The MiniMaxularity & Human Disemployment

Selmer Bringsjord

Are Humans Rational?

10/10/19

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Test 1 Letter Grades …
Two Affirmed Principles from What I Received
Two Affirmed Principles from What I Received

- It’s not rational for $x$ to begrudge $y$’s receiving a high grade (via some system) if $x$ does too by that system.
Two Affirmed Principles from What I Received

• It’s not rational for $x$ to begrudge $y$’s receiving a high grade (via some system) if $x$ does too by that system.

• It’s not rational to assign letter grades in a manner that assumes “equal footing” w.r.t. formal content when such footing is absent, or not possible.
How to assign letter grades? — rationally
Assignments

Grade Histogram (20% Increments)

- B
- A
- A+
Assignments

But every <15 must see me or Can in person in office hrs.
Assignments

But every <15 must see me or Can in person in office hrs.

And @ 530p today, Can returns to the solutions, ready to take questions.
Assignments

But every <15 must see me or Can in person in office hrs.

And @ 530p today, Can returns to the solutions, ready to take questions.
But every <15 must see me or Can in person in office hrs.

And @ 530p today, Can returns to the solutions, ready to take questions.
Now to AI & Disemployment
Chapter 6
The Singularity Business

Toward a Realistic, Fine-Grained Economics for an AI-Infused World

Selmer Bringsjord and Alexander Bringsjord

Abstract This is an essay on the Singularity business. Contrary to what many might expect upon parsing our title, we don’t use ‘the Singularity business’ to refer to the general and multi-faceted discussion and debate surrounding the Singularity, that mythical future point in time when AI exceeds today’s technology beyond what we can see from the present. Rather, we’re concerned with business and economic questions relating to what we dub ‘The MiniMaturity’, that foreseeable future time when AI of today simply matures.

Keywords Singularity • Machine intelligence • Automation • MiniMaturity • Technological unemployment • Economics of computation

6.1 Introduction

This is an essay on the Singularity business. Contrary to what many might expect upon parsing the previous sentence, we don’t use ‘the Singularity business’ to refer to the general and multi-faceted discussion and debate surrounding the Singularity.

We are greatly indebted to a number of colleagues for helpful comments and criticisms, including that which catalyzed our rather more circumspect position on the hypothetical state of economics in a world with machines that have either non-human intelligence in some sense (see AI™), human-level intelligence (see AI™™), or super-human intelligence (see AI™™™). We are grateful for the guidance and leadership of Thomas Powers, and comments from an anonymous reviewer.

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http://kryten.mm.rpi.edu/The_Singularity_Business.pdf
Before: A Realistic Timeline

Deep Blue

past

seen

MiniMax

Al < HI

foreseeable

Watson

present

Al = HI

future

Sing

Al > HI

claimed

AlphaGo
Before: A Realistic Timeline

seen

Watson

MiniMax

AI

Al<Hi

Al=Hi

Al>Hi

Deep Blue

past

present

future

claimed

AlphaGo
Before: A Realistic Timeline

Also, AlphaGo
Before: A Realistic Timeline

Also, AlphaGo
Before: A Realistic Timeline

No problem!

Deep Blue, Watson, MiniMax, Al, Minimax, Al \( < \) HI, Al = HI, Al \( > \) HI, claimed

AlphaGo, also, AlphaGo
Before: A Realistic Timeline

No problem!

seen

Watson

Minimax

Sing

AlphaGo

Also, AlphaGo

past

present

future

claimed
Before: A Realistic Timeline

No problem!

Deep Blue

Watson

AI

MiniMax

Minimax

Sing

Also, AlphaGo

Also, AlphaGo

claimed

Big problem!

foreseeable

seen

past

present

future

Al<Hi

Al=Hi

Al>Hi

No problem!

Deep Blue

Watson

AI

MiniMax

Sing

Also, AlphaGo

Also, AlphaGo

claimed

Big problem!
A Realistic Timeline

past

seen

foreseeable

present

future

claimed

Deep Blue

AI

Watson

MiniMax

AI < HI

AI = HI

Sing

AI > HI

AlphaGo
A Realistic Timeline

Today

seen

past

Watson

Al

MiniMax

Al < H1

Sing

Al = H1

Al > H1

foreseeable

present

future

AlphaGo

claimed
A Realistic Timeline

- Past: Deep Blue
- Present: MiniMax
- Foreseeable: AlphaGo
- Future: Watson

AI seen → AI foreseeable → AI claimed
A Realistic Timeline

Today

Deep Blue
Watson
MiniMax
Al\textless{}H\textsubscript{I}
Al\textsubscript{=}H\textsubscript{I}
Al\textgreater{}H\textsubscript{I}
Al Go

past
present
future

seen
foreseeable
claimed
A Realistic Timeline

- **Past**
  - Deep Blue

- **Present**
  - MiniMax

- **Future**
  - AlphaGo
  - Watson

**Today**
A Realistic Timeline

seen

Watson

Deep Blue

AI

MiniMax

Al<Hi

foreseeable

claimed

Sing

Al=Hi

Al>Hi

past

present

future

AlphaGo

To day
A Realistic Timeline

- Past
- Present
- Future

- Deep Blue
- Watson
- MiniMax
- AlphaGo

- AI
- AI<\text{Hi}
- AI=\text{Hi}
- AI>\text{Hi}

- Today
- foreseeable
- claimed
- seen
Recall Your Required (Quick) Reading

- http://kryten.mm.rpi.edu/SBringsjord_ABringsjord_SingularityBiz_0915151500.pdf
Who else has seriously thought about the AI-Dis/employment question (or at least aspects thereof)?
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- Kelso & Adler
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“The view that an orgy of production is needed to keep our mixed capitalist economy functioning effectively is frequently stated in terms of an economic pie. We are told that the problem is not one of dividing up the economic pie, but rather one of making an ever larger pie. Neither is a correct statement of the problem. The task of a truly capitalistic society is to broaden the ownership of the pie-making machinery and to build a vast number of new pie-making machines that will be owned by people who do not now own such machines.”
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A Realistic Timeline

- Past: Deep Blue
- Present: AI
- Future: AI = HI
- Foreseeable: MiniMax
- Claimed: AI < HI
  - AI > HI

seen

Watson
A Realistic Timeline

seen

Watson

MiniMax

creativity

foreseeable

future

claimed

Deep Blue

AI

Al<HI

Al=HI

Al>HI

past

present

future

creativity
A Realistic Timeline

creativity

seen

foreseeable

claimed

$?

Deep Blue

AI

Watson

MiniMax

AI<HI

AI=HI

AI>HI

past

present

future
A Realistic Timeline

creativity

seen

foreseeable

claimed

$?$

Deep Blue

Watson

AI

MiniMax

AI<HI

AI=HI

AI>HI

past

present

future
A Realistic Timeline

creativity

seen

foresight

Deep Blue

past

Watson

present

MiniMax

AI

Al<\text{H}i

Al=\text{H}i

Al>\text{H}i

future

claimed

$ for creating machines

Deep Blue

AI

MiniMax

Sing

creativity

for creating machines

Deep Blue

AI

MiniMax

Sing
A Realistic Timeline

seen

Watson

foreseeable

$\text{for creating machines}$

claim

Sing

Deep Blue

AI

AI_{<H_I}

AI_{=H_I}

AI_{>H_I}

past

present

future

creativity

$\text{for creating machines}$
A Realistic Timeline

creativity

seen

foreseeable

claimed

$ for creating machines

Worth Reflecting Upon

Deep Blue

AI

MiniMax

AI < H I

AI = H I

AI > H I

Watson

present

future

Worth Reflecting Upon
To simplify, let’s suppose that machines fundamentally compute functions. Very well. Now let $f$ be some arbitrary function that at least appears to be machine-computable, accompanied with a suitable description $D$ of $f$, $D$ expressed in our language(s). How hard is it to create a machine $M$ that computes $f$ given this info? Is it so hard that humans in the professions devoted to such creation are safe?