CC Casalino), Dr. Sergio Suardi (Italian Conference of Agriculture - Novara), Mr Giacomo Minelli (Casalino Council), Dr. Ivan Verga (VAS), Ms Lidia Chiaruttini (ERAPLE Udine), Dr. Licio Collavin (University of Trieste), Dr. Giuseppe Battaglini (Health Ministry), Professor Raffaele Giuseppe Agostino (Cosenza University), Dr. Piero Bassetti (Bassetti Foundation), Dr. Enrico Garrou (ARPA Piemonte), Dr.ssa Claudia Occelli (ARPA Piemonte), Dr. Pietro Girò (ARPA Novara), Dr. Claudio Martino (Unione Agricoltori), Dr. Andrea Ferrante (AUCS), Dr. Maurizio Pagani (President of Provincia di Novara), Dr. Ettore Rigamonti (Settore Agricoltura Provincia di Novara), Prof. Vincenzo Lungagnani (Assobiotec), Dr Gianfranco Torelli (Vice Major of Bubbio), Dr Bruna De Marchi (ISIG Gorizia), prof. Arturo Falaschi (ICGEB), Dr. Decio Ripandelli (ICGEB), Mr. Anatole Zonta, Mr. Giuseppe Perrella, Ms. Liliana Giolo. We wish to warmly thank them for their generous cooperation.

A number of institutions kindly contributed, either sending us relevant material or giving us significant information: Veneto Agricoltura, the Goethe Institut in Rome, Coldiretti Piemonte, European Science Foundation, USCF Viterbo, The Serra club of Viterbo, SWG Trieste.

Elena Collavin is grateful to John B. Haviland for bighearted advice and early comments on the report, and to Licio Collavin for benevolently taking the time to explaining and showing her how gene transfer is done.

INDEX

1. Political and legal framework in Italy on GMOs.	<i>Giuseppe Pellegrini</i>	Pg. 3
2. Description of collected data	<i>Elena Collavin</i>	Pg. 11
3. Main findings of data analysis. Synopses of Social positions (descriptions and table)	<i>Elena Collavin</i>	Pg.
4. Synopses: Social positions individuated in the Italian data	<i>Elena Collavin</i>	Pg. 24
5. Dynamics of social positioning	<i>Elena Collavin</i>	Pg. 45
6. Relationship between legal/political, cultural environment and the dynamics of social positions with respect to citizenship.	<i>Giuseppe Pellegrini</i>	Pg. 55
7. Dissemination strategies	<i>Giuseppe Pellegrini</i>	Pg. 67
8.1 Policy recommendations	<i>Elena Collavin</i>	Pg. 67
8.2 Conclusive observations	<i>Giuseppe Pellegrini</i>	Pg. 73
9. References		Pg. 76

1. Political and legal framework in Italy on GMOs.

Throughout 2000, Italy has become one of the European countries more hostile to agricultural biotechnologies and transgenic products, leading the group that opposes new agro food technologies at the European level – particularly within the European Council of Ministers. Amato government gave a significant power to members of the Green party, despite their little weight in terms of votes. Thus, the Minister of Agriculture actually stopped public research in this field, causing an unprecedented rebellion by the Italian scientific community. Government also suspended the commercialisation of certain modified products on the Italian territory with a Prime Minister decree. On August 4, 2000, Prime Minister Giuliano Amato decided to suspend maize derivatives produced by Monsanto, Novartis, Pioneer e AgrEvo. These are starches and flours present in thousands of products, obtained from modified strains to resist to parasites and herbicides (Glyphosates). The decree states that “current scientific knowledge does not recognize risks for human and animal health due to consumption of such GMOs “ but at the same time refers to the security clause of the European regulation of new food products, allowing individual member states to suspend commercialisation of a product or food ingredient, in the case that new information or evaluation of existing information suggest that the product or ingredient may pose a risk to health (article 12, regulation 258/97).

Thus, an emergency procedure is applied, designed to face risks not contemplated at the moment of the European authorization, while at the same time recognizing that such risks do not exist. Suspension of the four products also result from a contradictory series of advisory documents produced by the *Istituto Superiore di Sanità* (ISS) and by the *Consiglio superiore di sanità* (CSS) in response to a statement of denunciation by the Green Association *Verdi Ambiente e Società* on the 15th of September, 1999.

The green association argued that the abbreviated process authorizing the commercialisation four maize types was not legitimate. While GMOs release is authorized by 90/200 directive, the commercialisation of food products derived by transgenic agricultural varieties is regulated by the EC regulation on new food products, n. 285/97. GMOs release is also disciplined by EC regulation 258/97, describing two procedures, one normal and one simplified. In order to adopt the simplified procedure, the following requisites have to fulfilled:

- food products and ingredients should be “produced from GMOs but should not contain them”
- such products should be “substantially equivalent” to already existing food products and ingredients

Products suspended are not GMOs, but flour and starches produced from GMOs. Such derivatives have also been recognised substantially equivalent to conventional products already commercialised by the certifying body of the UK Ministry of Agriculture, the Advisory Committee of Novel Foods and Processes, and thereby marketed in Italy as well as in other countries. So why these products were suspended in Italy?

The Green Association VAS claims that both these four maize types and three types of oil from transgenic colza currently marketed would have been obtained an illegitimate certificate of equivalence, “sidestepping the safety evaluation and authorization procedures listed in the regulation 258/97”. The UK body is therefore accused of having certified an undemonstrated equivalence; according to the environmental group, derivatives from these maize and colza oil types differ from the corresponding conventional products because they contain extraneous protein traces due to genes inserted through genetic engineering; the protein produced by Bt gene or the enzyme conferring resistance to herbicides.

The key is clearly in the interpretation of the concept of ‘substantial equivalence’: a transgenic product can be considered equivalent to its conventional counterpart if it is identical, except for the

extraneous protein? This is usually what is agreed by experts and policy makers. EC regulation on new food products uses in fact the expression “substantial equivalence” and not “complete identity”. No product is currently commercialised that fulfils the complete identity principle invoked by environmentalists: the only products authorized on the basis of the substantial equivalence principle are the four maize and the three oil mentioned above.

The initiative by the Green Association, thus, does not actually denounce an illegitimately certified substantial equivalence, but rather aims at criticizing the principle of substantial equivalence as such.

The ISS has given a first advice on the matter on the 22 October 1999, upon request by the Minister of Health Rosy Bindi, stating that “our institute does not agree that the products are substantially equivalent”. The advice mentions three categories of new food products: 1) those substantially equivalent to their traditional counterpart; 2) those substantially equivalent to their counterpart except for the trait inserted through genetic modification; 3) those not substantially equivalent.

The ISS claims that the maize and oil types belong to the second category, while the simplified authorization procedure entailed by regulation 285/97 only applies to the first category, i.e. when there is total substantial equivalence. No indication, however, is given of regulations or official CE documents supporting such claim. CE regulation 258/97 does not contain this classification, stating instead that substantial equivalence is to be understood in terms of composition, nutritional value, metabolism, use of the product and the tenor of undesirable components. It is clear that if a certain gene is inserted into a variety of maize or starch, it should be checked that this insertion causes no changes to the plant metabolism, to the chemical composition of the product with regard to macro- and micro-nutrients and does not increase the level of toxic molecules. These controls have been made by the UK deputed body, according to EC regulation 258/97 and the same date have also been examined by the European Scientific Committee on Plants.

On the 16th December, 1999, the CSS expresses opinions in sharp contrast with those of the UK body, hypothesizing that the inserted gene could “alter the organisms’ metabolism by making it potentially dangerous” and thereby neglecting the fact that the products under question are not organisms, but flour, starches and oils. This misunderstanding will play a central role also in the following stages of the story, being also included also in the text of the suspension decree.

Finally, the CSS notes that the inserted gene could be transferred from one micro-organism to other micro-organisms within bacterial intestinal flora. This risk will be later recognized as non existing by the director of the ISS, Giuseppe Benaglio. While admitting that substantial equivalence is in itself an ambiguous concept, the Council considers these as not substantially equivalent in terms of composition, insofar as they contain proteins produced by genetic modification; “the resort to the abbreviated procedure of regulation 258/97 is also considered illegitimate”.

The government change, with Amato replacing Prime Minister D’Alema, produces a particular political situation. The Green party have now two ministries (Pecoraro Scanio, Minister of Agriculture, and Gianni Mattioli, Minister for EU policies). The Minister of Health Veronesi, a renowned oncologist, asks the ISS for new advice on the seven products. The advice is given on July, 4th, 2000 and repeats the former position without clarifying any controversial aspect. The non equivalence judgement is simply based on the list of genes inserted into the agricultural varieties from which the products derive, without explaining whether the proteins are still present in all seven derived products. Being unable to issue a suspending decree on such basis, the Minister, asks the ISS to reconsider the matter. This new advice (28 July 2000) contradicts the positions formerly expressed by ISS, attributing them to a restrictive interpretation of the concept of substantial equivalence. To avoid other misunderstanding, this aspect is now delegated to the legal office of the Prime Minister. Data obtained show that the four maize derivatives contain between 0,004 and 30 parts per million of extraneous proteins, while the three types of colza oil do not show a significant

– or at least not above the limit of 0,01 parts per million – amount of proteins resulting from genetic modification.

No data are available on the presence of fragments of extraneous DNA, as such analysis was not yet common when the UK body examined the products, between 1995 and 1997. “In general” ISS concludes, “in terms of micro- and macro-nutrients, the seven GMO products seem substantially equivalent to their traditional counterpart”. In the light of current scientific knowledge, ISS director considers these products of no risk for human beings. “This institute” writes ISS director Benagiano “does not express any observation with regard to the risk of releasing these GMOs or their products into the environment”. Being flours, starches and oils, these products could not interact with traditional varieties, diffusing extraneous genes across the environment. Also, the GMOs used for these products are not grown in Italy and at least the four maize varieties have been already evaluated by the European Scientific Committee on Plants with respect to ecological risks when the producers of transgenic seeds asked the authorization for environmental release in according to EU directive 90/220.

The decree issued by Amato government in 8 august 2000, however, misquotes this advice, confusing again the environmental release of flours and oils with the release of seed or maize plants, a confusion that is also recognized by Benagiano in a letter to *Nature Biotechnology*.

Decision on the suspension decree is taken notwithstanding a split in the Council of Ministers: on one side, the Ministers of Health, Industry and Scientific Research; on the other side, the two Green Ministers together with the Minister of the Environment. A crisis of government is menaced by these latter unless all products are suspended from the market. Thus, Prime Minister Amato takes upon himself the responsibility for the decree, authorizing the commercialisation of the three oils, that cannot even be blamed for the presence of extraneous proteins, while suspending the four maize derivatives.

It is the very first time that a European country calls on the security clause of regulation 258/97 to suspend the commercialisation of a transgenic product. The matter is thereby brought to the attention of the Scientific Committee on Food; should any risk be found in the products, the suspension would have to be extended to the whole EU.

On September, 7th, 2000, The Scientific Committee restates the safeness of the food products suspended in Italy. “The committee holds that information submitted by Italian authorities do not give sufficient reasons for considering the new products at risk for human health”¹.

The Italian decree causes sharp reaction within the Italian scientific community. A group of some 1000 researchers, together with some foreign colleagues, sign a document published on 5 November, 2000. Later, in February 2001, scientists publicly demonstrate in favour of “research freedom”.

The above described situation has generated a significant decrease in the amount of notifications to the National Biotechnology Commission for GMOs experimentation. In 2000, only two authorizations have been notified for GMOs experimentation.

1.1 UE and Italian Legislation

Italian normative on Genetically Modified Organisms, until July 2003, derives from EU directives and rules; more precisely:

- Directive 90/220/C.E.E., adopted with the Legislative Decree n.92, 3 March 1993 (Published on the ordinary supplement to the Gazzetta Ufficiale n.78, 3 April 1993), concerning **Genetically Modified Organisms** deliberate release.
- Directive 90/219/C.E.E. adopted by the

¹ “Opinion of the Scientific Committee on Food concerning a submission from the Italian Authorities raising concerns for the safety of certain products approved under the notification procedure of Regulation (EC) 258/97”, September, 7th 2000. Web page: http://europa.eu.int/comm/food/fs/sc/scf/out66_en.pdf

Legislative Decree n.91, 3 March 1993 (Published on the ordinary supplement to the Gazzetta Ufficiale n.78, 3 April 1993), concerning confined utilisation of **Genetically Modified Micro Organisms**.

- C.E. Regulation n. 258/97 (G.U.C.E. n. L. 433 14 February 1997) concerning novel food on the trade of new groceries and specifically those produced making use of biotechnology.
- C.E.E. Regulations concerning food labels: Regulation n. 1139/98 (G.U.C.E. n. L.73 26 May 1998)
- Regulation n.49/2000 (G.U.C.E. n. L. 13 10 January 2000) and Regulation n. 50/2000 (G.U.C.E. n.L.15 10 January 2000). Regulation C.E. n.1139/98 makes it compulsory to declare the presence of GM on labels of groceries produced making use of genetically modified corn and soy. Regulation C.E. 49/2000 states that products containing more than 1% of genetically modified corn and soy should declare it on the label. Regulation C.E. n. 50/2000 states that products containing flavours produced making use of GMOs should declare it on the label.

C.E.E. Directive n. 219/90, modified by the Directive n.81/98 was adopted by the Legislative Decree 12 April 2001 n.206. The above Decree requires specific procedures for the deliberate release of Genetically Modified Micro Organisms (see annex).

C.E.E. Directive n. 220/90, the still valid E.U. Law to which Italy refers to, will have to be adopted in Italy by October 2002. The above Directive states the procedures to be followed for the deliberate GMOs release. It is in 3 parts:

- A) On aims, identification of the competent authority, terminology and definition of GMO, deliberate release, commercialisation, product and notification and applicants.
- B) On GMO deliberate release in the environment, subjects obliged to notify, information on the release and conclusive report.
- C) on GMO's commercialisation and additional information, controls and sanctions.

GMO deliberate release is also allowed within specific procedures stated in the Regulation CE n. 258/97, which is structured as follows: one so called Ordinary Procedure, disciplined by articles 4, 6 and 7 and 2) a so called "simplified one", disciplined by articles 1.2 (b), 3.4 and 5 of an annex.

1) Ordinary procedure requires the involvement of technical authorities of each State Member with different degrees of complexity for different processes. Both the European Commission and EU State Members can make objections. Final decision authorising the release also indicates its limits and might give supplementary indications.

2) Simplified procedure requires that the interested company makes request to have its product evaluated by one of the entitled bodies of a State Member. The entitled body has to assess the "substantial equivalence" of the GMO product to the original one. Once obtained the evaluation, the applying Company notifies to the Commission the starting of commercial distribution. The Commission communicates the received notifications to State Members within 60 days.

Essential requirements in order to adopt the simplified procedure are the following:

- Products are to be obtained from GMOs but not contain GMO.
- Products are to be "substantially equivalent" to the original non-genetically modified ones.

Italian legislation (Legislative Decree n. 91/93 and n. 92/93) individuates the Ministry of Health as the GMO competent authority in Italy. Within the Health Ministry have then been appointed:

- a) Coordinating Interministry Commission deliberating on Genetically Modified Micro Organism's restricted release, as stated by the Legislative Decree n.91/93;
- b) Interministry Commission for Biotechnology (CIB) deliberating on field trials of Genetically Modified Organisms for exclusive research purposes. Legislative Decree n. 92/93 also regulates the trade of GMO.

Attention needs to be driven to the so-called Precaution Clause included in the article n16 of the Legislative Decree 92/93. The clause states that the Ministry of Health or the Ministry of the Environment can decide to restrict or temporally suspend the use and trade of products estimated dangerous to human health or the environment.

The analysis of a specific field trial, described in section 2 of this report, was conducted with regards of the Legislative Decree n. 92/93.

In august 2003 Italy adopted a new procedure for the deliberative release of genetically modified crops, adopting the EU directive 2001/18. Comparison between old and new normative allows to evaluate which type of social positioning is ascribed by law to citizens and what kind of participation is provided.

1.2 From Decree 92/93 to the new procedure

In Italy the past law regulating the procedure for deliberate release of Genetically Modified Organisms in the environment is the Legislative Decree 92, 3 March 1993, which adopts and enforces the 90/220/CEE Directive.

The Biotechnology Interdepartmental Commission was the advising body in charge of evaluating the acceptability of the experiments proposed in the notifications. The above Commission comes to a decision within 90 days since an application for field trial permission is received.

In particular the Commission is in charge of verifying that notifications comply with the provisions by the law, examining the observations drawn by other Member States, examining the applicant requests, drawing a final advice. The Health Ministry emits the final authorizing act.

Citizen participation in the permitting procedure

The law specifies that the Interdepartmental Commission in order to make a decision can consult interest groups or of general public in relation with every facet of the planned release. To the best of our knowledge this possibility has never been used with respect to a specific case of field trial, while environmental groups have obtained at least once to be heard by the Commission.

Information provided by law to the general public

According to the 1993 Decree no publicity is given of the received notifications. No publicity is provided for rejected notifications. Information can be requested to the Commission but there can be some restrictions if demanded by applicants. In any case no information is provided for notifications that were retired by the applicant.

Once the Commission had given its assent to the experiment, the following means of publicity are provided for the authorized field trial:

- details of the experiment are published on the Health Ministry web site (such as details of the applicant, location of the experiment and the kind of transgenic modification carried out on the planted seeds)
- signs are put along the perimeter of the fields where the experiment is taking place (but inspectors told us that when the rice grows those indications weren't visible). These signs seem to be addressed not to the public but rather to inspectors as they allow them to identify the field.

Besides, local authorities are given all the relevant information also in order to provide appropriate field inspections. For local authorities it has to be intended the Regional Presidency and the senior civil servants in charge of the relevant branches of the Regional Administration.

The ascribed social positioning is that of the unconcerned individual. Communication between the citizen and the institution is mono directional and dialogue between actors is not foreseen. Moreover, this means of providing data publicity allows only to a very interested and technologically literate person to access information.

Procedure then seems to assume that common citizens are not interested.

Tab. 1 Comparison between old and new law on GMOs experiment

Legislative Decree 92/1993 (EU directive 1990/220)	Social positioning ascribed		Legislative Decree 224/August 2003 (EU directive 2001/18)
NCA*: Health Ministry			NCA: Environment Ministry
Preliminary examination	Unconcerned individual,	concerned individual, Organizations of the civil society	Preliminary examination (15 days)
			Consultation (30 days)
Evaluation			Evaluation (60 days)
Permission (90 days) since the application)			Permission (115 since the application)

*National Competent Authority

The new Italian law

Within the new legislative frame (194/2003) the Biotechnology Interdepartmental Commission is still the advising body in charge of evaluating the acceptability of the experiments proposed in the notifications. The above Commission comes to a decision within 105 days since an application for field trial permission is received.

The new law moves the competence of the national authority from the Health Ministry to the Environmental Ministry, to which the commission respond. The Environment Ministry issues the final authorizing act.

Before the evaluation takes place, the law provides for a form of consultation. Consultation is defined as “the possibility of giving the chance to any physical or juridical person or institution, or organization or association, to formulate observations or provide information about any application” received. This refers to applications done in order to release GM crops in the environment for purposes different from commercialization².

To such aim it will be created a list of subjects to be consulted that shall include institutions, associations and other organizations, and any other person that will require to be included. Members of the list will be informed at the starting of every consultation and whenever new information will be available.

Public consultation lasts for 30 days, after which the competent national authority transmits the received observations to the Commission that evaluates them. The very same national authority will allow public access to information by creating a dedicated session in the Ministry web site. To this date the web site has not been published yet and information on field trials is still found on the Health Ministry web site.

This type of consultation represent a step forward from the past legislation. To give voice to the public before the decision is made can be seen as a more inclusive style as it allows the expression of citizens and social organizations. Within this legislative frame the social positioning ascribed to the public is that of the concerned individual, somebody knowledgeable and asking for information. Once again information comes via digital media and as such the law implies a certain level of computer literacy in the public.

Let us now look at if and how the new law responds to the social positioning we found in the Casalino encounter. The social positioning of some of the people in that meeting could be described as that of a concerned individual that wants at least to be informed before the experiment takes place. At first glance, one could argue that the new law responds to such expectations by providing both information and spaces for posing questions and objections.

² DLGS 194/2003 Annex VIII Comma A1.

Unfortunately, once again the law only formally provides for information to most concerned people, namely those who live near the field, because it does not supply for publication on local press or direct information to mayors.

2. Description of data.

We have been comprehensively studying two ongoing field trials. To this date in Italy almost 300 field trials have taken place. Paradys research is case based, the features of cases have no statistical relevance. Rather, we claim that the Italian situation, seen through the in depth analysis of two field trials, allows us to make well grounded considerations of policy relevance.

We have been collecting data mostly of three kinds:

- data strictly related to two chosen cases of field trial (both experiments were already in place when we started our research)
- data coming from episodes of anti GMO protest, recordings of public meetings on the more general theme of biotechnology and ethics, scientific conferences, councils, regions, consumers and green activist's statements on field trials, mostly as reported on their web sites, newsletters and forums. Regional laws and local declarations against field trials.
- data from the media (mostly newspapers and web sites) on the subject of field trials and more in general on biotechnologies

The criteria with which we selected the two trials are the following:

One of the field trials was the result of the last application to have received positive answer from the Inter Ministerial Biotechnology Commission. When Paradys started no new applications had been filed since that one. Having no chance of following a field trial from the beginning, as we aimed, we decided to select the one that had been most recently put in place. The second case of field trial was chosen because it was provoking protests and that is why it was particularly relevant in the Italian panorama, characterized by low controversy and media attention on field trials.

Case A

official papers of the field trial:

SNIF, Summary Notification Information File

Letter form the Health Ministry to the applicant communicating the authorization

Letter form the Health Ministry to the regional President communicating the give authorization to the trial

Letter form the Health Ministry to the Regional Agriculture Department in charge of trials, communicating the given authorization to the experiment

13 December 2001. Interview with the applicant. (30 minutes)

18 December 2001. Interview with the civil servant chief of the office in charge at the Inter Ministerial Biotechnologies Commission. (30 minutes)

18 February 2002. Interview with two ARPA representatives in charge of the field trial inspection (40 minutes)

18 February 2002. Interview with the regional civil servant in charge of the management of the trial (50 minutes)

16 December 2001. Interview with the mayor of the village where the field trial is carried out (30 minutes)

18 December 2001. Interview with a Greenpeace representative in the area. (20 minutes)

18 December 2001. Interview with WWF representative and employee of the Regional Agriculture Department. (20 Minutes)

8 newspaper articles that focus on the field trial case

Interviews with 8 local citizens, recorded in January 2004 (for a total of 2 hours)

Case B

25 July 2002. Interview with the University Agricultural department principal (20 minutes)

25 July 2002. Interview with the scientist in charge of the trial (1 hour)

26 July 2002. Interview with Greenpeace representative involved in the protest (1 hour)

26 July 2002. Interview with VAS representative involved in the protest (2 hours)

26 July 2002. Interview with a representative of an association between students and ex students of the agriculture department, all involved in the protest (30 minutes)

28 July 2002. Interview with a no global activist involved in the protest (1 hour)

7 newspaper articles covering various episodes of protest against the field trial

3. Main findings of data analysis. Italy: General conditions and Dynamics of Social Positioning.

3.1 Fields Trials in Italy: general conditions in which social positions developed

We shall first of all illustrate the conditions under which social positions developed in Italy in respect to field trials; by this we intend the national situation in general and more specifically the peculiar conditions that characterize the two cases of field trials we followed. Then, moving from macro dynamics, we shall focus on the micro ones that we were able to see at play in the single cases. A description of the Italian situation concerning field trials in the last few years shall show the consistency of the findings we are about to describe with the official and social frame under which they developed.

The legal situation at the time of the research, and the way in which such legal regulation was interpreted by appointed administrators, determined a very limited involvement of the general public in ongoing experiments. The media, while increasingly dedicating space to the topic of genetically modified organisms, hardly dealt with the specific subject of field trials. Green parties and NGOs that traditionally campaign on the matter of genetically modified plants are more concerned with other aspects of the issue, like the accidental contamination of fields due to seed contamination, the undetected presence of genetically modified products in processed food coming from abroad, the massive presence of genetically modified soy and corn in animal feed, on which there was still no clear regulation. On a political level, both the government and the opposition

didn't seem to think of field trials as a priority and the new relevant legislation was issued with large delay, only in July 2003.

Furthermore, the whole subject of food GMOs in Italy sees an almost compact opposition of government and parliament. Alfonso Pecoraro Scanio, from the Green Party, Agriculture minister until 2001, strongly and openly opposed GMOs. After the elections he was replaced by a minister coming from the very opposed wing of the parliament, Giovanni Alemanno, that belongs to the right national party, Alleanza Nazionale. While divided on everything on ideological grounds, the two ministers seem to share the very same view on GM foods: they don't want them.

This continuity and the existence of an almost compactly opposed front on the political side has determined the nearly complete arrest of field trials in Italy. Both ministers have been accused by researchers on the press of impairing national research, and both have in different occasions defended themselves on the same papers claiming that they are not against research, they just want to follow the precautionary principle; the end result is that, after a phase of large development with hundreds of experiments on the national territory, the number of field trials in the last few years has almost totally dropped.

Moreover, in Italy it is forbidden to import genetically modified seeds, which obviously makes it the more difficult to plan field trials. The result of the overall situation was that, in the last three years, on one side there were almost no new applications, on the other the attention of everybody, politicians, media, green activist, was mostly pointed not to field trials but to other issues involved in the employment of GM seeds and products. In particular, green associations like VAS and Greenpeace were focussed on the importation of genetically modified animal feed and on the frequent GM contamination of seeds coming from across the ocean. While experiments were almost null, activists and politicians fighting to keep GMOs outside the country were looking further, namely to the much more devastating prospect of the legalization of commercial cultivation of genetically modified crops. In fact, since the Amato Decree issued the 4th August 2000, in Italy is forbidden the cultivation and use of 4 types of Monsanto GM corn that are otherwise legal in Europe. Politicians and Activists fear that it will be no longer possible to keep that ban, that has already been the object of legal action from the above company. Sooner or later, Italy will have to face the possibility of seeing GM crops grown for commercial purposes on its soil, and it is to this much more serious menace that the attention of the many was pointed to in the last three years.

Field trials in Italy

Since the early nineties, in Italy about 300 field trials have taken place. Many of them were carried out by private companies, but in more recent times the number of trials proposed by the private sector fell and in the last three years only Universities and Research institutes responding to the Agriculture Ministry filed applications to the Inter Departmental Commission for Biotechnologies³.

Contrary to what happened in several other European countries, local people was not officially informed, let alone involved, in practically any of the above trials⁴. In the early nineties lay people was hardly informed about GM food, and this can explain the fact that the administrators did not feel the need to include the locals as interested parties in the running of field trials. In fact, one of the CIB members recollects participating in depressingly deserted debates on the subject of biotechnologies, and seems to hold that as the evidence of a general lack of interest in the subject on the part of the general public. Most likely, if 10 years ago Italian mayors had received notice of a planned field trial in their territory, they would have wondered what the fuss was about. The fact is that in the last 10 years things have changed radically in the perception of the public, and what

³ Commissione Interministeriale per le Biotecnologie, also CIB or simply referred to as "Commission".

⁴ At least in one case the scientist in charge informed directly the competent Mayor, whom he knew personally, about a planned release, and very visible signs were put on the field. In that case the trial was part of a research on the production of medicines from genetically modified crops. This is yet again another case in which the information reaches a mayor not as a result of the procedure but out of specific circumstances.

years ago was perceived as a technically obscure agricultural development has now become one of the most highly debated matters of controversy worldwide. Which is why the exclusion of the local public from the information process is nowadays generally perceived as a violation of their right to be informed about what goes on, even if legally speaking it is perfectly legitimate. Virtually all the people we talked about, even those expressing a viewpoint that we categorized as that of the “unconcerned citizen” seemed to agree on the point that locals should know. Only one agronomist involved in a trial expressed the opinion that the experiment was so small and had so little impact on the environment that it was simply wrong to make a big deal about it. Indeed, one of the effects of informing the public about a field trial is that of implicitly assigning relevance to the matter. People will then be authorized to think that there is something to worry about, some might say, and as a consequence silence and good governance could in this case go side by side. It is indeed important to assign the right meaning to the silence of administrators on field trials, but no matter how we decide to interpret it, still it constitutes an instance of social exclusion of lay people living nearby. In fact, given the level of controversy that field trials have produced elsewhere it is not possible to ignore that at least part the population might be very interested in the nearby growing of genetically modified crops, it is not possible anymore to legitimately assume that citizens are indifferent to the matter.

Still, it is clear that the conditions in which social positions developed in Italy on the matter of field trials are very different from the ones to be found in others European countries like the Netherlands and the U.K.⁵. In those countries the debate over GM crops is and has been much higher than it has ever been in Italy and lay people were able participate in Government funded consultations on the matter of field trials. In the UK the DEFRA web site overtly claims that information and consultation is provided to the public⁶, and that the public is involved by the Government; comparatively, the Italian Health Ministry web site keeps a very low profile and makes no claims of that kind; in fact the only general information one can find on the Health Ministry web site are a few laconic FAQ on GMOs that can hardly be described as an effort from the part of the decision-maker to provide information to the wider public. Concerning the information available on the Health Ministry web site, we can report the opinion, shared by the many we talked about in the last three years, that a line posted on a web site is not real information to the public, it is a formal act that has the aspect of information but does not bring into being the substance of it.

3.2 The decision-making process: social positions and dynamics

The title of this research is “Participation and the dynamics of social positioning: the case of Biotechnologies. Images of self and others in the decision-making process”.

The dynamics most relevant to the decision-making process in Italy are those internal to the Interministerial Commission for Biotechnologies, the advising body that evaluates applications. There are no contributions from the public to the decision-making process, and no objections or remarks have been filed to the Commission after a field trial has started.

We know that the Commission is composed by members coming from different governmental institutions and that they have different kind of expertises, and as a result we can expect that different social positions are voiced in the decision-making process.

Unfortunately, the decision making process on field trials in Italy is a sort of black box, inside which it is not possible to look. The only dynamics we can track are those between the applicant and the decision-maker. We have a sequence⁷ of application/response acted by the applicant and the

⁵ See the respective reports and the Paradys Deliverable 5.

⁶ See the UK Paradys Deliverable 5.

⁷ this idea of a sequence applied to the application response pattern, taken from Conversation Analysis, we found especially underlined in the Netherlands Paradys Deliverable 5.

deciding board. We know that sometimes we shall also find some embedded sequences, when the Commission before issuing a response asks the applicant for further details.

In fact, the factors influencing and determining the decision are not to be seen in action but only inductively described. A social researcher can see the input, that is the application, can know more or less who were the people who actually made the decision, and can see the decision taken, that is a permission to carry on the trial. Such decision comes in a few copies, in order to advise the relevant parties that a field trial will take place. This in turn tells us who is and who is not relevant when it comes to field trials, who is and who is not entitled to know about them, and it also tells us the implicit criteria with which such choice is made. From all this we have enough information to delineate which social positions emerge from the decision making process and characterize them in their articulation.

And yet, what happens between the application and the issue of the decision, what the Commission members discuss about in order to come to a decision, is kept from us. To be seen there are no documents, no recordings, no minutes of meetings, no traces of the arguments and counterarguments that constitute the tissue of a collegial decision making process. This obviously leaves us guessing and jumping to some conclusion with possibly too little data.

Still, we have some useful information. From the composition of the commission we can gather that the discussion cannot be strictly circumscribed to scientific issues. In fact, not all the members of the commission are biotechnologists, so they would have no role at all in that advising board if the matter was only to provide scientific advice. Commission members come from the Health Ministry and its technical offices (Higher Institute for Health and Higher Institute for prevention and security at work), the Environment Ministry, the Agriculture Ministry, the Work and Social Security ministry, the University and Research Ministry and from the Internal Affairs one. Also, as stated by directives and regulations, decisions are taken consulting other EU countries deciding bodies.

In October 2003, following our formal request, we met with the Commission. Unfortunately we were not permitted to record the encounter and consequentially we do not have any recorded audio of the episode, only field notes. Still, the encounter with the Commission members provided us with interesting information about the deciding board, starting from the very fact that in spite of the apparent agreement of the present members we could not record the encounter.

From the above reported composition of the Commission we shall deduct that the decisions taken by the deciding board cannot simply be of a strictly technical nature. Still, our impression is that some of the Commission members have a sort of misperception of their own role, as they claimed that their decisions are purely of technical kind. Several of the Commission members are scientists that obviously provide their best advice on the bases of their scientific knowledge, but the overall decision cannot be considered of a purely technical nature and coming from an organism that decided only on scientific bases. The composition of the Commission tells us that several other aspects connected to field trials, such as their opportunity and appropriateness for the country in economic terms, must be among the arguments discussed within the commission. If that were not the case, than several members of the commission would be having no role in the decision-making process, because they hold expertise in fields other than biotechnologies. Also, decisions about field trials permissions are obviously not taken in the void but in the midst of an environment heavily charged with political instances and sometimes tensions deriving from ministerial agendas that not always converge.

In Italy at the moment the Agriculture Minister participates in meetings organized by green activists and NGOs campaigning for a GM free Italy, while the Health minister expresses cautious support to agricultural biotechnologies. Such manifestly diverging views inevitably reflect on the works of the Commission. Pressures from the media or the public are not comparable to the ones that members of the Commission receive from the agenda of their respective chief. So it seems paramount that the status on the Commission becomes more clear to its members first of all. In

fact, if the political responsibility lies on the governing ministries, still a deciding body that has no awareness of its larger role is a clamped one. Also, the composition of the Biotechnology Commission is itself a guarantee for everybody that decisions are not taken leaving aside issues and instances much wider than those of scientific kind.

Summing up, we can state that within the decision-making process we individuate the following social positions: the scientific expert, in the applicant's role, the scientific expert, expressed by some of the Commission members, and the administrator, expressed in the need to comply with law and regulations. We have no doubt that a closer monitoring of the decision-making process would have revealed that a number of other social positions play a part, or attempt to play a part, in the process, but because of the impossibility of witnessing these dynamics such claims would be largely speculative.

3.3 Outside the decision-making process: social positions and dynamics in the two Italian cases

All other dynamics individuated are external to the decision-making procedure. They occur outside of the institutional course of action and influence it very little. In the old legislation, under which the research was carried out, there are no legally provided occasions to address the decision making process, but that would have not prevented citizens to write to the Commission anyway. Still, we have no records of letters sent to the Commission in order to influence its decision, or asking it to change its assessment on a field trial, and we know of no member of the Commission participating in debates related to one specific field trial.

As we already stated, the decision-maker is a multi headed figure and its internal dynamics cannot be considered to correspond to one social position. The outcomes of the decision on the other hand can be considered to be the issue of the executive power, the Health Ministry, and can be described within the frame of the "administrator" social position⁸, under the logic and structure of which the whole process is conducted. Actors involved in the decision-making process are in fact invited to participate within that administrative frame, even though they might bring in the process views belonging to social positions others than the Administrator one.

In one of the cases dynamics developed between the "scientific expert" social position and the "organized protester" one. In fact, the protesting front of the case in discussion is fairly composite, and in the argumentations of the ones involved in the protest several other social positions emerge, including the one of the "concerned individual", and the one of the "industrial actor". Such dynamics are retrievable from written documents that protestors sent to the faculty members of a University where a field trial is taking place. Also, the dynamic emerges from the narratives of protestors themselves, on one side, and the narratives of the responsible scientists, on the other side. Thus results are based on written documents coming from outside the procedure and from recorded interviews with the protagonists.

The above described field trial constitutes in fact a mayor example of long lasting organized protest against GMO experiments that has no equal in Italy. Protesters oppose several trials that are being carried out by the local University over many years. Their campaign involves some local opponents and several activists belonging to the multi faced anti global movement. There is an ongoing negotiation taking place between protesters and researchers on the security measures of the trials, and on patenting issues only marginally related to the results of experiments. The faculty has been asked to formally declare opposition to patenting living organisms and to stop experiments or at least secure the plants in green gardens. While on the one side there has been some dialogue

⁸ For a systematic articulation of all the social positions individuated in the Italian data and a description of their features please see chapter 4.

between protest representatives and faculty members, on the other fields have been disrupted several times and negotiations to this day don't seem to produce concrete positive outcomes.

This case is both atypical in the Italian panorama as it is the only one which generated articulated protest and it is particularly relevant for researching a number of citizenship-bond issues arisen by field trials. The field trial displays features that have potential relevance for reflections over policy issues.

In particular we find:

- Lack of official information to the public (and local administrators) about experiments at the time the protest started. This, as we more extensively stated elsewhere, is a recurrent situation in Italy and seems to find its reasons in both legislation and practice concerning field trials.
- The protest seems to involve different kinds of actors. It was ignited by few locals and carried out thanks to strong support from NGOs and no global activists, but it is also central for a local association of young agriculture entrepreneurs eager to defend organic farming and traditional products. Global political and environmental concerns seem to merge with local economically conscious approaches to farming. We find that claims arisen by protesters as businessmen and citizens of a country, that so far find no recognition in current legislation, merge with broader political concerns referable to more global rights that struggle to be acknowledged worldwide. Issues at stake include rights to participation and consultation in science, the claim to interrupt an experiment when judged dangerous and useless to the community and entitlements to decide directly how community resources are to be employed for funding public research. The role of science and scientist itself is put under discussion, as protesters ask faculty members to be useful to the community and accuse them of choosing their research interests ignoring more relevant necessities of local farming.
- The case is characterized by high media coverage (compared to any other case of field trial in Italy), mainly due to the recurrent episodes of crop disruption and by the occasional participation in the protest of internationally known no-global figures. For this reason we can expect features and outcomes of the trial to have some impact on the more general public.
- So far the protest produced public encounters and documented exchanges between faculty members and the protesters. Requests advanced by protesters go beyond what the law provides for, both in the area of security measures and for what concerns the involvement of citizens. Such claims of decision-making and participation then are probably to be placed in the most interesting field of the rise and negotiation of new rights. They arise issues related to the social function of science and the involvement of civil society in decisions concerning research funding and deployment of technological advancement in society.
- The involvement of the local population, by admission of an important NGO representative, is very limited. Despite the unusual media coverage the case has had, so far most citizens seem to have no interest in the event.

It has to be remarked how the protesters did not turn to the decision-maker nor to the administrators, either locals or national, but they directly engaged in a dialogue with the ones conducting the trial, that is the scientist in charge and the Agriculture faculty hosting the experiments. This datum can be read as a form of direct citizenship, that comes from a proximity more than geographical to the University. In fact, several of the members of this protesting front are students or graduate in that very institution and feel somehow part of it, and want to change the rules from within. The decision-makers in Roma seem to be irrelevant in the matter and the compliance to legal rules is not contested. In fact, in the documents issued by the no global side of the protest, we find that the Inter Ministerial Biotechnologies Commission is misquoted as the "Comitato Internazionale per le Biotecnologie", International Committee for Biotechnologies, that does not exist as an Italian board:

The letter is to the Faculty Dean and holds a number of requests. It asks, among other things:

that are made public the complete dossiers, filed to the International Committee for Biotechnologies, concerning the field trials going on in the University experimental farm
Fragment 1

The chosen addressee seems to signal that protestors did not turn their attention to the decision maker or to the administrators in order to ask for the papers received from the University, while the wording suggests that protestors must have a somehow vague idea of what this Committee or Commission is, as they did not get right the name of the deciding board. For protestors, the institution to refer to, and to open a dialogue with, is the University, the persons to address are the professors who are conducting the trial, not the central power which legally authorized the trial and that has obviously all the relevant information.

The following extracts come from an appeal, “appello”, filed to the Agriculture Faculty board by a local association mostly composed by students and graduate from that same Agriculture Faculty; members of the association are all engaged in farming related businesses in the local area. As we shall see, arguments of economic, ethical and environmental kind are brought forward, and they overcome at large the matter of the single field trial (please note that the translation, here and elsewhere, does not correct eventual syntactic incertitude of the Italian text):

(omissis)

Agriculture in Italy and in the world needs solutions that allow the warranty of environmental and social sustainability of primary activity. Investment in research and in it's socio economic evaluation should be incremented with structures, people, resources and most of all with mid term strategies. Adopting research directions on transgenic crops seems to us antithetic to the pursuing of this sustainability.
Fragment 2

(omissis)

Our concerns over genetic manipulations are also motivated by (our) strong opposition to the patenting that goes with them: (patenting is an) unacceptable (morally, economically and politically) assumption of a privatizing right over genetic resources, (that are) patrimony of humanity
Fragment 3

The association then asks the faculty to take action on a number of issues, some linked to the management of the trial, some linked to much wider issues:

(omissis)

In particular we ask (you);

- 1. to secure the ongoing transgenic experiments now conducted by the faculty researchers, by confining the plants as it was at the start*
- 2. to commit yourself to make available the results of the experiments for future researches and applications, (the results) in any form and manifestation, including the genes and other partial DNA sequences, thus excluding any form of patenting of the obtained or isolated products. In particular it has to be guaranteed that the recourse to genetic resources belonging to other countries (particularly countries from the south of the world) occurs with full awareness and only after the consensus is given by the community who has safe kept them, valorised and preserved them. As already stated by the International Treaty voted by the FAO conference last November, now being ratified, part of the eventual economic rights obtained has to be given (to those communities);*

3. The faculty has to take on an active role at the forefront in an agricultural research that has to aim at valorizing agro ecological principles and agricultural quality, and has to safeguard the richly differentiated Italian rural panorama.
Fragment 4

Trying to translate in social positioning terms this rather complex sets of arguments, we individuate several configuration of traits that coexist in the articulation of the case on the part of the appealing front. Concerns expressed are of different sort: scientific, environmental, social, economical, ethical. Also, they span with ease from local issues to worldwide ones, with no contradiction, offering a viewpoint that embraces many of the controversial topics related to GMOs. The voicing is that of a competent subject addressing directly a public institution and calling it to its wider responsibility, with no regard to strictly legal requirements, that are not even discussed. All these characteristics we could report as belonging to the “organized protester” social positions.

The above document and the public encounters that occurred at the faculty produced some outcomes, and the reply of the Faculty appears at least partially in line with some of the values expressed by protesters. We shall quote some excerpts from a letter that the Dean of the faculty sent to all faculty members, student representatives and also to some members of the faculty of Economics. The letter is also an invitation to a meeting organized to “open a discussion” on those topics.

The letter follows episodes of protest and public assemblies and appears like a first attempt to answering to the repeated requests posed by protesters. It is a proposal to develop an efficient system providing anyone with detailed and up to date information about ongoing field trials, and to constitute within the faculty a “Committee of guarantee on biotechnologies”, an organism that should “safeguard the role of the University”.

The letter starts with the recognition that protests have been useful to raise the awareness of the fact that GM issues need to be met by a strategy of the institution as such:

“Hypothesis of a university strategy about GM experimenting.

This University, and in particular the Agriculture Faculty, has recently been involved in a discussion with local and international opinion groups on the subject of GM experiments conducted here, and in particular on open field trails. We estimate that University researchers have provided satisfactory answers, and nevertheless, we express the opinion that the discussions occurred have been of great utility for fostering the growth in this university of the awareness that this problem has to be faced with a strategy coming from the institution itself.

Fragment 5

Then the document proceeds stating that an institution like the university has to have “institutional answers” for such problems.

As everybody knows the problem of GMOs rises a great number of controversial questions to which public opinion is particularly sensitive and it is not conceivable that an institution like our is not ready to give institutional answers to the worries collectively shared.

Fragment 6

Then we find a list of issues that researchers might face when doing GM research.

The problem is in fact very complex because it involves numerous essential aspects of our research activity and might generate conflicts between the different principles that have to guide our choices. It is sufficient to remind, among others,

the principle of freedom of researchers, the one of the need to face research problems at the highest level, and the one of the ethical safeguard of our activity
Fragment 7

In fact, none of the arguments arisen by protesters are welcomed here, and so far the document seems to be all internal to a logic of best scientific practice, not of attention to the needs of local agriculture, or to those of worldwide sustainable development.

But then follows a list of three main issues that will have to be objects of attention while having in mind the aim of “*building a mechanism that can allow the University to express it’s policy over this problem*”. For reasons of space we sum up the three points on which the Dean wants to open a discussion:

- 1) Making available clear and detailed information to the public on ongoing researches (all researchers would be obliged to post on the faculty web site extremely detailed information about their work, in order to provide the most precise information about trials)
- 2) The setting up of a working body, a “guarantee committee” able to express opinions on field trials. The committee would be having the power to evaluate the opportunity of planned or ongoing researches and also the authority to suggest eventual modifications to the researches for safeguard or for security reasons.
- 3) The patenting of the results coming from researches conducted at the faculty. On this subject the Dean states that:

“Discussions in the Agriculture Faculty indicate a strong prevalence of opinions against the hypothesis of patenting the results of these researches. It is nevertheless difficult, even admitting that it were possible for the University to adopt such hypothesis as a political agenda, to clearly define which would be the limits of applicability of such hypothesis.”
Fragment 8

In this part of the document it seems like the internal discussion matched the appeals coming from protestors, at least at a preliminary working level.

This case seems to be one in which articulated arguments belonging to the repertoire of the social positions of the organized protester were met with a matching approach coming from a viewpoint that we can classify as the one of the scientific expert. The letter of the Dean is characterized by an at least partial understanding and opening to the arguments brought up by protestors in order to be able to give them “institutional answers”. Issues brought up by no global activists and local opponents to the field trials are treated not only as legitimate but also as useful for the good conduct of the University that has acquired an understanding of the need of an institutional strategy thanks to the demands arisen from society. The fact that the Dean thinks about setting up an internal “comitato di garanzia per la ricerca OGM” is also very interesting. It seems to suggest that the kind of parameters and controls set up by the ministry could be revised by the committee in a more restrictive sense, and that reasons of “opportunity” of field trial planned by faculty members could become an issue. The committee would be able to “*provide opinions before or during the course of the trial on the opportunity of starting or pursuing researches already in place*”. In blunt terms, it would mean that a researcher, having obtained authorization from the National authority, should also then go to her colleagues and have her experiment evaluated, not only in scientific but also in “opportunity” terms. Then, “opportunity” is a very vague term that can refer to several aspects concerning the trial, maybe some of which were the object of concern of protestors.

The above described could be an episode in which the social positions of the scientific expert and the one of the organized protestor find the possibility of a dialogue, with scientists taking up the challenge of including issues other than scientific practice in their frame and devising the means to respond to democratic and ethical challenges posed to them by the community. Still, we could not really describe the situation in totally positive terms. Not all of the issues arisen found positive response: information was distributed, and the Dean started the works of a Committee for self-regulation on GMOs and for fostering dialogue between scientists and society. Nowadays, on the web site of the faculty it is possible to find rather detailed information on ongoing researches, but we found no explicit reference to the fact that some of the researches employ GM techniques.

To this date, the field trials object of protest have not been enclosed in a green garden as requested by the opposing front. Also, the whole Faculty has not issued a document declaring itself against patenting results of its own research, as it had been requested by protestors.

Some dialogue has started and questions brought forward by protestors have been acknowledged, while as we expected legally authorized and publicly funded experiments have not been interrupted because of the requests of protestors.

The second case of field trial that constitutes our data presents quite different characteristics, and different sets of dynamics of social positioning. The case is mainly characterized by the fact that the experiment was unknown to locals and provoked no protest.

While mapping Italy in order to individuate cases to study we contacted the mayor of a small village where a field trial was taking place. During the interview it became clear that he was not aware of the experiments on his territory. We were interested in discovering the opinion of local people on the subject and the mayor was determined to share with his citizens the information he now had and to obtain answers from the responsible scientists and significant administrators. Months after the first encounter, a public meeting took place in the village, at which all the relevant social actors were invited. The meeting was organized by the mayor with our support. In the following day we also held a focus group. To both the meeting and the focus group all relevant actors were invited: scientists involved in the research, local politicians, green activists, representatives from consumer associations, farmer unions representatives.

- Neither citizens nor local administrator had knowledge of the ongoing experiments. The level of information and involvement of local people in this case seems to be characteristic of the Italian situation concerning field trials. The almost invariable lack of information and involvement of citizens stems both from the institutional setting and from a professional attitude apparently widespread among civil servants concerned with field trials. At institutional level we find a legislation that provides only formally for information to the public; At the level of regional governance, when it comes to making case bound decisions about providing mayors and local residents with information concerning the trial, civil servants and politicians invariably decide not to act in that direction. In general, scientists only make their experiments public, thus exceeding their minimal statutory obligations, when they believe the trials not to be controversial and to be welcomed by the population.

- The nature of the public encounter that took place was clearly of no relevance for decision-making procedures, and could have no executive effect over the trial. Still, that meeting represents very likely a unique case of public encounter organized by local power, not in the context of a protest, where voluntarily social actors involved gathered to face a community and discuss the matter of the experiment, the security measures taken and the opportunity of it.

In line with the conditions in which the case developed, we find in the data the following social positions: the concerned individual, the administrator, the politician, the scientific expert, the industrial actor, the unconcerned individual. These social positions were displayed during interviews, but they also surfaced in the course of the public encounter and during the following

focus group in which several stakeholders were represented. Interestingly, we did not find represented the social position of the organized protestor. In fact, nobody seems to voice it. The dynamics of social positioning we found to be most interesting were the ones that developed between scientific expert and concerned individual, and between administrator and concerned individual. Concerned citizens at the meeting voiced their unease at the fact that the trial was unknown to locals. Scientists found themselves at traits under trial in the course of the public encounter and tried to separate their role from the one of the those in charge of making public the trial. A perceived conflict of competences was made evident between the mayor's rights to know what happens on his territory and the requirements provided by the law on field trials, that ignores mayors and local populations.

Possibly the most relevant single piece of data we can use to illustrate the dynamics of social positioning in this case is a written document that the mayor read out at the beginning of the public encounter. It frames the field trial and the issues related to GMOs within the viewpoint of the concerned individual, but it is also a plea to the Inter Ministerial Commission for Biotechnologies. In fact, the mayor, knowing that we were about to have an encounter with the Commission, asked us to take with us the written document and to give it to the Commission, and he did so as a public gesture, in the course of the meeting. His speech is directed to his citizens but also to the Administrative power, and it sums up not only fears and hopes related to GMOs but also, and most importantly, it voices a criticism to the legislation and a protest at being ignored and excluded from the whole process of testing and authorizing GM crops.

SIN: (...) it was then that I came to know that on our territory too, I don't talk just about JJJJJJ but about the province of XXXXXX, a news that then I double checked on internet, and the data were there, not every day, some days yes, some days no, ehm these experiments were taking place. It has to be immediately said for fairness and clarity, experiments that have been authorized by the ministry and thus perfectly organized and under control. The problem is not then for us tonight where and which experiments, I mean to stir a sort of local curiosity, also because I repeat it, these experiments are regularly authorized. The problem is another one, ((2 seconds pause))hello ((to some people who had just arrived))

?: hello

?: hello ((people reply))

SIN: we know or we think to know that the paths of biotechnologies can give shape to innovations that affect an epoch, and this I say as incompetent, as incompetent, we don't know if for the good or for the bad. I mean that there are still many perspectives still unknown to us. There are many stands we can say the most diverse ones, on the subject of gmos, some of them are perfectly scientific, that is those of scientists or of those that work near it. Others are still technical, for instance environmentalists positions then there are all the others like mine for example, that I define of the heart, and take good note I don't say of the head but of the heart. The only reasoning I could make is the following, let's hope that biotechnologies can change the world, that can make wheat grow in the desert or among ice, that they can heal illnesses and other things. But history taught us that many times, beyond discoveries of scientists, of science, in the end of every reasoning can intervene a force much bigger, that banning even some of the ethical aspects that are extremely important, can overwhelm everything and everyone: I mean economy. And this I think is the biggest risk, it is a bit like globalization" (...)

Fragment 9

from the same speech, a little later on:

"I asked myself why is it that we have organized it, we that are small, in this little piece of Italian land, in this remote corner of the world. In the end though I have found some answer. Biotechnologies exist, and they come to us from above. (It is) ready-made material, from televisions and mass media in general, (but) actually none of us know a lot about it, and maybe

never worried about it much. After all we cannot imagine that people meeting in the street would start talking about biotechnologies instead of talking about the last football match. Another reason why I believe it to be useful to have people talking about it is that we have to avoid that happens, and I am referring to some local issue here, (a) simple (example), that can be close to the position, to the ideas of people, like for example what happened with mobile phones antennas. First we did the antennas and then poor local administrators, the ones closer to people, found themselves without knowledge and without means, facing the fears of population. This is obviously an accusation (J'accuse) that I put forward against the legislation that estranged knowledge from small places. (I say) this especially not to make everybody scientifically informed but in order to get rid of a sort of fear and worry from our head and our hearts. (I shall make) a last observation, I have found in some documents the confirmation that what we are doing is pioneer like but real and at the same time important. They are documents I have downloaded from internet⁹(...)

Fragment 10

A side from the poetic flair of the speech, it is plain that here a dichotomy is put in place: on one side we find the good, genuine ones, “small people” and “small places” and “poor local administrators” that are “incompetent, incompetent” like himself, the ones “closer to people”; on the other side we see enormous, blind forces at play: economy, globalization, but also legislation, (could we maybe translate that into “government”?) that has “alienated knowledge from small places”. The risk seems to be of being ignored or swept away. The speaker seems to describe himself in his narrative as a sort of hero bringing light where obscurity is, in order to eliminate “from our minds and from our hearts a sort of fear and worry” From his narrative he (and the community he represents, as the inclusive “we” seems to suggest), is doing something “pioneer like but real and at the same time important”, so he evidently takes pride in having organized the meeting. In the speech we do find all the characteristic features of the “concerned individual” social position, but also of the Politician. In fact, the speaker talks as a good leader (“*what we are doing is pioneer like...*”) that aims at protecting his electors and is ready to listen to their fears and worries.

He also makes an explicit “J'accuse” against the legislation that “*estranged knowledge from small places*”. The expression “J'accuse”, commonly used in Italy, for whoever knows about Zola and the Affair Dreyfus, spells courage and honesty against general hypocrisy, and also pictures the actor as willing to take the risk of becoming unpopular while fighting injustice; all ingredients of which are made good and admirable people. In all this talk not only transpires the self-description of an estimable mayor, but also a view of the world, and of what should be done to make it better. Citizenship from the part of the speaker seems to be participation, is the right to be invited to know and decide in advance about issues that are too big to be left to technocrats.

As we said, we brought a copy of the above speech to the Commission members, and they welcomed it with interest, but they did not reply in any form to the mayor. In fact, as the mayor himself said, from a legal point of view nothing wrong had been done; from the Administrator standpoint there was nothing to say, and nothing was said. The dynamic here is of silence and denial of acknowledgment from the part of the administrator social position, and of claims to be heard and recognized from the concerned individual and also from the politician. In fact, we also find that the mayor voices the politician social position, and as such the concerns of a representative that wants to play a part in the decision making and that is diminished in the position that both legislation and practice assign to him.

⁹ We made an effort to preserve in the translation some features of the speaker’s style (the subject of the sentence is often left implicit, there is loose concordance between subject and verb).

4. Synopses: Social positions individuated in the Italian data

In the Italian data we distinguished seven different social positions. We shall not here illustrate the methodological approach we followed in order to individuate them, as it has been explained and theoretically justified in the introductory chapter by Bora and Hausendorf. Still, we should remind how the distillation of social positions was a process that started from the actions and persons we were able to observe in the course of this research. The theoretical and methodological framework we followed implied at first the extraction of congruent “sets of expectations” from the data, defined as a constellation of features (organised alongside the axes of issue dimension, appropriate form of communication, problem focus dimension) and that aggregate coherently to create different types of social positions.

Then, going back to the data, the displaying of one or more of those congruent communicative structures (instances of social positioning) were found as sequentially emerging in the course of interaction or in documents that respond to one another. In this way, expectations, or viewpoints or frames¹⁰ features, were isolated and detached from the single actors who in specific instances manifested certain explicit or implicit standpoints. In this way, it was possible to have an empirically derived list of coherent sets of expectations that was responding to its inner logic and had a good explanatory power. Different space has been given to the social positions according to importance they have in the Italian data.

The features we looked for are the following:

For the social position analyzed

- a) Who are the relevant social actors and which roles are assigned to them
- b) What is the self image provided
- c) Which are the relevant topics, or issues
- d) What is the image of others provided
- e) What is a ‘valid’ contribution to the respective discourse, that is which is a valid form of communication
- f) Which is the central problem focus
- g) Which is the main system reference

4.1 The Administrator

The social position “Administrator” in the Italian data has been derived in an inductive way from the national legislation, from the official papers about a field trial that we obtained from the Biotechnologies Commission and furthermore from opinions, ascriptions, evaluations and attitudes displayed by national and local administrators we talked with. Having done such analysis, we have then been able to retrieve features of such frame of mind in the talk of the most diverse actors. We should not forget that, as it is always the case, one person has many jackets, and that often scientific experts cover the role of administrators and civil servants. In other cases administrators are politicians as well, and it is interesting to see how their multiple nature surfaces in their talk. (see for example the fragment we quoted above from the talk of a mayor). Because the Administrator social position is the most relevant to the matter of field trials we shall dedicate to it more space, while some of the others will be defined more shortly.

When it comes to local politicians we see that their concerns in the matter of field trials can be very different from the ones that guide the legislator and the national administrators; in fact, local and national “administrators” can be in conflict (See fragment 10) Mayors in particular because of

¹⁰ Marina Sbisà was the one to bring forward the idea of using the notion of frame in order to describe social positions.

their role seem to shift from one position to the other. Still, both national and local administrators are characterized by their focus on the matter of how to well manage a territory, keep control and ultimately fulfill the law requirements.

a) Relevant actors

In the “administrator” frame of mind, the parties taken into consideration when it comes to making decisions about field trials are those provided by law, namely specialists and politicians, that have to do their job “come Dio comanda” which is an idiomatic expression that literally means “as God commands” and appear as the only relevant actors in the decision making process:

“those who know about an activity need to know which is the pure risk, the objective risk, the one closest to the objective risk, the famous “risk assessment” that is known as such, in order to, once the real risk has been assessed when it has been described it is up to the politician to to make the to see if he is able to control it on he is not, if (the politician) is able to control it he liberalizes it if not he does not liberalize it. “Risk management” is it is a task of the politician, in sum everyone has his own role to play if they all play their role as God commands, also in view of the famous traceability and labelling, most likely in a few months.....”

(a regional civil servant in charge of a field trial during a multi party conversation)

Fragment 11

As it is clear from this abstract, the relevant social actors are those who do the risk assessment and those who do the risk management. Here risk is described as something as much as possible objective, the “pure risk”, “objective risk”, “true risk”, that is a risk that needs to be calculated in order to make decisions. This is far from being an ingenuous assessment, the wording is the result of an operative approach: like the outcome of a trial is what the specialists call the “truth of the trial”, not something that has the nature of epistemic truth, the “objective risk” is what is needed in order to proceed, not “the real one”, decided once and for all.

From this point of view it appears that the whole decision making process is seen as a 2 seats boat, where there is no room or place for other actors but the expert on one side and the one who has the political investiture to decide on the other. Also, it appears that the only matter of discussion is risk; we know that a number of other issues are instead considered to be paramount in the frame of other social positions while discussion GMOs field trials. Here it seems like the “everyone has to play his part” leaves out the public, that has no part at all.

We now go back to the Italian legislation and see who are the actors that appear in the Legislative Decree n.92 that regulated the deliberative release in the environment of genetically modified organisms until July 2003:

In the legislation we find as relevant parties the applicant “notificante”, the Biotechnology Commission, the Health Ministry, that will eventually grant permission for the trial and finally the regional administrators that will take care of the inspections. All these figures are assigned roles, rights and obligations. The public is quoted at article 7f and given a passive and only potential role:

Art.7

1. The Commission referred to in article 15 of the legislative decree implementing the 90/219/CEE Directive, concerned with the confined use of genetically modified micro organisms, in order to come to a decision on the applications:

- a) examines the conformity of the application with the dispositions of this decree*
- b) examines the remarks brought forward by Member Countries*
- c) evaluates risks of deliberate release*
- d) examines the requests of the applicantas in article 11/3*

- e) *promotes, when assessed as necessary, the request of the opinion of the High Council of Health and the one of the Scientific Committee for risks deriving from biological agents, that was instituted by article n.40/2 of the law 19 February 1992, n.142;*
- f) *can dispose for the consultation of groups and of the public on any facet of the planned release*
- g) *produces it's conclusions*

Fragment 12

Article 7f holds the only explicit reference to the public in the whole law. The public is not given a right to know or to be involved or consulted. Power is instead given to the Commission to eventually consult whomever they esteem appropriate in order to come to a decision.

Also, information to the public is not compulsory, it is not stated anywhere in the law that the public has to be informed. Web publication and signs posted in the fields, when present, do not constitute the compliance to a law requisite, they are just habits acquired and fulfilled “*gratia et amore Deo*”; passing time and changing expectations such minimum forms of publicity have begun to be felt as rights of the public to be informed.

b) Self image provided

“because in fact our task is to go and check if the law is respected and that is if what the politician has decided is actuated”.

A regional civil servant in charge of monitoring field trials. From a multi party conversation

Fragment 13

The administrator very clearly places herself in this role, complying with the law and by doing so also following the will of politicians in charge.

Some administrator presented himself as someone who has since a long time been making all the efforts to inform people about important agricultural issues, including GMOs, and who has gone beyond his duties in order to give information sometimes being wrongly accused to be a paid by multinationals.

c) Relevant topics or issues

The legitimate issues for the “administrator” are the ones connected with the legal aspects of the trial; those include the conformity of the procedures to the legal requirements and the rights and duties assigned to certain persons during the decision making process and afterwards in the management of the experiment. Accordingly, the issues to focus on from an administrative point of view are: the obligations and rights of the applicants on one side and the protection of public health on the other. As a consequence, once the decision is taken, the administrator will be principally concerned with the security of the trial and the fair conduction of inspections.

The focus of the Italian law regulating field trials¹¹, the one on which the administrator founds its activity, is indeed on the protection of health and environment:

Art.1

This decree establishes measures aimed at protecting human health and environment in respect to:

- a) *deliberate release of genetically modified organisms in the environment*
- b) *introduction in the market of products containing genetically modified organisms or constituted by them, destined to the subsequent deliberate release in the environment*

¹¹ In the past, until July 2003

Fragment 14

d) Image of others

The law is very limited in assigning roles: as we already stated it considers only experts, even if not only scientists, and administrators. On the other hand, the administrators we talked with, obviously displayed a much richer picture of the situation and drew their sketch of politicians, scientists, green campaigners, lay people and industries, but we evaluated that while doing so they largely exited the frame of the administrator, and so we shall not report such evaluations in this chapter.

Given the situation generated both by the law and by common practice, there is conflict between administrations. In fact, the law privileges the hierarchically superior level of administration, the central one, while keeping from local administrations information that are very relevant for the ones that administer a territory. Interestingly, the local administrator complains to the ones higher up on the grounds of not having been put in the condition to control and manage the territory better. In that case, we could witness an instance of a local administrator taking up the social position of the “Concerned individual” in fact, and looking at the issues from a point of view other than the one of the law that excluded him from the decision-making process and does not even provide for informing him.

The public is not in the mind of the administrator, or better said, the public is to be found to play a very important role at some point, much earlier on, at the time of elections, long before the field trial case becomes an object of interest for the administrator. According to this frame of mind, participation is granted by the right to vote and choose politicians that will be responsible for the matter (see fragment 11 about risk assessment)

Participation is often seen as an obstacle to efficiency (and sure it is in some respect) while new forms of governance are still to be devised and proven.

Even when the administrator admits to the need of informing the public, he does not so much for spirit of justice but more in the frame of mind of the officer that wants to avoid uncontrolled reactions, and not so much because it is a right of the public to know what is going on:

In the following fragment a mayor and a civil servant are talking about the choice that had been done of not informing local people about a field trial; the civil servant has just apologized for his choice of not distributing information to the mayor, and the mayor replies very much like an administrator. In this frame of mind, information is key not because it is seen as a right of citizens, but because it is essential in order to be in command of the situation:

SIN: the problem remains on the territory it is that of the citizen that then goes to the mayor and asks; now let's face it because there is such lack of information among us just imagine with the word of mouth here the experiment is transformed into a nuclear power station about to explode so this is why, it is not a reproach, it is a matter of fact statement ehmmm

(a mayor during a public meeting)

Fragment 15

By the same token, that is, within the same frame of mind, an administrator, in order to fulfill ones duties of well monitoring an authorized field trial can decide that the best thing to do is not to pass on the news to mayors. In the void of requirement from the law, and in the culpable absence of relevant politicians (the information does arrive to the president of the region, a political figure who should assume a certain line of action), this is what happens most of the times in Italy. Security is the reason brought up in several occasions for justifying these decisions, as several fields have been disrupted by protestors in the recent years.

The public is consequentially constructed as a passive figure, it appears mostly as someone that has the right to be protected and respected by scrupulously complying with the law; and, according to law, no active role is reserved for it in the matter of field trials.

Information, in some cases, is meant as information to be given after the experiments have been accomplished. Someone voiced a view of the public that has a role only at, so to speak, the two very ends of a field trial. Long before a trial is proposed, citizens will have expressed their judgment with their vote, and politicians elected will have devised laws and regulations to deal with open air GM experiments. Then, and only after the trials have taken place, citizens become the ones in front of whom those results have to be presented, that is they are the final evaluators. Scientists should go to the public and show what they've got, and results are supposed to be useful for everybody.

e) Which is a valid contribution to the respective discourse, or else put, which is the legitimate form of interaction?

The one prescribed by law. In the case of Italian law, no predefined form of interaction between public and administrative power is devised by the regulatory text; there is no predefined slot for presenting objections and no possibilities to come in contact with the decision makers or the administrators putting forward formal objections or requests of explanation. In our data, several administrators with scientific expertise told us how in the last 10 years they tried really hard to be present at public meetings on GMOs and that they are always ready to provide information and resources to anyone that would come to them for clarification, often going beyond their duty. This was part of a self presentation that corresponds to our impression of a competent and good willed persons often feeling under attack for the role they have in the field trial administration. Most of the times the encounters to which those administrators participated were not on a specific field trial, but were instead focused on more general matters related to genetically modified organisms and so they can hardly be classified as attempts to interact with the locally concerned public about field experiments.

In any case, the good will and determination of some administrators does not change the reality of a system where no role is provided for the public, especially for those who live nearby a trial.

The interaction provided by law is hierarchical, from top to bottom, and it is only from decision makes to administrators, and as we have seen it excludes some important local administrators. The letter communicating that the field trial has been authorized is sent by the office of the Health minister to:

- 1 the applicant
 - 2 the president of the region where the trial is to be conducted
 - 3 the regional civil servant in charge of agriculture development, who disposes for inspections
- This is all the "interaction" that occurs most of the times.

f) Central problem

The central problems emerge to be security and efficient compliance to legal requirements.

g) Main system of reference

The system of reference is the legal frame. From what we can gather from the legislation that regulated the field trials we followed, voting is the legitimate form of participating in the system. Not only private citizens are not consulted, they don't even need to be informed. Local administrations at council level don't need to be informed.

The new law in place since July 2003 instead provides for consultation of the public; the form of consultation is that of a 30 days period, during which anyone can write to the commission on the matter of the planned field trial. Anyone can ask to be included in a mailing list that will provide

information from the biotechnology commission on the new applications and decisions. We have been told that Mayors of the interested town are included by default in the list.

4.2 The organized protester

In order to understand our data, we need not to forget that at the legislation prevents interested parties like organized protesters to come to know about a planned release¹². Data are made public, and only very partially, only after the experiment has started and no slots are provided for objections or counter proposals within the procedure. Possibly influenced by the legislative situation, we didn't find any attempt of interfering or addressing the decision making process of field trials.

Data shredding light on the organized protester social position and linked to a specific field trial come from only one of the cases we followed. In the other case we studied there simply were no organized protestors, not local nor coming from outside the community. The green association representatives that had been invited by the mayor did not show up to the public meeting, and they didn't come to the encounter scheduled for the following day either. The mayor who organized the meeting, selecting the speakers to invite had privileged environmental representatives from the local area who accepted the invitation but did not come in the end, and it was never clear why they didn't; we have no doubt that, had the mayor invited some of the competent activists in the Italian context, things would have been very different.

All the same, while we have plenty of background data coming from organized protesters web sites and we have documents of their active engagement in the matter of genetically modified organisms, we only see them in action in one specific case of field trial.

The dialectic we were able to follow emerged between organized protesters and the university responsible of the field trial. Translated in social positions terms we could say that the dynamics we could witness were between **scientific expert** and **organized protesters**. In the whole protest, that started several years ago and is still in place, the **administrator** who took a decision in Rome was never involved (See fragments 1 and 4). No appeals or objections were made to the Biotechnologies Commission; rather, the direct responsible party was targeted and asked to "secure" the experiments, that is, to cover the genetically modified plants, put them under a green garden and thus prevent risks of cross breeding. This absence from the picture of the decision maker-administrator is of great relevance to us, as it displays a certain approach and can be read as a certain concept of citizenship intended as direct action on the part of green activists.

The protest has been lasting for years and has had several moments, of dialogue between faculty members and protestors, of requests from the part of protestors, of attempts on the faculty part to meet some of the requirements of the protestors, and included episodes of vandalisms on the fields. The acme of the protest, that is when it reached the largest audience, consisted in a peaceful occupation of the fields by local and international activists during the FAO meeting held in Rome in June 2002. The occasion was one well orchestrated image event of the kind green activists have been successfully devising in order to gain visibility to environmental causes: activists invaded the field and put on the ground big condom like shapes near the plants, visually suggesting that the field was unsafe and needed to be put under protection. This case remains the only field trial that made it to the national TV.

In fact, image events like the ones performed by activists in this case are a well studied phenomenon and have it's foundation in the tactics that since the mid seventies groups like Greenpeace and Earth First have been employing in order to obtain visibility in the public sphere. Such actions make large use of images: large signs, masks, dangerous and spectacular performances, and are strictly linked with the language of the media, they need the media to be

¹² The legislation changed in July 2003 but this research has been carried out almost entirely under the previous law.

witnessed and acquire visibility. All of these features we found in the “organized protestor” social position. Because there is remarkable coherence and uniformity over the different countries involved in the Paradys research over the features of the organized protestor social position, we shall not here make large use of quotes from our data, we rely on cross national corroboration. The reader can also find evidence of the features we summarize here in the above discussed fragments 2, 3 and 4.

a) Relevant Social actors and roles assigned

The picture provided within the social position of the organized protestor is very rich. The relevant social actors in the context of field trials for this social position are: activists, citizens, scientists, administrators, politicians, multinationals.

b) Self image provided

The image provided is that of a proactive minority that is at the service of the community because it defends everybody’s rights against the blind overwhelming arrogance of economic powers.

c) Relevant topics

Justice, protection of the environment, security, globalisation, social equity.

d) Image of others

Locals

An organized protester, with years of experience in campaigning for environmental causes, displayed a view of the locals as persons largely not interested in the trial, that do not worry about genetically modified plants as “*they don’t worry about a lot of other things*”. This could appear as a view distorted by preconceptions, but is in fact interesting how such view of the public is shared very often by a number of specialists in the area of biotechnology and environmental protection, specialists that sit on both sides of the table and do not share the same opinions on genetically modified plants. It is no doubt that such view comes from personal experience, and it should not be discharged as a preconception. Activists are interested in local people opinion as they need the support of local population in order to see their campaigns supported and winning, and it is only with a sense of regret that they admit to such common attitude.

It has also to be remarked how this view of the public displayed by the environmentalist matches with a certain view that the organized protesters have of themselves as being at the forefront of a war to protect the environment from the attacks of mindless industry and the lack of control and proper action from the ones in charge. The public in all this is often a spectator, a passive mass that has to be stimulated and pushed to reflect about matters that were not so present in their everyday life and ultimately act to change things.

In an article on the local press concerning the protest against the trial, an ironic and disenchanted local journalist seems to share this view. He commented on the fact that, following the action on the field performed by activists, citizens of that quiet little town could no longer ignore worldwide issues like the third world starvation. In fact, the journalist says, GMOs raise several important questions, and require deep reflection, something the average person of that town does not like to do, the priorities there being “the three Ms”: “*mestiere magione macchina*”, that means getting a job, a house, a car. All the rest is simply not important to locals; Starving kids, when they appear for a second on the tv screen, “*ci fanno star male quanto un gol della Croazia*”, which means that those images of suffering hurt the average local citizen as much as a goal from Croatia, that is, if I interpret it correctly, a spiky but very ephemeral pain.

As for the image given of **scientists**, **multinationals**, **citizens** and the **media** it will be enough to quote a fragment from a document distributed and published on the web by VAS, the green organization most involved in fighting GMOs in Italy. The author of this on line document is Ivan Verga, vice president of the association, who is presenting a publication of the association:

A fact mostly technological and industrial, like the modification of genetic features of an organism is usually proposed on the media as a fact of inherently and exclusively scientific relevance. It is made object of propaganda and supported by the radio, TV and newspapers by scientists the authority of whom should be enough to establish the absolute truth (of these facts) and the indisputable benefices (of these products). The fact that some of these scientists are also consultant for biotech industries constitutes, obviously, a totally marginal conflict of interest. With this initiative of us we try to respond to the exponential need of information on the subject. (This publication) printed in a million copies, has the aim of letting citizens of our country know all what is essential in order to refine one autonomous opinion and in order to, all together, be able to defend ourselves from the excesses of genetic engineering, and from the irreversible risks of those biotech applications that only respond to the thirst for profit of multinational industries that produce (GMOs)

Fragment 16

e) Valid form of communication

The form of interaction of organized protesters is that of lobbying, campaigning, doing propaganda, putting pressure on the decision makers and on applicants for pushing them to comply to their requirements. The media are a very important element in this strategy and are used very wisely by the most competent and well-connected activists. The images of Greenpeace activists, on a tiny rubber boat in the wild ocean, putting themselves between the harpoon and the whale, cannot but stay with us, and so do the images of people in white contamination-proof outfit uprooting GM crops.

f) Central problem focus

The central problem is the fight of the good ones against the bad ones, where the good ones are those who want to protect the environment and want sustainable development and respect for the developing countries, while the bad ones are only looking for their private profit and are ready to do anything for it.

g) Main system of reference

All our data make us say that the system of reference for organized protestor is Justice. Justice with a capital “J” has obviously little to do with law and legal requirements, while it has to do with social equity and respect for the environment, and it acknowledges rights that go beyond the legally recognized ones.

4.3 The Scientific expert

Findings on this set of expectations, that we can track back to a “scientist” frame of reference, come from interviews we conducted with scientists, most of whom involved in field trials. They also come from a public encounter and a focus group, and from newspaper articles written by scientists on the subject of field trials and more in general on the topic of GM research.

a) Relevant social actor

When it comes to field trials, relevant actors are **scientists** themselves, the **Biotechnologies Commission** and **politicians**, at both national and European level. Those are the key figures who are described as having a direct role in the decision making process.

One thing that was made very clear by the scientists we talked with, was that the decision-makers are not a group of scientists that “regulate themselves”; in fact, scientists pointed out, sometimes

sarcastically, that the Biotechnologies Commission has a composition that gives space to figures other than scientific experts; as such the decisions taken by the advising body are to be trusted as not being the result of a distorted and “scientist” point of view, rather they represent a balanced outcome.

This is how during an interview one of the scientists describes the work of the Commission, and expresses concerns about a possible future involvement of the public (prospected by the interviewer):

prof: because when the commission examines the applications for doing experiments, it starts looking at, what have you introduced, where did you get it from, in which species, what are the aims, how is it expressed, what does the bibliography say and in the end (the commission) says yes you can or you cannot do the trial. Instead here, we eee we wil have to simply say look we would like to make a trial with a genetically modified organism do you want it or not, eh, this is the thing.

Fragment 17

In the following, the scientist is talking about the fact that the Biotechnologies Commission is not just composed by scientists “that govern themselves”:

prof: tomorrow we will face things in a more democratic way but for now, if there are commissions of experts which, that already have their varied composition, it is not that researchers are governing themselves isn't it? so that (the commission) can express it's evaluation and gives or gives not it's authorization, then this seems more than enough to me.

Fragment 18

b) Self image

Scientists assign themselves the character of honest workers aiming at knowledge and understanding. In the self presentation they also often display traits of the prosecuted: several of them have learnt how hostile the public can be and feel abandoned by politicians.

Some scientists also constructed a picture in which they assign themselves the role of defenders of the public against the overpowering influence of multinational companies. In this view, scientists are “citizens first of all”, working for the well being of society, and their role goes beyond a search for knowledge and acquires a social finality.

The following fragment comes from an interview with a scientist responsible for a field trial:

sure sure, our aim is not just that of selling the plants, our aim is to understand and to defend the citizen, first of all we are citizens, then we are researchers; so our aim is not profit at all; the aim is just to understand, to do some good advanced research to propose some eventual corrections too possibly for for mistakes that have been done in the past on certain subjects..

Fragment 19

In this fragment it is largely the use of pronouns and possessive adjectives that polarizes a representation of roles and social functions ascribed during the conversation. The category “public” seems to be relevant for the speakers as opposed to the absent but implicitly referred to “private” or “commercial”, the first one being colored strongly positively, the second one negatively.

The possessive adjective “our” seems to refer to the aim of the category of public scientists as opposed to the one of, broadly speaking, multinationals or of the one of scientists working for them. “Citizens” come in the picture in the sequential context of a discourse about the aim of public scientists. *“We are citizens first of all then we are researchers”*

A side from a recurring sense of frustration and the impression of having been the object of constant misrepresentation, we find the idea that attitudes of hostility against science have been common in the course of history, and that ultimately even this last misrepresentation will be overcome.

The following fragment comes from a multi party conversation with agriculture experts, in a local village where a field trial is taking place. The two speakers are both involved in farming business. The first speaker is concluding a series of remarks on how it is a general idea that GMOs are monstrous, bigger then normal and so on:

int3: at this point people's opinion is this one! Anything that is bigger then normal...

int.1: but in the end, after all, in fact, after all these phases will pass. If you think of what the church has meant for science, what happened in the middle ages, we have managed to get to have antibiotics and so even these moments will pass in the end.

Fragment 20

c) Relevant topics

Among the relevant topics emerged a probabilistic approach to risk, the potential of biotechnologies, the role of research in society.

The obstacles seen by the scientist are bad politicians and practicing pork barrel politics on one side, and the irrational fears induces by unfair and speculating media on the other. It is in fact a misinterpretation of the precautionary principle on the part of politicians that produces a stall and a dangerous immobility. About risk, a scientist told us in interview:

I think that we have to take on board a certain level of risk, and verify all what we can verify, but do it with rapidity, with some decision, otherwise I don't understand what precaution means...

Fragment 21

and further in the interviews the scientist talks about “immobility principle” that comes from a wrong interpretation of the “precautionary principle”

d) images of others

Some scientists have severe words for **politicians**, at both National and European level. The following fragment comes from an interview with a scientist in charge of a field trial:

Scientist: well, I don't know what the situation is elsewhere I mean one hears that it is quite different not really different because we see in fact that the positions of european governments are quite aligned isn't it, on these subjects and so there is an attitude eee of cautiousness let's say rightly of cautiousness but that is suggested by fear of electors

int: more then else

Scientist: more then else

int: more then by

Scientist: and that is why in fact maybe it is not really that other's intellectual structure is much better then ours ((laughs)) but in our country there is no doubt that research is undervalued.

Fragment 22

This criticism from the part of scientists is very likely to be found as a common trait of the category all across Europe. In fact, the above quote seems to be echoed by a letter that not long ago more than a hundred British scientists sent to Tony Blair, complaining for the prone attitude he displayed facing unjustified media interpretations that followed the publication of results from the Farm Scale Evaluation . Scientists accused the government of having “consistently neglected opportunities to address any of the unsubstantial assertions about the process of genetic modification and possible risks”.¹³ In sum, they accuse political power of not taking a stronger position against the view on GMOs provided by the media.

¹³ Current Biology Vol 13 No 23

In the frame of the scientist, outside the decision-making system, but strongly pushing to get in even if not invited, we find the **public**, and the **media**.

The two elements are strongly linked, as the media are seen as influencing in a very negative way the public and taking up a role left vacant by education, seen as the best resource to foster understanding and avoid manipulations from all sides.

The following fragment comes from an interview with a scientist in charge of a field trial:

this is why I say that if we don't start from the school how can you take, the man on the street and throw on him a piece of news and demand that he takes it with equity, and this I refer to myself too, I can too influence uhh in a certain way that is convenient to me, ee that I believe to be fair but is not fair toward those who were under my influence, because I did not provide them with the arguments good to convince him but I have simply been good enough in exposing (the arguments), in using some example and in impressing him in the end. I mean that we are fighting a war of manipulation and not one of knowledge.

Fragment 23

Journalists are often criticized for the way in which they handle the topic of genetically modified organisms.

About the media, a scientist told us that Italians “*have been gradually terrified*” by them.

The following extract comes from a television program on GM food¹⁴, the speaker is a scientist and he is on a rampage against journalists, so much that he reminds how he had organized a congress on “*Journalistically Modified Organisms*”:

and in fact the real acronym and I have already said it and I have also organized a conference about it GMO stands for Journalistically Modified Organisms because journalists have let's say boosted this risk potential I give you an example first channel news two weeks ago “the real panettone”¹⁵ from Milano, this amount of raisins, obviously gm free...this is a constant day after day campaign to make (people) think that GMOs are poison!

Fragment 24

e) Valid form of communication

The legal regulation in place is appropriate for the conduct of field trials, information and debate could be provided and then ultimately politicians should decide.

The following extract comes from an interview with a scientist in charge of a field trial, he is talking about involvement of lay people in field trials :

PRF: one thing is to estimate that the population has the right to express their opinions, in the ways provided, they will pose their questions and (questions) will be collected, but there will have to be somebody that has the responsibility to organize the thing otherwise it might become very arbitrary

(omissis)

and then these general orienting (advices) will have to be passed on to the politician and the politician obviously will have to take them into account as he cannot neglect the attitude of the population

Fragment 25

¹⁴ We wish to thank Anatole Zonta for providing us with a copy of the recorded program and for transcribing part of it.

¹⁵ Typical Christmas cake.

We shall notice that in this frame of mind education is the way to become citizen: we should “start from the school”; Through education persons acquire the understanding, the comprehension, sole tool that permits productive dialogue and gains legitimate access to the decision making process. In order to be included in the system people need to acquire understanding of the problem. The following remark comes from the same interview as the above one:

*SCI: in the end the school is composed by a multiplicity of teachers that hopefully are competent, and as a consequence they transfer their knowledge to the students, some better than others that can always occur, but in sum in the end we will have a transfer of knowledge and...but, if we abandon this route, then who is that provides for information...
Fragment 26*

and then he starts off on a polemic digression of the role of the media...

f) Central problem

The problem focus within this view is represented by understanding. The scientist social position is centered around the issue of understanding nature and devising new technologies to be applied for general improvement. Scientists want to practice their skills, they want to actively seek after their hypotheses and reach further responses. Field trials are a step, and they are not charged with any kind of meaning other than try to find out how things work. Scientists find it almost anomalous that so much fuss is made of legally authorized field trials, and they have experienced with distress in the last years mounting protest and sharp criticism. The decision-making system is fairly set up, and it provides enough guarantees. In the following fragment the same scientist is talking about legislators and devising new more inclusive systems of decision making for field trials:

*sci: obviously they can study a way of enlarging this base (of decision makers) or (they can study) how to construct (this base) differently, but I don't think that one could give a relevant weight to the impressions of those who don't master the subject
int: well it is very clear (what you said)
sci: maybe it is not very nice, but it is of no use that I tell you something else, that's it
Fragment 27*

All representatives from this set of social expectations seem to share the intimate conviction, well studied by social scientists expert in scientists and the discourse of science, that “if people knew” than they would understand and ultimately come to share the scientist view, or at least come to see the legitimacy of it. To this effect I shall quote a fragment that is a sort of parable. The fragment comes from an interview with a professor that is in charge of a field trial challenged by protestors. The speaker is talking about he attitude of the local population that participated to a fairly heated public meeting organized by protestors:

I think that the population, we have, at least the ones that came they got they have understood they have understood at least or there were those who didn't come they came to understand but they did not want to understand so that in fact a lady she went out at a point during my talk and she came back and and she started shouting and so one of our students told her but you what have you understood you have understood nothing as you went out to smoke and you have understood nothing she said you are afraid of gm plants and you are smoking she said a student from your region a student that studies here so she says actually I am against gmos full stop so why you come here to bother us? but the majority have hmmm then in fact then there was also a professor between other things in fact a math professor that was totally against gmos he had come here to protest two three years ago and then recently I have met him and I say and so? Now what do you think? and he says listen, he says I I have not changed my mind radically but now I have understood more and I must say that in the end earlier on I had understood nothing I just

was following what others were telling me but now I have understood with my own head I am not afraid anymore of gmos.

Fragment 28

g) Main system of reference

The main system of reference is that of a sound activity carried out within the scientific community, that shares rules and values; while the freedom that should be granted to science is often quoted, scientists also refer to the necessity of practical, economic outcomes that should derive from research. One of them said that *“it is an illusion to believe that speculative research can survive if there is no link to something that in the very end has an economic aspect to it”*

4.4 The industrial actor

In the two cases we followed there were no industries involved, applicants were universities and researches were publicly funded by the government and by the EU. Still, it appears that the social position of the industrial actor surfaces and has some relevance in the more global issue related to GMOs, and so we shall describe what emerged from a reconnaissance of the Italian situation. Furthermore, we found traits belonging to the industrial actor social position also in the data coming from the two selected field trials.

We shall consider industrial actor not only biotech companies but also companies involved in the food chain business: in fact these companies are often involved in the discussions over the issue of GM food and in some cases they have taken sides quite strongly on the subject. Obviously we shall see how the stands taken by biotech companies and food chains companies can be quite opposed on the subject of GM food, but interestingly they somehow respond, at least in their self presentation, to a very similar logic.

Industrial actors in general try very hard to build for themselves an image that has very little to do with making profit, even if of course making profit can be seen as an essential part of being a successful company. Still, in Italy we notice a diffused suspicion against profit: money is often demonized in our society and we will hardly find an industry representative claiming that her company is guided by the desire for profit. Instead, in the rhetoric of PRs, of press releases, and in the speech of company representatives, we find a lot of reference to development, human potential, and care for customers but very little to profit, especially when the matter has to do with GMOs. In Italy especially we find reference to “creating jobs and “ and “working for safety”. Examples come from major biotech companies and from the major Italian food chain producer and distributor, COOP, who has campaigned very actively against food GMOs.

A few quotes will illustrate the main features individuated:

The following fragment comes from a Coop press release. Coop and consumer associations had sent to the EU suggestions on the White book on food security, year 2000.

Roberto Conti, vice president of the national association of Coop Consumer has underlined “we have suggested modifications and integrations to the white book on food security because we are convinced that, if followed, such suggestions, with the others proposed by the other social parts, can really contribute to the improvement of health protection of consumers. We have done and will continue to do our bit, proving that for Coop food security means guaranteed quality, the quality of the more than a thousand Coop products; and continuing activating forms of collaboration between the world of production, distribution and of the consumers, being aware that such forms of collaboration will be the more and more essential in order to guarantee consumers “from the field to the table”

Fragment 29

“Fundamental ethical values of the biotech industry”, from Assobiotec (Association between biotech industries) web site:

The bio industry recognizes to have it's own responsibility in fostering, trough dialogue, a better reciprocal understanding of worries of ethical nature. Such worries include cultural and religious aspects linked with biotechnologies, together with worries on their impact on the environment and the adequacy of regulation. These fundamental ethical values are brought to the attention of consumers, of patients, of farming communities, of politicians, of legislators, of the media and of all that want to know the ethical approach that bases our work.

Fragment 30

“General principles” from Assobiotec web site:

We are committed to realize the potential of biotechnologies in order to improve mankind's quality of life. In doing research, development and production and distribution of products and services we put our attention first of all on health, security and environment protection. We develop and make use of biotechnologies with the utmost respect of dignity and rights of mankind. We communicate and disseminate information on biotechnologies and on products and services derived from biotechnologies in a correct way, giving equal status to risks and benefits. We foster dialogue with those that express worries of ethical and social nature connected with biotechnologies.

Fragment 31

Within the frame of the industrial actor, the choice of promoting or of refusing GMOs is motivated by considerations that have also an economic aspect. The following fragment comes from a TV program on the subject of Italian wine and GMOs. ALR is the journalist hosting the program, MP is a farmers representative, APS is the once Agriculture minister.

APS: the logic of GMOs is opposed to the one of typical products

MP: on a product like wine, on which Italy is at the first place in the world try to go and tell them...

ALR: right let's talk about the wine

MP: go and tell them that we make the wine using GMOs, frankly from a point of view if image and of economy we don't really do a great job, I think that there are some things that can be saved with biotechnologies but let's be careful about what we say on this thing.

Fragment 32

As we already stated, we do not have direct contributions of the industrial actor within our two cases or to the issue of field trials, that in both cases were in charge of university research centers. From the above examples and several others in our data we can propose the following schema:

- a. social actors:* citizen-consumer, producers, distributors, administrators,
- b. self image:* Competent, attentive, careful, trustworthy. “*La coop sei tu*” is one of the slogans, Coop is you, so careful and attentive as you would be with your food and the environment. Also, “*we pay attention first of all to health, security and environmental protection*”(from Assobiotec web site)
- c. relevant topics:* security, health, development. quality, trust, protect consumers
- d. Image of relevant others:* citizen-consumer, attentive and smart, deserves attention and explanations. Legislator renitent in acting following citizens rights and requirements.
- e. valid form of communication:* active campaigning locally and nationally, on the media and trough representatives in local villages, also addressing directly the institutions (see fragment 29)

- f. Problem focus:* trust of customers, health and environment
- g. Main system of reference:* the market, what the customer wants.

4.5 The concerned individual

Features that characterize the concerned individual were individuated in data coming from random interviews, a focus group, a public encounter, newsletters, written documents coming from the web and newspaper articles. Most of the sources are closely related to the happening of a field trial, but some aren't, and the concerns expressed are often referred to the more general issues connected with GMOs. Like for what concerns the social position "organized protestor" we noticed a high coherence of the features coming from Italian data with those coming from the other Paradys teams. For examples of the "concerned individual" we refer to the chapters 3 and 5, in which it is possible to see the social position in interaction with the social position of the Administrator and with the one of the scientific expert.

- a. Relevant social actors are:* citizens, scientists, politicians and multinationals
- b. The self image proposed* is that of an alert and involved person, someone aware of one's rights and willing to see them respected.
- c. relevant topics are* security and health and the overwhelming power of multinationals that affects people's rights
- d. Image of others:* scientists are implicitly or explicitly described as unfair and corrupted, or at least selfish and undemocratic, multinationals have not conscience and would do anything order to make profit, and when they make mistakes they don't pay.
- e. valid form of communication:* acting and challenging the powers in charge or directly scientists in order to make them accountable in front of citizens
- f. central problem focus:* economy and globalization are blind forces that threaten democracy, democracy should rule the country, not financial powers.
- g. main system reference* is participative democracy. Everybody should be called and participate in important decisions.

4.6 The Unconcerned individual

This social position was mostly derived from features emerged in random interviews recorded in a village where a field trial is taking place. The trial should have been known to the population (1.500 citizens) because more than a year before the interviews took place a very well attended local meeting was held in the town hall, during which the experiment had been explained and discussed. Local newspapers had reported the news, announced the local gathering and reported on it afterwards. No protest preceded or followed the local meeting, to the best of our knowledge no claims, complains or requests for further explanations were filed to either the mayor, the Roman administrators on the scientists about the trial.

It is no surprise that such social position emerges in the context of a field trial that has not provoked protest, and in the course of solicited interviews with local people that displayed no concern or great interest for the field trial.

The social position of the "unconcerned individual" is characterized for little or no knowledge of the field trial, and overall lack of interest in it. Many of the ones I addressed did not know about the trial and confused that instance with episodes of corn contamination, occurred in the previous summer.

In fact, in order to collect these interviews, the help of the local mayor was essential, I would have had a much harder time to involve those people in a conversation on the trial without his precious support as these persons were simply not interested. In fact, it was obvious that some of them talked with me out only of politeness, because of the endorsement of the mayor, who in some

cases participated in the conversation and brought forward the point of view of the concerned citizen.

The “unconcerned individual” sees as relevant topics those of health and security, the actors in the field that he individuates are experts and administrators, the legitimate form of interaction devised is that of delegating decisions to the competent parties. The ones that should decide are “i luminari”, the experts who know better, all the others have no competence and should not be involved. The following fragment comes from a 4 parties conversation. A side from the interviewer, 2 local citizens and the mayor of the village are present. A local citizen is talking about public involvement and decision making on field trials:

II: well, surely citizens should be informed first of all. eeeee about the fact that citizens could decide if it is good or bad to have something like that [the field trial] at home, well only luminaries can tell that, I mean doctors, because let's say the level of knowledge that is to be found here in the territory eh hhh for example if a trusted person says listen, nothing happens, then nobody would ask themselves if it is like that or not, and at the same time if someone says look this is bad I mean for sure everybody would have their say and maybe even those who talk only because they like the sound of their own voice, so I don't know to which extent it would be... it would be successful to have a meeting at the town hall of HHHHHHHH in order to decide do we put down the experiment or do we let them carry on with the experiment and very many could say yes in the end nothing happens to us that is without knowing what can happen I mean if someone says if a knowledgeable person says nothing happens we all say the good majority takes to the letter that word in the end because we don't know about the subject
Fragment 33

The *image of self* provided is that of a rational and reasonable individual that has the wisdom of assessing his impossibility to decide and does not, like somebody else, talk only because they want to hear their own voice. The *image of relevant others* includes the experts, “i luminari cioè i dottori”, that are assigned the role of doing their highly specialized job, and the locals, that have a very low level of knowledge on the subject. Politicians are not evaluated positively, but as any stakeholder that lies in order to foster his own interests. The following fragment comes from a multi parties conversation with 2 local citizens, the speaker is a lady that works in a local radio station and the topic is GM food . She is talking about politicians:

INT2: do you think that in the end in front of a microphone or in television or at the radio or to a newspaper really they [politicians] say the truth? that they really explain what the product is? at the very end they all have interests in having the product reach the market
Fragment 34

The public is seen as customers that should eventually be able to choose GMOs or not, but should not be involved any further in the matter, not at the early stages of strategic policy about the development of GMOs and not at the field trial level, a part from a general right of being informed. Again we find a view that information should be given to locals but not the possibility to participate in the decision. Here the two persons speaking are two local citizens:

II: To involve well yes you can involve people but if they don't know how eee that is the important thing that the population be informed but to involve them I think that it is at least absurd because if they don't know
Fragment 35

The unconcerned individual is against forms of participatory procedures as they would imply an understanding of the issue and of technicalities way beyond public expertise.

The following fragment comes from the same multi party conversation as the above, and the one talking is the owner of a local radio station. He is very polemic with a position, voiced during the conversation, that would want the public to be involved in the decision; The second voice is that of another local citizen:

I1: well everybody can have their say but to enter in the, it is that that, if one is not a technician one cannot say yes or no there are there are the experts that can decide for those who you see it is obvious then with information one can have

I2: one can decide if they want to eat it or not, that's fair

Fragment 36

Expertise is seen as a very important factor, the polarity constructed is between knowledgeable and not knowledgeable persons. The kind of citizenship advocated within this frame of reference seems to be the one of representative democracy. Citizens delegate to experts and cannot decide because they don't know. This view of citizenship is very much in line with the one displayed by the "scientific expert" social position; Both welcome an expertise driven decision making logic and don't see the need for further involvement of the population in the process of deciding. But in the case of the "unconcerned individual" it is not so much out of trust in decision makers that the assessments should exclude lay people; it is more out of lack of interest and trust in the whole decision making process that the unconcerned individual does not want to be involved, not because he or she believes that things are done in the best way.

The impression is that this social position does not stem so much from a highly developed trust in the political system. Again, the following is the voice of a local citizen:

I1: anyway I believe that this is the way of acting in all fields the one of science the one of legislation the one of education they decide a priori what they want to do and then the outcome it is not important what the outcome is it is not important if the product works or it does not work the important the result the final result is that that thing is done anyway in my opinion even the Community [The EU] they decide ((then her mobile goes off)) sorry..

Fragment 37

From the same conversation. Here the mayor is voicing the "concerned individual" social position and asking why don't we manage to face issues before they hit us, why don't we discuss GMOs before they reach the supermarkets. Again the question is about being involved or not in decisions at the beginning; When saying that "we hear things that other people don't know" most likely the speaker refers to the fact that she works in a local radio station:

SIN: so why don't we do these sort of reasoning at the very beginning?

I1: because usually they never do it before I mean anyway I repeat for what we have been able to see in these years that we could hear hmm sometimes we hear also things that others maybe don't know right? but usually if they decide that something has to be done they do it anyway eee it has been decided that they have to give so much funding for experimenting for producing then if it does not get consumed who cares but that is the way...

Fragment 38

The following fragment comes from the same conversation, and again the speaker talks about the public as an insider, she is referring comments received during her work at the radio station. The sceptical position expressed above is also attributed to many people she talked with:

II: many times for example they tell us we have spent eee several billions in order to do this referendum, we have said yes no our our idea anyway has not been taken into account and so many times they feel I would not say excluded but surely even if they get involved , they believe that their, that what they will express then will not be taken into account.

Fragment 39

The unconcerned individual social position, when presented with the issue of a field trial, presents the following characterizing traits:

Social actors individuated in the subject of GM field trials: experts, administrators

Relevant issues: health and security

Forms of communication: a valid contribution is a scientific one, other arguments are ignored

Central problem focus: expertise, those who know should decide, the others should have no means to contradict the decision.

Main system reference: Politics, delegation to responsible scientists

Main problem focus: expertise is the essential criterion to make a decision

4.7 The politician

Features characterizing the politician social position come from several pieces of our data, especially a public encounter held nearby a field trial and a number of interviews with administrators and civil servants. Here in order to illustrate this social position we shall use examples coming from a television program on the subject of food biotechnologies and wine . The program was broadcasted on national public TV in March 2004. It was conceived as a sort of round table and guests were: the actual Agriculture Minister, Giovanni Alemanno, the previous Agriculture minister, Alfonso Pecoraro Scanio, regional politicians against GMOs, scientists pro GMOs and representatives from farmer unions that have different positions toward food GMOs. The program from the very start turned into a very heated and polemic interaction. During an exchange full of conflict with a scientist that claims that all foods can pose risks and that biotech food is safe enough, the ex minister immediately invokes the precautionary principle:

A.P.S.: in nature you find also poisons, the problem is that you know them from a thousand years then is some cases obvious they are minimal things, in in genetic modifications (.....)the principle is a precautionary principle, simply that

Fragment 40

then again, the ex minister to the scientist that defending GMOs was stating that Nature is not good:

A.P.S.: no no no nature is recognizable, the problem the problem is that you must put a clear label and let me know if it is GMO or it is not GMO this is the thing, let's cut it with the myth of infallible science that with the mad cow disease you have done things that are disputable, disputable, disputable

Fragment 41

Later on the ex minister will accuse the scientist of hiding GMOs . The scientist was saying that if you put “GM free” on food label than you should also write “mycotoxin free, microbus free, heavy metals free, pharmaceutical residues free...”

The ex minister replies:

A.P.S.: let's put various things (on the label) but why do you have to hide GMOs? why do you hide them? if they are safe then declare it!

Fragment 42

and then:

*A.P.S.: scientific fundamentalism is worst then the Islamic one
Fragment 43*

and also:

*A.P.S.: scientists are split in two groups on this issue , there are those fanatically in favour and there are those fanatically against (GMOs), we have to stay in the fair middle. When science is divided politics has to remain on the precautionary side this is our duty, they are divided (to the scientist) you are divided in two (parties)
Fragment 44*

Inn the following the actual Agriculture minister takes the ground and professes ideas quite close to the ones voiced by the ex minister; the journalist then remarks how minister and ex minister profess the same position:

Journalist: in spite of political divisions uh? Pecoraro Scanio and Alemanno perfectly agree

A.P. S.: because this is not a matter of political division this is a matter of protection

Journalist: It's right, when one talks about protection,

A.P.S.: Alemanno is doing the Minister of Italian Agriculture politics, I have been the Minister of Italian Agriculture politics, we have one interest which is the one of protecting our agriculture. We have reached a record in the sector of organic products which are very requested in the market, we have reached a record in the sector of typical products, the fact that some genetically modified fields can contaminate our typical and organic agriculture is an economic damage, and this actually goes beyond scientific positions (...)

Fragment 45

In the light of what illustrated by the above fragments and by several other examples from our data, we can describe the “politician” social position as follows:

- a. Relevant social actors:* politicians, citizens, farmers
- b. Self image provided:* leader, decision maker, protects the interests of Italian agriculture
- c. relevant topics, or issues:* security, protection of Italian agriculture
- d. Image of others provided:* scientists are divided and some are positivist, have “fundamentalist” approach, citizens are wise.
- e. Which is a valid form of communication:* campaigning, media communication, direct contact with electors, legislation
- f. Which is the central problem focus:* defend Italian Agriculture, defend citizens
- g. Which is the main system reference:* consensus

SYNOPSIS: SOCIAL POSITIONS AND THEIR COMMUNICATIVE STRUCTURES IN THE ITALIAN DATA

	administrator	organized protester	scientific expert	industrial actor	concerned individual	unconcerned individual	politician
relevant actors	experts, politicians	activists, citizens, scientists, administrators, politicians multinationals	experts, politicians, administrators	customers, scientists politicians	citizens, scientists, politicians,	politicians, experts	politicians, citizens, farmers
image of self:	the one that assures that what government decided is put into practice	proactive, defending everybody's rights and the environment, common patrimony of humanity	honest member of society, prosecuted, misunderstood	describes itself as a vehicle for technological and social improvement, produces wealth and gives better and better services for health and environment	alert and involved, aware of one's rights, issues are security and justice in social and ethic context	rational, realistic, delegates decisions to the appropriate subjects	leader, statesman, protects citizens and does the best for them with his/her foresight
self: what are the relevant issues	risk, procedural givens, appropriateness of the law to the issue	scientific evidence, global and local economic situation, social justice, health and environment protection	probabilistic approach to risk, potentials of biotechnologies, the role of research in society, scientific evidence, social acceptability, economic potential	worldwide development health, protection of the consumer,	security, citizens rights, economic power	security, health	security, development, protection of the interests of influencing stakeholders (Italian farmers or local citizens)
self: relevant forms of communication	1 the formally provided ones, 2 top down information when useful for good administration	lobbying, mobilizing the masses, pressuring political powers, boycotting companies	scientific evidences, legal regulation, administrative procedures education	commercials, campaigns on specific issues, pressures on politicians to guarantee with regulation the economic strategies pursued by the industry	making accountable scientists and politicians, ask for the implementation of rights that so far are not been acted upon enough	the formally provided ones	media communication to electors and potential electors, laws and regulations
images of others:	experts do their	multinationals are	lay people are	politicians are not	scientists arrogant	experts, science	citizens to be

relevant issues ascribed	work professionally, politicians are too often engaged in pork barrel strategies, citizens to be protected	seen as blind greedy overwhelming forces that must be stemmed. Citizens not respected in their rights, Politicians subservient to positivistic scientific advice and pressures from the market	terrified by the misleading media, politicians too often follow the inclination of the electorate	ready enough to make the right choices for the country customers are alert and well informed, endowed with rights, customers - citizens	and distant from the people,	luminaries who are the only ones who can decide, politicians not concerned with what people want but only with their own interest and agenda.	protected, stakeholders to be listened to
images of others: forms of communication ascribed	propaganda from the media, campaign from activists	multinationals behave unfairly, manipulatively, imposing their GM products.	politicians and environmentalists use demagogic communication, media use sensationalistic approach to the news	environmentalists falsify reality in order to gain credit with lay people VS multinationals behave unfairly, manipulatively, imposing their GM products.	multinationals behave unfairly, manipulatively, imposing their GM products.	activists stir protests as a job lay people just want to be assured that there is no danger	all vibes and signals from society need to be welcomed and replied to
problem focus	security, administration	fight between the bad and the good, David and Goliath	freedom for scientific practice	security, development, growth	business and globalization are negative forces that impair the rights of civil society	security, health	defend Italian agriculture
main system reference	legal system	justice	scientific curiosity	the market, what the customer wants	participative democracy	individualistic concerns	consensus

5. Dynamics of Social Positionings: Types

Dynamics are concerned with activity and change. Social positions are enacted in interaction and implicitly acknowledged in documents and laws. With “dynamics of social positioning” we refer to the fact that in our data different social positions are at display and that they interact, producing forces and becoming vectors of change or of stability in the social system. Both within the decision-making process and outside of it, we witness structurally different viewpoints at play, and in this session we shall give account of these encounters, characterized by complementarities and conflict.

With “dynamics of social positions” we can in fact refer to essentially different phenomena. We can account for at least three ways in which “dynamics” of social positions occur.

First of all, we will describe dynamics between actors that come into view within the decision-making procedure, in the different steps of the prescribed legal process. Following the law, different social actors are assigned roles to play within the prearranged course of action, and most likely they will act accordingly to their given role in the decision making process. Within this category we are in the frame provided by the Administrator social position and we shall find the actors that are considered to be relevant by law, acting according to the law. In view of that, we will notice the exclusion of some of the social positions we individuated in the analysis of the whole Italian data. We will also notice if there are conflicting or complementary relations between the positions activated. In fact, we cannot exclude that actors having a place in the decision making process might express positions of their own, maybe not compatible with the Administrator one, within which they all act.

Secondly, we find intra-personal dynamics of social positions. Those are shifts within the self-presentation of one person in the course of a single event or in time. The same person, professionally belonging to one category, can express with her words and actions different social positions. We will most likely find a pre constructed social position, given by the role the person has in the decision making process or in the dealing of field trials; the institutional role will set an expectation on the social position that will be expressed by the person. Along with that pre set social position we will notice how other positions emerge and how are those related to the institutionally provided one.

Thirdly, we find interpersonal dynamics of social positions, that is the sequentially ordered expression of different social positions displayed by different parties in the course of face to face interaction. We can also find interpersonal dynamics of social positions emerging from interrelated documents produced by different parties.

During an encounter we shall see the interaction of persons bearing very clearly a certain social position, bringing forward values and viewpoints: we shall see how these different social positions are reciprocally dealt with and in the most felicitous instances composed within the interaction.

We shall report the following descriptive aspects of the dynamics individuated:

- a) Discourse manifestation (oral-written),
- b) Relation to procedure (direct, close, indirect),
- c) Data source (interview, public meeting, document),
- d) Predictability (normal course of events, unexpected development),
- e) Positions involved

We shall also look at the outcome that patterns of dynamics produce in the Italian data. Some instances of dynamics reveal compatibility between social positions, others seem to show that certain social positions are in irresolvable conflict, they ignore or negate each other. In some cases, we notice that different social positions, in the circumstances analysed convergence and produce mutual acknowledgment.

5.1 Dynamics of social positions within the decision making process

Following the Italian regulation concerning field trials (as it was during the time of our research) a number of actors come into play during the decision making process: an applicant that addresses a commission of various experts, then the commission of experts that makes the decision, then the political power that is called to subscribe such decision. Following the decision, civil servants, at national and regional level are to implement, monitor and guarantee the fair management of the pronouncement taken by experts and undersigned by the political power. All these actions are taken under the umbrella of the Administrator social position, in the sense that they are invited and legally enacted precisely because the legal regulatory system includes them and assigns roles to specific categories of actors, excluding others.

As we already have had the opportunity to point out, our direct access to the decision-making procedure was prevented by several factors. First of all, during the phase of data collection, no new applications were filed to the Commission. Moreover, had that been that case, we would have not know about new applications, because the applications received were not made public; thirdly, in no case we could have witnessed the discussions occurred within the Commission (we assume there would be discussion of course), that works with closed doors and does not keep minutes. The kind of data we have are written documents, in this case strictly related to the procedure, as they constitute the formal communication between applicant, permission givers and the administrative power.

The dynamics of social positions we can account for are strictly the ones prescribed in law. Namely, we find a scientific expert applying to the appropriate organism making use of a pre ordinate form, and thus producing a SNIF. In fact, in the SNIF we find that all sort of questions of scientific nature need to be answered: about the nature of the planned experiment, about the potential risks, about the bibliography justifying such experiment, about results obtained by previous experiments of similar kind, if there have been any.

The social position activated in the application phase is clearly the one of the scientific expert and it corresponds to the scientist as conceived under the Administrator social position. Here we find compatibility and complementarities between the figures of the administrator and the one of the scientific expert. Following the application, the Biotechnologies Commission then needs to come to a decision. Which are the criteria that inform this decision making? it would be simplistic to assert that the Commission decides strictly following scientific criteria and ignoring any other sort of issue that could be dear to other actors, and to social positions other than the one of the Administrator. The Commission is not only concerned with what is strictly legal, and with scientific evidence. We can speculate that maybe the more scientifically competent members of the Commission play a major role, and that external experts, when called to help the Commission to make a decision, are most likely biotechnologists reporting on the most up to date scientific evidence . And yet, from what we were able to understand in the course of the meeting we had with the Commission, the members of the deciding board do represent different instances, including the political, environmental and economical opportunity of the planned field trial. This we can argue on the basis of the list of the components of the Commission, (written data), on the basis of the meeting we had with the Commission (oral data) and on the basis of some telephone conversation we had with some members of the Commission (oral data).

The advice of the Commission needs then to be ratified by the political authority, the Minister in charge. The political authorization has always been given, as far as we know, after the approval of the Biotechnology Commission. In fact, it could be argued that the act of the minister is due and as such it does not represent the real activation of another social position; the politician acts as one of the figures included in the Administrator social position. Following that final act of ratification,

administrators have then the role of granting that the authorized trial takes place in the appropriate way, according to the law.

Summing up, in the Italian legal system for authorizing field trials (up until July 2003) we find, in institutional setting:

A scientist files an application to the Biotechnologies Commission (see SNIF): written data closely related to the decision making process.

Following examination and evaluation of the application, the Commission makes a decision (here we should at least include, at play in dynamics internal to the Commission and only guessable from the outside: the scientific expert social position, the concerned citizen, the politician and the administrator) (no written data, only hypothetical claims)

Once the decision is made, the Health Minister ratifies the response

Following the decision, administrators are communicated the given authorization and act on it according to law and regulations (written data)

The potential to introduce in the decision-making process actors like lay citizens or environmentalists has never been realized. The Commission never called lay people or NGOs to help them decide on a field trial. Consequentially, the social position of the organized protestor, and the social position of the concerned citizen, if not enacted by the Commission members in the course of meetings, most likely remains out of the whole procedure. The same is true for the social position “industrial actor”, unless we suppose that because in the Commission we find a representative from the Industry Ministry, such social position does appear and plays a role in the decision-making. But all these unfortunately can only be suppositions and we should leave them as such.

5.2 The same person shifts from one social position to another.

We found episodes in which one person, endowed with an institutional role, starts off acting the corresponding social position but then, in the course of the same encounter, or during later meetings, displays features belonging to a different social position. This is a very well known and expected phenomenon that has to do with the self presentation participants constantly negotiate according to the occasion and the context. The various faces that participants put forward respond to the particular circumstances they are in and are explained by the multiplicity of the social self. Even in the course of one encounter, that is within the same interactive frame under which actors are introduced, often with a certain explicitly given identity, we find the phenomenon of slipping and “changing faces”. Such faces often correspond to different social positions.

For example, in the course of a public meeting, an independent expert in charge of monitoring the trial is asked by the public to assess the matter and management of the experiment. He does so strictly remaining within the boundaries of administrative talk. In fact, he talks like an administrator that has high technical expertise, but not like a scientist that makes assessments based on his scientific knowledge. He explains and provides precise and objective like information, avoiding any value judgement. In his talk, it is apparent the choice of not assessing the matter of the experiment (was it well thought, opportune and so on) to the point that it is not easy to tell¹⁶ if the expert approves or not of the research, when he states that “the experiment went well”. The public instead was most likely expecting an appraisal of the experiment. In fact, asked by a member of the public what does he mean by saying that the experiment went well, the expert replies that it went

¹⁶ In fact, we would claim that here inference can be made that the expert is not in favour of the experiment precisely by virtue of the almost reticent way in which he keeps himself within the boundaries of the administrator role. This is what is called an Implicature generated by the violation of the quantity maxim, but in this report we shall not develop further on this.

according to what was planned and authorized, so that it is perfectly in line with the authorization given. These explanations could be seen to pertain in some respect to the social position of the scientific expert, in the sense that they presuppose and display expert competence, but they belong to the administrator social position, in the sense that the evaluation of the experiment is done only according to the parameter of respect for the rules assigned, leaving aside all other kind of estimations.

Later on, within the same meeting, the same expert will be involved with again a question by the public on the fact that the public had not been involved. A person was commenting on the fact that it was a good thing that at least the ones in charge of monitoring the experiment were informed, and then carries on with her speech, while the expert, in overlap, utters a murmur “you don’t know how we came to know about it”. This little murmured on line comment, not acknowledged by anyone, places the expert within a very different frame, most likely the one of the concerned citizen, that has complains about the way in which the procedure is carried on. This comment, sort of “hats off” expression, lets us see trough the professional face enacted by the expert and allows us to guess what is his real evaluation of the validity and opportunity of the trial. In his professional vest, the expert could have not made such half voiced comment to the public, that lets us suppose that he has are in fact reasons of discontent with the whole matter. The two positions displayed seems to be contradictory in the context, one is the official one, the other is a surfacing but understated, and has the status of private one as opposed to the public, official face proposed during the public encounter.

We find a second example of shift between the display of different social positions in the talk of a mayor that we had the chance to converse with several times. The following is an extract from a public meeting:

He is explaining why he got involved in the organization of the encounter after coming to know that there was a trial going on in his municipality. First he talks like a politician that has responsibilities toward his citizens:

We can say that it is also one of the reasons why in the end we decided to organize this debate because I believe that, hmm if we broad the issue a bit, to be an administrator and hmmm spend half a billion in order to restore a school is a responsibility that a mayor and council members can take on themselves, hmmm but to know, let’s say since a few weeks ago, about this presence (the field trial) and not say anything is a responsibility that I believe nobody wants to takes on
Fragment 46

and then he carries on displaying features of the concerned citizen:

because I wish that in the coming years we will see all the developments for which biotechnologies can become the solution for humanity but nowadays we shall say that we as common mortals have no certitudes eeeh scientific, of scientists but we have some worries some fears and so eee, a side from having decided to participate in the Paradys project but we have really estimated the concept right and thought but why should we not talk about it? hmm it is not only a matter of transparency of information but it is really a matter of participations and to talk about topics because now we should not focus everything on the fact that here there is a one hundred meters experiment it is a topic that has to be widened you (to a member of the public) were saying rightly for example as food we don’t know if these things are good or bad but it has to be widened because it is right to do it, because it is right that people know these things otherwise we run the risk of finding ourselves like for so many other things we allowed to build homes under electricity towers and then we discovered that maybe they provoked leukemia, tumors and so on, we have we have so then one comes to a point when one says let’s start thinking in a different way and one says let’s think earlier on about issues and then eee,

in our small environment with all our limits we will try to do something in order to eventually improve or change directions and paths
Fragment 47

In the above example the social position of the politician and the one of the concerned citizen go hand in hand, and the same speaker can shift or slip from one to the other without contradiction, taking up topics and repertoires typical of the two positions within the same talk.

5.3 Two different Social Positions, enacted by two different actors are juxtaposed within the same encounter

We have several examples of instances of different social positions acted out one after the other by different persons, often as a polemic reply to one another.

We shall look at one interchange that in the course of a public encounter involved a lady in the public and a professor that teaches biotechnologies and was participating as biotech industries representative. The public encounter from which we take this example is focused on a field trial happening nearby, so it has no relation with the decision making process, that had occurred years before, without any involvement of the public. Data are in this case constituted by transcriptions of audio recording. The lady involved in the exchange was very active during the encounter, formulated questions and engaged in the discussion with several members of the panel. She was one of the few people in the public to take the ground several times and became the interlocutor for many of the invited speakers. In the following exchange we can clearly see the surfacing of two incompatible social positions, enacted respectively by the professor and by the layperson. The two positions expressed are overtly incompatible and the interaction has the features of a conflicting sort of conversation, characterized by the expression of disagreement, interruptions and overlaps. The first one to speak, the professor, visibly presents a view that we characterized as the social position of the Administrator, that is a view in which everyone has his own role and responsibility as assigned by law, and accordingly citizens have nothing to do with the matter of field trials. Following such quite explicit representation of how things should be, the lady replies offering a view that we classified as the one belonging to the “concerned citizen” that takes as a fundamental value the possibility to participate and be involved in decisions that have potential impact on her life. Also, she clearly states that, in the light of experience, she has little faith in the assessments of decision makers. This lack of trust is another characterizing trait of the concerned citizen. In this example, we not only have the display of two different social positions but also the attempt from one part to induce the other to enter his own frame of mind and agree on the principles that rule his view of things, namely the fact that roles are assigned and that what is due to citizens is only the reassurance that things are done according to the law. As we shall see this attempt fails, and the member of the public instead offers her own view of how things are, and how they should be, based on an entirely different set of democratic expectations.

The professor takes the ground after complains have been voiced at the fact that locals had not been informed about the field trial. He is talking about the fact that people should not complain for not having been informed about the experiment because there are roles assigned by law, the persons in charge are responsible so everything is under control. Not only that, but the lady should now be reassured by the words of the scientist who two years after the starting of the experiment had been invited in the village by the mayor and had just explained to the public the matter of the trial.

PRA is the professor, S1 is a lady in the public.

eh Mr Mayor, I wanted to congratulate with you for having organized this public meeting, you are giving proof of sensibility...I am surprised at, let's say the idea that it is

too late (for doing it), but I wanted to add that, in my opinion, we have to avoid the banalization of responsibilities, we cannot dilute responsibility infinitely, I teach at the university to future biotechnologists, telling them that biotechnologies are considered dangerous by law, and that as a consequence professional biotechnologists will have to make use of all their care, and diligence in trying not to make any damage. And that if they will eventually produce damage, they will be held responsible for that, and so there is a degree of different responsibility depending on the function one has let's say in the country, in the administration and so on, and so we should not have everything depend on information for the citizens., h I would like to ask to the lady, don't you feel reassured by the explanations of professor SCI? by those given by [

SI: [I would have preferred they had given them to me before, (...) because I am [...]

PRA: I I understand madam, but let's say a doctor cannot consult with all patients all the population, one, the responsible persons have to take their own responsibilities [otherwise we would

SAI: [yes yes

SAI: but I wouldn't like it to happen what is now happening with asbestos, there is a trial going on in which indeed these illustrious persons in charge said that as in the seventies we didn't know and so nobody bears responsibility, those who died died for their own fault

Fragment 48

In order to discuss this example we will make use of concepts derived by Speech Acts theory, the principles of which we shall leave aside for the purposes of this report. For a discussion of how Speech Act theory can be applied to the study of Citizenship we shall refer the reader to the contribution of Marina Sbisà to the forthcoming volume by Bora and Hauseldorf. ???

“To reassure” is one of those verbs that in Italian are not illocutionary. It is not possible to put them in the explicit performative form, at the first person present “I thereby so and so” and thereby succeed in reassuring someone. In other words, just as “I insult you” or “I scare you” don’t insult or scare anyone, it is not possible to reassure somebody telling them “I reassure you”; the fact that the addressee gets reassured by our acts is in the realm of the perlocutionary consequences of our behavior. Of course one can say “I assure you that so and so”, and guarantee something that should put the other person’s heart at rest, but that is obviously different from “I reassure you” and the success of such an act depends pretty much on the level of trust that person has in me. I reassure you can only be used to announce the reassuring speech act (“I reassure you: you passed your examination”) Here, after the explanations given by the scientist and the complains of a lady in the public, the representative of biotech companies (PRA) says that “one should not let everything depend on information to citizens”. Given the sequential context we can consider the above statement as both a judgment and an exhortation; in fact, immediately after, PRA asks the lady in the public (SAI) to state that she feels reassured. A question like “don’t you feel reassured?” is an exhortation “you should feel reassured”; he seems to urge her to agree and actually feel reassured.

The attempt of the professor to summon a statement of “being reassured” is met by a quick, overlapping, interrupting and smart reply, followed by an interchange in which deep skepticism toward both science and the legislative system (see the antiphrastic “illustrious”) is displayed. In fact, the interrupted professor interrupts the lady and once more states his position: people in charge have to take their responsibility.

We cannot avoid to notice that the professor, making use of a similitude to make his claim, chooses to compare the situation (field trial setting, relationship between persons in charge and lay persons) to the doctor-patient relation, a quite asymmetrical one in which on average the doctor has the knowledge and the patient is in need of help. The lady refers to a trial about compensation for cancer caused by asbestos to dozens of workers in a shipyard. The trial provoked a major scandal in Italy because no responsibility was assigned to the shipyard chiefs for their conduct, in times when it was universally recognized the danger of asbestos. Asbestos scandals become one of the many

historical references used to make sense of the issues arising from biotechnologies (along with BSA and Thalidomide, among others).

The interaction between professor and layperson in the public does not end at that point. Following this interchange, the same professor will provide the information that the new law, implementing the 18/2001 UE Directive, will grant information for local residents and on line consultations before the start of experiments.

Such follow up seems very interesting to us while looking at dynamics of social positioning: the professor, while having well stated his position, and also having tried to elicit from the layperson agreement on his view of what the position of lay persons should be, seems to back off. The professor does in fact take into account the instance expressed by the lady, does recognize it and provides the information that legislation will respond to the expression of claimed rights manifested by the lay person. The professor takes up the evaluations expressed by the lady in the public and admits to the fact that they are important enough to have been included in the law, and in this way he acknowledges them. In this instance we could describe the sequential dynamic as the inclusion of the “concerned citizen” social position within the administrative frame. Interpersonal dynamics are obviously very complex and we should not forget that the above interaction is a public one, in which blaming and claiming are publicly conducted, and contradictions are often composed with interactional values as priorities, without taking arguments to their full consequences. We would like to underlie how the professor does not shift position, or expresses any change of opinion, but he does recognize the instances voiced by the layperson and provides the information that such instances will receive full inclusion in the forthcoming law.

Let us now look at another exchange taken from the same public meeting, a sequence involving the scientist in charge of the field trial and a layperson from the public. It is the very end of the public encounter, and the mayor as chairperson is trying to draw the conclusive remarks, when a layperson from the public stops him and voices a demand, without explicitly addressing anyone. The scientist in charge of the trial takes up the requirement posed by the layperson, and promises to come again and show his results to the public in the village.

SIN is the mayor of the village, SA1 is a layperson, SCI is the scientist in charge of the trial.

SIN; but anyhow I believe that

SA1; ((to the mayor)) wait, for, given the fact that the experiment is running, so, we have this privilege, at this point, according to somebody, that on our territory this wonderful experiment is taking place, that, so at this point we are all informed we want to know how it is going, which results it produces, not only in the end, what happens along the way. Actually now I don't know what is going to happen, I have not understood, but I cannot remember anymore, which is the timing what happens now [...]

SCI; [I, as I have come tonight, in one year time when, we will repeat the experiment next year I can come [and I will be glad to bring to you also with slides the data and everything

SA1; [that's it((unclear))

(unidentified speaker); and maybe he will make he will bring the paniscia¹⁷ made with that very rice

((background noises, laughs))

SA1; and then everybody will decide if they want to eat it or not ((laughing))

Fragment 49

According to speech act theory, an utterance like “we want to know how it is going” displays force indicators that would have it belong to the class of exercitive speech acts, we could say that it

¹⁷ Traditional dish made with rice meat and vegetables.

has the illocutionary force of a demand or of a claim. Being that the case we shall consider the request to be based on a right in virtue of which an obligation arises for the person receiving it. But the above sentence might as well have been considered simply the expression of a wish, or a pretense based on no recognized right and as such not producing any obligation in the addressee. If the utterance is shown to have been interpreted as a request, the addressee implicitly recognizes the interpersonal right of the speaker to make such request, while if it is taken as the expression of a wish, no right to make a request is recognized to the actor proffering it.

Given the fact that in Italy, as we have already stated many times, no law enforces the expressed request, or wish, to be kept informed of the various stages of the experiment, we are in fact in a situation where in the context of interpersonal relationship a non-existent right might get recognition. In order to make comments on this we need first of all to look also at the response the utterance receives. We cannot in fact assess the force of a speech act only on the basis of force indicators, (like the type of verb or the mode of the verb), we need to look at how the utterance is received by interlocutors.

A fair example of how recipients can select particular aspects of the force of an utterance was presented by Simon Pardoe at the Second Paradys workshop in November 2002. With his permission we quote here the excerpt¹⁸:

(Martin Heys is a name given to a member of the public; he is talking about a village survey).

Martin Heys: Of those who replied, and who had an opinion, the vast majority were against it.

GM crop company representative: I guess so, yes.

Martin Heys: Will you accept that then? And on the basis of that, will you listen to what the village is saying and rip up your crops? Much against that it will hurt your wallet. I really feel sorry for you!. But do it, listen to us, rip them up. We don't want them?

Woman: We don't want them.

Woman: We don't want them. Full stop. [Loud & lengthy applause]

GM crop company representative: I note your opinion and the opinion of the people here.

Fragment 50

In this case probably the woman, stating “we don’t want them” was not expressing an opinion but trying to do another type of action, something that in the Austinian classification falls among the class of exercitive speech acts

“An exercitive is the giving of a decision in favor or against a certain course of action, or advocacy of it. It is a decision that something is to be so, as distinct from a judgment that it is so, it is a sentence as opposed to a verdict¹⁹”.

Such act implies a certain level of power for the speaker and the attribution of a duty to the addressee (just like the utterance quoted from the Italian data: “*we want to know how it is going, which results it produces, not only in the end, what happens along the way*”). In the above exchange from the UK data, the representative of GM company with her/his reply selects the force of the woman’s utterance as nothing more than the expression of an opinion. Doing so, he implicitly makes it clear that the lady in the public (and all the audience with her) are in no position, haven’t got the power needed to issue a decision but can only express opinions on the matter.

The reason why we quoted this example from the work of Simon Pardoe is that it seems a very striking example of how the social position implicitly enacted by the company representatives excludes the right of citizens to have a crucial say on the occurring of a field trial in their territory.

¹⁸ We thank Simon Pardoe for permission and for providing us with the correct wording and sequence context.

¹⁹ Austin, John L. (1975), *How to Do Things with Words*. 2nd rev. edition. Oxford: Oxford University Press. p.155

On the contrary, in the Italian data, there is a positive response to the decisions expressed by the member of the public.

Let us see the point in detail. This is an occurrence in which the voicing, the prosody of the spoken expression is fundamental in order to identify the expressed meaning. The Italian "ecco", "that's it" can be both an adverb and an exclamation; it is also often used in conversation at the beginning of turns as a turn taker. Here it has the role of sanctioning the reply from the scientist as the expected one, it seals the promise. It means that the citizen did receive what she was expecting, namely the commitment from the scientist to come back the following year and provide her and everybody else with evidence from the experiment.

The layperson takes the ground stopping the mayor (wait), that was trying to close the encounter with a concluding remark (Anyway I believe that). His turn contains ironic remarks (we have this privilege at this point, according to somebody, that in our territory this wonderful experiment is taking place) as it is evident from the antiphrastic value of "privilege" and "wonderful", and also the fact that he signals how it is a privilege in the opinion of somebody (obviously not his own) to host such experiment. Then comes the demand (we want to know how it goes which results it gives) and it comes as a collective one (the subject is "we"). An interesting aspect to us is that his turn does not receive an immediate reply there, nor he specifies who he is addressing his request to.

Nobody uptakes promptly the task to reply, after the request is made the lay person carries on stating that he does not know what is going to happen in the future about the experiment; he seems to be willing to keep the floor and not let his contribution drop in the silence. In such context he seems to be indirectly addressing the responsible of the trial and indeed the scientist does take the turn and proffers his commitment to come next year and show his results. Here the timing is interesting and allows us to argue that the lay person produces the third step of a negotiated promise; the lay person's "that's it" in fact is uttered in overlap, during the turn of the scientist and is proffered at slightly lower volume, right after he offers to come (I can come) and it is the sanctioning comment, the sort of on line positive feedback one gets when the expected answer is supplied.

We can then argue that here a request is made, a reply is given that recognizes it by committing to fulfill it, and a third position sanction is produced that accepts and seals the offer. Moving from the micro level of detailed analysis of the verbal interchange, to a reflection on the nature and relevance of this exchange for our purposes, we should attempt to identify which aspects of it are of interest for a theory of communicated citizenship. We are indeed analyzing a commitment a scientist takes of his own will, as of his own will he decided to accept the invitation of the mayor to come to the village and describe the experiment. All this happens outside of the deciding procedure and it is of no relevance for it. We might in fact say that it is a personal commitment the scientist takes personally with the person sitting among the public, and that it has no relevance for reflections on the matter of social inclusion. And yet, a promise made in a public context, *coram populo*, has maybe a different value from a private one; for example we would most likely consider such promise to have been fulfilled if say next year not that very scientist but another one from his team were to come and give updates in the village. On the other end, the person in the public might as well in this year have moved to a different town, or simply not be interested anymore, but that would not free the scientist from the commitment taken²⁰. What we are then facing here is the creation of an obligation that is not so much between persons as between the social entities they represent; even if not a right institutionally acknowledged. We witness the taking up of a commitment that comes from the recognition of a right currently ignored by Italian law.

The lay person with his request has expressed the social position of the concerned citizen, that we described as characterized by the claim of being entitled to know and eventually decide on matters potentially affecting the community and the world. The scientist, with his reply, does exit a frame in which lay people don't count. In the reported exchange, the scientist takes up instances of

²⁰ I owe this remark to John B. Haviland

the concerned citizen viewpoint and agrees at reporting to the community about his work. While not changing the legal frame and not instituting any legally bounded rights, such commitment provides an instance of convergence of two otherwise rather incompatible social positions, the one of the concerned citizens and the one of the expert scientist, within which lay people usually have little active role.

We now take one last look at the excerpt we quoted from the UK data, that we can classify as a failed chance for the mutual acknowledgment of different social positions, and we shall make one last remark on the possible causes for this missed opportunity: the type of request brought forward by the English public at the meeting was of a nature less easily acceptable by the ones in charge of the experiment. While “we want to know how it goes” in the Italian data receives an answer that responds to its force, “We don’t want them” is met by a reply that fails to acknowledge the real force of the utterance, and the power that would be necessary to the speaker for making such claim. Making use of a broad generalization, we could say that maybe it is possible for the persons in charge of experiments to accept the “intrusion” of the concerned citizen with requests of being informed and having a controlling role. Ultimately though, the deciding system shows its high walls when the concerned citizen wants to have the last word on field trials occurring within the community. The ultimate decision, as a matter of fact, is not to be made directly accessible to citizens as local communities; when it comes to taking final decisions lay people are not recognized as competent actors.

6. Relationship between legal/political cultural environment and the dynamics of social positions with respect to citizenship.

The GMO issue is, nowadays, the center of a heated debate involving different social actors. There exist several reasons to explain why GMOs became the source of many conflicts. First of all, the scientific community and the decision makers were not able to provide sufficient proofs and suitable warranties of GMOs as regards the safety for the environment and human health, such as to be considered valid by the social forces. Secondly, environmental associations and many agricultural producers do not think it is necessary, among other reasons, to develop the transgenic agriculture, given that Europe boasts a rather good food self-sufficiency based on conventional cultivations and on local typical products. A third element of criticism concerns the monopoly regime of the patents involved with GMOs, giving an enormous economic power to a few international industrial groups, above all American ones, which could thereby strongly influence the market of food products. Lastly, from different parts, there are several worries concerning the impossibility, once the transgenic cultivations are introduced, to be able to reconvert the cultivations in a traditional way. According to the most critical persons, this process, therefore, stands out as an innovative course with no return.

Taking into consideration the international scenario of regulation concerning the introduction of the transgenic agriculture, Europe qualifies itself as the area where the strictest regulations based on the precaution principle are used. This principle foresees the adoption of strict control measures upstream of the production process, with rather long trial periods in comparison with those of many extra European countries. In this way, actually, the European market proved to be, in time, rather closed to the development of the transgenic agriculture, causing commercial disputes with other markets, in particular with the North American one. The European public opinion is, on average, skeptical of GMOs, even though some members of the European Commission, on several occasions, underlined the importance of extending the transgenic cultivations, by pointing out that the co-existence between the transgenic cultivation and the traditional cultivations is possible.

With regard to Italy, as it clearly comes out from the interviews made within this study, a kind of tacit alliance between the environmental associations and policy makers took place. This is characterized by a more or less explicit opposition by the Italian government to the introduction of the GMOs in agriculture. In this way, the traditional alliance between scientists favorable to the scientific innovation and politicians was broken and this led in the last years to some unprecedented public protests by members of the Italian scientific community, which it denounced the governmental position on GMOs as a limitation of the freedom of scientific research as well as in terms of the reduction of funds assigned to it.

Unlike in other European countries like Denmark, Germany, Switzerland and United Kingdom, no consultations of the citizens and of the organizations of the civil society were made on the issue of GMOs, notwithstanding the fact that the regulations concerning the introduction of the GMOs were modified in July 2003 according to the European Directive 2001/18, which include important indications concerning the participation of the citizens and of the social forces.

It is within this framework that the analysis of the interviews and public meeting made within the Paradys project has to be placed, with the aim of taking into consideration the strategies involving environmentalists, institutions and other social forces in the democratic governance of technological innovation.

In the last two years Italian environmental associations have conducted several information and awareness campaigns directed to public opinion on the issue of transgenic agriculture. From several interviews to environmental activists it clearly emerges that their actual interest to participate in institutional forums that may contribute to shape decision processes on GMOs is fairly limited. It seems, instead, that the strategy adopted is that of building separate forums of discussion and consensus-building, trying to elicit public attention with the help of mass media – we have

mentioned the protests by VAS in front of Monsanto's premises in Lodi, aimed at denouncing the presence of transgenic seed, an event receiving wide media coverage both in 2001 and 2002.

Another initiative that is worth mentioning is the creation of the Consiglio dei Diritti Genetici (Council for Genetic Rights, CDG), "an independent organism, with scientific as well as moral authority"²¹. The main aim of CDG promoters is to create a body which is separated from institutional contexts that officially have competence in the area of biotechnologies, trying to build "a stable network, both at the national and at the international level, making it possible an interdisciplinary exchange of knowledge among science, law, economics and philosophy that together can contribute to form a scientific and cultural way of thinking overtly alternative to the model of "biotechnological civilization that it is being imposed without the consensus of the collectivity".

CDG is founded in sharp opposition with the activity of the Comitato Nazionale per la Biosicurezza e le Biotecnologie²² (National Committee for Biosecurity and Biotechnologies) to aiming at a more substantial form of control, "awakening the capacity of collective reaction with respect to those who have forgotten [i.e. scientists, policy makers] the real function of their own work".

It is clear that the strategy adopted by promoters – mostly, environmentalists – is that of building separate and competing forums/bodies, capable of raising public attention, stimulating an open debate on a wide range of issues related to GMOs, not only limited to the scientific and regulative aspects. This strategy, in the Italian case, has been adopted after the refusal, in 1999, by environmental associations VAS, Greenpeace and Crocevia to participate in the Consiglio Nazionale delle Biotecnologie in order to represent social demands not yet accounted for within that Council; on that occasion, they had requested as condition for their participation the exclusion of representatives of biotech companies, a condition considered unacceptable by CNBB.

It should be recalled that a network of local Councils (Comuni) against transgenic food has also been created in these years, with such local authorities declaring their own areas as GM-free. Moreover, some Italian regions have also adopted regulations that strongly limit the possibility of introducing transgenic cultivations in their areas. In the summer of 2003, for instance, the Regione Piemonte decided to destroy several crop fields upon discovering some evidence of contamination with transgenic crops. The destruction of fields received prominent coverage from several TV prime time news as well as from the daily press.

Finally, a proposal for a 'public initiative law' (i.e. a law proposed directly by citizens) was proposed by the Verdi (Green Party) of the Region Veneto in order to totally ban GMOs growing across the whole region. In this way, central power is challenged by emphasizing the local responsibility of public administrators and civil society groups, like in the movement of city councils against transgenic food²³.

Despite the fact that Italian legislation has not specifically received the EU directive 2001/18, in terms of providing institutional spaces information to the public and involvement of citizens in decision processes, new forms of public participation have been activated that have channelled public debate on GMOs.

Also for this reason, environmental organizations, enterprises and local administrations, on several occasions, have directly addressed their requests to the European Union, rather than to the national government. More in general, the lacking of appropriate (and/or the perception of)

²¹ Founding Manifesto of the Consiglio dei diritti genetici, web: http://www.vasonline.it/news/2002_ogm_cdg_3.htm.

²² The Comitato Nazionale per la Biosicurezza e le Biotecnologie (CNBB) is an institutional body set to control and evaluate biotechnologies both in terms of socio-economic impact and in terms of impact on health and the environment. It operates under the Presidency of Council and it is formed by experts from various Ministers, by a representative of Assobiotec, of Enea (Energy and Environmental Council) and of CNR (National Research Council)

²³ The campaign promoted by Verdi started on October 11, from Padova with a press conference and a collection of subscriptions. The aim is to obtain 5000 subscribers by 6 April, 2004. Source: Osservatorio sui Conflitti Ambientali e Geopolitica, web: http://www.sherwood.it/osservatorio/ogm_free/proposta.htm.

institutional opportunities of civic participation on the issue of GMOs have led associations and other citizen groups to devise new and interesting ways of influencing policy making, including the actual creation of new participatory forums/bodies – like the Stati Generali of Transgenico and the CDG - and the (so far, attempted) development of local citizen initiatives in the area of legislation.

6.1 Communication in Italy on the subject of GMOs

Some general considerations may be drawn from an analysis of the public debate on agricultural and food biotechnologies. A survey was made in Italy in 2001 and the first half of 2002 on the subject of agricultural and food biotechnologies through the analysis of media exposure (newspapers and television)²⁴. Some aspects emerged from the analysis which will be considered shortly.

GMOs are given a negative connotation by their placement alongside images of danger. In 2001 in particular, their association with topics regarding dangers, such as BSE, was strong. Media coverage is particularly intense where there are significant facts that can be qualified as emergencies: the protest by scientists, the Monsanto seeds suspected of being transgenic and the case of the radioactive pasta.

However, media attention in 2001 was in general fairly low.

According to the authors of the report, the GMO subject is not dealt with ‘scientifically’; news reports prevail, carrying descriptions of events, comments and the opinions of journalists.

There is no sign of debate between actors of various specialisations involved in the matter. Those with the highest profile in the public debate are politicians and journalists. The politicians have generally taken up prudent positions, with differing emphases. The Greens, in particular, express opposition and diffidence.

Experts and scientists appear only marginally or not at all in the public debate.

Television communication is made through various programmes: news, entertainment and scientific information. The opinion of the scientific committee which conducted the study regards the quality of information on GMOs as poor. If the scientific information is reassuring, other sources shape a fairly sceptical and negative public opinion on the subject. Emphasis is made in particular of the idea that GMOs go against a quality diet that values typical Italian products.

The terms used are fairly evocative: fundamentalism, integralism, obscurantism.

Furthermore, it is possible to identify an oppositional use of the terms ‘nature’ and ‘technological applications’. The use of polarisation between hostile and favourable positions is clear.

It is interesting to note in the six-monthly report for the period January-June 2002 how media coverage ignores the local level. Plenty of space is given to the policies of foreign governments and the Italian government, but none is found for the positions of the regions and local bodies. In this context it is important to point out that open field trials are authorised by law and take place at the level of individual local bodies, thanks to the consent of individual farmers, in activities guided by researchers from public institutes (universities and research institutes).

As shown in the 4th deliverable drawn up by Elena Collavin, local administrators in places where GMO trials take place are not officially informed. Consequently, no public debate between the public, scientists, biotech companies and environmentalists takes place, except in exceptional circumstances.

The report²⁵ contains an interesting statement concerning the social positioning of scientists: ‘scientific research should not be one of the things under consideration, but a factor of knowledge

²⁴ The survey was carried out by the Pavia Observatory, commissioned by Ong Crop life. The research work is of annual duration and covers the years 2001 and 2002.

²⁵ ‘Le agrobiotecnologie nei media italiani’, 2002 report, 1 semester, pg. 20

and balance. It is not easy, but it is a challenge that involves all, scientists, environmentalists, journalists and the general public'. Should the role of scientists be that of impartial actors, with no position on the matter? Is it possible to ascribe science and its experts with such detachment from the subject of GMOs?. We think this is a controversial question that is difficult to consider with the certainty it is posed by the authors of the report. The involvement of scientists in the public debate qualifies their position: subjects who have an influence and precise opinions. Their contribution is not indifferent and enriches the debate on the subject. Science cannot be neutral, but is deeply interwoven with the ideological, political and cultural motivations of the society in which it exists. In the last century science has ranked alongside and at times replaced the Church and tradition as the source of popular knowledge and thus represents one of the most powerful means of legitimising society. In this sense, scientific knowledge cannot pretend to be autonomous and outside the fray, but must assume an attitude of critical reflection.

6.2 Biotechnologies and the opinion of Italians, issues related to participation

We present some results from a recent survey conducted at the end of 2001 in Italy on the subject of biotechnologies. This was the second survey on 'Public opinion and biotechnologies in Italy'²⁶; the first was carried out in 2000. Some aspects of the conclusions reached by the survey that are of particular interest to the Paradys project are presented here.

The possibilities that open up to research and industry in the biotechnological field pose the problem of who ought to make the difficult decisions necessary to govern these processes.

Several questions regarding the perception of the responsibility of scientists and companies working in the biotechnology sector were posed by the survey.

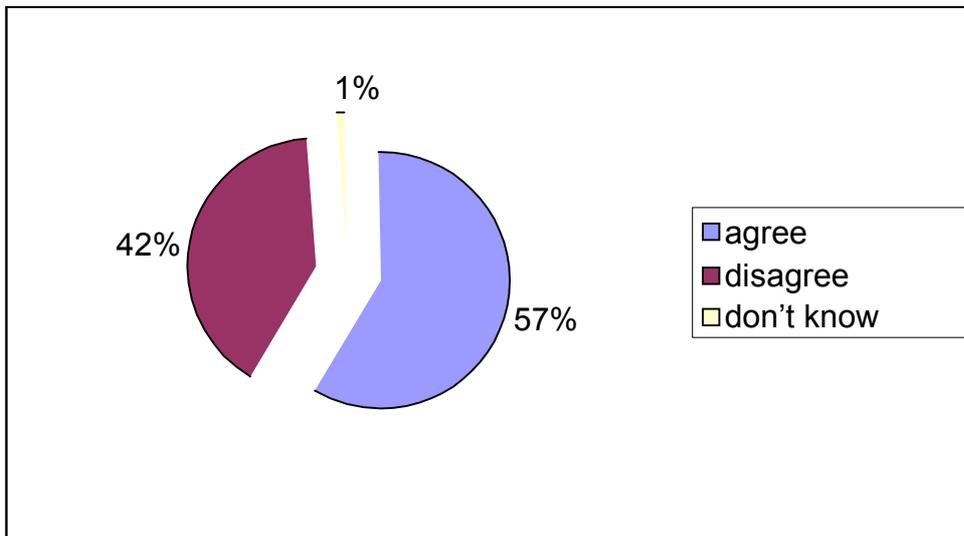
Scientists, research and responsibility

A first group of questions, aimed at showing the perception of responsibility, was aimed at recording the opinions of those interviewed on the level of trust of scientists and their work.

²⁶ The survey on Biotechnology and Public opinion in Italy was carried out by POSTER srl under the scientific supervision of Federico Neresini (University of Padua), Massimiano Bucchi (University of Trento) and Giuseppe Pellegrini (University of Padua). The survey was carried out in the last two weeks of October 2001 with 1017 telephone interviews to a representative sample of the population over the age of 18. The complete report can be downloaded at www.poster.it

The survey was partially funded by the 'Giannino Bassetti for a responsible enterprise' Foundation (www.fondazionebassetti.org).

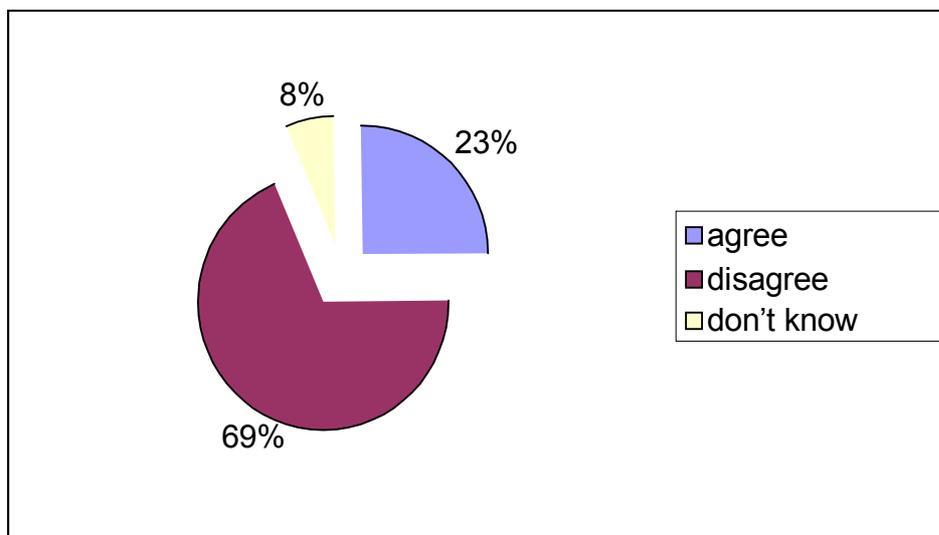
Fig. 6.1 - I trust in scientists because I think they work for the good of mankind (% values on N = 1017)



The survey of the level of trust Italians have in scientists offers a positive picture, even if the percentage of agreement with the statement is not overwhelming, though exceeding fifty per cent of responses.

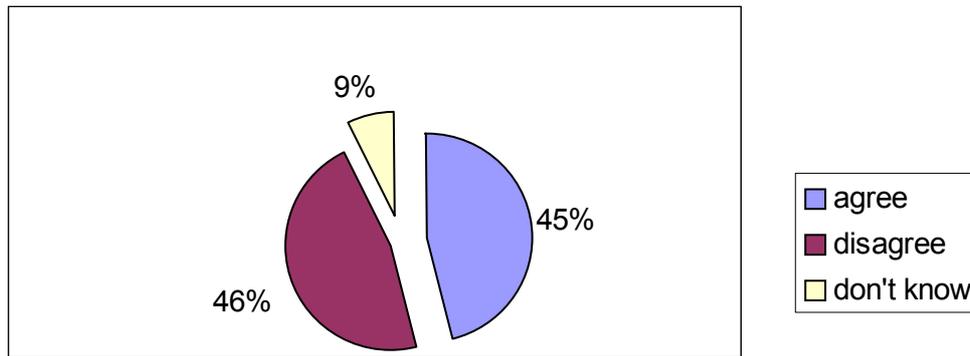
Invited to respond on the advisability of allowing scientists to patent their discoveries, interviewees decisively took sides. Sixty-nine per cent disagreed with this proposal. The opinion is essentially negative.

Fig. 6.2 - It is advantageous to allow scientists to patent their discoveries in order to gain economic profit (% values on N = 1017)



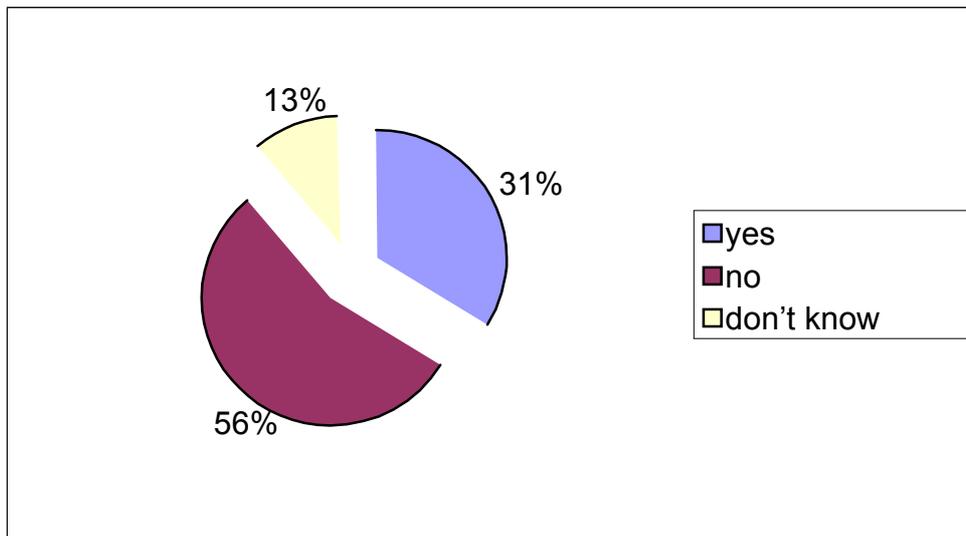
Analysing the data concerning the risk of allowing scientists to patent their discoveries to gain economic return, the position of those interviewed seems less certain. The levels of agreement and disagreement are more or less on a par.

Fig. 6.3 - It is risky to allow scientists to patent their discoveries in order to gain economic profit? (% values on N = 1017)



The opinion of the moral acceptability of this practice is unfavourable.

Fig. 6.4 - In any case do you think this is morally acceptable? (% values on N = 1017)



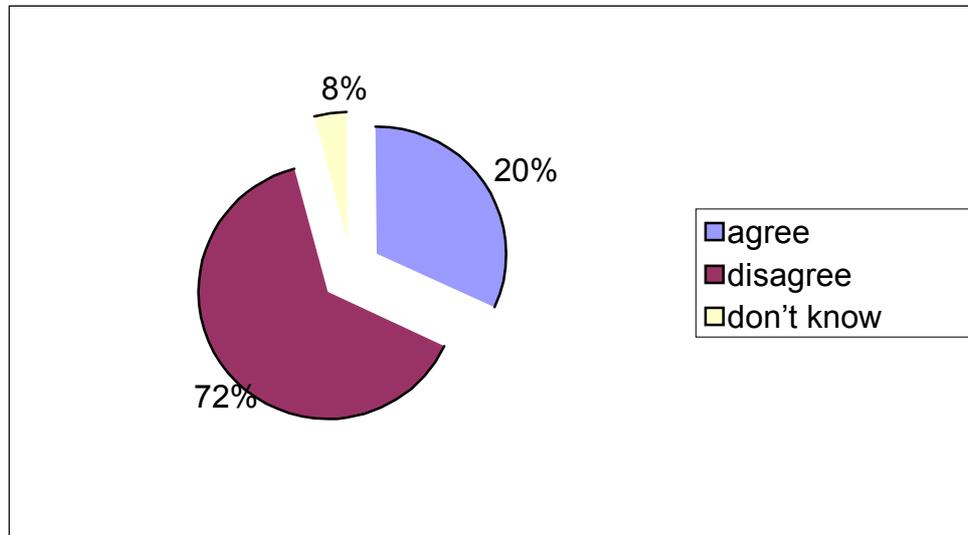
The subject of the regulation of biotechnologies has considerable implications for industry, agriculture and research in Europe. Widespread suspicion of biotechnologies, particularly regarding genetically modified organisms, has since 1998 led to a moratorium on new authorisations for transgenic products. Authorisations have also been stopped in Italy and limitations imposed on research and trial work. Emphasis is made on several sides that there are irrational fears, that the debate has polarised on two opposing sides which have no functioning channels of communication. The impasse reached, and the slow-down in research work, highlight the need to carefully consider the role of scientists, governments and companies in this scenario.

The specific surveys of recent years have shown a general scepticism in public opinion, such that some European governments have set up trade barriers, reducing imports of transgenic products,

despite recent EU regulatory dispositions on the traceability and labelling of genetically modified foodstuffs and animal feed.²⁷

Such distrust is well represented by the Italian public who participated in the survey. 72% of them believe that the laws in force are not sufficient to protect consumers from the risks associated with modern biotechnologies.

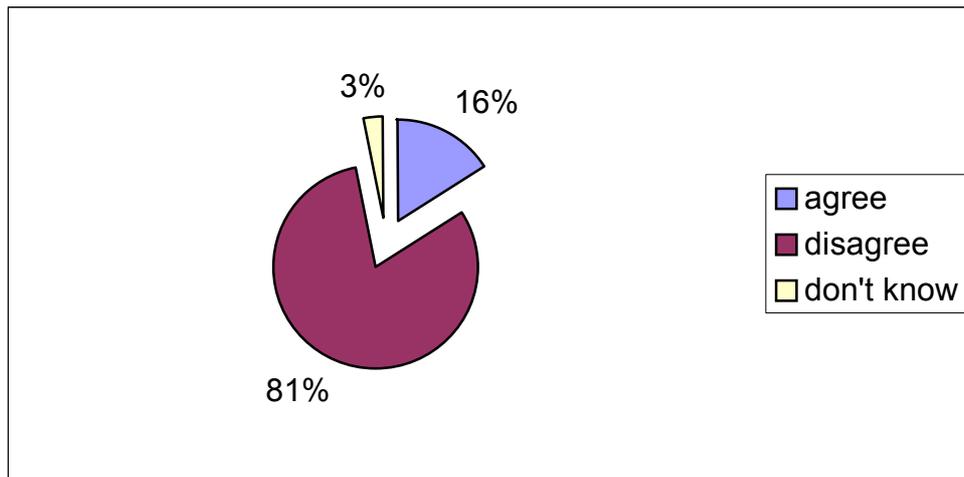
Fig. 6.5 - Current laws are sufficient to protect people from the risks associated with modern biotechnologies (% values on N = 1017)



Disagreement remains very high regarding the possibility of scientists acting without limitations imposed by law, but the fact that 16% of those interviewed think it expedient to allow scientists total freedom of action must not be undervalued.

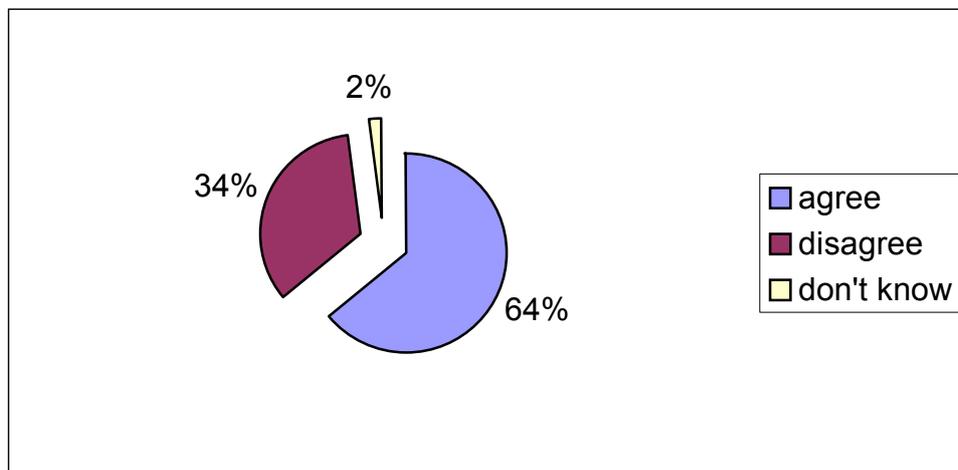
²⁷ EU Directive 2001/18/EC.

Fig. 6.6 - Scientists who carry out research on biotechnologies should be able to do what they like without excessive legal restraints. (% values on N = 1017)



In line with what was previously stated, those interviewed do not assign specific responsibilities to scientists regarding the negative effects of applications. Indeed, 64% of the sample do not agree with the statement that ‘scientists who do research in the biotechnology sector are responsible for any negative consequences deriving from the application of their discoveries’.

Fig. 6.7 - Scientists who do research in the biotechnology sector are responsible for any negative consequences deriving from the application of their discoveries (% values on N = 1017)



Overall, those interviewed indicated the need for precise legal intervention in order to regulate research and the application of trials for the production of products with biotechnologies. Substantial trust in scientists and their work is accompanied by the need for strict precautions able to guarantee the public.

Decision-making processes and criteria

Under what conditions would those interviewed be prepared to authorise the marketing of foodstuffs produced with GMOs? The position of public opinion in this case also seems very clear. Indeed, more than one in three would not authorise marketing under any circumstances; a further 44% would be prepared to allow it only if guaranteed a total absence of risk. Overall, these two positions account for more than 80% of the subjects.

The idea of ‘zero risk’ is therefore fairly widespread and deep-seated, despite it being a rationally and scientifically unsustainable position, given that the possibility of excluding *a priori* any possibility of danger is quite beyond our reach. It would nevertheless be necessary to be able to go further into this question, to more accurately verify whether or not the ‘zero risk’ option does not actually correspond to the request for a ‘risk reduced to the lowest possible level’, obviously attempting to also define what is normally meant by the expression ‘lowest possible level’.

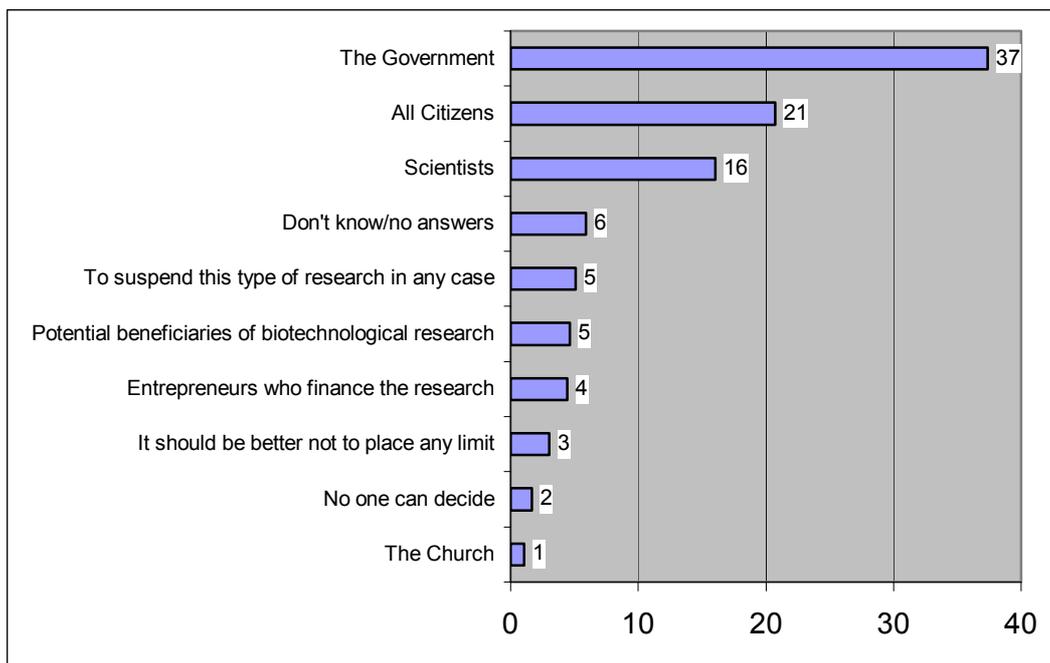
*Tab. 6.1 - Imagine that the possibility of marketing genetically modified foodstuffs depends on your decision. You would agree to the sale of genetically modified foods only if:
(% values on N = 1017)*

there was absolute certainty that there was no risk for those eating them	44
any risks were less than or at least on a par with those of non-genetically modified foods currently being sold	14
any risks were less than the benefits that could be derived from them in terms of lower costs and longer preservation times	2
I would never allow the sale of genetically modified foods	38
no response	2

Finally, some questions were posed regarding the decisions relating to biotechnologies, both on the level of research and their application.

In order to verify the ability of those interviewed to distinguish between the two dimensions, half of the sample were given a formulation that concerned the pursuance of scientific research, the other half one concerning the use of applications deriving from such research. The analysis of the data showed that there are no particular differences of opinion on the basis of the two formulations; in other words, Italian public opinion does not distinguish between biotechnological research and its applications. It is therefore possible to deal with the two items together.

Fig. 6.8 - Which of the following subjects should decide on the use of possible applications deriving from scientific research and from applications in the biotechnology sector? (% values on N = 1017)



The government is therefore the main institution to which decision-making responsibility is attributed.

More than one interviewee in five, however, thinks that all members of the public should be involved in decisions on biotechnology, a particularly interesting indication in the light of the broad debate which has developed on the involvement of the public in scientific research, particularly on a European level.²⁸

The third subject to whom decision-making prerogatives are attributed are scientists, followed at some distance by the potential beneficiaries, entrepreneurs and religious institutions. Finally, it must also be noted that according to 10% of the sample, no one is effectively able to decide on the matter, with an interesting differentiation for the consequences on the level of regulation: while 2% limit themselves to claiming that no one is able to decide, 3% think that for precisely this reason it would be better not to place any limit, and 5% state that, for the same reason, it would be advisable to suspend this type of research in any case.

The picture does not undergo any big changes when moving to consider which other subjects should be questioned on decisions regarding the research and use of biotechnological knowledge (see tab. 2)

It is important, however, to note the importance taken on in this by consumer or public protection organisations, indicated by 23% of those interviewed, to which environmental organisations (7%) may also be associated. This is a confirmation of the credibility these subjects had already been shown to enjoy as sources of information on biotechnologies. Scientists, moreover, receive a percentage of votes very close to that for 'all members of the public'.

As actors who would in any case be consulted, entrepreneurs see their position clearly improved, given that 8% of the sample thinks they should be involved in the decision-making process: undoubtedly more than the 4% who, as we have seen, would entrust them with the task of regulating the matter. On the other hand, it is interesting that only 5% of public opinion recognises

²⁸ See the recent European Commission documents (www.cordis.lu) and the various programmes intended to stimulate public awareness and interest.

the potential beneficiaries of biotechnological research and its possible applications as actors who should be given an active role in decision-making processes which, in the end, concern them very closely. This could in some ways foreshadow a conception of the ‘passive use’ of biotechnological innovations, assigning final users little importance in orienting these, along with little responsibility for any negative effects deriving from their introduction. And yet there is no doubt that the ‘demand’ for innovation, even in the field of biotechnologies, has an all but secondary function in determining the innovation itself: it is enough to consider the pressure exerted by associations of the sick and their families.

Tab. 6.2 - Which other subjects should be questioned on the use of possible applications deriving from scientific research and from applications in the biotechnology sector? (% values on N = 1017) (multiple answers; % values of total valid answers)

All Citizens	23
Scientists	22
Consumers’ organization	16
Others public protection organisations	11
Entrepreneurs who finance the research	8
Environmental organizations	7
Potential beneficiaries of biotechnological research	5
Parties and Syndicates	3
The Church	3
Others	1
Total	100

The possibility nevertheless remains open on one hand as to whether the interests of users have been attributed to consumer or public protection organisations rather than to a possibly difficult to identify subject as ‘the potential users’ of biotechnological innovation. On the other, it is quite probable that the potential beneficiaries have been included in the category ‘all members of the public’: a further sign of the fact that the request for involvement expressed by the Italian public is oriented in universal terms. More than a request for the safeguard of particular interests, it is a request that relates in general to the level of citizenship and participation. Moreover, it must be remembered here that a not insignificant number of people interviewed (28%) were in favour of the proposal, made at the end of the interview, to be involved in a public meeting to discuss biotechnologies with scientists, entrepreneurs and politicians.

Tab. 6.3 - And who should in any case be consulted before deciding on the continuation of scientific research and on the use of possible applications in the biotechnology sector? (multiple answers; % values on total valid responses)

the general public	23
Scientists	22
consumer associations	16
other public protection organisations	11
the entrepreneurs who finance the research	8
environmental organisations	7
the potential beneficiaries of the applications	5
political parties and trade unions	3
the Church	3
Other	1
Total	100

The strongly lay orientation expressed by Italians on this occasion should finally not be ignored; indeed, the Church is not only cited by an almost zero percentage as decision-maker, but is also indicated as an actor to be consulted by only 3%.

The choice of who should decide is only partly related to the level of trust in science distinguishing those interviewed.

The people who have the greatest trust in science more often think that the government and potential beneficiaries should make the decisions concerning biotechnologies.

Tab. 6.4 - Who should decide, and trust in science (% values on N = 1017)

Who among the following should decide?	Index of trust in science		Total
	low and medium-low	medium-high and high	
the government	37	42	40
the general public	26	19	22
scientists	17	17	17
no one is capable of deciding	11	10	11
the potential beneficiaries of the applications	3	7	5
the entrepreneurs who finance the research	6	4	5
the Church	1	1	1

On the other hand, while ‘the general public’ are indicated by a smaller percentage of those interviewed who have faith in science, the scientists did not receive – as could perhaps have been expected – a greater attribution of decision-making power. This is further confirmation of the existence of deep-seated and largely transverse attitudes towards subjects typified by different levels of exposure to scientific communication, information on biotechnologies and orientation towards science.

7. Dissemination strategies

During the three years of the research project we have constructed significant relationship with social actors: scientists, environmentalists, politicians, local administrators and stakeholders in many ways concerned on gmo's. In order to organize specific initiatives around the dissemination of the results, we will focus our attention to the following strategies:

1. The network dissemination strategy will be geared to communicate research results to academic and non-academic audiences both within and outside the network.
2. Specific dissemination strategies will include: public presentations, seminars, publications, online presentations, communication with related projects and initiatives.

It is expected that there will be some invitations to speak at relevant professional meetings in Italy during 2004, as communities are aware of the project. Calls for papers on e-mail list should also be monitored and proposals to appropriate international events considered.

It's our intention to organize two seminars, one for a large audience, one for scholars in academic context. Probably, the open seminar to the wide public and several experts, stakeholders and politicians will be held in Milan. The other one closed seminar will be done in the University of Padova.

About publication we are working around a paper for an international review among the following: Science Communication, Science technology and Human Values, Public Understanding of Science. Online presentations will be realized in two website: Poster-Observa and Paradys Italy.

Finally, with regards to communication with other projects, specific activities will be done with the region lombardia project "Public participation and innovation governance", and the IASMAA project "Osserva 3" of the autonomous province of Trento.

Due to the collaborative nature of the project, dissemination will also incur implicitly alongside the specific activities outlined above. Firstly, the project team will be working with a wide range of academic staff enabling cross-fertilisation of approaches between individuals, departments and between disciplines across the consortium institutions. Secondly, the steering group members have been chosen for their potential to enable the project work and the approaches for good practice to embed into existing frameworks for this area within their institutions, to disseminate findings widely across the institution, and thus provide a high level of impact. Furthermore, dissemination of generic and subject-based outcomes is implicit in that two or more departments will participate in the initial phases of the project at Trieste, Poster Vicenza and University of Padova.

8.1 Policy Recommendations

Technocracy and Democracy are antithetic: if the protagonist of the industrial society is the expert then it cannot be the lay citizen. Democracy is funded on the premise that everyone can make decisions about anything. Technocracy, on the contrary, requires that only the few that are experts be called to decide.

(Norberto Bobbio, Il futuro della democrazia: 23 Translation mine)

and yet democracy is not achieved with plebiscites consensus and those governing should not be hostage of customer polls like advertisers:

Your representative owes you, not only his industry, but his judgment; and he betrays, instead of serving you, if he sacrifices it to your opinion

(Edmund Burke, quoted in Turner 2003:1432)

The *White Book on European Governance* issued by the Commission in 2001 assessed a situation of growing distance between citizens and government and set the agenda for increasing democracy and gaining back the trust of Europeans in their institutions. Since then, the EU Commission has issued several documents on the subject of European Governance, new models for policy making, the relation between science and society, Participative Technology Assessment, and more in general on the role civil society should play in European scientific research. Starting in 2001, the EU Commission has also conducted a public consultation on the subject of Biotechnologies, providing a large amount of information to the public, organizing conferences for stakeholders and giving the possibility to everyone of addressing the Commission with comments requests and suggestions.

On the matter of GMOs, the EU has probably the most demanding approval system in existence and the most comprehensive consumer information, that now requires labelling for food and feed containing more than 0.9% of GM product of the kind legally authorized for consumption in the EU.

It would be hard to affirm that issues related to both science and civil society in the GMO debate have not received attentions at European level. And yet, the man on the street often displays a view of the way in which GM technologies are handled that depicts politicians as puppets in the hands of worldwide economic empires. Scientists too are sometimes seen as servants of multinationals, characterized by hubris and lack of interest for general concerns of ethical or environmental nature.

This conundrum does not have easy answers and touches several aspects of how our society works. This is why legislation and practice concerning GM field trials is a particularly good example of how public policy about technology, the discourses of science itself, and social issues surrounding information and public participation coalesce in a specific case, and simultaneously involve institutions and individuals at different levels. Distinct social actors are involved in the policy and the decision making procedures in place for the authorization of experiments that involve cultivation of genetically modified crops, and many more are involved, on the one hand, in the actual experiment on the ground, and, on the other, as concerned local citizens, scientific or commercial advocates, or as committed activists. Each case of field trial can be seen as an experiment of enacted citizenship, in which it becomes evident who is a relevant subject and who isn't, who is given room and who is not, and how the discourses of protesters, scientists, administrators and local citizens conflict or display compatibilities.

The issues at stake in the Science and Society debate in Europe in fact are fairly crucial: as we see it, one aspect of the multi faceted matter is the need of meeting the challenges posed to Europe by the global market, for which research, and particularly research in the field of biotechnologies, plays a key role. The other central aspect of the issue is the development of a European democracy in which citizens are willing to participate in the governing process and are provided with appropriate tools for doing so. Central aim is then the implementation of research policies that both meet the needs of society, and receive support of society at large.

One of the findings of our research is that questions and answers exchanged between citizens, administrators and scientific experts are often mismatched. A scientist is not equipped for answering to questions of global equity, an administrator cannot answer to dilemmas of ethical kind, and a citizen cannot be asked to contribute to the debate with remarks of scientific nature or face exclusion from the debate. Productive dialogue can be fostered only if the parts listen to each

other and attempt to widen the ground of discussion beyond strictly technical aspects of scientific nature and ideological standpoints.

The PABE research, published in 2001 was conducted with the method of focus groups and aimed at assessing the perception of GMOs in Europe. The results from focus groups conducted in 6 EU countries have been summarised into a series of recurrent questions that participants pose:

Key questions posed by the focus group participants:

Why do we need GMOs? What are the benefits?

Who will benefit from their use?

Who decided that they should be developed and how?

Why were we not better informed about their use in our food, before their arrival on the market?

Why are we not given an effective choice about whether or not to buy and consume these products?

Do regulatory authorities have sufficient powers and resources to effectively counter-balance large companies who wish to develop these products?

Can controls imposed by regulatory authorities be applied effectively?

Have the risks been seriously assessed? By whom? How?

Have potential long-term consequences been assessed? How?

How have irreducible uncertainties and unavoidable domains of ignorance been taken into account in decision-making?

What plans exist for remedial action if and when unforeseen harmful impacts occur? Who will be responsible in case of unforeseen harm? How will they be held to account?

PABE report p. 48

In the same line, a document issued by the International Council for Science in 2003 has revised 50 independent scientific studies on biotechnologies conducted all around the world and has concluded that:

“50 independent and authoritative scientific enquiries -carried out by different groups in different parts of the world, and for different reasons - are largely in agreement in their response on the major questions concerning GMFs: Who needs them? Are they safe to eat? Will there be any effects on the environment? Are the regulations adequate? Will they affect trade?”

New Genetics, Food and Agriculture: Scientific Discoveries-Societal Dilemmas. P.3

Our data further corroborate these findings and show that the concerns of citizens are linked to issues of various nature in which uncertainties about the new technology match a widespread lack of trust in the regulating system, in politicians at both Italian and European level and also with a deeply rooted feeling that the logic of profit largely overcome any other consideration aimed at equitable and democratic coexistence.

Legislators, decision makers, politicians and scientists now know which are the questions that citizens are posing them. As we can see, the questions address issues of various nature and cannot be satisfactorily answered by scientists only, or by politicians only, or by economy experts only. These questions require a broader approach to the issue of GMOs, and a number of trust building actions from the part of the decision maker.

More locally and more restricted to the Italian specific situation, in the light of our research we can provide for some specific recommendations concerning field trials in Italy, inspired to the aims set by the several EU documents dedicated to the science and society debate. We start from the assumption that civil society participation should represents a goal for the government and that

information is considered to be a right of all citizens. The following recommendations then aim at making easier public participation and fostering productive dialogue between citizens and responsible parties.

1 Provide for information about field trials the most concerned ones

With the new legislation issued in July 2003 in Italy a 30 days period is allocated for citizens to file comments and advice to the deciding board before the planned experiment takes place. The details of the planned release are now published on the Health Ministry web site and anyone can download the SNIF²⁹ of the experiment. It is also possible for anyone to sign on a mailing list at European level and receive information on the latest applications filed to the national competent authorities in Europe, and thus be kept informed. A recently funded NGO, the Council for Genetic Rights, has set up an independent committee of scientific experts that systematically examines the details of the planned experiments and files comments and advice to the decision maker. In this sense, the situation has improved from the time in which this research was conducted, when no information was provided before the trial was put in place and the SNIF was not publicly available. Still, the ones more concerned with the planned release, namely the citizens of the council in which the release is planned, don't receive appropriate information.

When we started this research we were surprised at finding out that in Italy several experimental fields had been destroyed by activists in the past, but that only in a very few cases there had been instances of organized and articulated protest with debates, negotiations or at least some communication between protestor and persons responsible for the field trial. This considered, we argue that lack of information to locals does not really protect the trials from vandalism; In the actual context a sort of "keeping a low profile" strategy followed so far concerning field trials seems counterproductive.

A public meeting organized by a mayor in a village in which nobody had been informed of the ongoing field trial turned to be a productive and civilized debate, thanks to the attitude assumed by citizens, by the relevant regional civil servant and by the scientists in charge, who accepted to come and explain what the experiment was about. Citizens were not given any power or right, but they were in that instance at least recognized as interested parties, and addressed as such. Maybe this unique experiment could be repeated in villages and cities hosting field trials, before protests mount in the silence of responsible parties. Far from being instances of participative democracy such encounters can be a way of opening a channel between experts and local citizens, which could lead to a positive mutual recognition. No need to say that in these occasions it is perceived fairness and human qualities displayed in face to face interaction that come into play, but maybe it is exactly starting from an interpersonal level that reciprocal distrust between administrators, experts and civil society can be addressed, at least more than it is targeted with informative booklets or scanty on line reports.

In fact, in Italy information available to citizens on the institutional sites is very scarce or old: on the Health Ministry web site there is no information aside from the list of the new applications, on the Agriculture web site there is no information about the fact that the law has changed and that new applications are to be found elsewhere. Overall, a lay person wanting to know about Italian field trials will find much more detailed information on NGOs web sites, and this is a reason of pride for green activists but it is a bad sign for the institutional resources, that should instead provide for a rich and articulated picture of the state of affairs to interested citizens. Information Technology offers the possibility to make available a great mass of information to the public in a cheap and efficient way. Not only useful documents but also recorded lectures and debates could be easily

²⁹ Summary Notification Information File

made available to the concerned public, hopefully with great benefit for the quality of the discussion.

2 Make the decision making process transparent

a. As we stated in chapter 3 , the composition of the Inter Ministerial Commission deciding about field trials in Italy is by itself a guarantee of the fact that the criteria followed in order to authorize an experiment are obviously of scientific kind, but also respond to concerns other than strictly technical ones. The multiplicity of expertise held by the Commission members should be emphasized as it represents a guarantee for the concerns of citizens, that have a broad approach to the issue of genetically modified food and pose questions that are not satisfied by answers restricted to obscure technicalities.

b. In order to obtain the name of the Commission members we had to make a formal request to the Commission itself and we justified our demand with the necessities of Paradys research. We suggest that the names of the Commission members are made public because this would be a first step in showing transparency of the process and accountability of the ones who take decisions.

c. As we described in chapter 3, there is no trace left of the whole decision making process: no minutes, no recordings, no documents. In chapter 3 we also described the decision making process as a black box of which we could see only the input, the SNIF, and the output, the letter communicating that the trial had been authorized. What was in between was not accessible. We would suggest that instead track is kept of the overall process and that the single steps that led to the authorization of a trial are made public. Again, information technology allows for cheap and fast ways of distributing a large mass of data of many kind: text, sound, images. Sweden could be taken as an example in this respect³⁰.

In the words of lay people and environmentalists we found suspicion and mistrust about the ways in which decisions are taken. We do not claim that ideologically bound criticisms of biotechnologies could be changed in this way. Still, we believe that one way of addressing widely spread distrust is actually showing exactly how decisions are taken.

3 Understanding, trusting and deciding

Gabriele Abels, in a detailed review of the policy development of the European Commission on the subject of Biotechnologies describes the occurrence of a shift in the Commission between a “deficit model” view of the public to a “trust model” one.

While years ago the received view of the public was more or less that if they only knew then they would agree now the focus is on building trust in regulators and thus gaining approval through consensus the trust in decision makers. Confidence and understanding (where understanding seems once again to mean agreeing) are mentioned together. And yet, all this is based on the assumption that understanding how the process works will equate to a growth of trust in the responsible ones and ultimately in agreeing with the decision makers.

And yet, Abel says: “Understanding can be a mayor source of distrust” (Abels 2003: 15) and wonders “does participation help to build trust or could it even diminish the trust in authorities?” (ibidem)

In fact, I would argue that no more participation is needed in order to have a response about food Biotechnologies from European civil society; If the assumption is that decisions should follow what civil society wants, then the response is pretty clear, no more consensus conferences or focus group or polls are required.

It is precisely in the assuming that there is an easy equation between social utility and social approval of a technology that we find maybe a potential pitfall of the EU participatory approach. In

³⁰ See Paradys Deliverable 5

fact the EU policy shift toward inclusive policies and a view of a research that needs the sanction of civil society to justify itself does not produce increased acceptance of GM technology, and some would argue that it does not produce better science either. Furthermore, the underlying assumption in all the above documents is that research policies that meet the needs of European society also receive the support of European society. Unfortunately, what might in theory go hand in hand, can in fact reveal to be a two-headed body that wants to go in two different directions. Discrepancies on which research does fit the needs of European society are very many, at least among the Italians we talked with in the last three years. Several of the most critical toward food biotechnologies argue that so far GM crops have proved to be of little use for consumers and advocate the diversion of funds on research fields that aim at crop improving via other means than biotechnology, like old traditional farming and new processes inspired to organic farming.

If we are to trust statistics based on expressed opinion to assess the response to GM plants (we cannot have in Europe polls based on actual consumer behavior yet) then the response is clear: to this date the majority of Europeans don't want genetically modified food, don't want to eat them nor to have GM crops growing in Europe.

This position of refusal of genetically modified food is widespread and largely coherent all over Europe, and it is shared by sectors of society so vast that in some cases they have nothing in common but this adversity to Biotech food. This societal response is not confined to the more environmentally or politically sensitive or to more involved people. Nowadays in Italy food industries are choosing to boost their image using the "no gmo" logo in their television ad campaign, that being a good enough indicator of the widespread, consensual and established assessment of biotech food as something bad.

So, one could say, European society has already chosen, politicians should comply and scientists involved in agriculture biotechnologies change field or emigrate; Europe should divert its research resources to some other field more in line with what European society wants.

Only that, of course such decision seems simply not to be possible, as according to the same EU Commission, putting the brake to the development of biotechnologies would equate to condemn Europe to recession in the long run. This amounts to say that European society needs, among other things, well developed and highly competitive research in the field of food biotechnology. In fact, the Lisbon strategy the EU fosters relies on the trust in long term positive effects of developing life sciences, effects for the economy, the protection of the environment and the better condition of society.

Many commentators believe that life sciences and biotechnology following Information Technology, will be the basis for the next wave of knowledge-based economies with huge potential for improving the quality of life through the creation of highly skilled jobs, improved competitiveness and economic growth in Europe, better healthcare and new tools to address the different challenges such as protection of the environment.
(EC Towards a Strategic Vision of Life Sciences and Biotechnology: 5)

and also:

*Life sciences and biotechnology have entered a stage of exponential growth, opening up a vast **potential** to move economies in Europe and globally towards more sustainable development and improved quality of life. They are therefore of strategic importance in Europe's quest to become a leading knowledge-based economy. Europe cannot afford to miss the opportunity that these new sciences and technologies offer.*
(Towards a Strategic Vision of Life and Biotechnology: 3)

This given, we believe that maybe the most fruitful approach in order to avoid further distancing of the governing apparatus from citizens would be the following:

on the one hand, to keep developing and applying tools and strategies that foster inclusion of citizens in the decision making process. Also, educating Europeans to the decision making practice from a very young age, fostering the employment of citizenship values of rights and responsibilities to practical cases, promoting the understanding through practice of the dilemmas, uncertainties, responsibilities and infelicities a hard decision always presents

on the other hand we would suggest to governing parties and related bureaucracies to make it very clear to citizens when in fact certain fundamental strategic decisions have already been taken. Citizens should be explained at length the reasons that guided the process but also, when it is the case, be told very clearly that they are not called to decide. This in order to avoid the frustration produced in those who, after believing that they have been called to settle on something, find out only at the very end that they had no power at all, and that instead of debating, studying and getting involved they could have as well stayed home and watch their favorite sitcom.

8.2 Conclusive observations

If we take into account the legislative, political and cultural panorama above described, and also some of the attitudes expressed by public opinion we can individuate some areas of interest concerning the political directions taken in the field of agricultural Biotechnology and citizen participation.

The case study and the collected data during public encounters, meetings and interviews, reveal that the use of GMOs is a complex subject, not strictly reduced to considerations of scientific kind but also of political, economical, ethical, environmental and social kind.

On the political side, the position of the Italian government has been defined since some time as opposing the cultivating of GMOs. Also, in 2002, the Ministry of Agriculture gave a strong signal of opposing GMOs by suspending all field experiments in the research institutes controlled by the Agriculture Ministry, signalling alarm and concerning activities that make use of GMOs. Such actions clearly did not favour a positive assessment of the public on GMOs, a public, as we know, already very opposed to them and it has also projected further shadows on experimental activities. Part of the reasons for this opposition to GMOs are to be reconduced to the will of protecting traditional farming and the patrimony of typical local products that Italy has in great number. This opposition is also linked to the fact that many think that Biotech farming is not useful in a situation of self sufficient food production .

Along with this, it has to be underlined the link with other European countries notoriously opposed to the use of GMOs. The Agriculture Minister Mr Alemanno, even opposing GMOs, during the Italian semester of EU presidency had to mediate with other positions that are more open and look at the possibility of having coexisting cultivations of GMOs and traditional crops as a solution to the whole matter.

Recently the whole question of security of food containing GMOs has been shifted becoming a matter of choice for individuals that will now be able to buy or not food containing GMOs. This shift occurred thanks to the recently approved EU regulations on tracing and labelling. GM and no GM products will have to be kept distinguished. In this way European regulation, adopted by the Italian government, construct a type of individual as a consumer more then as a citizen who has rights of being informed and of participating.

From an economic point of view, we remark hoe in several occasions recorded by our data surface some aspects debated in the public sphere. GM crops are promoted by big industrial groups that

hold the large part of patents related to this type of agriculture. This results in strong concerns related to the possibility of depending from agriculture multinationals not only for the seeds but also for herbicides. There concerns are joined by an hypothetic attempt by the EU of protecting itself from the import of GM products coming from markets outside Europe (especially corn and soy) and for this reason a strong debate developed within the WTO.

Concerning ethical and environmental issues, it is interesting to consider the subject of the responsibility of innovation. During a public meeting analysed within Paradys it has been discussed at length the issue of effects innovation has, and in particular the difficulty of making it clear who is responsible for eventual negative consequences, like Asbestos and the BSE. The discussion made it clear that techno scientific innovation brings along a quote of irresponsibility, because it is not possible to define with certitude who are the first responsible parties and how it is possible to start innovative ventures without uncertainties.

The topic of uncertainty has then been linked to the one of risk, with the difficulty of accepting the impossibility of doing innovative ventures with zero risk. No scientist would in fact be able to declare that a discovery of him is totally risk free.

Risk assessment and risk management then become crucial elements in view of a correct information to the public, a communication of risk that seems to be insufficient for the danger level presumed for the use of GMOs.

From many parties comes the request of the definition of a system of rules able to guarantee a transparent and equitable market. This could be the condition for opening a new phase of scientific research strongly careful of the protection of life and of the environment. Even if mankind has always manipulated nature thanks to genetics now worried questions are posed on this scientific and technological practice. Who are the actors who can guarantee the fair use of genetic engineering? How is it possible to regulate the enormous economic interests that biotechnologies are attracting? Which outcomes can genetic engineering have? These and other questions agitate the public sphere, often generating confusion and incertitude. Information on the media and scientific information are often inadequate to provide for elements of clarity that would help citizens to understand the dimension of the above discussed issues. But there is not only communication between researchers scientists and lay public, in fact there is also constant communication of scientific matters between experts through specialized journals and any other form of communicative interchange. In fact, all the process of construction of scientific facts is substantially a communicative process. At the same time divulgation and scientific communication between the sphere of research and the world of technical productive realizations seems real and indispensable. Analysing the single spheres we become aware of how much divulgation is not well done or in some cases is not done at all³¹. It often happens in fact that one single piece of news appear on widely distributed newspapers and magazines generating false polemics produced by lack of information and together with major doubts, in the large distribution, on the respect of quality, extent and objectivity of the information on scientific facts. It is also true that, thanks to the hyper specialization in the single fields of science it is not always easy the communicative interchange between different disciplines. Moreover, the links between the world of research and the one of technical-productive realization are not so proficient and active.

A side from the importance the media have in the debate linked to techno scientific innovation we shall also consider other actors that have played an essential role in the management of the development of biotechnologies. In particular we think about the Italian government that has taken side against this kind of technology when applied to farming, this with considerable consequences of international politics and in open contrast with countries that regularly use biotechnologies for their farming production.

³¹ We refer in particular to the examples quoted by Meldolesi in “Organismi geneticamente modificati”2003:53

Together with these matters we should not forget also the level linked to the territory to which refer to when political decisions are taken and we want to face the topic of the participation of the public. These territorial levels are essentially three: the national, the regional and the local (Council administration and local community).

At national level the legal frame requires a weak level of involvement of the public and implies the use of instruments not easily accessible to the large public. The public is configured as a group of individuals and organizations strongly interested in the subject, able to log on the ministerial web site and ready to get involved in consultations.

Regional administrations have the role of inspecting and controlling authorized field trials and there are specific prescribed procedures for informing or involving local administration and local communities. We remind that during the summer 2003 some regional administrations had to take action facing the presence of GM contaminated fields in their territory. These episodes had large resonance on public opinion thanks to the coverage of both local and national media coverage. The management of these situations constituted a real emergency that revealed how different regional administrations hold quite different positions on the subject of GMOs: there are regions notoriously against GMOs and regions more open to the co existence of GM crops and traditional crops. It has been clear from the press that regions did not develop a preventive strategic information on the subject but had to act in order to respond to alarms raised by green organizations and farmer unions. This way the debate on biotechnologies is structured in an episodic and cyclic way, missing a reflected and constant plan for communicating. Such plan could provide for clarity and overcome alarmist and emotional reactions and could help citizens to achieve a clear comprehension of the problem.

Looking at the local dimension concerning field trials we see that even within the new legal frame the local dimension is not considered for the provision of information and involvement of citizens even if the data we presented show that there is a strong interest of the local communities.

Information to local communities is not provided for within the most recent legal frame. This lack of consideration for the local authority of councils and the under evaluation of local communities has been justified from several parts with the worry that local communities would pose a veto to the trials. Also, fears are that publicity could provoke protests and even disruption of the fields. Even if these worries are comprehensible, we claim that insisting with not informing it is possible that the opposite effect is achieved: in fact, the moment local communities would come to know about field trials, doubts and suspects toward institutions would increase, along with protests against experiments. It should be reminded that from collected data and from researches done on public opinion it emerges that there is no opposition to research activities, when they are conducted with reliable security measures for both the environment and the population. At local level a group of councils created the “coordinamento dei comuni antitransgenici” opposing GMOs and who organises initiatives of denounce and information within the public sphere. At regional level more than one administration declared it’s adversity to GMOs and as a consequence it’s opposition to field trials. Also, the creation of the “Consiglio Generale per I Diritti Biologici” and some public events correlated to that have made it evident how when some spaces for participating and debating foreseen by the actual law are absent, then other forms of debate arise. These debates have involved several social actors: consumer organizations, farmer organizations, politicians at national level environmentalists and scientists.

From this situation it is possible to deduce that the topic of biotechnologies is nowadays in Italy a source of several social conflicts. The attention we posed at how the debate in the public sphere is conducted has been the more important as it has allowed us to build a map of relevancies shared and not shared by various actors at play; for doing so we made use of the notion of social positioning. In fact, for the aims of our study, it was fundamental to find out if and how the management of biotechnologies allows for the development of an effectively communicated citizenship. For citizenship we mean the development of citizenship rights, which in turn are comprehensive of civil, political and social rights. Also, it includes the many ethical aspects of individual and

collective right to health, bioethics, ethics and the environment and also considerations about the global well being of the people and the quality of life of the individual.

The analysis of the collected data and the study of the political, cultural and social panorama in Italy in the last three years allows us to assert that the social rights of citizenship, proposed by the concept of technological citizenship, are not protected enough. The legal course in fact does not arrange for inclusive procedures. This approach, of traditional type, devises some closed spaces in which politicians and scientists make decisions in the name of a representative democracy that does not appear to be enough given the impact of powerful technological innovations.

This is why the challenge is the one of rethinking models that imply the involvement of citizens and that permit proficient instruments of communication, which in turn allow for a full development of citizenship.

9. References

Abels

Bobbio, N., 1984, *Il futuro della democrazia*, Torino Einaudi

Abels, G., 2002, *Experts, Citizens and Eurocrats. Towards a policy shift in the governance of Biopolitics in the EU*. European Integration online papers. (EIoP) Vol. 6 N.19;
<http://eiop.or.at/eiop/teste/2002-019a.htm>

Austin, J. L., 1975, *How to Do Things with Words*. 2nd rev. edition. Oxford: Oxford University Press.

Bauer, M.W. and G. Gaskell, 2002, *Biotechnology: The Making of a Global Controversy*. Cambridge.

Blank, R.H. and S.M. Hines, 2001, *Biology and Political Science*. London and New York.

Bradley, K. St. Clair, 1998, *Alien Corn, or the Transgenic Procedural Maze*. In van Schendelen, M.P.C.M. (ed.), *EU Committees as Influential Policymakers*. Aldershot, pp. 207-222.

Cantley, M.F., 1995, *The Regulation of Modern Biotechnology, A Historical and European Perspective*. In Rehm, H.-J. and G. Reed (eds.), 1995: *Biotechnology*, vol. 12, 2nd ed.. Weinheim, pp. 505-681.

Commission of the European Communities, 1991, *Promoting the Competitive Environment for the Industrial Activities Based on Biotechnology within the Community*. In *European Industrial Policy for the 1990s*. Bulletin of the European Communities. Supplement 3/91. Luxembourg, pp. 41-54.

European Commission, 2000a, *Communication on the Precautionary Principle*. COM (2000) 1. Brussels.

European Commission, 2000b, *Towards a European Research Area*, COM (2000) 6. Brussels.

European Commission, 2000c, *Making a Reality of The European Research Area: Guidelines for EU Research Activities (2002-2006)*, COM (2000) 612. Brussels.

European Commission, 2000d, *Proposal for a Regulation of the European Parliament and the Council Laying down the General Principles and Requirements of Food Law, Establishing the*

European Food Authority, and Laying down Procedures in Matters of Food. COM (2000) 716 final. Brussels.

European Commission, 2000e, White Paper on Food Safety. COM (1999) 719 final. Brussels.

European Commission, 2000f, Science, Society and the Citizen in Europe. Working Document, SEC(2000) 1973. Brussels.

European Commission, 2001a, European Governance. A White Paper, COM (2001) 428 final, 25 July 2001. Brussels.

European Commission, 2001b, Democratising Expertise and Establishing Scientific Reference Systems. Report of the Working Group. White Paper on Governance. Work Area 1: Broadening and Enriching the Public Debate on European Matters, May 2001, Brussels.

European Commission, 2001c, Towards a Strategic Vision of Life Sciences and Biotechnology: Consultation Document, COM (2001) 454 final. Brussels.

European Commission, 2001d, Science and Society. Action Plan, COM (2001) 714 final. Brussels.

European Commission, 2001e, Transgenic Plants: Breaking the deadlock. Brussels. Internet: <http://europa.eu.int/comm/research/news-centre/en/agr/01-09-agr01d.html>

European Commission, 2001f, Proposal for a Regulation of the European Parliament and of the Council concerning Traceability and Labelling of Genetically Modified Organisms and Traceability of Food and Feed Products Produced from Genetically Modified Organisms and Amending Directive 2001/18/EC; COM (2001)182 final, Brussels.

European Commission, 2001g, Proposal for a Regulation of the European Parliament and of the Council on Genetically Modified Food and Feed, COM (2001) 425 final, Brussels.

European Commission, 2001h, Questions and Answers on the European Food Safety Authority, Memo/01/248 revised, 18 December 2001, Brussels.

European Commission, 2002a, Life Sciences and Biotechnology – A Strategy for Europe, COM (2002) 17 final. Brussels.

European Commission, 2002b, Implementation of Regulation (EC) No 258/97 of the European Parliament and of the Council of 27 January 1997 concerning Novel Foods and Novel Food Ingredients. Discussion paper prepared by Directorate General Health and Consumer Protection. July 2002. Brussels.

European Commission, 2002c, Commission Proposals for a Trustworthy and Environmentally Safe Approach to GMOs and GM food and feed backed by European Parliament. IP/02/992, 3 July 2002, Brussels.

Durant, J., M.W. Bauer and G. Gaskell (eds.), 1998, Biotechnology in the Public Sphere. A European Sourcebook. London.

Eurobarometer, 2000, Eurobarometer 52.1: The Europeans and Biotechnology, Report by INRA (Europea) – ECOSA on behalf of Directorate-General for Research, Directorate B – Quality of Life and Management of Living Resources Programme, 15 March 2000. Brussels.

European Group on Ethics in Science and New Technologies (EGE), 2000, Citizens Rights and New Technologies: A European Challenge. Brussels. URL: http://europa.eu.int/comm/secretariat_general/sgc/ethics/en/index.htm

European Group on Ethics in Science and New Technologies (EGE), 2001, General Report on the Activities of the European Group on Ethics in Science and New Technologies to the European Commission 1998-2000. Brussels. URL: http://europa.eu.int/comm/european_group_ethics/docs/rap_en.pdf

Feick, J., 2002, Regulatory Europeanization, National Autonomy and Regulatory Effectiveness: Marketing Authorisation for Pharmaceuticals. Max-Planck-Institut für Gesellschaftsforschung. MPIfG Discussion Paper, February 02/6. Cologne.

Gaskell, G. and M.W. Bauer (eds.), 2001, Biotechnology 1996-2000: The Years of Controversy. London.

Grote, J.R. and B. Gbikpi (eds.), 2002, Participatory Governance. Political and Societal Implications. Opladen.

Irwin, A., 2001, Constructing the Scientific Citizen: Science and Democracy in the Biosciences. Public Understanding of Science 10 (1), pp. 1-18.

James, P., F. Kemper, and G. Pascal, 1999, A European Food and Public Health Authority: The Future of Scientific Advice in the EU. A report commissioned by the Director General of DG XXIV. December 1999. Brussels.

Joerges, C., Y. Mény, and J.H.H. Weiler (eds.), 2001, Mountain or Molehill? A Critical Appraisal of the European Commission White Paper on Governance. European University Institute, Jean Monnet Working Paper No. 6/01. Florence.

Joss, S., 1998, Danish Consensus Conferences as a Model of Participatory TA: An Impact Study of Consensus Conferences on Danish Parliament and Danish Public Debate. Science and Public Policy 25 (1), pp. 2-22.

Joss, S., 2002: Towards the Public Sphere – Reflections on the Development of Participatory TA. Bulletin of Science, Technology & Society 22 (3), 220-231.

Kassim, H., 1994, Policy Networks and European Policy Making: a Sceptical View. West European Politics 17 (4), pp. 15-27.

Klüver, L., M. Nentwich, W. Peissel, H. Torgersen, F. Gloede, L. Hennen, J. van Eijndhoven, R. van Est, S. Joss, S. Bellucci and D. Bütschi, 2000, European Participatory TA – Participatory Methods in TA and Technology Decision Making (EUROPTA). Report. Copenhagen. URL: <http://www.tekno.dk/europta>

Landfried, C., 1997, Beyond Technocratic Governance: The Case of Biotechnology. European Law Journal 3 (3), pp. 255-272.

- Levidow, L. and C. Marris, 2001, Science and Governance in Europe: Lessons from the Case of Agricultural Biotechnology. *Science and Public Policy* 28 (5), pp. 345-360.
- Lindsey, N., M. Wambui Kamaraa, E. Jelsøe and A. Thing Mortensen, 2001, Changing Frames: the Emergence of Ethics in European Policy on Biotechnology. *notizie di POLITEIA* 63, pp. 80-93.
- Majone, G., 2002, What Price Safety? The Precautionary Principle and its Policy Implications. *Journal of Common Market Studies* 40 (1), pp. 89-109.
- Neyer, J., 2000: The Regulation of Risks and the Power of the People: Lessons from the BSE Crisis. *European Integration online Papers (EIoP)* 4 (6). Internet: <http://eiop.or.at/eiop/texte/2000-006a.htm>.
- PRADYS 2003, Deliverable 5, unpublished working document.
- Radaelli, C., 1999, *Technocracy in the European Union*. London and New York.
- Randall, E., 2001, The Plan for a European Food Authority and the Politics of Risk in the Union. Internet: <http://www.policylibrary.com/Essays/RandallEFARisk/EFARisk2.htm>.
- Salter, B. and M. Jones, 2002, Human Genetic Technologies, European Governance and the Politics of Bioethics. *Nature Review Genetics* 3, 808-814.
- Sbisà M., (in press) Communicating citizenship in verbal interaction: Principles of a speech act oriented discourse analysis, *in the volume "Communicating citizenship and social positioning in decision-making procedures: the case of modern biotechnology"*,
- Scharpf, F.W., 1999, *Governing in Europe: Effective and Democratic?* Oxford.
- Skogstad, G., 2001, The WTO and Food Safety Regulatory Policy Innovation in the European Union. *Journal of Common Market Studies* 39 (3), pp. 485-505.
- Swedish Presidency, 2001, Conclusions from Umeå: The Ethical Debate must be Strengthened. Press release 12.6.2001. Internet: <http://www.eu2001.se/eu2001/news>.
- Van Steenberghe, Bart, ed. 1994, *The condition of citizenship*, London SAGE.
- Vogel, D., 2001, The New Politics of Risk Regulation in Europe. CARR Discussion Paper. Centre for Analysis of Risk and Regulation, London School of Economics. Internet: http://www.lse.ac.uk/Dept/carr/Publications_folder_web_files/Disspaper3.pdf
- Vos, E., 1999, EU Committees: The Evolution of Unforeseen Institutional Actors in European Product Regulation. In Joerges, C. and E. Vos (eds.), *EU Committees: Social Regulation, Law and Politics*. Oxford and Portland, pp. 19-47.
- Vos, E., 2000, *European Administrative Reform and Agencies*, EUI Working Papers, RSC No. 2000/51. Florence.
- Weale, A., 2001, Science Advice, Democratic Responsiveness and Public Policy. *Science and Public Policy* 28 (6), pp. 413-421.

Weingart, P., 1999, Scientific Expertise and Political Accountability: Paradoxes of Science in Politics. *Science and Public Policy* 26 (3), pp. 151-161.