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Computational Cognitive Assistants for Futures Studies: Toward Vision Based Simulation

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Abstract

Many foresight researchers believe that quantitative simulations have a very restricted contribution in futures studies due to their simplicity and lack of creativity. While qualitative methods, taking advantage of the human cognitive system, have a great potential in addressing a wide range of problems in futures studies, this potential is mostly due to the human visual logic that can handle the task of imagining future scenarios much better than mathematical logic.

On the other hand, computational methods benefit from the advantages of silicon-based systems namely speed, large memory, rapid networking, and communication. Hence, it would be extremely beneficial to come up with a solution that combines the positive sides of both qualitative and computational approaches. Cognitive artificial agents are computational units that make use of the human cognitive system. Their interaction with foresight and futures researchers can result in promising solutions for the problems addressed in futures studies. In addition, these agents can serve as a great source of inspiration for taking the first step towards vision based computers that can simulate humans' imaginations of the future.

This paper reviews some of the previous attempts in this field and finally sheds light on the main issues where methods in futures studies can play a

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