

CrispR Food.eu

CRISPRFOOD.EU (2018)

This appendix is related to:

Mollon, Max. *Designing for Debate* (Ph.D. Dissertation), 2019.

Section: *Conclusion | New Roles for the Political Designers*

See: maxmollon.com/permalink/maxmollon-phd.pdf

URL of this document: maxmollon.com/permalink/PHD_Appendix-crisprfood.pdf

Having listed my contributions to knowledge in the dissertation body, I now preview some of the contributions of this research, to my own practice. This way, I intend to conclude my research in a *designerly* way. Presenting this project seems important to me because, since this research emerged and was driven in a project-grounded way, potential avenues of future works may emerge similarly.

Through the following project, called *CrispRfood.eu* I attempted to address the limitations listed in my dissertation conclusion. I uncover a whole new round of research questions. They are related to:

- Addressing issues that are known but unintelligible. Or in other words, tackling over-discussed issues rather than under-discussed ones, and attempting to shift preconceived opinions in order to allow non-sterile and non-polarised reflection.
- Active audience construction through a communication strategy. Drawing on Tim Parson's previous quote, it seems important to bridge decision makers and issues-experts (that is, lay people who experience issues) through design for debate. Here, employing communication means may allow to identify and reach a heterogeneous mix of audience members potentially concerned by an issue. But also, reaching them through local situations (interpersonal debate) and mass media (online debate platforms). This approach draws on Information and Communication Sciences.
- Controversy mapping, used to refine the analysis and accounts of the debatable and debated topics—based on Science, Technology and Society studies, inspired by the work of Paris-based Sciences Po Medial Lab.



One of the communication situations of the project—a two hour-long speculative citizen's assembly, bringing together people from different backgrounds coming from ten different categories of public.



Part of the project team at work and the logos of “symbolic support” partners.



About the project

- **In**
26 June 2018 (first debate).
The project started on 24 March 2018.
- **At**
Ninth session of the *Design Fiction Club*
at the *La Gaîté Lyrique* (Paris)
- **For**
Self-initiated project intended for both French citizens as well as French policy-makers (originally intended for the attention of the EU Justice Chamber).
- **By**
Bureau *What if?* (Max Mollon and Welid Labidi) is a collective and *agent provocateur* of public debate since 2014, specialised in the organisation and facilitation of speculative ethical and societal debates. Team 2018: Valérie Decroix, Théophile De Marcillac, Céline Marzin, Noémie Nicolas, Yoan Ollivier, Abdelrahmane Sekkai, Hanna Rasper, and Ketty Steward—in collaboration with Albert Moukheiber (cognitive bias specialist) and GK Collective (theatre actors) on the June 26th session.
- **With the spirited support of**
La Gaîté Lyrique, Science-Po, La 27e Région, IHEST, Tek 4 life, Agrobioscience, Plurality University, Usbek & Rica, Up’Magazine, Obliquité, La Paillasse, Cap-digital.
- **Thanks are due to**
Researchers (Corinne Cotinot, Geneviève Jolivet, Cléa Bauvais, Zoé Bengherbi, and Emmanuel Ferrand); Science-Society (Jim Dratwa and Dorothée Browaeys); Associations & activism (“Fred”, Gilbert Cochet); and Anonymous people in the fields of research, wine making, law, insurances , chocolate factory, cocoa exports (Ivory Coast). Special thanks to: Louis Eveillard & latelier-des-chercheurs.fr (technical support).
- **Licence**
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CONTEXT AND ISSUES

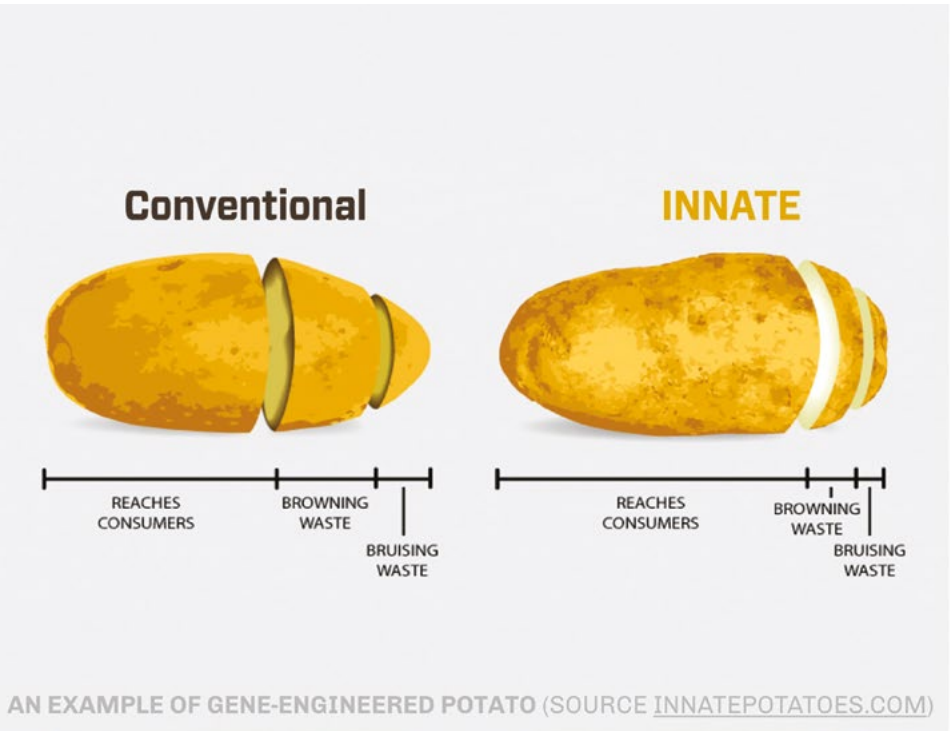
DEBATE TOPIC

CrispR and Cas9 are the names of two molecules originally present in bacteria. They are able to cut and paste genomes into various strains as a defence mechanism against viruses, an action which causes natural mutations. Once triggered by humans, these mutations can be used as a “varietal improvement” technique (called NBT¹).

These “human-made natural mutations” are different from “trans-genesis” (which is categorised as Genetically Modified Organisms) because they do not require the implantation of DNA from a foreign organism. It is more akin to switching genes on and off. What is controversial here is the pace, precision, and ease with which mutations can be triggered. It is like accelerating Darwin’s natural evolution in a laboratory.

This is not a controversy about eugenics, genetically-modified animals, the creation of chimeras, or the threat to human health posed by GMOs. CrispR’s applications can indeed range from human genetic cures to the manufacture of biofuels and the irreversible spread of modified species in natural ecosystems. However, the heart of our debate was limited to the first sector that was to be legislated upon—plants and agriculture—and to its ethical, ecological, societal, and economic issues.

What if scientists could replicate a naturally occurring mutation in the potato to extend the shelf life of new varieties of potato by making them more resistant to maturation? This is what enables the CrispR/Cas9 technology. Shown below is the example of the gene-edited innate-potato, intended to reduce waste.



¹ <http://bit.ly/crisprvideo>

STRUCTURING THE CONTROVERSY

Map of Debatable Topics

Beginning with the analysis of discourses of the main actors who expressed their views on that topic, we created a map of the controversy. The discourses were found in the press, online, and collected through a dozen interviews of actors chosen among ten categories of people implicated by this issue (such as scientists, insurance providers, farmers, and so on).

The issues to be debated were regrouped into four themes (and four tensions):

- Juridical ambiguity establishing a tension between two rationales for the CrispR-food authorisation (“legally” considered as natural, while also seen as a European competitive “economic” opportunity);
- Agriculture’s impact on our anthropo-economic model of society, whereby a tension rises between two postures—a “duty to feed the world” and a will to appropriate it (for instance, patenting it);
- Ecosystems and the impact upon them (CrispR genetic engineering is sometimes publicised as perfectly under-control even though adverse effects on ecosystems might be irreversible);
- Ethics, a subject on which a number of tensions arise, including questions which ask whether human beings should be given the right to modify living beings. If this is already the case, how far should such rights be allowed? Further, the claim that it should not be stopped because it is profitable to society begs the question of who exactly is profiting from this.



List of arguments

Three lines of arguments were drawn from the speeches of actors on this topic. Discourses tended to either:

- Solve the problem (via genetic engineering, by modifying plants and shortening the time of natural mutations);
- Adapt to the problem (by not touching the plant structure and adapting the crop conditions, such as agroecology, permaculture, and traditional selection); or
- Do nothing (letting natural biodiversity do its own work).

Preview of our database of the arguments.

[illegible]

Preview of the list of fallacious arguments and misconceptions that were deconstructed during the debate (list provided to debate moderators).

"CrispR-Food are GMOs!"

But, GMOs may be authorised in Europe under specific conditions.

"But if CrispR produces GMOs, it's forbidden!"

"Random mutagenesis" is a type of GMO that has been unconditionally authorised for 40 years, the issue at stake is compliance with conditions: labelling, tracing, and environmental impact assessment.

"Yes, but dominating nature, we've always done it!"

Bias of reasoning called "the call on traditions"

**"If it's profitable to society,
one shouldn't stop it."**

Yes, but profitable to who?

EXTRACT OF THE LIST OF RECURRING FALLACIOUS ARGUMENTS ON THIS TOPIC



Speculative controversy

In order to dispel pre-established opinions and to create dramatic tension for critical reflection, the debate topic and the controversy mapping were projected into the future and placed in the context of ongoing climate disruption. This included trends such as climate migration, overpopulation, urban exodus, rising temperatures, cessation of the Gulf Stream, the decline of biodiversity, and so on.

In the light of this discussion, we observed that contemporary actors have begun to prepare for this future. Champagne families, for instance, have already bought thousands of acres of land in England so that they have access to appropriate weather conditions for the growth of their grapes in 25 years' time. Another example is the case of the researcher Rachel Levin who enquires into how genetic engineering can be applied to enhance the stress tolerance of coral reefs as the oceans' temperature increases (or, to be precise, how it can be applied to edit the DNA of the "Symbiodinium" organism on which it depends).

CrispR-food challenges relations between human beings and nature, addressing in particular the division between them. This technological “progress” invites us to question whether science is a cure for or the cause of our modern lifestyles (an ambivalence that is called the *pharmakon*). We attempted to crystallise the previous issues with one “cleaving” question—**what if CrispR-food could be a solution to the challenges of feeding a growing world population under adverse climatic conditions?**



Left: will the coral reef be genetically edited in the future?

Right: will champagne grow in England soon?



“Transgenic animals soon in our plates?” – Nine months earlier, the media would adopt a simplistic and alarmed tone, similar to the GMO outcry a decade ago. This put potential media pressure on decision-makers of the EU.

COMMUNICATION STRATEGY

The project attempted to reach existing publics already constructed around related issues. This was achieved through various means.

RIGHT TIMING

At the end of March 2015, nine French civil society organisations submitted an appeal to the French Council to obtain a moratorium on the sale and cultivation of what they called “hidden GMOs.” In October 2016, the Council referred the case to the EU Court of Justice.

- In June 2018, at the time of the debate, the decision of the Court was imminent. The conditions for a crisis of public opinion seemed to be gathered, as they did ten years ago since debates were already taking place but only within expert circles;
- Citizens and the media were neither informed nor consulted;
- Confusion was easily created between the sterile debate on GMOs in the 2000s and the complex applications of CrispR to plants; and
- The polarisations of opinion of the 2000s were still vivid.

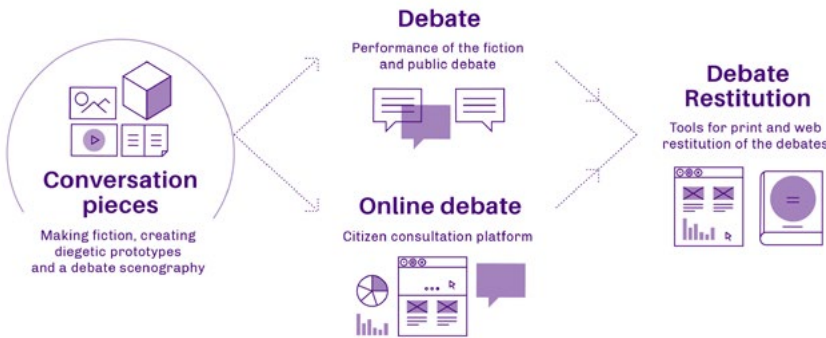
Taking advantage of this pre-crisis momentum in the controversy was a means to bridge audiences both constructed as well as not-yet constructed (in this case, so-called experts and non-experts).

It is important to note that immediately after our debate, in July 2018 the EU decision was made in favour of the complainants, considering CrispR-food as GMOs. However, each country of the Union was now tasked with interpreting this decision within a flexible European legal framework, leaving the controversy somewhat pending.

COMMUNICATION SYSTEM

Something similar to a citizens’ assembly, that phase as a citizen experts consultation was organised (“citizen experts” has no dash between words, leaving room for a creative ambiguity). This happened through several means. The challenge was twofold:

- Allowing communication among the citizens of different expertise;
- And, among the latter and decision-makers (legislative bodies, French policy makers, government, boards of organisations, including industries or labs).



The project therefore contains 4 steps, progressing along 3 formats. In each one, conversation pieces are used to spark debates. Phases comprise:

- A first participatory debate on 2018 June 26th;
- An online public debate phase, punctuated by other physical debates in Paris or in French Regions;
- A report sent to stakeholders. (aiming at revealing the main lines of the controversy, and present them as valuable knowledge, rather than aiming for consensus);
- After the report is published, the stakeholders are offered the right of reply on the online platform;
- The whole is relayed by the media and the project partners.

SPECULATIVE AGORA & OTHER TOOLS

The debate session follows a format we call “speculative Agora”. The Speculative Agora is a kind of citizen assembly: a participatory and speculative debate stimulated by “provotypes” (prototypes of Design Fiction that provoke reflection). There is no stage, no badge, no announcement of (official) experts attending. It allows everyone to feel free expressing themselves. The first part of the debate combines fiction, role-playing and theatre. The second phase is a standard debate. The first was presented, here, as the General Assembly of Bioethics 2046. In 2046, we will review the choices made on CrispR in 2018. This event format is licensed under CC BY-SA 4.0 to encourage others to use it on other themes, or on this theme

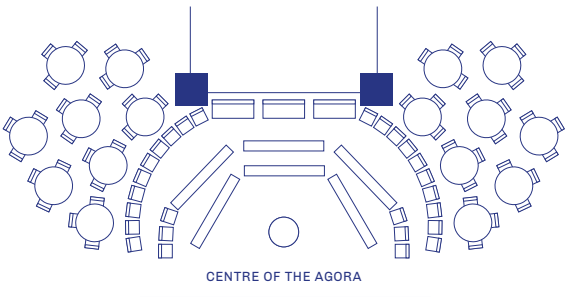
with our images (licensed under CC BY-NC-SA 4.0). The following pages detail our version of the protocol (2018.06.26).

PROCESS (PHASES)

THEME OF THE CONFERENCE (CRISPR-WHAT) |

- **In medias Res.** Starting right into the fictional situation, here in 2046, without prior notice nor explanations, allows to destabilise and focus the audience’s attention expecting yet another debate on a topic they know (inspired by the “In medias Res” theatre concept).
- **Speculative Warm-Up.** The greeting discourse is given in 2046, and allows the audience to understand by themselves their **Role** (citizen experts), the **Mission Statement** (debating for the General Assembly of Bioethics 2046). **Basic Pedagogic Information** + Q&A aim at compensating and better bridging different levels of expertise. (This phase is called “warm-up” because it engages the audience both physically and mentally, and is reflecting the experience (i.e. time-travel) into the future that people are about to live.)
- The **Speculative Role Playing Debate** (RPD) phases are initiated by a series of case studies presentations, with their respective pedagogic update, followed by a debate phase (in 2046). This phase allows experts to step back from emotional implications and forces the interlocutor to convert the known polemics of the present, into issues for future generations. It can even liberate official experts from their usual persona—being someone else for an hour. For all, it disinhibits speculative thinking and critical speech, in a space and a time out of daily constraints.
- The **Back To Reality** debate phase is key. The audience is still debating, but the RPD is broken. This counters the theatrical experience’s tendency to verge onto entertainment, and the immersive role-playing’s risk of impinging on critical distance with the topic. It might be useful to display the background debate topics chosen (and often hidden) during this phase. Also, encouraging people to speak in their own name stimulate people to reflect on their position as citizens, their respective (often neglected) expertise, and their capacity to be actors and not spectators after this debate session. The longer is this phase, the better.





SPECULATIVE AGORA & OTHER TOOLS

PARTICIPATORY HYGIENE RULES |

- **Agora.** The room is disposed in a meeting configuration, rather than a conference (e.g. here, an amphitheatre), with: no stage, no “speaker” in the centre during the debate phases, speakers sitting in the public or in the centre on lower chairs than the public). This intends to foster the construction of opinions, via collective intelligence, to allow mutual understanding, and to confront various expertise and opinions.
- **Hidden Experts.** Official experts are invited but hidden (no badges, no mention of experts’ presence before the end). This aims at disinhibiting non-official (but nonetheless) experts (of their everyday life, at least).
- Moderators should, on the top of their usual work, mediate eventual expertise intimidation.

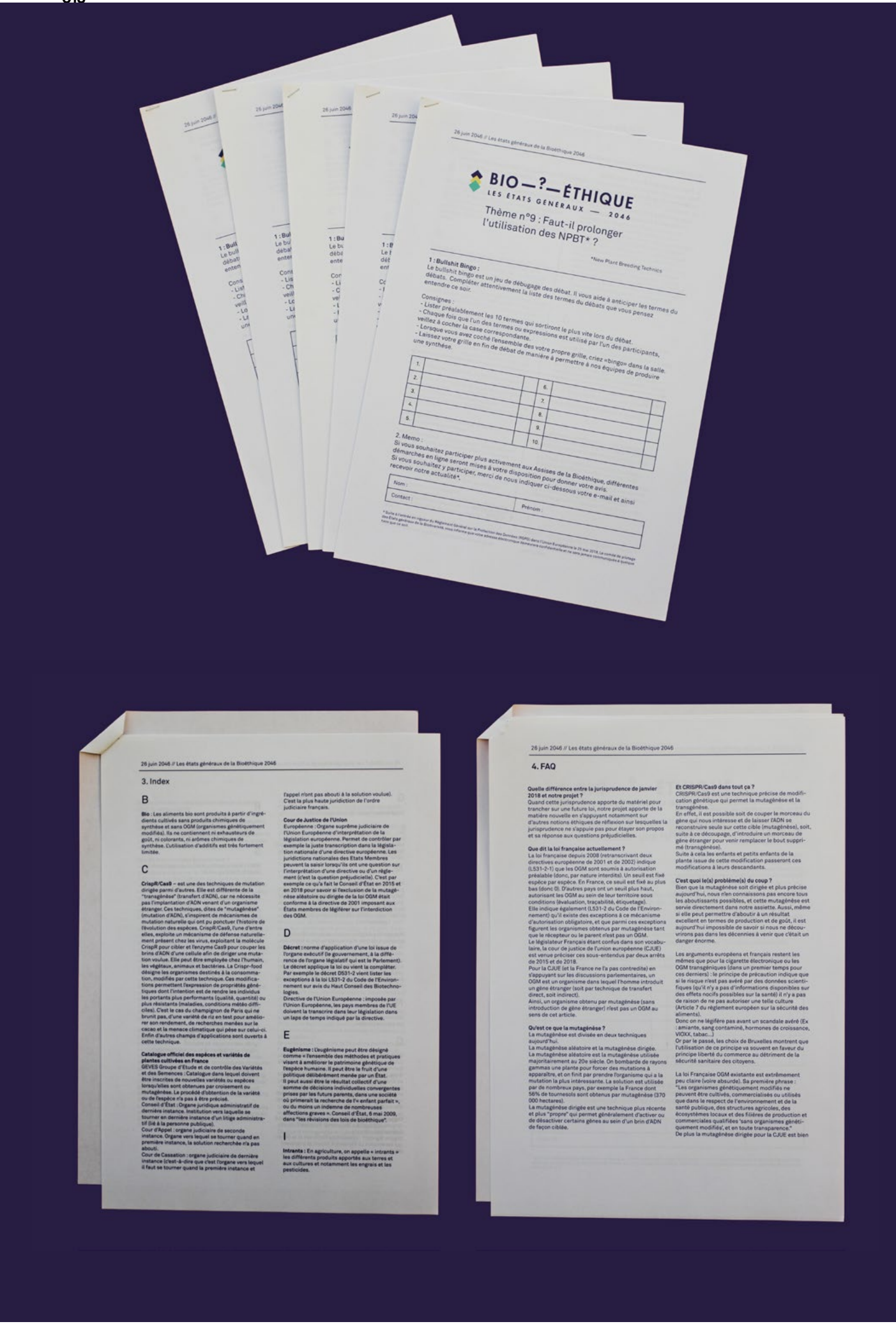
PEDAGOGIC MEANS |

- **Knowledge Backups.** index of keywords + FAQ, given in the welcoming paper file.
- **Punctual Knowledge Update.** given just before the introduction of a case study.
- (As said earlier – Speculative Warm-Up provides Pedagogic info + Q&A.)
- (Actors can also provide knowledge in a relevant timing)

All kinds of pedagogic information allow to disinhibit newcomers, and improve the level of accuracy and complexity of the questions raised during discussions.

MODERATION MEANS |

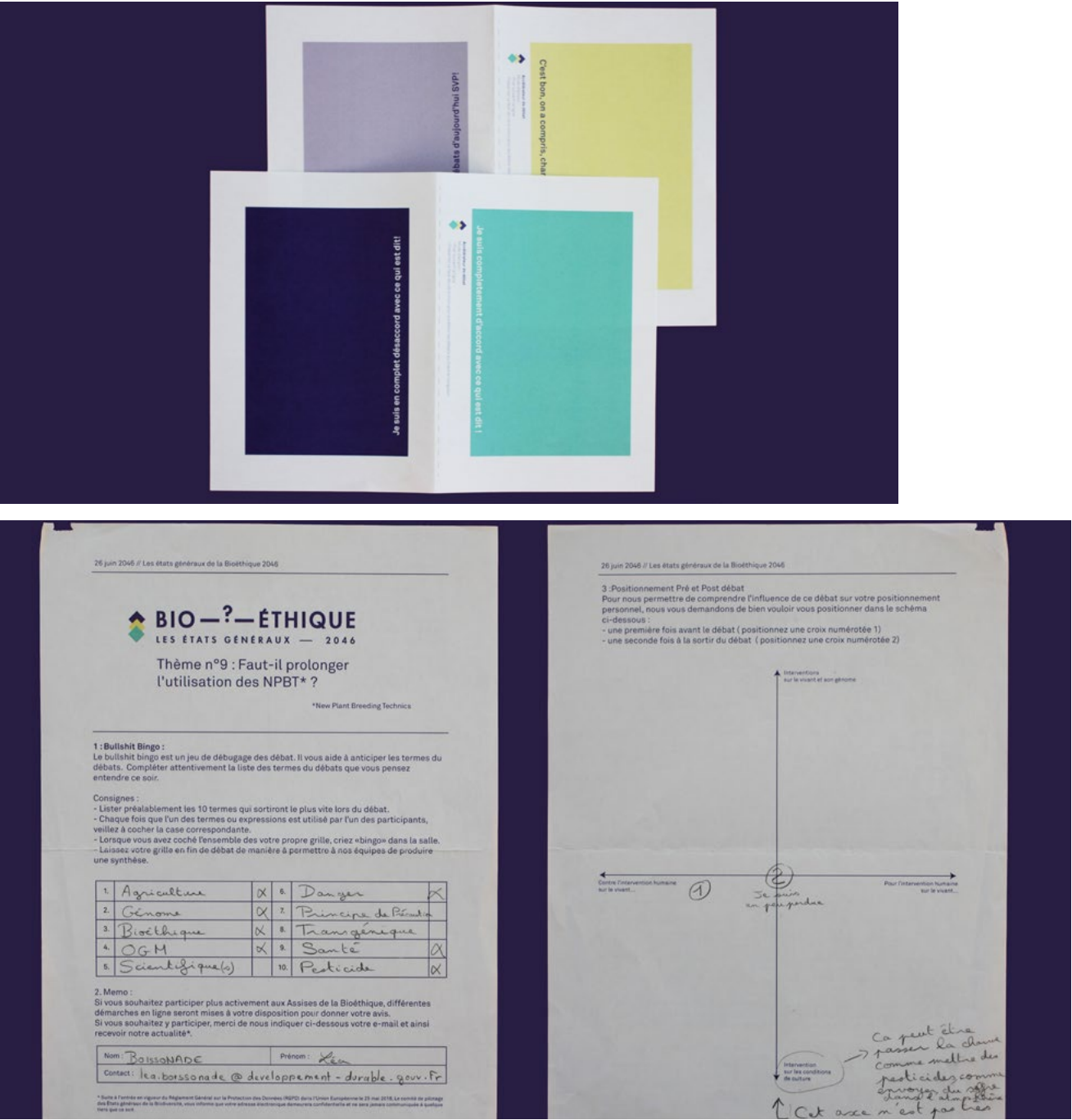
- **Dissimulated Actors.** They stand among participants, and help defuse recurrent fallacious arguments, diving into overlooked discussions, and for disinhibition (warming-up first questions, lowering the level of language, making mistakes).
- **Collaborative Moderation.** Avoiding standing alone in the centre of the agora avoids standing as a speaker. We dispatched several interlocutors in the room (a speculation specialist, a participation specialist, a cognitive sciences specialist).
- **Fallacy debunker.** Cognitive bias specialist who debunks fallacious arguments).
- **Bullshit Bingo.** A bingo game to list the most expected words pronounced during the sessions. It allows to evacuate pre-made expectations.
- **Diversion Flag.** For instance, “Thanks, we won’t have this debate tonight” flag (used if necessary) avoids questions that are out of scope or misleading.



Deliverables
SPECULATIVE AGORA & OTHER TOOLS

Alternative expression means

- **Visual Participation Flags** (Agree/Disagree/Next topic/etc.), used as debate accelerators, they permit interactions as a group, and shy people to express without talking (inspired by the Occupy movement system).
- **Diagrammatic Pole** (a diagram to position one's opinion on two axes that are paradigmatic of the debate topic) allows people to make and declare an opinion, and to get a sense of the debate's impact by collecting votes before, and again after the debate, expecting potential changes.



Documentation means

- **Collaborative live note-taking** – This could take many forms. Here, we used a time-line based note-taking software (a team of 3) (aiming at noting disagreement topics), with the software: les-cahiers-du-studio on <https://latelier-des-chercheurs.fr>
- **Live drawing/mind-mapping**
- **Statistics on the Bingo + Visual diagrammatic pole** (declarative data)
- **Photo, video** of the session to document the process, analyse the session and share the experience to absent people
- These are all used as material to analyse the session and make the report.



STRUCTURING THE CONTROVERSY

— **Map of debatable topics** – Through interviews and stakeholder speeches (online, and in specialised press), the issues to be debated were collected and divided into 4 themes:

- Legal ambiguity: creating a tension between economic rationales and the very definition of what is considered as natural by the law;
- The anthropo-economic model of society based on agriculture modes: a second tension is built between “feeding the world” and appropriating it (or patenting it);
- Ecosystems: genetic engineering draws polarities between attempts of excellence in human knowledge and irreversible adverse effects;
- Ethics: should we give ourselves the right to modify living beings? If yes, how far? If “it is profitable for society, don’t stop it”, but profitable to whom?

- **List of arguments** – A list of arguments was drawn from stakeholder speeches on this topic. It made it possible to distinguish three postures of arguments:

- “solve” the problem—by modifying plants and shorten the time of natural mutations—via genetic engineering;
- “adapt” to the problem—by not touching the plant structure and adapt the crop conditions (e.g. agroecology, permaculture, traditional selection);
- or “do nothing”—letting natural biodiversity work by itself.

Joseph Food 26th June - Argumentation of controversies

Point of view	Name	Pros	But (pros)	Cons	But (cons)	year
Science (hard/bio)		<p>The use of genetic engineering in agriculture is a promising way to increase food production. It can help to reduce the need for pesticides and herbicides, which can be harmful to the environment. It can also help to increase the yield of crops, which can help to feed a growing population.</p> <p>However, there are also concerns about the safety of genetically modified organisms (GMOs). Some people worry that GMOs could have unintended effects on the environment or on human health. There is also a concern that the use of GMOs could lead to the loss of biodiversity.</p>	<p>The use of genetic engineering in agriculture is a promising way to increase food production. It can help to reduce the need for pesticides and herbicides, which can be harmful to the environment. It can also help to increase the yield of crops, which can help to feed a growing population.</p>	<p>There are concerns about the safety of genetically modified organisms (GMOs). Some people worry that GMOs could have unintended effects on the environment or on human health. There is also a concern that the use of GMOs could lead to the loss of biodiversity.</p>		
Agri industrial		<p>The use of genetic engineering in agriculture is a promising way to increase food production. It can help to reduce the need for pesticides and herbicides, which can be harmful to the environment. It can also help to increase the yield of crops, which can help to feed a growing population.</p> <p>However, there are also concerns about the safety of genetically modified organisms (GMOs). Some people worry that GMOs could have unintended effects on the environment or on human health. There is also a concern that the use of GMOs could lead to the loss of biodiversity.</p>				



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But, GMOs may be authorised in Europe under specific conditions.

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Bias of reasoning called "the call on traditions"

"But if CrispR produces GMOs, it's forbidden!"

"Random mutagenesis" is a type of GMO that has been unconditionally authorised for 40 years, the issue at stake is compliance with conditions: labelling, tracing, and environmental impact assessment.

**"If it's profitable to society,
one shouldn't stop it."**

Yes, but profitable to who?

EXTRACT OF THE LIST OF RECURRING FALLACIOUS ARGUMENTS ON THIS TOPIC



- **List of fallacious arguments and misconceptions** to be deconstructed. List provided to debate moderators.



— **Speculative controversy** — In order to defuse pre-established opinions and create dramatic tension for critical reflection, the debate topic is projected into the future, and placed in the context of the ongoing climate disruption. This includes trends such as climate migration, overpopulation, urban exodus, rising temperatures, cessation of the Gulf-stream, the decline of the bio-diversity, etc. Contemporary actors prepare for this, like big Champagne families who already bought thousands of lands in England to remain in similar weather conditions in 25 years time. Or researchers (like Rachel Levin) who enquiry how genetic engineering could be applied to enhance the stress tolerance the coral reefs to oceans' temperature increase (or to be precise, it could be applied to edit the Symbiodinium's DNA, from which it depends).

BIO — ? — ÉTHIQUE
LES ÉTATS GÉNÉRAUX — 2046

LA GAITÉ-LYRIQUE WISHES TO
Welcome you:

**To the General Assembly
of Bioethics 2046**

**Experts citizen debate
for the revision
of the bioethics law**

28



“ Welcome to our Citizen Experts Debate n°09: ‘Should we prolong the use of genome-edited agriculture?’ Why this revision: because what is commonly called Biooptimale agriculture has been debated for a year now (see the Case study n°4). But 26 years ago, the controversy, though intense, was restricted to experts. We open it today to the general public.

”

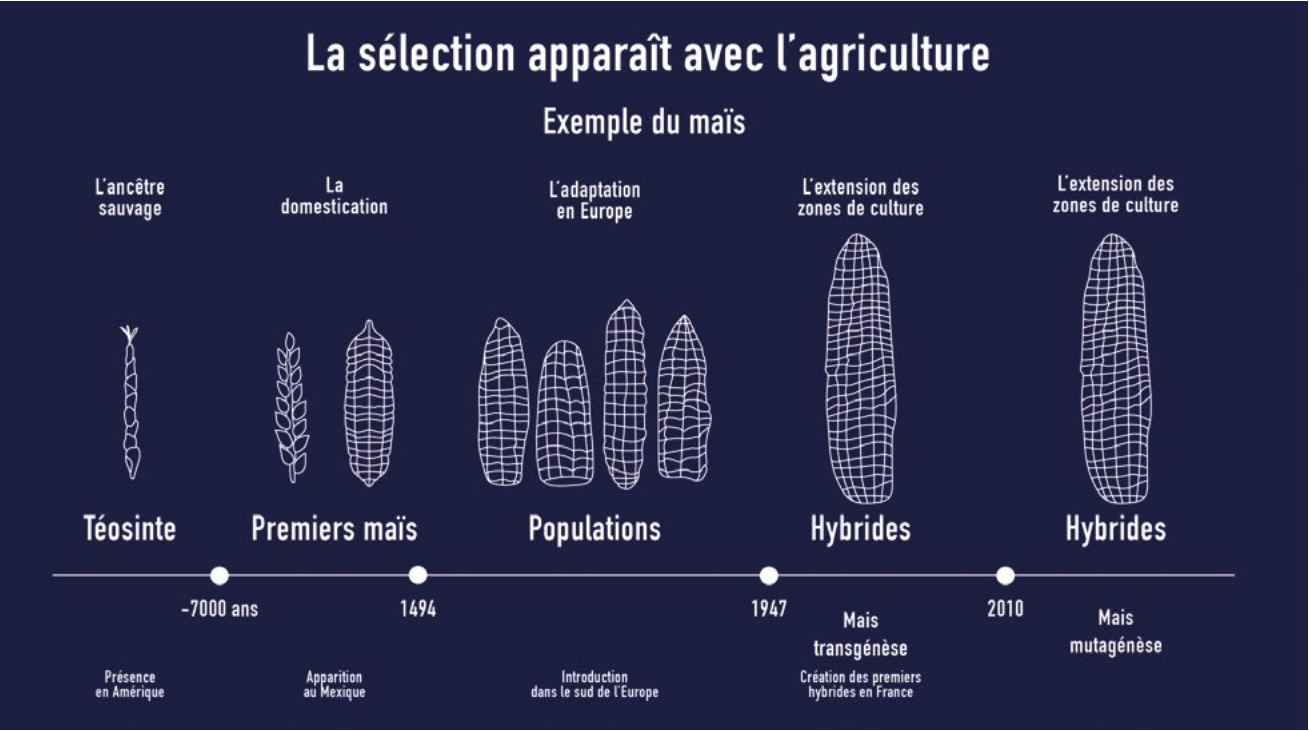
[Extract of the welcoming speech]

“

You are the expert citizens volunteering for tonight’s debate. You are asked to review and debate 4 case studies. They present conflicts that happened throughout History since 2018. These four situations will give you enough information to remind the conditions of society at that time (or let you reconstitute the scene, for younger generations).

”

[Extract of the mission statement given to the public]

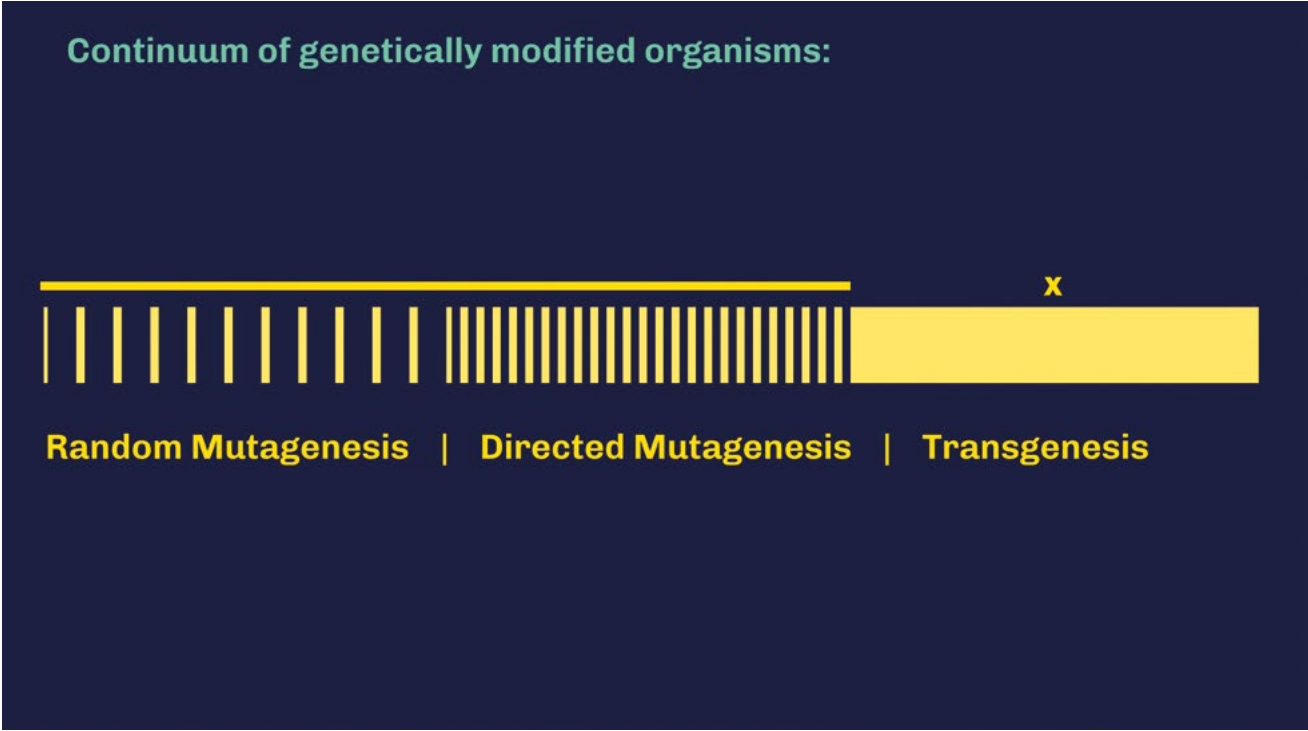


“

Some information to get this debate off to a good start. For those who had not learned it in biology class, varietal improvement began with human settlements in -7000 BC. After the crossbreeding of varieties and what has been called ‘GMOs’ (that is a term which became taboo in 2010s and has since fallen into disuse), CrispR has established itself as the most recent and least expensive technique. CrispR stands for Clustered Regularly-Interspaced Short Palindromic Repeats. Crispr-food refers to organisms intended for consumption, modified by this technique. It is the case of the ‘Champignon de Paris’ which does not get brown, the high production rates rice, the cocoa which resists the climatic change, etc.

”

[Extract from the Knowledge Update of the Case 1/4]



“

In 2018, CrispR (also called ‘site-directed mutagenesis’) was authorised because it reuses mechanisms present in nature (unlike ‘transgenesis’), and because it approaches another authorised technique, ‘random mutation’ (obtained by irradiation of plant cells with ionising (radioactive) radiation)”.

”

[Extract from the Knowledge Update of the Case 1/4]

Case study n°1

(2023)

Meeting agro-ecological challenges: a question of scale

Historical data :

(2017) 30% of bees disappear each year
(2014) 78% fewer flying insects in 24 years.

(2020) the area of France dedicated to agriculture = 59% (72% in 2050)
(2018) original estimate: 9.7 billion human beings (including 8 in an emerging country)

(2016) 20% of total EU production wasted (of which 53% by households). .

Ref : http://europa.eu/rapid/press-release_MEMO-16-3989_fr

— Case 1: (2023-2027)

Meeting agro-ecological challenges, an issue of scale

— Case 1 Part 1/2 – (2023)

Turning 100% organic, the way to reduce our ecological footprint

“

How can we feed the world with limited resources and a need to reduce our ecological footprint (i.e. agrochemicals)? How can we fight waste when transporting food?

”

[Extract from the Knowledge Update of the Case 1/4, part 1/2]



The famous “Baguette in the traditional way”, highly publicised to popularise the creation of the label “*Bioptimale, a balance point between ecological footprint and optimisation of the living*”. This naturally resistant wheat also contributed to promoting eco-responsible consumption. (This baguette was actually distributed to the public, next to a basket of vegetables from the competing label: Confiance).



Excerpts from an ordering catalogue of supermarket suppliers. The 6th version of the highlander potato extends the “use-by” date limit (shelf life of 1 month).

Case study n°1
(2023)
Meeting agro-ecological challenges: a question of scale

Part 2/2

DNA manipulation control :
- Untraceable for random mutagenesis
- Untraceable for directed mutagenesis

Can we trust organic labels?



Ref : Interview Archives Naturalia. Juin 2018

— Case 1, part 2/2 – (2023)

The label “Confiance” as the only solution to CrispR’s untraceability.

“

The organic label rapidly became obsolete as modified seeds are technically untraceable, because ‘too close to a natural mutation’.

”

[Extract from the Knowledge Update of Case n°1, Part 2/2.]

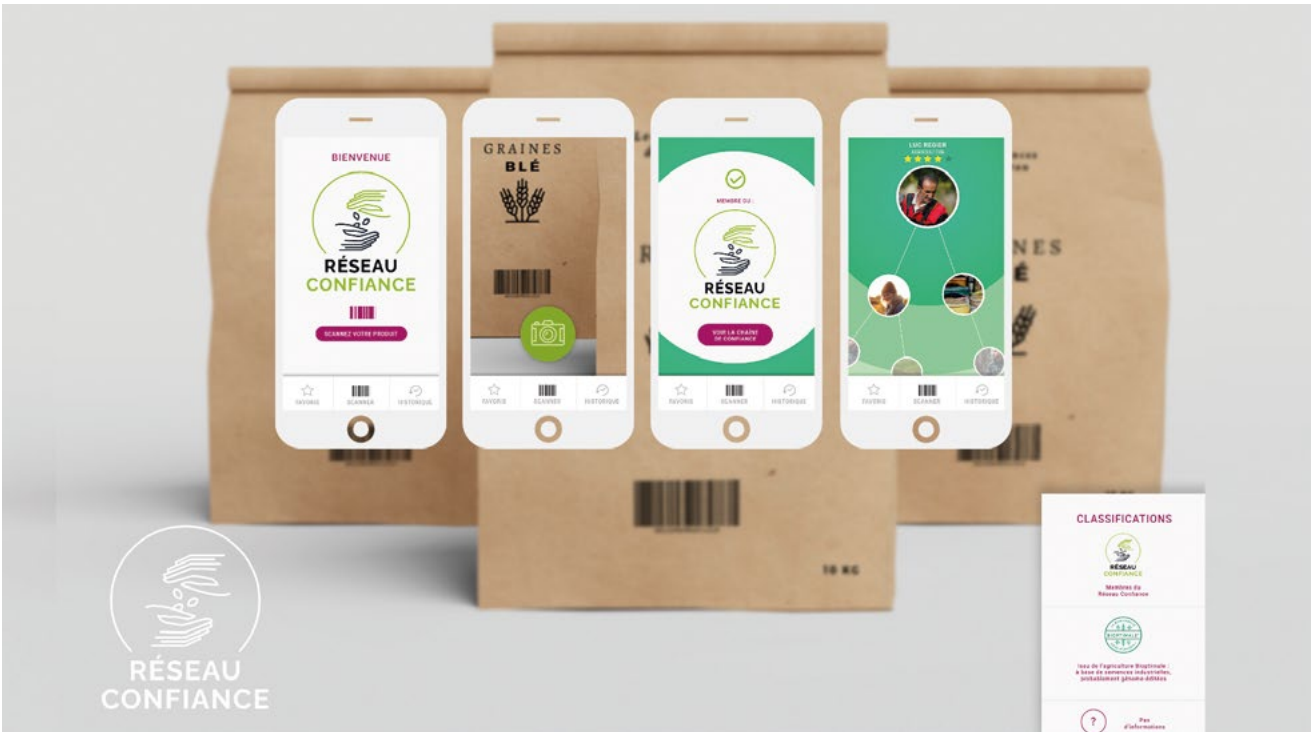


- Improvement via editing (untraceable)
- Can be used on a large scale



- Improvement via traditional selection
- Smaller scale

Logo of the “Confiance” label, which is based on the exchange of pre-CrispR seeds between peers. Created by the network of farmers who requested an appeal against CrispR-food, to the French Council (March 2015), then to the EU Court of Justice (October 2016)—whose appeal failed in September 2019. (in our fiction)



Interface and use scenarios of an app used to verify the traceability of a vegetable’s origin. Scanning the barcode of the food purchased gives access to the seed transmission family tree, constructed each year from a harvest to the other, since 2018.

Launch of Role Play Debate with the case study n°1.

Case 2, 3 and 4

The 4 controversial topics identified in the mapping were merged and embodied into the 4 cleaving case studies. Each situation displays several conversation pieces. A selection of them, taken in the 3 other case studies is outlined below.



Meeting
agro-ecological challenges:
a question of scale

Case study n°1 (2023)

—

To start the discussion:
What about you, what kind of food do you eat?
Biopitmale or Confiance?



Extract from Case n°2/4

Back in 2019, the authorisation of the CrispR-Food—without any labelling obligation—was presented as a condition to guarantee competitiveness and European economic stability. The same year, Swiss people positioned against the CripR-Food through a popular vote. In 2021, the first CrispR harvests are relayed by the press. Therefore, Swiss people put in place a poster campaign to prepare for the next vote:

“Should a tax on the import of European food products be put in place to finance the protection of Switzerland’s biodiversity against the CrispR pollen at the country’s borders?”

Launch of the debate

“Let’s imagine we are all Swiss. Now, please vote yes or no with your participation flags please.”

10

juin

2021

Oui !

À la protection
de notre
patrimoine
agricole



Initiative populaire

+

Pour la création d’une taxe
d’importation sur les produits
alimentaires (Initiative Taxe Pollen)

+

Initiative populaire

—

Pour la création d’une taxe
d’importation sur les produits
alimentaires (Initiative Taxe Pollen)

+

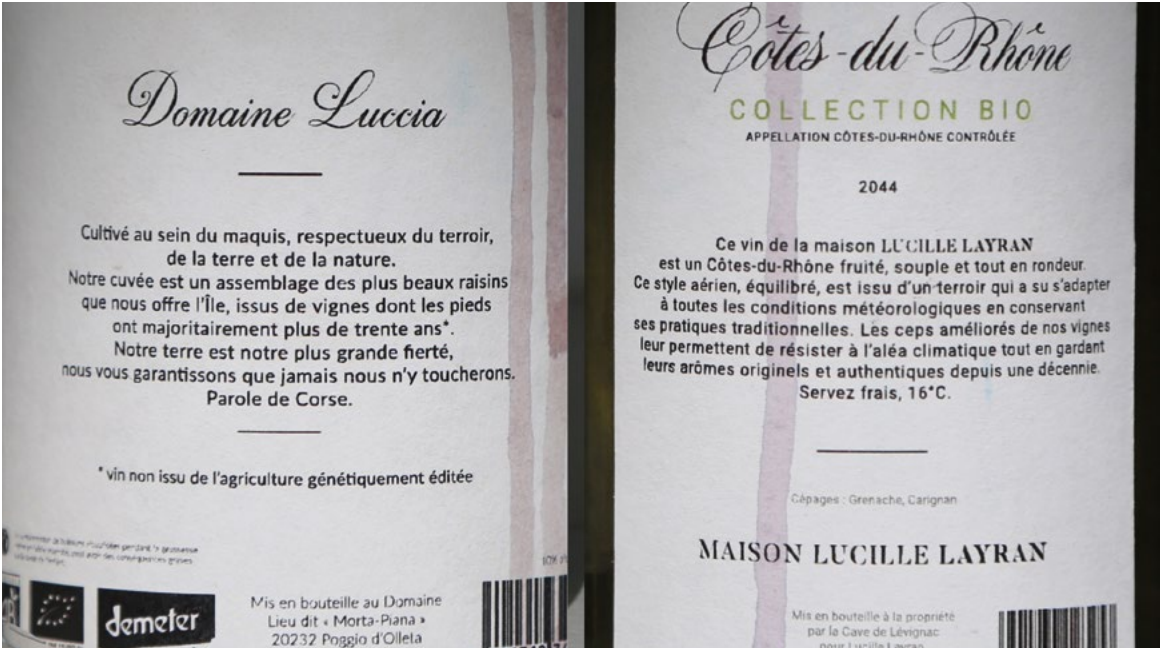
Non
à la
Suisse
sous
cloche !

10 juin 2021



— Extract from Case n°3/4

In 2031, the temperature increase exceeds 3.5°C. An insurance consortium declares that it no longer recognises high temperatures, lack of rain, hailstorms or even brief frosts as climatic hazards—because they have become too usual. This flyer promotes a new customised agricultural contract, promoting genome-edited species, weather sensors and prediction algorithms.



— Still Case 3/4

Off the French Coast, an exceptional association of all Corsican winegrowers and farmers decided to invest in climate engineering to avoid the use of CrispR. A *Côte-du-Rhône* CrispR-organic wine and a Corsican weather-engineered one were proposed for blind-testing. This provoked the scandal of a spectator (an actress), realising that she drank GMO wine.

— Launch of the debate

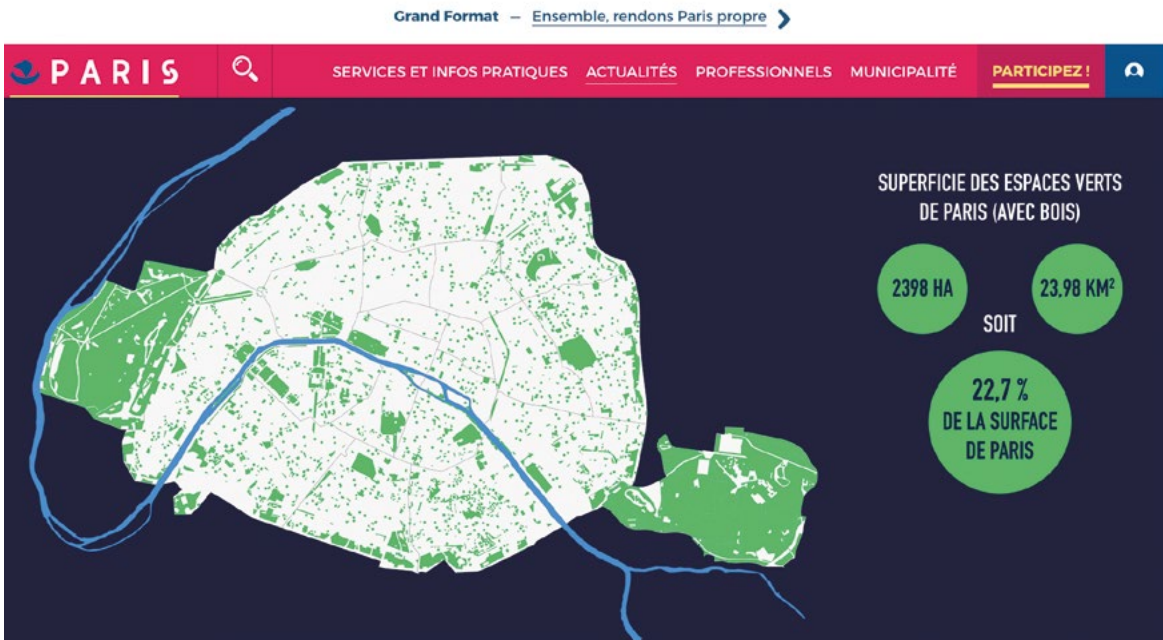
“
It’s your turn to taste now, which wine do you prefer?
”

Release

- ~110 people
- 2h30 of debate
- All wine bottles drank (Bio-CrispR and Geo-engineered)
- Bioptimale Bread untouched

— Experts attending include

Director of research (National Institute of Agronomic Research), Head of the European Group on Ethics in Science and New Technologies (at E.U.), member of the ministry of sustainable development, oenologist, etc.) Unfortunately, no farmer could move to Paris, at this crucial time of the year for them.



— Excerpts from Case n°4/4

A representative of the city of Paris comes to present the results of the capital's resilience plan since 2038. It is based on replanting CrispR trees whose CO2 absorption capacity is increased tenfold. The number of deaths attributed to air pollution has decreased from 48,000 in 2017, to 31,000 in 20 years.

Then, an excerpt from an audio broadcast presents the scandal that launched this 9th debate of the General Assembly of Bioethics on the revision of the CrispR authorisation law. It concerns the genetic edition of the equatorial primary forest, at its edges, to reinforce the most exposed trees to the aggressiveness of torrid winds, and reduce the risk of fire.

— Launch of the debate

“
”

Who is satisfied with Parisian parks and why?

Quotes from the debate

Speculative RPD in 2046

“— What? You made me drink a CrispRised wine just now? Without telling me?!!”

“— You say ‘artificial’. But, smelling the laboratory in the wine I taste, that is a new taste, new sensations. I love this! Let us cultivate the heritage of the laboratory, not only of the soils”

“— We talk about traditions, but we are out of our minds! Wine and cheese who cares? We must act so that our future is the best possible... and not evacuate the important question: should we continue with CrispR or not?”

Back To Reality phase

“— What future will be built? Anybody can debate about anything? Are we qualified to talk?”

“— A technology one cannot stop, creates nothing but chaos.”

“— The man/plant relationship is a millennial debate. The question must be asked at the local farm level. CRISPR Cas9 is about power. Who controls that?”

Outcomes

Assessment

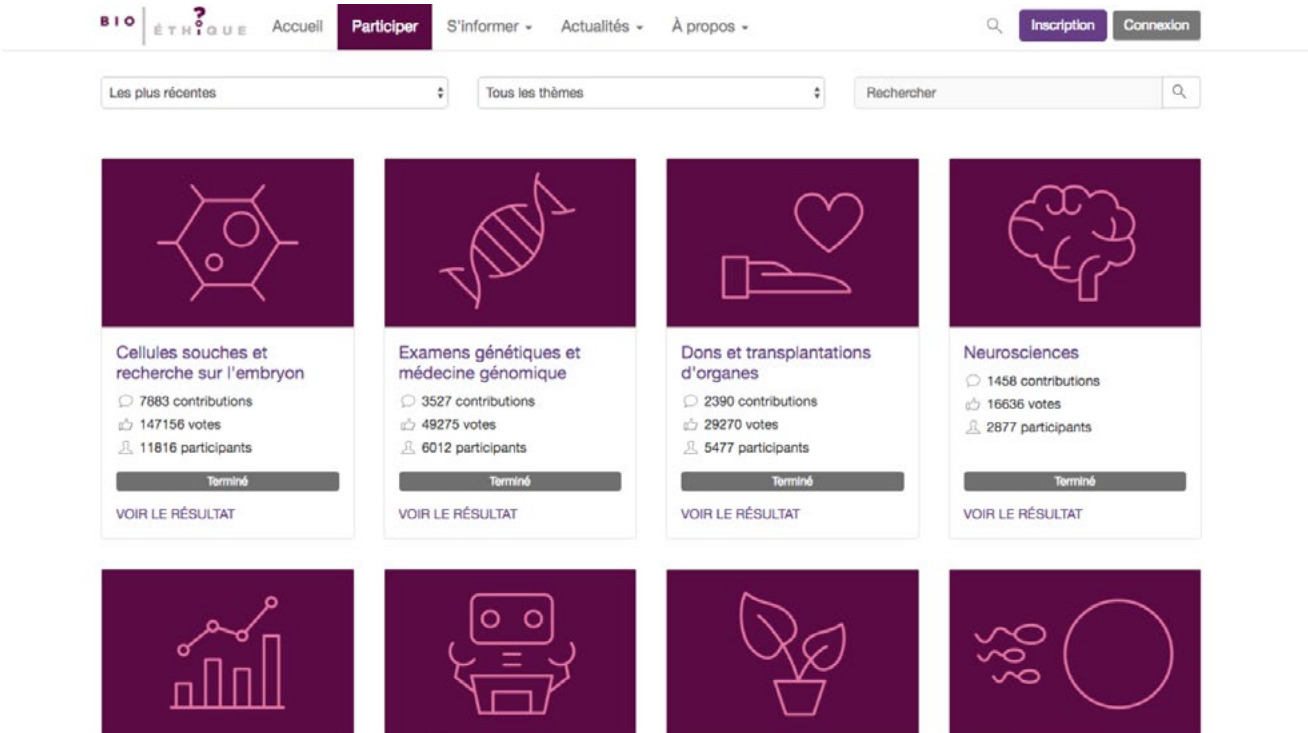
As a form of assessment of the project, people who attended and participated in the debate were interviewed, expecting for experience feedback. Here are quotes from these interviews (in full length in appendix-crisprfood-01)

“— This debate just unlocked the mess of one of my last book’s chapter! I never saw CrispR [‘controlled’ mutagenesis] as a cousin of ‘random’ mutagenesis [which is legal].

— (Max) Indeed it is not the case from scientists perspective, but seen from citizens and vegetable consumers’ point of view, it is!”

2018.06.26 – Dorothee Browaeys, Animator of a science-society debates network.

Next steps — The online debate will take place in January 2019, punctuated with several physical debates in Paris and other French regions. As depicted in the picture, many platforms are available for this (not settled at the time when these lines are written).



Learnings & New Questions

Mapping

Inspired by the work of Bruno Latour and Science-Po Medialab, we added to the stakeholder interviews an analysis of their online speeches. Using the list of their arguments allowed:

- To make the debatable topics map more robust;
- To feed the moderators of the debate with a list of recurring arguments, including fallacious ones;
- Finally, we were able to place the map of “debated” topics on the top of the previously constructed map of “debatable” topics, transforming it into a tool for visualising opinion trends.

From exploring issues to designing debates

With this project, we completely reversed our work process. The design activity was usually used to identify debate topics. And the debate sessions were used to widen the scope of preliminary controversy mapping. For CrispR-Food, we did this phase in March 2018, then completed the map as described earlier. Then designing the final artefacts only served to materialise the polarities of a map already built.

Building a less situated audience requires more pedagogy

After many debate projects with local audiences, changing scale exposed us to difficulties to know our audience. Preserving the critical and political authenticity of the project—by wanting to reach the greatest number—meant increasing its pedagogical scope, that is, “building a larger and wider bridge” with the public. The biggest design work has therefore been to test our fictions and to make them robust to 5 criteria: feasibility, probability, desirability, understandability, and avoiding off-topic debates.

Debate animation tools

Service design and design thinking offer tools for workshop animation, to the point where perfecting this art puts our team in competition with other professions—namely citizen consultation.

Learnings & New Questions

Paradox of the respect of the stand-point theory

Following many discussions on the neo-colonial stakes of this particular debate, we undertook the development of a case n°5 on the “blind spots” of this topic (i.e. the “crispRisation” of African agriculture and the cocoa tree). Due to the fact that we could not actively involve Ivory Coast people in the team, we cancelled this case.

Self-censorship of a too-good wrong idea

If we are not neutral, we try to be transpartisan. In order to create fictions that may seem “desirable” to opposing stakeholders (i.e. with whom we would disagree), we practised role-playing. However, putting ourselves in Monsanto’s shoes (to take a caricatural example) may have led us to find very (very) desirable artefacts or slogans for them. After discussions on these kinds of cases in the Design Fiction Club—i.e. The self-fulfilling nature of design fiction projects—we decided to censor this idea. What balance must be struck between “believability” and caricature?

Successes to be consolidated

- We had a non-sterile debate on GMOs (which, in France, is almost impossible);
- The usually silent participants were able to express themselves via the colour “flags”;
- Everyone participated in the role-play debate, even the experts (like, really dived into it);
- Debating from another space-time has created an “air-bag” with sensitive topics, allowing the usual enemies to confront each other frankly, but creatively (i.e. the biology scientist and the E.U. science-society programme director);
- The actors were a great help in breaking the inhibition and guiding the discussion out of the sterile topics.

Failures and possible improvements

- Few are those who tried to convince each other or to confront each other during the Role Play Debate (apart from the experts)
 - » Extending the non-fiction debate phase seems important
- The argumentation bias can inhibit participants
 - » Associate it with the other facilitators to preserve the substance of the argument
- Too many actors
 - » Do not exceed 3% of the total audience number;
- The start was too fast for neophytes to learn anything
 - + Not enough time
 - » Could be extended up to 2 days!
- Better reveal the debate questions hidden behind the case studies
 - » Only during phase 2.

Questions

- To what extent are these debates not just entertainment for scientists, who come back to their lives after?
- After the debate, how to involve the responsibilities of so many categories of public, and decision-makers, other than by popular pressure?
- How can such a project remains free, neutral and critical, if it is funded by stakeholders of the debate concerned?
- How to make a living from a critical practice, in a profit-oriented economy, without being financed by cultural/art circles (like most Critical and Speculative Design projects)?