HyperDemocracy : Large-scale Consensus Support Platfrom based on Social Multiagent Systems

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Research Area「Trusted quality AI systems」
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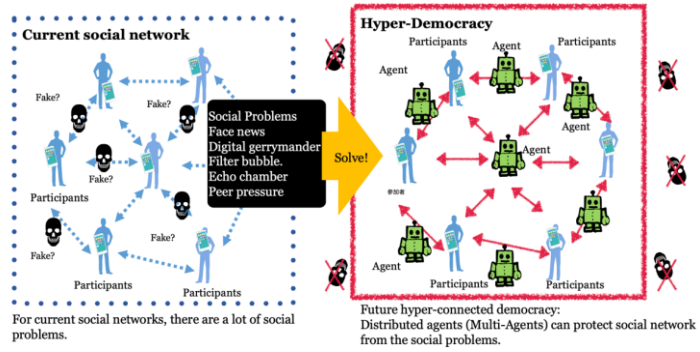
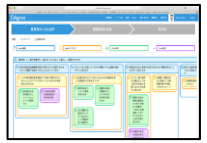
Outline : This study realizes the Hyperdemocary Platform that is a social network that support software agents and human to collaboratively participate, discuss and make a democratic consensus. The rapid development of AI, smartphones, and the Internet, as well as the rapid changes in the environment caused by Covid-19, have made the realization of a new social system more and more realistic. Specifically, multiple agents will be stationed in social networks as the platform of democracy and act with human, mediate decisions and interactions, and support better consensus building and scalable & collective decision making. In particular, while collecting opinions and preferences, software agents are attentive to the emotions of each participant, helping humans to efficiently reach a consensus that is both proactive and satisfying. In other words, the system solves the trade-off between proactive and satisfied consensus building by humans and super-efficient and super-rational consensus building by software agents. In the SNS, social problems such as flaming, fake news, group polarization, and gerrymandering have been pointed out. Our agents will solve these problems by collaborating with human in the platform.

Research Goals: We will conduct social experiments on the hyper-democracy platform and its verification, establish it as an international application, and commercialize it.

Related Work and Challenges: Existing research includes Deliberatorium and Climate Colab as systems to support crowd discussion. However, in these systems, AI technologeis and multi-agents are not assumed. In the 1990s, classical AI research such as PERSUADER and JUDGE were developed to support agreement using case-based reasoning in AI, but they support it in a specific domain and are not intended for a large number of people on the Internet. In sociology and political science, the effectiveness of the Deliberative Poll method has been recognized as a way to achieve democracy based on deliberation. Recently, some researchers have been using chatbots as simple moderators in Deliberative Poll, but they were not facilitated based on the semantic structure of the discussion as in this study. As for theoretical research, there are Argumentation Theory and Mechanism Design. However, these are theoretical studies, and their applications are not yet advanced. This research is different in that it aims to apply these theoretical studies to the real world and commercialize them.

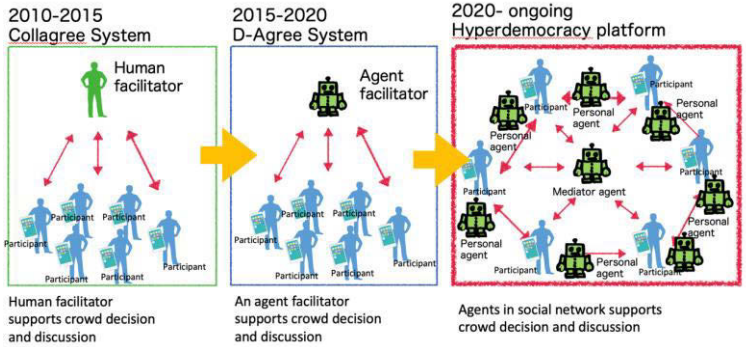


Collaboration with Nagoya city



Visualizing a discussion

Kabul experiments



Future Deployment & Research Plan: To develop and expand the hyper-democracy platform on an international scale as a reliable forum for discussion and consensus building. To commercialize the platform as a reliable social network and consensus-building support system originating in Japan, and to deploy it widely internationally. The multi-agent technology to ensure the reliability of information and discussions, and the automatic generation mechanism of new ideas and consensus proposals can be acquired as intellectual property rights, and the hyper-democratic platform based on this technology will enable people to create economic, social, and public value and also new industries.