FEELING SCIENCE

European Commission

Parola di Donna & JRC SciArt present

FEELING SCIENCE

a theatre experiment

Wished for by Sandra Coecke e Naouma Kourti

Joint creation and performance by:
Joanna Bartnicka
Alba Bernini
Isabella Cerutti
Sandra Coecke
Rosanna Di Gioia
Matina Halkia
Agnes Hegedus
Naouma Kourti
Nicole Ostlaender

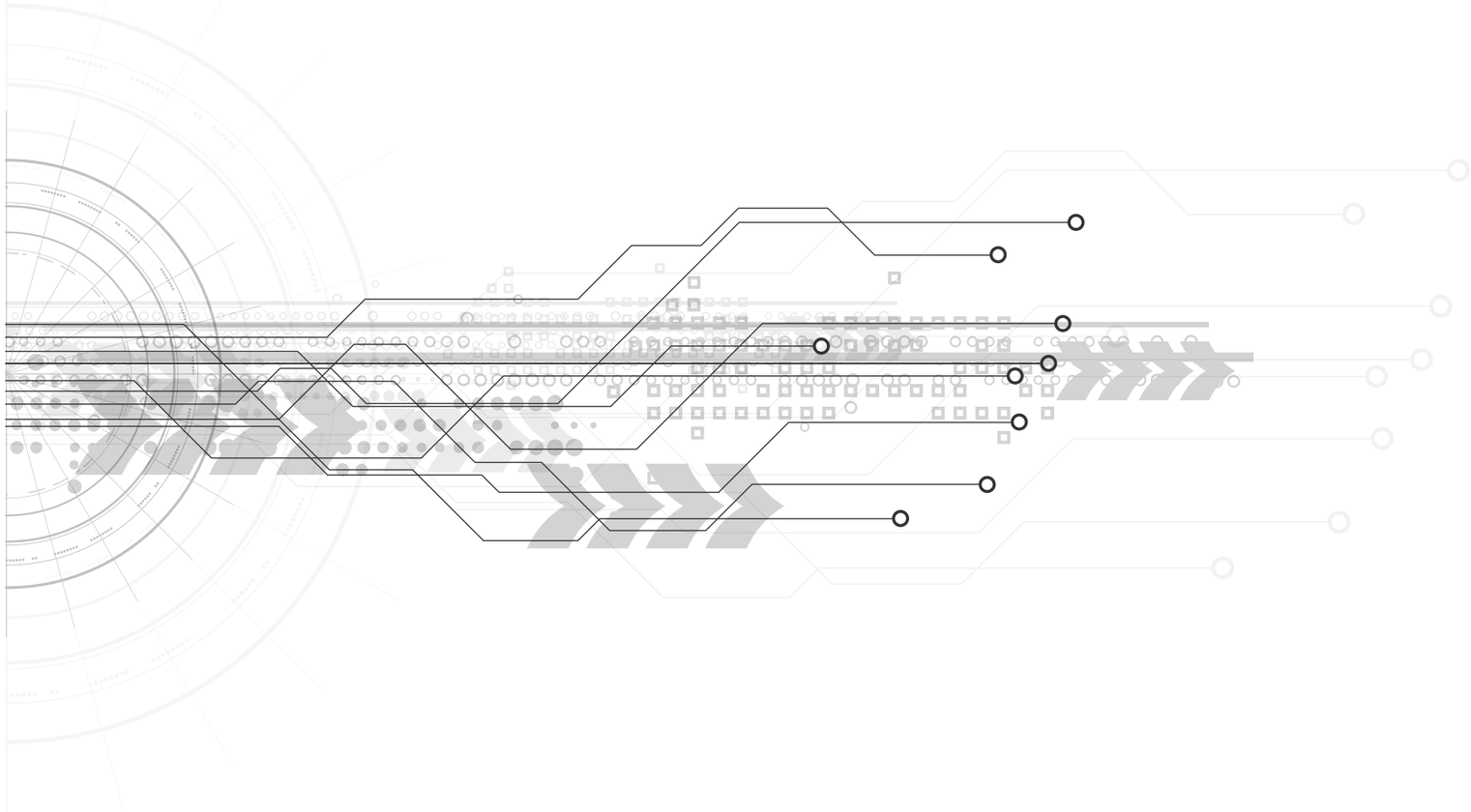
With the participation of
Franca Maria De Monti

Concept by Angela Dematté and Simona Gonella | Screenplay by Angela Dematté | Jointly directed by Simona Gonella and Andrea Chiodi | Scientific-dramatic contribution to the screenplay: Matina Halkia | Assistant director: Franca Maria De Monti | Assistant playwright: Gianluca Madaschi | Costumes: Ilaria Ariemme | Set designer: Studio Cromo | Light design by Marco Grisa | Video recording directed by Fabio Bilardo | Music by Ferdinando Baroffio | Organised by di Marisa Coletta e Mario Nuzzo | Produced by Joint Research Centre, Ispra | Scientific counsel provided by JRC SciArt (Adriaan Eeckels e Caterina Benincasa) | The show will make its debut on 21 October 2022 as part of the Parola di Donna festival at the Teatro Santuccio di Varese

“One of the things a scientific community acquires with a paradigm is a criterion for choosing problems that, while the paradigm is taken for granted, can be assumed to have solutions. To a great extent these are the only problems that the community will admit as scientific or encourage its members to undertake. Other problems, including many that had previously been standard, are rejected as metaphysical, as the concern of another discipline, or sometimes as just too problematic to be worth the time.”

“Discovery commences with the awareness of anomaly, i.e., with the recognition that nature has somehow violated the paradigm-induced expectations that govern normal science. It then continues with a more or less extended exploration of the area of anomaly. And it closes only when the paradigm theory has been adjusted so that the anomalous has become the expected.”

Thomas Kuhn- The structure of scientific revolutions



In these complex times for European history, we can say to have felt the complexity of the relationship between science and policy on our very skin. It is time to find a new order, a new way to deal with the cognitive power that science offers policy.
Western theatrical tradition has long given us female bodies that are sacrificed in the name of social orders, starting from Antigone and Iphigenia. So what happens if political and scientific language meet in the ritual field of theatre, where female bodies are not seen as scapegoats but as thinking bodies, as agents, as writers of a new “logos”?

Conscious of such nuances and issues, we now want to bring these elements into play in a different manner, one that allows for a new TECHNE to flourish - a techne that combines the rational and irrational (or absurd?), the conscious and unconscious, the scientific and emotional language in new, possible, combinations.

A NOTE FOR THE AUDIENCE

I'm happy that you are here to take part in our experiment. No, don't worry, no effort is required here from you - there's no need to do or say something during the show. But let me tell you something. If you're reading this note you probably want to know more about what you're about to see.

There's a unusual juxtaposition between science and theatre in the title of this show, and perhaps you're wondering what is the story that this strange group of artists and scientists from the Joint Research Centre of the European Commission are wanting to convey.

Are you one of those spectators who's not content with sole entertainment? Is art rather an exploration, a strange way to understand more about the world and yourself?
Perhaps you've been forced to come here and you don't know what to do with these last five minutes before the show starts. Small talk with your neighbour bothers you, but just sitting and doing nothing feels awkward. Reading is a great excuse for not interacting with others, I understand you well. Anyway, the point is that you're reading me. You can stop or you can carry on, as you prefer. You're free. Yet if you continue you will enrich and alter your point of view with details and meaning. This is how knowledge works, it's a road of no return.

I see you've chosen to carry on reading. Brave choice.

On stage tonight, there are no actors. The people you see sitting there are scientists. To be more precise, eight scientists plus an actress doing the narration. And still, if you count the women in the cast, you'll see one more person credited. That's Joanna Bartnicka, who helped create the project but is not on stage. At the back of this booklet you'll find their biographies, where you can read about the work they carry out as scientists. If you want to, of course. Because you're free. Free to go back and forth (across this booklet) with the utmost freedom.

It's slightly intoxicating, being free....

Every entanglement is an influence. An influence on 'freedom'. Watch your movements as they alter with these words ....have you noticed? How do you feel as you move into / enter another way of seeing? Every word, action and image you see on stage has been chosen in the hope that you might embrace its complexity.

I've been trying to prepare and fertilise your mind so that you are ready to embrace our experiment.

These nine women on stage, they are not there to fulfil some unassuaged vanity. They're there because it was the only way for you to engage with their theatre experiment that took place and is in fact still taking place. In this experiment, execution and representation coincide – there is no difference between observers and the observed.
Those who are putting themselves out there as observed are being observed and are observing the change taking place within their observations.

Are you feeling uncomfortable? Do you want to leave? Are you worried that some feminist veneer will emerge when you least expect it? After all it is only women on stage tonight.
Look up. Around you. What do you see? people chatting, people on their phones, people reading this text, like you. And I start wondering whether you'd invite those not reading this text to start reading it.

The narratives we will convey are not easy-going. You will find no respite in them. We are about to bring some sets of information face to face with you, sets of information that we will also call symbols, bodies and languages. We are doing this to help your mind digest something new. So that you might also be a part of the experiment. In this way you will discover the state of being of scientists and artists. This state is unpredictable, the results will emerge out of the complex system that we will form together, tonight.

BIOGRAFIE

JOANNA BARTNICKA

Joanna's role is to study the effect of heavy metals on health. She obtained her PhD from King's College London (UK) in 2012.Her thesis discussed the history of the development of methods to visualise how copper, an essential metal, is transported in our bodies and in cancer cells. Some types of cancer cells accumulate copper and use it to fuel the development of the tumour. Visualising and understanding the link between copper and the development of tumours could help us design methods of diagnosis and therapy for cancer. After finishing her PhD, Joanna started working at the JRC in Ispra, where she is studying whether soil pollution due to cancerous metals can contribute to the development of tumors amongst the people exposed to these metals.

ALBA BERNINI

Alba began working at the Joint Research Centre in Ispra in April 2021. She develops mathematical models that simulate the spread of infectious diseases in groups of people[EB2] . The project she is working on at the moment is called IMPARA and aims precisely to learn from the Covid-19 experience. The aim of the research is to understand the best strategies put in place by different countries, namely those that were able to contain the pandemic without triggering too much collateral damage on society and the economy. After her Master's degree Environmental and Land Engineering and PhD In Information Engineering, she returned to her homeland of Liguria, and worked on a European project that aims to put forth a new strategy to recover drywall in the Cinque Terre National Park.

ISABELLA CERUTTI

Is a researcher in the Technology Innovation in Security unit of the Joint Research Centre in Ispra. She has a degree in electrical engineering and specialised in telecommunications in the United States. She has worked in the planning and control of optical and radio networks, both at University and industry, then landed at the Joint Research Centre during the pandemic. She is currently working on new technologies such as 5G mobile networks and quantum communications.

SANDRA COECKE

Started working in 1993 as a manager for a lab of in-vitro toxicology in the pharmaceutical company Janssen in Belgium, where she employed new techniques to avoid the testing of chemical substances on animals. In 1996 she became part of the European Centre for the Validation of Alternative Methods in the JRC in Ispra, and was able to apply her full knowledge of pharmaceutical companies at a European level. She was in charge of the European Union's Laboratory Network for the Approval of Alternative Methods for many years. Thanks to this network and thanks to the use of advanced technologies, she made a contribution towards testing the toxicity of certain chemical substances and better understanding certain diseases like, for example, Sars-Cov2. Sandra recently began working on the management of safe and sustainable food systems.

ROSANNA DI GIOIA

Rosanna is a researcher in the Cyber and Digital Citizens' security unit in the Joint Research Centre in Ispra. Rosanna graduated in Social Psychology whilst working as an administrative assistant, then specialised in Coginitive Processes and Technologies. In the last ten years she has worked on cyber-security projects with the aim to educate children and young adults towards the responsible and safe use of digital technologies. On these topics she has coordinated the research, development and sharing of two educational and playful tools Happy Onlife & Cyber Chronix. Amongst her research interests you also find projects related to the impact of digitalization in the life of young citizens, to cyber-crime and to preventing and fighting online abuse towards minors.

MATINA HALKIA

Matina is an architect and engineer, with postgraduate specialisation in Art History and Multimedia Art and Science (MAS) at MIT's Media Lab, where she used sensors, actuators and I/O devices to develop multilinear narratives in 3D space. Since 2001, when she joined the European Commission, she has been contributing to evidence-based policy applied in a broad range of areas of information technology in disaster risk management and global security, including the automatic extraction of data from satellite images. She has developed algorithms to predict the risk of conflict using machine learning; has evaluated the urban damage in Syria as it was destroyed by the war. More recently, she was involved in a High Scientific Consultants Group with a special interest in the application of Artificial Intelligence for cancer screening. She has represented the European Commission in the UNECE Land and Housing Committee, the World Urban Forum, the World Reconstruction Forum, the European Science Open Forum and other international political forums.

AGNES HEGEDUS

Hungarian, holds a degree in pedagogy; having served for many years on the national team and having obtained a European title (juniors) in table tennis, Agnes arrives in Italy for sporting reasons. After some first years spent as a player/coach in Serie A, she finds a job in Novara at the TERA Foundation (Oncological Hadrontherapy) under the guidance of the art physicist Prof. Ugo Amaldi (amongst his many titles her was also director of the DELPHI experiment at CERN). Upon the occasion of a meeting organised by Celso Osimani, at the time President of AIRP (Italian Association for Radiation Protection) and JRC functionaire, with Amaldi she visits the cyclotron at the Joint Research Centre site for the first time. No less than ten years later she finds herself working for the same institution. Currently she is responsible for finances (budgets, contacts and personnel) for unit E.2 (*Technology Innovation in Security*) of the JRC.

NAOUMA KOURTI

Naouma was born in 1966 in Athens, in Greece. She started working at the European Commission in 1996 as a researcher in nuclear safety. Next she became project leader and pioneer in the use of remote sensing to detect and identify boats fishing illegally. Then she moved to security, focusing on the protection of critical infrastructures in the EU. In 2014/15 she was associate professor at George Mason University VA USA on research matter on security. From 2006 to 2021 she was the deputy head of unit of the unit "Technology Innovation in Security". Since last year she works on the Science and Art programme of the JRC (JRC SciArt).

NICOLE OSTLAENDER

Nicole is a researcher in the unit *Foresight, Modelling, Behavioural Insights & Design for Policy* at the Joint Research Centre in Ispra. She has a degree in environmental sciences and geographical information, and moved to the JRC from Germany in 2006. . Her passion has always been combining natural sciences and informatics, and she enjoys thinking outside the box. She has been working for many years in standardization of data, dealing with "what is data made up of" and "what does data mean". Standardization is a key concept, especially when we are talking about the environment, because no storm, no heatwave and no toxic cloud caused by an industrial accident Stops at state borders, so it is necessary to understand each other. This brought her to describe models with which to tackle important questions – environmental but not only. Right now she is using all she has learnt to help create models with multiple criteria, to be used to compare alternatives and choose the most useful ones from an environmental, economic and social point of view.

EXPERIMENTAL THEATRE