A network of museums to study human decision making processes

We would like to introduce ourselves and possibly make you enthusiastic for our initiative of building a network of museums to jointly promote and study human interaction processes across cultures, development and gender.

In 2021 we started conducting low-effort, unsupervised, gamified experiments in the newly opened Humboldt Labor in Berlin. This is a joint initiative of the Max Planck Institute for Human Development and the Science of Intelligence Excellence Cluster. Building on the positive experiences from visitors taking part in the experiments, and the suitability for scientific data collection, we are now inviting other museums and researchers to join this initiative for hosting low-effort, unsupervised and gamified experiments.

What is the goal of this initiative?

The goals of this initiative are twofold: i) To familiarise museum visitors with ongoing scientific research by making them an integral part of gamified experiments, and providing them with information on the research being conducted. ii) To build a network of museums to jointly investigate human interactions across the lifespan. The ambition is to run the same studies in different museums worldwide to study similarities and differences in human interaction processes across cultures and developmental stages. Museums offer unique opportunities to gather data from a diverse sample, allowing to go beyond the WEIRD samples.

What is in it for your museum?

Based on our experiences thus far, museum visitors enjoy taking part in ongoing scientific research projects. By turning this into ongoing scientific studies, visitors become an integral part of data collection. We make it appealing for visitors to take part in the experiments by keeping the studies short (a few minutes), visually attractive (materials are designed by professional designers), fun, and educational. Regarding the latter, after the study, visitors can see how their behaviour compared to all previous museum visitors to learn more about their own performance compared to others, and they get more background information about the type and goal of the study.

How does the exhibition element look like?

The experiment consists of a few tablets mounted on a table. Visitors can sit down and take part in the experiment by interacting with the touchscreen. See here for the Berlin setup. The studies can be provided in the native language and other languages. For example, in our setup in Tokyo, visitors can decide between the English and Japanese language. The experiments are unsupervised, meaning there is no experimenter on site. After installing the tablets they require little to no further effort from the museum. The only thing required is a reliable internet connection to connect to an online server, hosting the experiments.

Which museums are already part of this initiative?

The initiative started in 2021 with the opening of the Humboldt Labor in Berlin. After this successful start, we are now reaching out to other museums. Early 2023 the Japanese

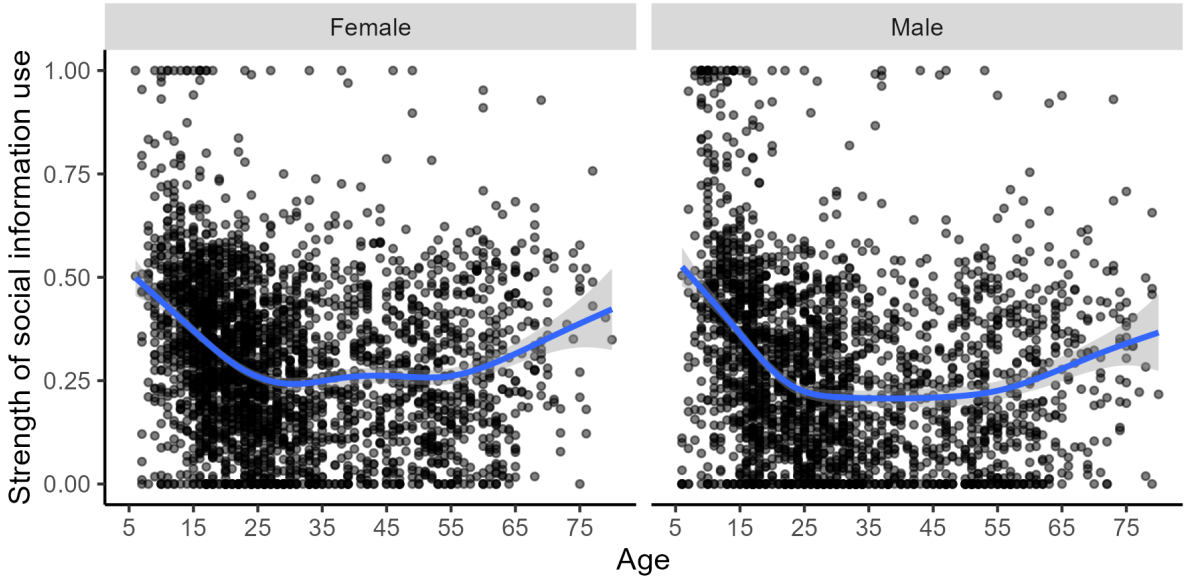
Museum of Science and Technology (Miraikan) in Tokyo joined the initiative and installed three tablets. We have also started experimenting in the NEMO Science Museum in Amsterdam, the Netherlands.

What is an example of a study that is being conducted?

We currently run a series of studies on social influence, using the BEAST task (Berlin Estimated AdjuStment Task) (Molleman et al. 2019). In this task, people briefly observe a group of cartoon animals and have to estimate the number of animals in the group. After they provide their estimate, they observe the estimate of a previous museum visitor who observed the exact same image. Next, they are asked to make a second estimate regarding the same image but without seeing the image again. Visitors can take part in five such rounds after which we ask them to enter their age and gender. This task provides a direct and simple measure of how much weight people place on their own judgement and the judgement of others. Or, in other words, how strongly individuals incorporate the advice of others into their decision-making process.

What is an example of a scientific finding?

More than 10,000 museum visitors have completed the above-described study thus far. The figure below shows the amount of social information use across age for females and males, in the German sample. As can be seen, across both genders, the level of social influence peaks at the youngest age group of visitors (6-7 years olds) and gently decreases with age up to around 20-25 years of age. From this age onward, we observe no strong changes anymore in the level of social information use, and visitors in this age range consistently weight their own information heavier than the information of other visitors. The data from the Japanese sample look very similar.



What type of museums are we looking for?

We are particularly interested in how decision-making processes develop across age. Therefore, we are especially interested in museums which attract a diverse public in terms of age range (including children). Moreover, we are looking for museums who would like to commit to this initiative for a longer period of time. We hope to build up a network of museums over the next couple of years to turn this into a more longer-term initiative, and also allow other researchers to use this infrastructure to promote and advance their research. Because we launch new studies regularly, the exhibition element does transform over time, so the element is continuously updated showcasing ongoing research projects. For all new projects we launch, we assure that they are fun, short, engaging, visually attractive and educative.

For researchers

If you as a researcher are interested in joining this initiative, please get in touch. We are very open to think of new, interesting research paradigms to implement on this network but note that we are currently still building up the network. We are especially interested in researchers to join if they also have links to museum(s) in their own country, and could facilitate building bridges to new museums.

Want to know more?

If you are interested in joining this initiative, or in getting more information, please send an email to Ralf Kurvers (kurvers@mpib-berlin.mpg.de).

Who are we?

A group of enthusiastic researchers, interested in studying human interaction patterns across cultures, development and gender.

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