

Final Report: Research Visit at HCC group of the FU

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Visualizing an Algorithmic Process

6-9.12.2018

I was invited to FU Berlin by Jesse Benjamin of the FU HCC group to input my thoughts and skills in both CS research and Traditional Design to the ongoing IKON project the group is working on. The overall goal of project IKON is the development of a strategy for Knowledge Transfer at the museum of Natural History in Berlin. Project IKON is conceived to support the transfer of expertise in such disciplines as Biodiversity and Ecology into society, politics and industry; as well as into educational and pedagogical offers at the museum.

At the HCC they are developing an application for researchers that will feature data visualizations to support this data transfer and sharing practice. The visualizations will be enriched by algorithmic processes that can detect connections between research projects and recommend potential knowledge transfer activities, as well as outline emerging long-term trends in research topics and global engagement.

A challenge in the development of the application is the issue of humans directly interacting with algorithmic processes, a highly current and relevant topic that can be found in nearly all socio-cultural contexts. However, due to its contemporary nature, few research studies exist that tackle this challenge. Due to my research so far at the HUJI Hybrids Lab, I was invited to help in the aspect of Research-through-Design, using methods and insights I have gained so far in my studies about how humans choose to interact with algorithms and for what reasons.

With the invitation to the HCC to deep-dive into the collaboration project, I was asked if I would also like to give a talk to the group members about the work that is done in my home lab – The Design Hybrids lab at the Hebrew University of Jerusalem. In the Design Hybrids lab, we combine craft traditional procedures and the study of them along with computing tools and methods to create tools and introduce methods from the digital world into the craft realm. The talk I gave was very much a learning process for both sides – after the talk concluded, the conversation in the room continued for almost a whole hour. A lot of the questions raised during that session helped me focus my own research and it felt like there was a lot of interest in the unique line of work we do and combine.

Alongside our project meetings, Jesse and I conducted a workshop, to small scale test our working theory of an answer to the standing question we wish to currently answer – how to better visualize an algorithmic process, rather than its outputs. The workshop outputs were very much helpful, some of the weaker points we foresaw, proved to be weak, while an abundance of new ideas and directions appeared.

Our cooperation, the HCC and mine, in terms of praxis and theory strikes us as particularly fruitful, merging Human Computer Interaction concepts with traditional craft in the area of sustainability of knowledge generated by algorithmic systems. Drawing from our experience doing this workshop, we formulated concepts for future workshops together.

The next step for us would be continuing our long-distance planning and evolution of a large-scale working theory examination, that is already rapidly easily self-defining, after this intense work session. Once we are pleased with our output, we would render it to fit inside the needs of the IKON project, but also hopefully help towards the human understanding and ease of explanation of algorithmic processes.