

Informatics 1 Cognitive Science

Lecture 3: Cognitive Science & The World

Maithilee Kunda

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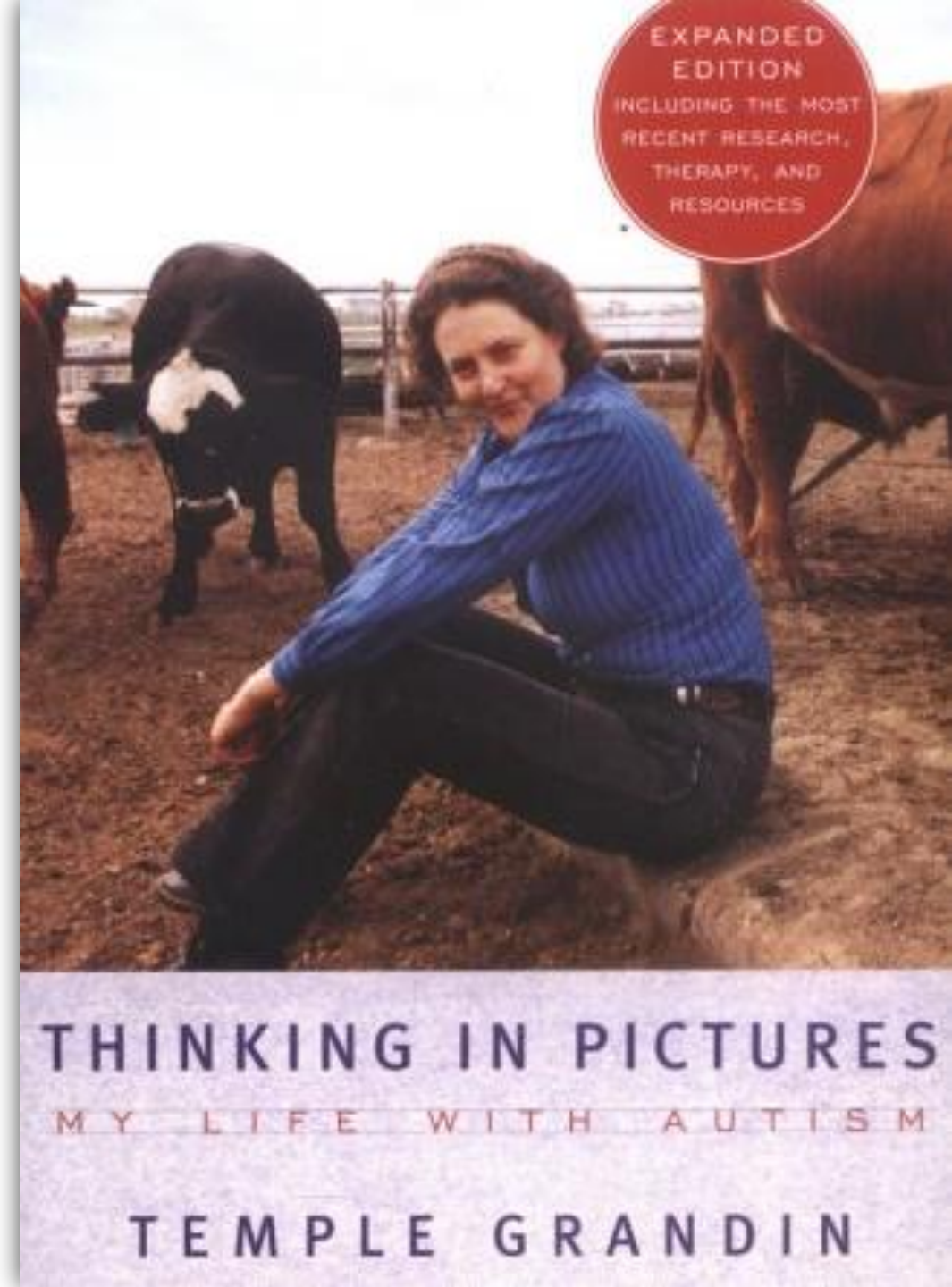
January 16, 2025

Outline

- Who is cognitive science about?
- Applications of cognitive science
- Ethical considerations

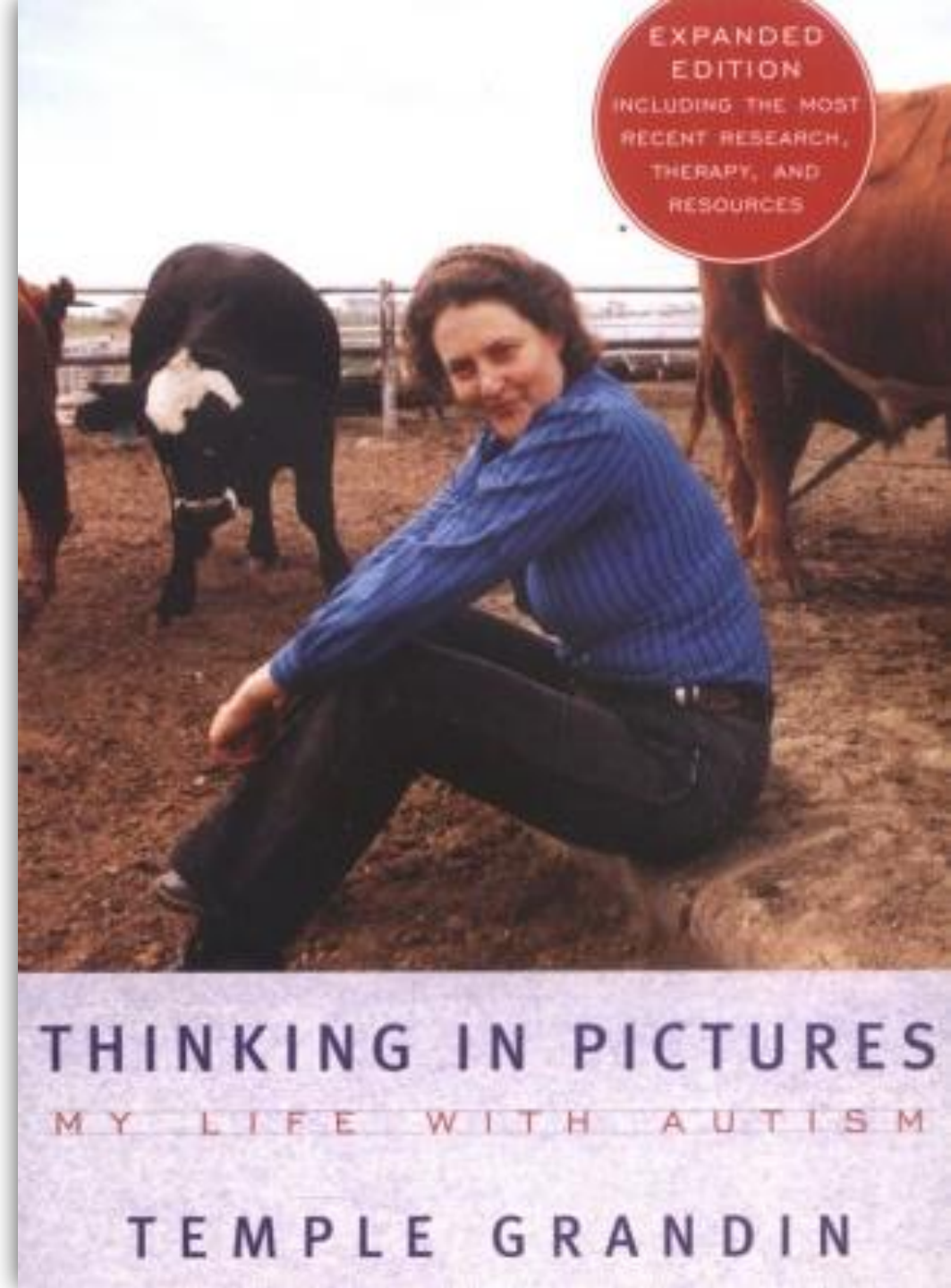
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- Early in grad school, I read this book...



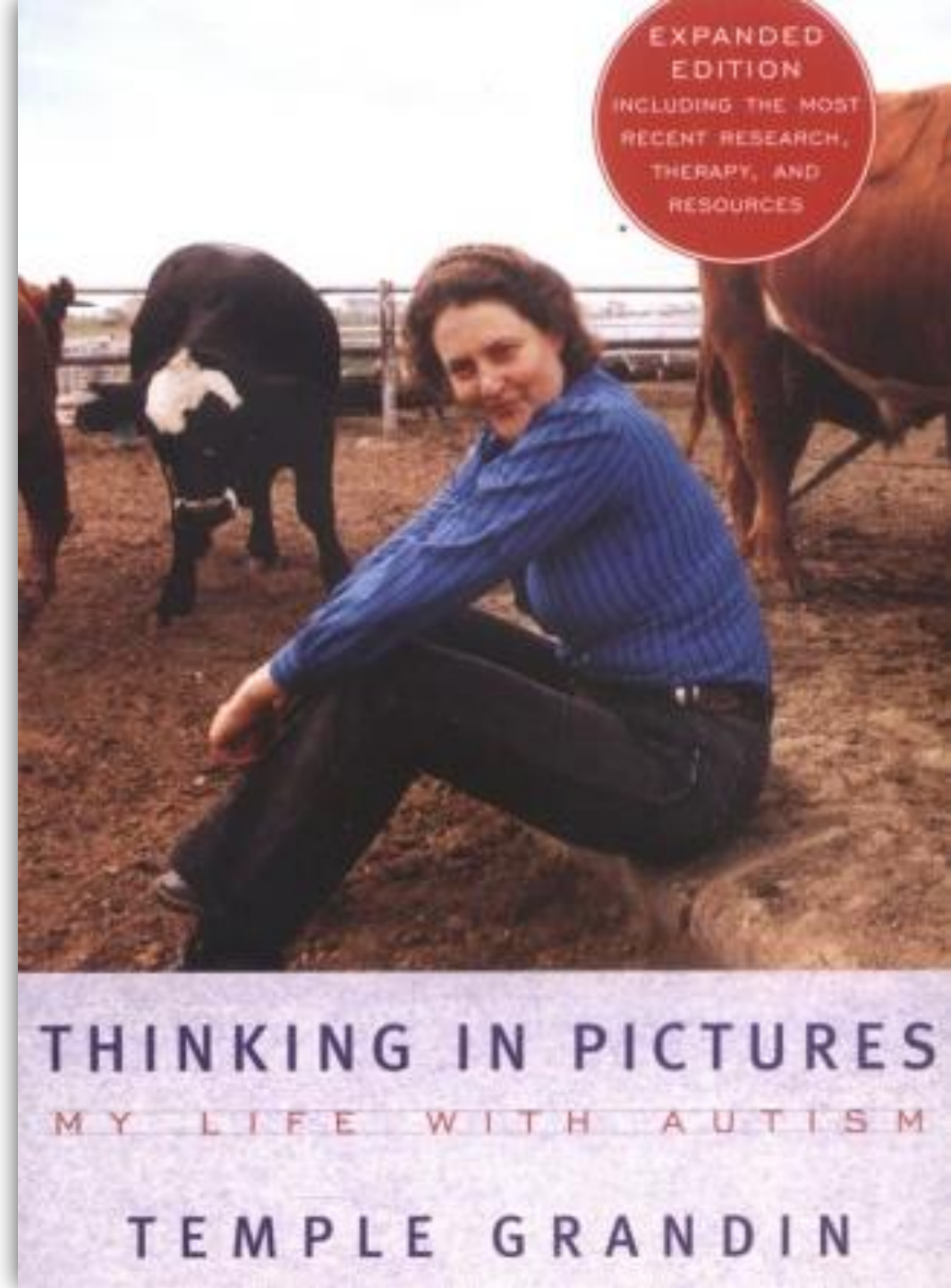
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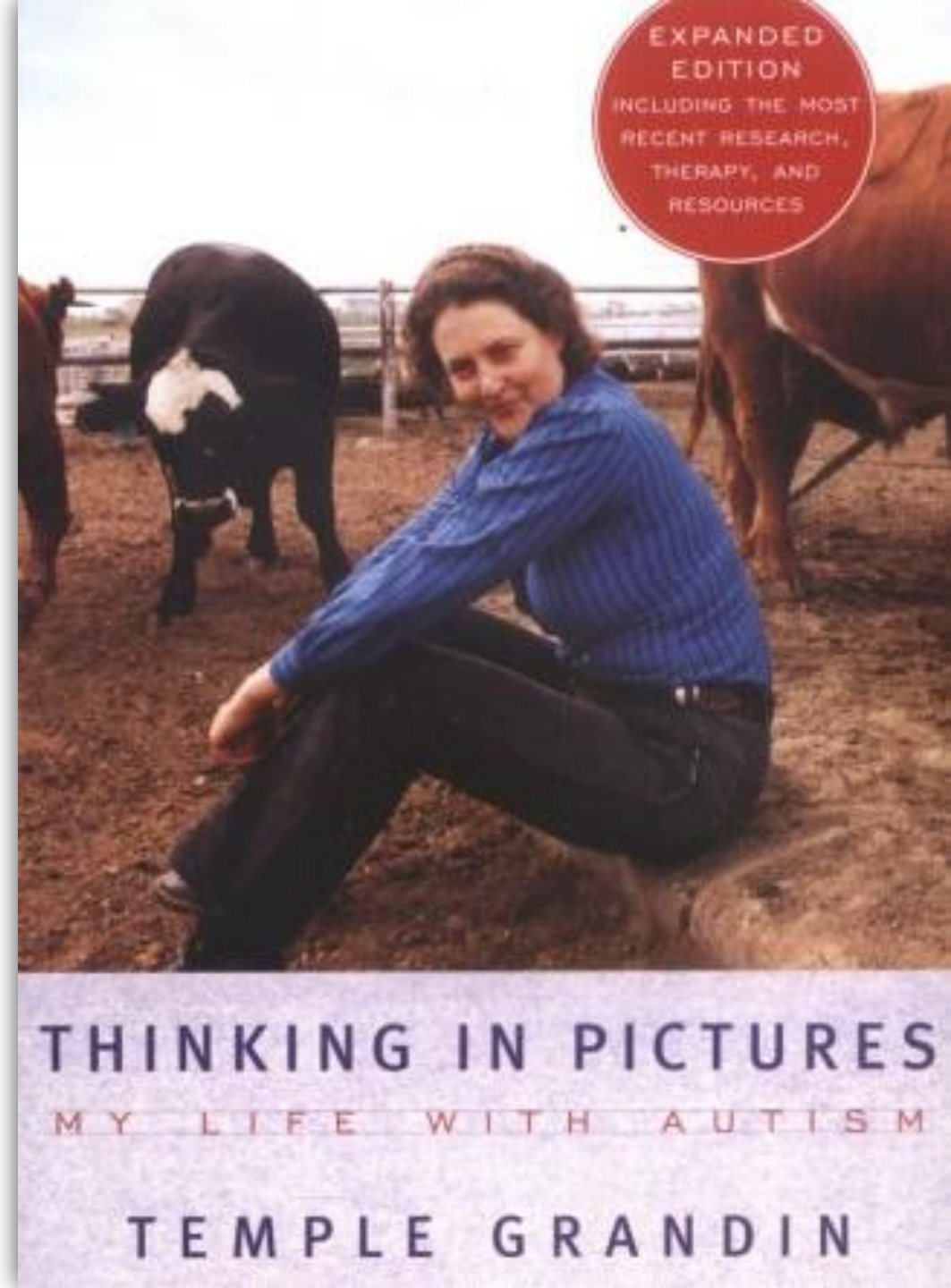
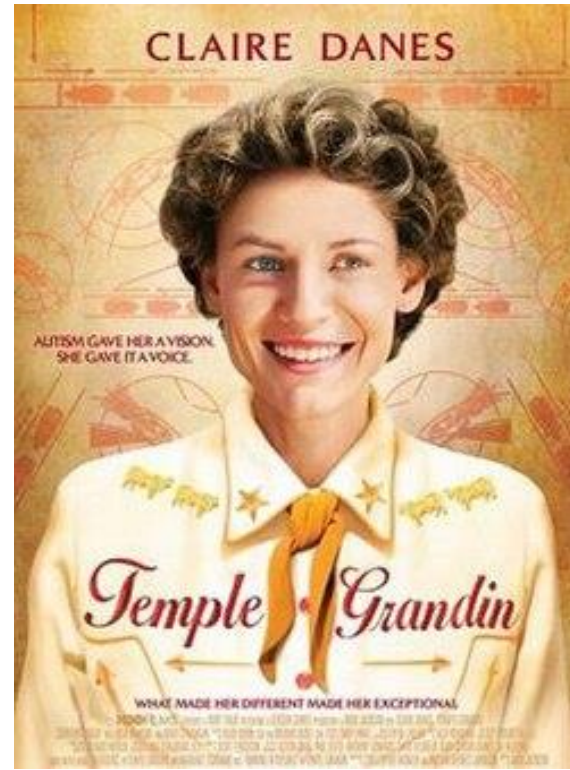
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- How does this kind of thinking work??



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Highly recommend the book, and they also made a great movie with Claire Danes...



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- How do we reason about ethical dilemmas?

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Can we translate whale language? How would we know if we were right?

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- Let's do the phenomenon of: Emotions
- Emotions were not very well studied for a long time, and we still know relatively little about how they work.

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How can we study a cognitive phenomenon to understand differences in how it manifests?

- Let's do the phenomenon of: Emotions
- Emotions were not very well studied for a long time, and we still know relatively little about how they work.
- Instead of just saying "How do emotions work?"...

Come up with two different concrete questions that emphasize WHOSE emotions you would study, and why.

Next step... Two pairs together!

- Join your pair with another pair.
- Share your FOUR examples amongst your group.

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shoutout to
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- Animals (as species AND as individuals!), machines, aliens.....



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BEHAVIORAL AND BRAIN SCIENCES (2010) 33, 61–135
doi:10.1017/S0140525X0999152X

The weirdest people in the world?

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Abstract: Behavioral scientists routinely publish broad claims about human psychology and behavior in the world's top journals based on samples drawn entirely from Western, Educated, Industrialized, Rich, and Democratic (WEIRD) societies. Researchers – often implicitly – assume that either there is little variation across human populations or that these “standard subjects” are as

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Researchers – often implicitly – assume that either there is little variation across human populations, or that these “standard subjects” are as representative of the species as any other population.

Are these assumptions justified?”

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sometimes we study them too much!

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- This is also why having diverse cognitive scientists is important!

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- Ethical considerations

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==> Cognitive science can help in many careers! (Story about a student)

Now it's your turn! (Discussion activity in pairs – Try to pair up with someone different!)

Come up with two applications of cognitive science that you think would be cool, interesting, or helpful for the world.

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Brainstorming hint: Often it is easier if you imagine someone specific!

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- What is something would directly benefit you?

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- Or, what is something that would benefit one of your family members?
- Or, imagine a specific person who is completely different from you in certain ways. What would help them?

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So far, we covered “positive” applications... but there can be negative applications too

“The man behind our ability to endlessly scroll through content on social media sites... said he regrets what his invention has done to society.

Aza Raskin is the creator of "infinite scroll".... He said he designed the service to create the most seamless experience possible for users, but did not foresee the consequences.

Mr Raskin... said infinite scroll was one of the first products designed to not simply help a user, but to deliberately keep them online for as long as possible.

"I regret that I didn't think more about how this thing would be used," he told The Times. “I know as a designer that by taking away the stopping cue, I can make you do what I want you to do.”...”

Knowles, T. (2019, April 27). I’m so sorry, says inventor of endless online scrolling. The Times. <https://www.thetimes.co.uk/article/i-m-so-sorry-says-inventor-of-endless-online-scrolling-9lrv59mdk>

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 - Eugenics – a lot of racism cloaked in research on “intelligence”
 - Research on gender differences, e.g., in STEM careers

Summary

- Who is cognitive science about?
 - Many different people (and/or animals and/or machines)
 - We can study commonalities as well as differences.
 - Age, gender, socioeconomic status, culture, neurodevelopment, personality, expertise, family background...
- Applications of cognitive science
 - Basic science plus practical applications in virtually every area of life
- Ethical considerations
 - Both positive and negative applications are possible.
 - Research design matters, for people and also for animals.
 - Cognitive science can interact with our biases, for better or for worse.