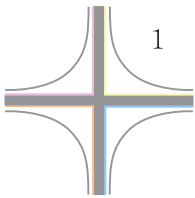


I wish you to believe in
Biotechnogiosity

a religious faith as a biotechnologic process

Research proposal for project thesis

Laura Boffi



Personal landscape

What I see when I think about Biotechnology is a black box of pure science research applied in the effort of building up an industry of bioengineered living organisms. I perceived the development of Biotechnology as an external entity from our humanness, as we have always been used to think of it. Biotechnology is radically changing our possibilities of being human in the world, but we are still depending on our former biological foundations in the way we live/behave/interact as true biotechnological organisms. I see a contradiction in this that makes us struggling about the evidence that the more we are getting closer to the decodification of our DNA, the more we are loosing our certainties as human beings.

What I feel instead is that Biotechnology carries in its development a demand of human re-definition in the sense that the more it undermines the fundamentals of our biological state, the more we should retrace in it the answers to our condition as living creatures. If we deeply understand what Biotechnology is changing in our humanness, we would get rid of any simplistic polarizations about the good or bad of its consequences, but we would be able to socially construct that technology itself.

I believe that Biotechnology is the cause of the change and as well the tool to deal with that change, in the same way it will be both the subject and the object of my thesis.

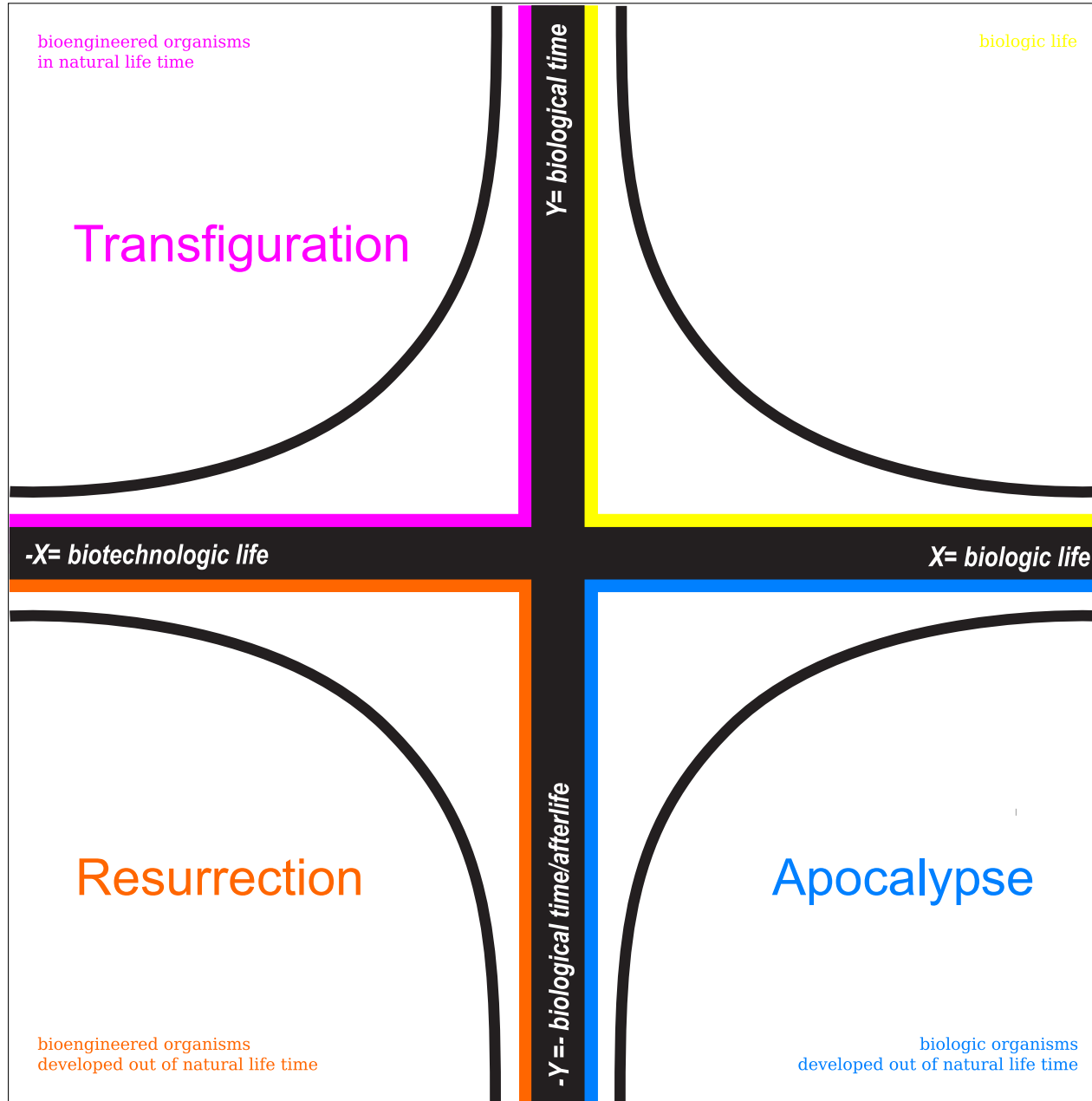
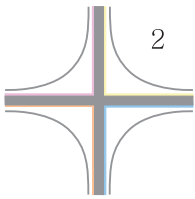


diagram n.1



Foreseen context

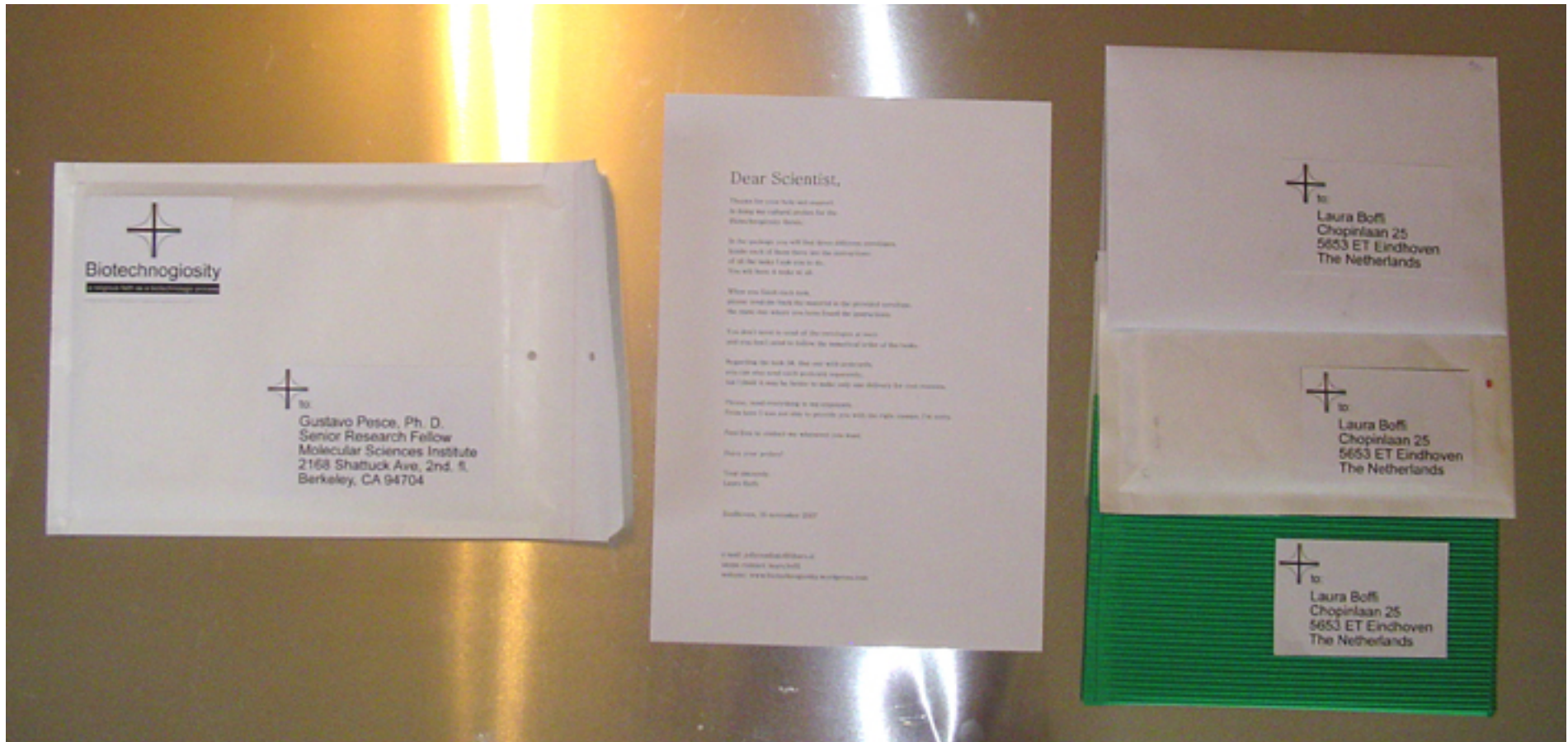
The mass introduction of Biotechnology in daily life will involve a radical change in human **Life cycle** since we would experience new possibilities of living out from our biological life and biological time, (diagram n.1). We would be able to experience life in 4 different status: Biological life, Transfiguration, Resurrection, Apocalypse.

Biotechnology would draw a life cartesian system showing new ways of being born, growing up and dying that would lead people to question again their **spiritual needs**, such as giving an answer to the origin of life and the afterlife. The issue would not only consist of reactualizing our way of being religious as biotechnologic creatures, but also how to drive the scientific development according to the religiosity we would retrace and build around the Biotechnology itself. Biotechnologic life, like the former biological life that our anchestors belonged to, would become both the reason and the tool for our new religion and eventually we could manage to succeed in the **social construction** of Biotechnology itself.

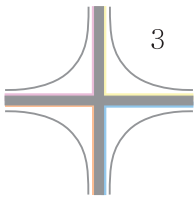
Thesis question

What if we could unpack that scarying black box of science and biotechnology, responsible of our doubting about humanness and spirituality, and make use of its content as a tool for redefining our new religiosity? Would we get to a religious faith as a biotechnological process?

Would it eventually be **Biotechnogiosity?**



picture n.1



Unpacking the black box_ probing scientists

The reason why we actually feel Biotechnology and science external to humanity is that it is proposed to us as a black box of theories. Society seems not to play an active role in driving its development. Bruno Latour, in his work *Science in Action*, tries to understand how scientists work in labs in order to underline the causes responsible to close that black box.

I would like to see if from a human point of view, there is an opening in scientists way of working that proves a spiritual/religious feeling in the way they behave in their context. I recruited 6 scientists through science magazines and dedicated blogs in order to make with them a cultural probing, (picture n.1).

This is my recruited crew of volunteers:

1# Neville Cobbe

He is a research fellow at the University of Edinburgh, Queen's Medical Research Institute in Evolutionary Biology. He also writes articles for the magazine *Zygon*, (www.zygonjournal.org), about Religion and Science.

Email: Neville.Cobbe@ed.ac.uk

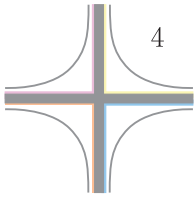
Address:

Neville Cobbe, PhD

University of Edinburgh_Queen's Medical Research Institute

47 Little France Crescent

Edinburgh EH16 4TJ



Unpacking the black box_
probing scientists

Scotland, UK

2# Neli Prota

She is a Ph.D in Biology at the Wageningen University, The Netherlands. She is from Italy.

Email: neli_prota@yahoo.it

Address:

Neli Prota

Troelstraweg 65

6702AG Wageningen

The Netherlands

3# Simone Maccaferri

He is an Italian researcher who is finishing his studies in Pharmaceutical Biotechnology.

He has been the president of CNSB, National Coordination of Biotechnology Students in Italy,

(www.cnsb.it). Now he is working in the Association of the Italian Biotechnologists,

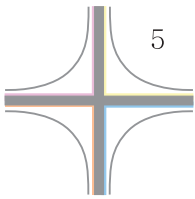
(www.biotechnologi.org) where he is following a project about biotech lifelong learning as a delegate

in the executive board. He is a founder member of the European project Bipop, financed in the 6°

frames, about innovative way to communicate science.

Email: maccaferri@biotechnologi.org

Address:



Unpacking the black box_
probing scientists

Simone Maccaferri
Associazione Nazionale dei Biotecnologi Italiani
c/o E.F.B. - R.B.O.
Via della Beverara 123
40131 Bologna
Italy

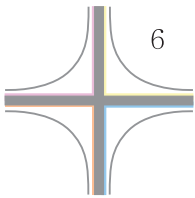
4# Gustavo Pesce

He is a Senior Research Fellow at the Molecular Sciences Institute MSI, (www.molsci.org), where he is working on the yeast molecule. The mission of the MSI is to predict the behavior of cells and organisms in response to defined genetic and environmental changes.

Email:gpesce@molsci.org

Address:

Gustavo Pesce, Ph. D.
Senior Research Fellow
Molecular Sciences Institute
2168 Shattuck Ave, 2nd. fl.
Berkeley
CA 94704



Unpacking the black box_ probing scientists

5# Malgorzata Lagisz

She is a biologist, working as postdoctoral researcher at Newcastle University in the UK. She runs an EU-funded project on development of insecticide resistance in a pest beetle. Her research is quite interdisciplinary – it encompasses ecology, ecotoxicology, genetics and bioinformatics. She does lots of lab work (breeding and killing beetles, genetic analyses) and lots computer work (data handling and analyses, writing papers), as most biologists do.

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Address:

Malgorzata Lagisz

School of Biology

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6# Francesca Kone

She is a Master in Marine Biology, Polytechnic University of Ancona, Italy.

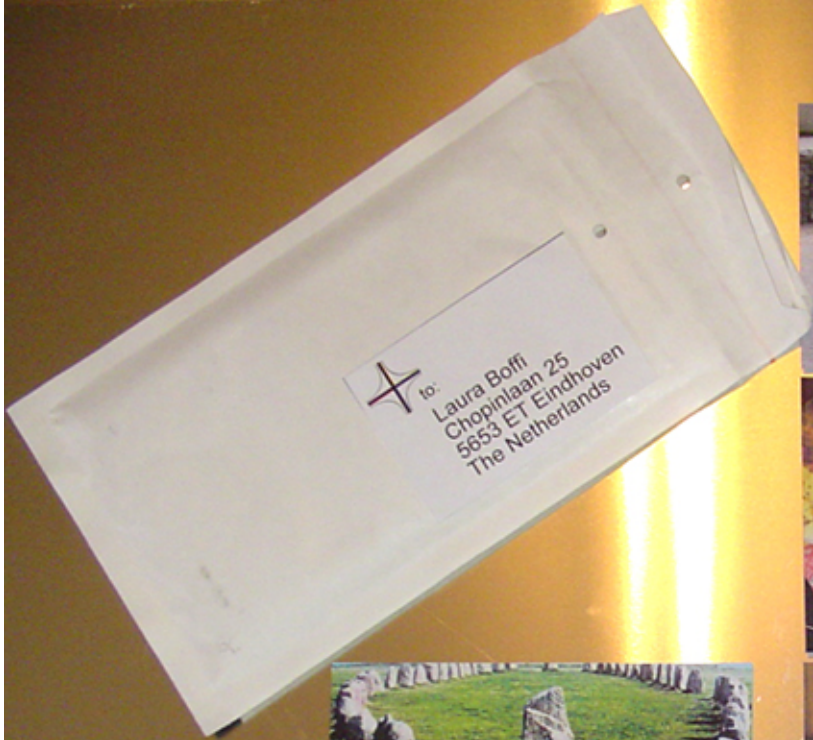
Email: lafrenzen@libero.it



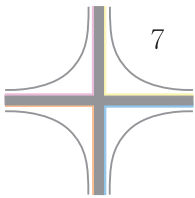
picture n.2



picture n.3



picture n.4



Unpacking the black box_ probing scientists

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Italy

The cultural probes consisted of 4 tasks:

1# correcting my Act of Biotechnogiosity faith;

2# commenting my Living Iconography pictures as they rapresented 3 lab experiments;

3# associating a personal sentence or a picture made by them on purpose to the Biotechnogiosity main statements I wrote down on the back of each inspiring postcard, (picture n.2 and 4);

4# choosing an object/product of experiments from their lab to send it back to me as a good luck charm I should worship during my thesis struggle, (picture n.3).

The aims I designed these probes for are the following ones:

1#/ 2# confronting my vision on the Biotechnology black box with the view of expert people of the field;

3# scientists reconceptualization of the Biotechnology black box in the light of spiritual/religious thoughts;



Biotechnogiosity
Pacchetto 500 ml di 3 biotecnologie pronte

to:
Gustavo Pesce, Ph. D.
Senior Research Fellow
Molecular Sciences Institute
2168 Shattuck Ave, 2nd. fl.
Berkeley, CA 94704

Biotechnogiosity
Pacchetto 500 ml di 3 biotecnologie pronte

to:
Neville Cobbe, PhD
University of Edinburgh
Queen's Medical Research Institute
47 Little France Crescent
Edinburgh EH16 4TJ
Scotland, UK

Biotechnogiosity
Pacchetto 500 ml di 3 biotecnologie pronte

to:
Simone Maccaferri,
Associazione Nazionale dei Biotecnologi Italiani
c/o E.F.B. - R.B.O.
Via della Beverara 123
40131 Bologna
Italy

Biotechnogiosity
Pacchetto 500 ml di 3 biotecnologie pronte

to:
Neli Prota
Troelstraweg 65
6702AG Wageningen
The Netherlands

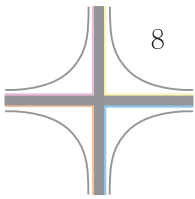
Biotechnogiosity
Pacchetto 500 ml di 3 biotecnologie pronte

to:
Malgorzata Lagisz
School of Biology
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Newcastle University
Newcastle upon Tyne
Tyne and Wear
NE1 7RU
UK

Biotechnogiosity
Pacchetto 500 ml di 3 biotecnologie pronte

to:
Francesca Kone
via Montessori 7
60129 Ancona
Italy

picture n.5



Unpacking the black box_ probing scientists

4# pushing the scientists to see their environment from a different prospective, such as faith and spirituality.

I image that the design outcome that might be originated from their answers could consist of either lab tools that could underline the humanness of scientists work and the faith driving them through their research or even a lab workshop to make their research more accessible and human understandable to the unexpert audience.

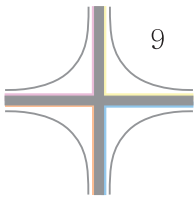
The cultural probes sending was completed on the 17th november '07, (picture n.5).

Lab experiment as performing a ritual

Considering lab experiments as a scientific liturgy expresses my personal belief that lab procedures are mainly inspired by a human faith of finding out the truth on what humanness may mean nowadays. On the other way around, Emile Durkheim in *Les formes elementaires de la vie religieuse*, Conclusion, said:

“...we so claim that religious beliefs have their fundamentals in a specific experience whose demonstrative value is not less than that one of lab experiments...”

I have planned to video record a lab experiment in order to understand how much of rituality is in that procedure. After contacting the Tags, Arts and Genomics Center in the Leiden University, (www.artsgenomics.org), I got the permission to film at the Gorlaeus Laboratories and I'm waiting



for the date in the next 2 weeks.

My contact there is the Tags scientific manager Anne Kienhuis, (email:askienhuis@lic.leidenuniv.nl).

Food taboo/norms from Biotechnogiosity beliefs

The creation of hybrid cells with genetic information from humans and animals raise a lot of questions about the humanness of the outcome. But what about if we try to see this biotechnology from a different point of view, imaging different uses that could turn it into a spiritual capability? We may transfigure and resurrect into an animal and we will never be buried anymore after death: we could rebirth in a living cementary as chickens in a hen and our familis would question what to make of our eggs, since they would carry our genes information through the germline inheritability. Which food taboos or norms?

I plan to make an experiment like a dinner with cookers and eaters, asking the first to think about recipies for the hybrid eggs and the second to eat them choosing from different tools I may provide.

After filming the event, I may come up with “A never last supper performance” in the form of designed dinner, from the recipy to the set of tableware.

How to take care of an hybrid egg_thinking in progress

What would you do with an egg that has just been hybridated with you beloved defunt genes? Would you think of it as a kind of living coffin? How would you take care of it up it would open? And,

thinking about the personal decision of reincarnation in an hybrid egg, could it be a nother way of dealing with euthanasy?

I may think to make an experiment giving people an egg and record the way they interact/take care of it.

The design outcome could involve from the bioengineering of eggs, (the shell as a coffin), to the biotechnologic relics, (after the eggs crack).

Donating eggs needs human understanding_thinking in progress

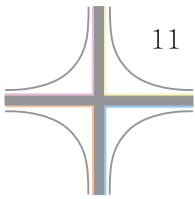
I think about the actual eggs banks and the donation of female gametes. I also think about the ancient practise of collecting urine door to door from rural population in order to supply the needs of clinical laboratories. I may investigate which kind of feeling could lead you to do so and to trust the goodness of the request.

I may conduct an experiment in my rural homevillage, asking peasants to donate their chicken eggs to allow the reincarnations of defunts through genetic engineering.

This would give me a clear idea of how strong is the preconceived idea of scientific black box compared with human/basic need of spirituality.

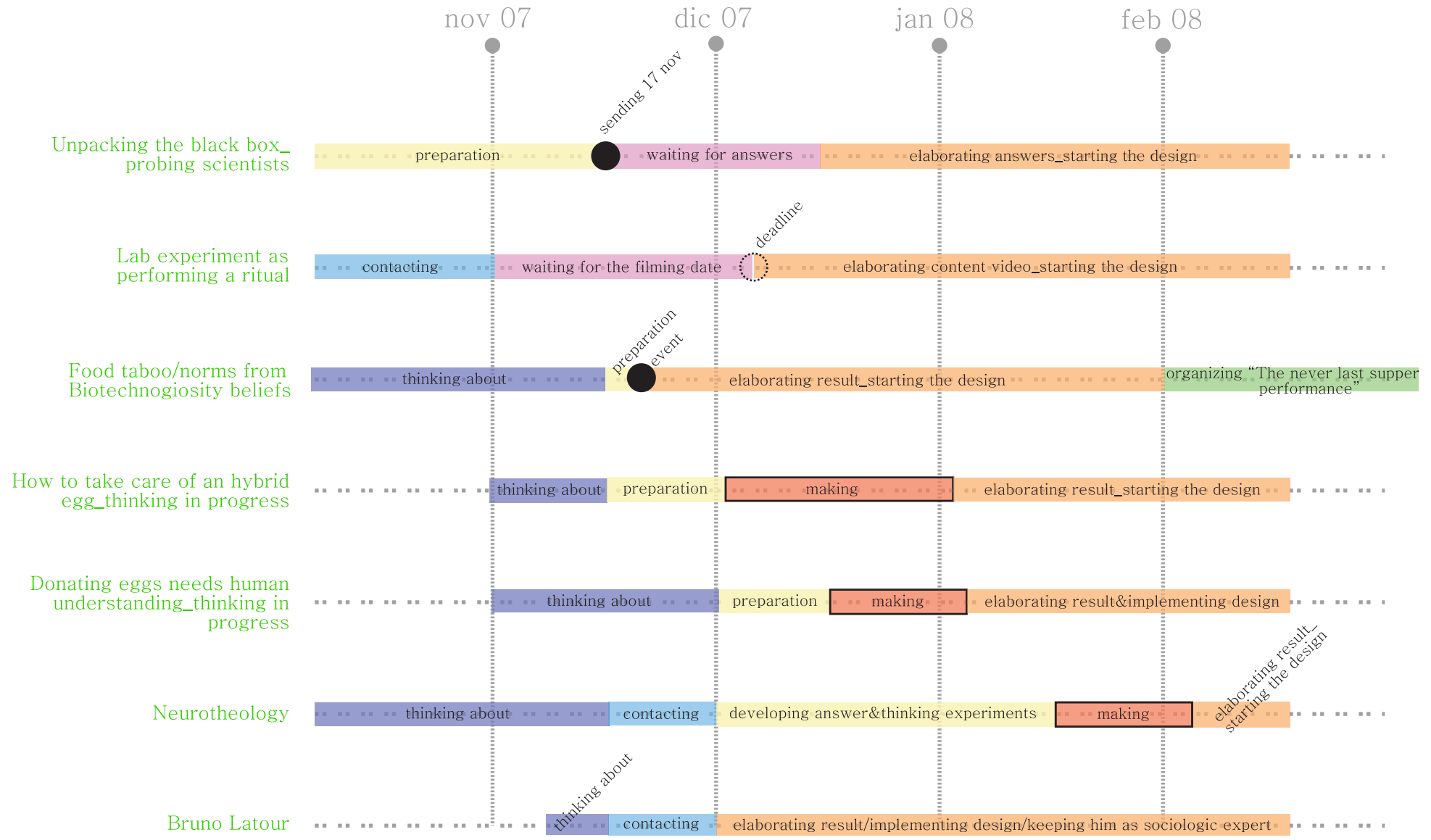
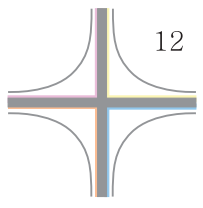
Unexplored area of interests_ Experts to contact

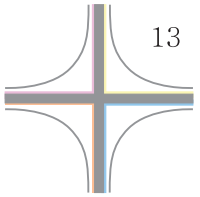
Neurothelogy is a science that demonstrates that the brain is genetically programmed to the rligious experiences. I would like to spread my research in that field, trying to understand the effects of a possibile bioengineering of th brain. I wonder if we would need a biotechnological exorcism.



The expert I should contact is the professor Andrew Newberg, from the University of Pennsylvania.

I also would like to contact Bruno Latour, philosopher and anthropologist, author of Science in action, who studied the work and behaviour of scientists in lab to understand how the scientific black box prevent the science itself from the social construction of technology.





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