

MAKING THE FUTURE: MAKER CULTURE AND LIFELONG LEARNING

On March 28, 2018 Global Governance Bachelor of Arts had the Honor to host the lecture of Giulia Paparo on “Making the future: Maker culture and lifelong learning”.

Giulia Paparo is graduated in History and Philosophy of Science at Utrecht University, Netherlands. The aim of this Degree course is to study the foundations, practices, and culture of the sciences and humanities from a historical and philosophical perspective. The program addresses the historical development of scientific thought and practices with a broad approach that investigates the interplay of science or the humanities with cultural, social, and institutional factors. She works in the science communication and institutional marketing field and additionally she worked on various interdisciplinary projects. She is the responsible for education at the Futurium in Berlin.



The conference was mainly based on the “FUTURIUM”. The Futurium is a joint initiative by the Federal Government and leading German research organizations, foundations, and business enterprises. It is an independent platform for dialogue and networking between state, science, business, and society. Futurium calls to our minds the idea of the future, in fact, as Mrs., Paparo explained to us, it is supposed to represent the “Haus der Zukunft” (House of the Future), the place for debating about the future we would like (Future Forum), presenting possible features in the dialogue between science, technology, art and society (Future Stage), with always changing exhibits (Future Museum) and a place for empowerment and for trying the future with your hands (Future Lab). The Futurium is not open yet, the opening of the entire structure is fixed in spring 2019.

Futurium is located in the immediate vicinity of the new Berlin central station not very far from the Deutscher Bundestag. The architecture was designed by the two Berlin architects Richter and Musikowski. It is made of dark cast-glass with high window fronts that opens to wonderful panoramic views of the surrounding area. It looks like a rock in the middle of Berlin, lower in respect to the other buildings. There is also a vast outside space, where people can discuss together and connect with nature.

The building is divided into different areas: the exhibition area, the gallery, the fab lab and the rooftop known as the “skywalk” because it is accessible to people. All over the rooftop, there are solar panels (“The Solar Sea”) that make the entire structure autonomous. Visitors, in this way, can enjoy the magnificent view and get in touch with the new “solar innovation”. The architecture of the Futurium clearly reflects the idea of “multifunctionality” and the awareness of a future based on continuous change.

The most important and innovative part of the Futurium is the “FabLab”. Giulia Paparo easily explained to us what a Fabrication Lab (FabLab) is through a short video clip. It is the place where people have access to machinery and materials and where they can fabric whatever they want according to their ideas. In fact, digital manufacturing tools are also easy-controllable through computer systems: the person can tell exactly what to do, can adjust the subject of the idea and is able to take inspiration on the virtual platform. The fundamental idea is to create a community of people that share thoughts and ideas and that can locally solve problems because if people all around the world share their information this can be the first step to find global solutions.

This “Making community” presents specific aims: Understanding, participating, empowering, learning by doing, combining artisanal work with digital technologies, establishing informal peer-led learning, because people will always find someone that helps them by using its own personal skills. In the center work communication specialists, engineers, physicians, scientists and experts and if they are not available there are virtual platforms to get the input you are looking for. And finally, fun and sharing because the project is not about making money but enjoying what you believe in and to have fun by doing it together.

The Futurium is also relevant because of the connection to the “Sustainable Development Goals”. We will give you just a few of the many examples:



4 - Quality Education giving access to the Lab, expositions and projects also to children starting with the sensitization of the educators and with a “Life-long education” which is not something that ends up with school, but it keeps going through the whole life. And also:

- By liking science-learning to creativity and investigation;
- With the interdisciplinary nature of the project, because is based on sharing different knowledge, skills and experiences;

9 - Innovation and Infrastructure by providing generic lab equipment and machinery to the people;

- Allowing everyone to participate with no discrimination on race, age or beliefs;
- Transparency in the process an idea. In the project, you learn to fail. Failing is something considered bad especially in the western society instead, it is something that characterized everyday life, we learn by failing until we get to the solution;
- Future-education approach – a more flexible way of teaching by integrating technological-skills within the system;

3 and 10 – Good Health and Reduced Inequalities: starting with the project “*Toowheels*” – which is a project that provides the possibility to build sporty wheelchairs simply by downloading the file on the website and going to the closest FabLab or by doing it at home;

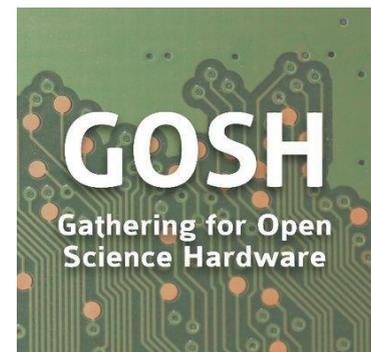
12 and 13 - Responsible Consumption and Climate Action: With another project by another student “*Precious Plastic*” - The main idea is to turn plastic waste into something valuable and to start the recycle business all around the world.

We also focused on two significative projects:

- **The OPEN SCIENCE**- that has four fundamental goals:
 1. Transparency in experimental methodology, observation, and collection of data.
 2. Public availability and reusability of scientific data.
 3. Public accessibility and transparency of scientific communication.
 4. Using web-based tools to facilitate scientific collaboration.



- **The Global Open Science Hardware (GOSH)** – Which is a movement that seeks to reduce barriers between diverse creators and users of scientific tools to support the pursuit and growth of knowledge. Empowering people by building lab equipment so that anyone can build its own lab. The principles of this movement are: GOSH is accessible, makes science better, is ethical, changes the culture of science, democratizes science, has no high priests, empowers people, has no black boxes, is an impactful tool and, finally, allows multiple futures for science.



In the last part of the lecture we were able to put into practice the principles previously explained. We divided into groups of two and we made small circuits. We worked together. We enjoyed science. We helped each other when problems occurred. We experienced a Making Community.

Alice Bertola and Li Qiao