Seeking the human in human-like computing

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clear intersections
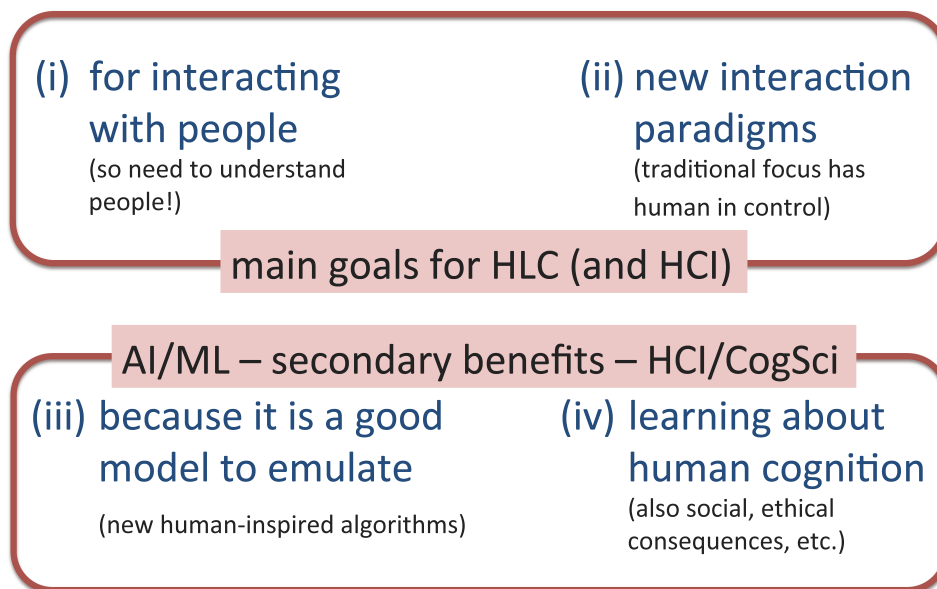
"offering the prospect of computation which is akin to that of humans, where learning and making sense of information about the world around us can match our human performance" (EPSRC)
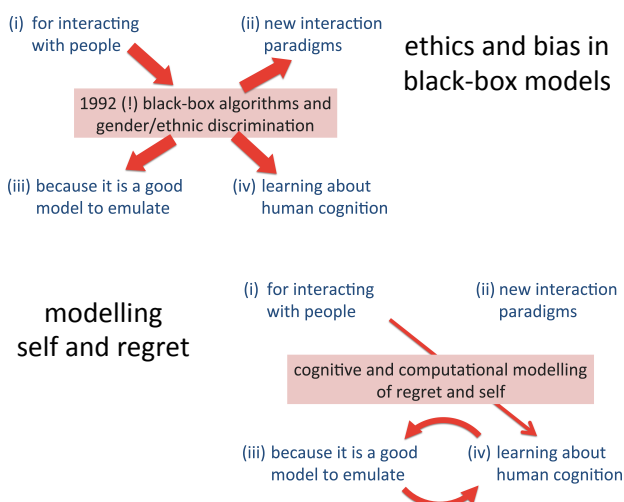
Human-Like Computing

studies the ways in which people engage with technology and the ways in which technology can be designed to work for and alongside people

Human–Computer Interaction

four topics

(i) for interacting with people
(so need to understand people!)

(ii) new interaction paradigms
(traditional focus has human in control)

main goals for HLC (and HCI)

AI/ML – secondary benefits – HCI/CogSci

(iii) because it is a good model to emulate
(new human-inspired algorithms)

(iv) learning about human cognition
(also social, ethical consequences, etc.)

past examples

(i) for interacting with people
(ii) new interaction paradigms

ethics and bias in black-box models

1992 (!) black-box algorithms and gender/ethnic discrimination

(iii) because it is a good model to emulate
(iv) learning about human cognition

modelling self and regret

(i) for interacting with people
(ii) new interaction paradigms

cognitive and computational modelling of regret and self

(iii) because it is a good model to emulate
(iv) learning about human cognition

future challenges

(i) for interacting with people

apply HCI knowledge, theories and methods for rich human behaviour

(ii) new interaction paradigms

build on existing formal & informal understanding of human interaction with active computational partners

http://alandix.com/academic/papers/mi20-human-like-2016