Plan Overview

A Data Management Plan created using DMPTuuli

Title: Intergroup Contact via Telerobotic Puppetry

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Template: General Finnish DMP template

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Project abstract:

The research investigates how robots could facilitate contact between groups in conflict. It uses a multidisciplinary approach, combining communication and media studies, social psychology, art, design, and robot engineering with one principal objective: reducing prejudice between the groups. Telerobots (robots that are remotely operated by humans) are increasingly used in social situations where face-to-face meetings are difficult to organize. They are used in public services such as health care and education, as well as in private-sector working places and residential homes. New demands for robotic avatars have surfaced in light of the COVID-19 pandemic, where physical distancing is imposed on society. Following the premise of Intergroup Contact, established by Gordon Allport in the 1954 publication The Nature of Prejudice, the research seeks the optimal conditions for telerobot-based communication that can reduce prejudice between groups in conflict and improve intergroup relations. The focused form of implementation is that of telerobotic puppetry, founded on a long tradition of political activism and art therapy. Puppetry is explored as a performative form of telerobotics. User's readiness for telerobotic puppetry will be evaluated' through qualitative user-surveys and quantitative constructive design research. Results will form a base for a puppet theater workshop and public performance event that will occur in Israel and Palestine simultaneously. Following workshops and events, qualitative data will be gathered from participants through interviews and note-taking, while quantitative data will be collected through the computational platforms used in the project. The research is conducted primarily in the Learning Environments research group at the Aalto Media Lab and in collaboration with the Virtual Reality Lab for Conflict Research at the IDC Herzliya.

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Intergroup Contact via Telerobotic Puppetry

1. General description of the data

1.1 What kinds of data is your research based on? What data will be collected, produced or reused? What file formats will the data be in? Additionally, give a rough estimate of the size of the data produced/collected.

This research seeks to collect data primarily from the following key sources:

- Online anonymous user surveying.
- Interviews with workshop participants, event participants, and stakeholders in the field of conflict resolution.
- Audio and video recordings of workshop sessions.
- Automatic meta-data collection through the computational platforms used in the research, including Human-Computer-Interaction with remote control interfaces and Human-Robot-Interaction with telerobotic puppets.

Online user surveys are developed on the *Qualtrics Core XM* software, maintained by IDC. Data is downloaded as CSV and is expected to be in the 10s of Megabytes range.

Interviews are conducted either online via the Zoom Platform or live, wherein audio and video will be recorded. Audio is encoded as MP3 and video as H.264 MP4. Due to video recordings, data is expected to be in the 10s of Gigabytes range.

Audio and video recordings are done in online workshops contacted with the participants. The audio recording can be transcribed for detailed content analysis.

Computational meta-data would be produced on production Aalto servers involved in the communication and on embedded computers operating the telerobots. The data would be in JSON format and is expected to be in the 10s of Megabytes range.

1.2 How will the consistency and quality of data be controlled?

Survey data and interview and workshop transcripts would be reviewed by the researchers conducting the interviews or survey.

Meta-data collected on computational platforms would be secured so that only the lead researchers have access, and would be reviewed by them.

2. Ethical and legal compliance

2.1 What legal issues are related to your data management? (For example, GDPR and other legislation affecting data processing.)

Data gathered for the project through user-surveys and computational platforms would be anonymous and contain no identifying information.

All participation in interviews, workshops, and events is voluntary and individual participants will be asked to provide informed consent, covering both research and data sharing. All participants will be de-identified in the data analysis process. The participants will be made aware of data collection policies and protocols, and subsequent analysis and archiving for the project in accordance with GDPR guidelines.

We will follow Aalto's data policies for all human data collected:

https://www.aalto.fi/en/services/aalto-university-data-protection-policy

Our compliance with the requirements stipulated by the EU General Data Protection Regulation (GDPR), national data protection legislation, and other legislation that relates to the processing of personal data will be ensured as per the data policy. The collected data will only be stored on systems meeting Aalto University guidelines for personal data storage. Ethical pre-approvals are not generally needed. However, should journals' requirements include ethical evaluation, one will be requested from Aalto Research Ethics Committee.

2.2 How will you manage the rights of the data you use, produce and share?

The anonymized data collected for the project by Aalto will only be made available under the Aalto data management policy. Data will be collected in compliance with all intellectual property rights of the datasets used.

The software and codebases created as part of the research project will be made available as open-source, as per the criteria under Aalto University's open-source policy.

3. Documentation and metadata

3.1 How will you document your data in order to make it findable, accessible, interoperable and re-usable for you and others? What kind of metadata standards, README files or other documentation will you use to help others to understand and use your data?

The data, as well as the software and codebases developed for the computational platform and our analysis pipeline, will be well-documented in accordance with FAIR principles.All the external software, data, and APIs will be supplemented by their corresponding documentation where possible.Our documentation will include cataloging metadata, i.e. the metadata required by our repository; information necessary for understanding the data and code; and information on the automatic processing of the analysis pipeline. Such documentation will be provided through text-based README files and CSV files with clear and useful headers, comments, and inline codes.

4. Storage and backup during the research project

4.1 Where will your data be stored, and how will it be backed up?

Data will be stored on Aalto University's network drives (https://scicomp.aalto.fi/aalto/aaltodata/). This storage is free, shareable, snapshotted,and backed up to an offsite datacenter. Access is controlled via Aalto accounts plus Unix groups. Additional copies of the data can only be made by the project members and must be securely stored as per our general guidelines.
An Aalto-hosted GitLab will be used for maintaining version control of our data and code, which also provides another back-up archive of both the data and codebases.

4.2 Who will be responsible for controlling access to your data, and how will secured access be controlled?

The principal investigators at Aalto are Avner Peled & Teemu Leinonen, who will manage overall data access policies and protocols. Aalto University's cluster is only accessible within the university and the IT Centre for Science (CSC) networks through a secure connection (using SSH). Access to the storage where the data reside is controlled via Aalto accounts and Unix groups. The same procedure is applied to Aalto's version control system.

5. Opening, publishing and archiving the data after the research project

5.1 What part of the data can be made openly available or published? Where and when will the data, or its metadata, be made available?

All datasets' metadata, and anonymized data, will be made publicly available through the Zenodo platform as needed, to support external review, validity, and analysis of the datasets.

5.2 Where will data with long-term value be archived, and for how long?

The data with recognized long-term value will be archived in the national Fairdata PAS service provided by the Finnish IT Center for Science. The anonymized data with recognized long-term value will be archived at the Finnish Social Science Data Archive (FSD). The storage periods will be decided during the project.
The codes and scripts developed in the project, as well as the shareable data, will also be made available on public code and data repositories, such as Github and Zenodo.
Forms (informed consent form etc.) in paper format will be destroyed securely after revision time. The digital material will be archived as long as the research data will be stored. The storage period will be defined during the project.

6. Data management responsibilities and resources

6.1 Who (for example role, position, and institution) will be responsible for data management (i.e., the data steward)?

Aalto University will take the primary responsibility the data collected and archived for analysis and public dissemination for this research project, Aalto University is responsible for implementing the DMP and for ensuring that it is reviewed and, if necessary, revised on a regular basis. After the project has ended, Aalto University will be responsible for archiving and disseminating the resulting data as needed.

6.2 What resources will be required for your data management procedures to ensure that the data can be opened and preserved according to FAIR principles (Findable, Accessible, Interoperable, Re-usable)?

Data storage, computational specifications, and software needed for the project are offered by Aalto University's IT services and the IT Centre for Science (CSC). Both Aalto and CSC provide guidelines as to how to produce reusable, interoperable implementations and analyses.Aalto University's version control system (https://version.aalto.fi), as well as one provided by Github, are at our disposal to make our code and datasets accessible and findable.