Neuroscience
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Presentation Abstract

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Title:	Social dimensions and ethical issues in the use of embodied modeling with autonomous agents in neuroscience research
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Topic:	++H.04.a. Ethical and policy issues in neuroscience
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Abstract:	Throughout history, scientific breakthroughs and advances have raised critical ethical considerations. Currently, autonomous agent neural network modeling offers new neuroscientific methods to gain insight into the workings of the embodied brain. The science, however, is being increasingly used for purposes that raise ethical issues, such as the use in surveillance systems and drones. What kind of guidelines or rules should be followed to ensure that research will not bring harm to others? Is there a way to approach brain research relating to autonomous agents, artificial intelligence and robotics, in a more mindful manner? The purpose of this presentation is to identify ethical issues surrounding autonomous agent modeling. We examine the examples and discussions in (1) scientific and academic research (2) popular culture and science fiction literature (3) government and military usage. We propose initial ethical guidelines and principles for current and future research on autonomous agents. The societal impact of these ethical issues is also presented.
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