Department of Philosophy: Graduate Seminar Series Yunlong Cao "The Epistemic Limitation Criterion of Machine Intelligence"

Alan Turing famously proposed the Turing Test, and less famously, an epistemic limitation criterion for machine intelligence. However, these two conditions appear to be in tension. In this paper, I argue for the epistemic limitation criterion as a necessary condition for attributing intelligence to machines. I show that in classic thought experiments where readers intuitively find a system lacking intelligence, such as the Blockhead and the Chinese Room, an epistemic access into the system's inner working is guaranteed, violating the epistemic limitation condition. I also briefly propose a theory explaining why epistemic limitation matters for machine intelligence: with the epistemic limitation, we need to anthropomorphize to explain the relevant machines behaviors. This approach offers a theoretical alternative that is significantly different from mainstream views of machine anthropomorphism such as computational functionalism.