Humans! Collectively rational or socially stupid?

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Chamber of horrors of social reasoning

The horror stories of Vincent: social proof, bystander effect, informational cascades, bubbles, pluralistic ignorance...
The child is *not* given any instructions beforehand.

(Waneken & Tomasello, Science, vol. 311, 2006)
TUG Robot, Hospital of Southern Jutland (2013)

The Hospital of Southern Jutland (Sygehus Sønderjylland) has since mid 2012 been experimenting with TUG hospital robots.

(ing.dk, 16. januar 2013)
Anti-social TUG hospital robots (2009)

Frustrated users of hospital robots in USA:

- “TUG was a hospital worker, and its colleagues expected it to have some social smarts, the absence of which led to frustration—for example, when it always spoke in the same way in both quiet and busy situations.”

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- “I’m on the phone! If you say ‘TUG has arrived’ one more time I’m going to kick you in your camera.”
- “It doesn’t have the manners we teach our children. I find it insulting that I stand out of the way for patients... but it just barrels right on.”

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Theory of Mind (ToM): The ability of attributing mental states—beliefs, intentions, desires, etc.—to other agents.

Having a ToM is essential for **successful social interaction** in humans (Baron-Cohen, 1997).

The presence of a ToM in children is often tested through **false-belief tasks**, e.g. the Sally-Anne test.
My research

**My research**: Trying to make computers and robots socially intelligent by equipping them with a Theory of Mind.

**A test case for my research**: Passing the Sally-Anne test (Vincent-Thomas test).

Let’s see how it can be done...

(Bolander & Andersen, JANCL, 2011)
In this state: The observer knows that Vincent believes the cube to be in the large tin.
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Vincent leaves

Thomas transfers cube

place in large tin

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Thomas transfers cube

Vincent re-enters
place in large tin

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Social robots and science fiction

TUG robots at the Hospital of Southern Jutland: “There has been incidents where the ambulance personnel couldn’t wait for TUG to move away. Then they went and pushed it.” (J.K. Clausen to ing.dk).
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1. A robot may not injure a human being or, through inaction, allow a human being to come to harm.
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Showing consideration to others requires:

1) the intention to do so;
2) the ability to do so.
Collectively rational of socially stupid?

The current state of affairs:

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↑

humans

robots

Conclusion: Robots need a ToM to learn how to behave well in a world of humans; humans need to learn to be more careful in how they apply their ToM.
The current state of affairs:

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**Conclusion:** Robots need a ToM to learn how to behave well in a world of humans; humans need to learn to be more careful in how they apply their ToM.