**Slide 1**

*last* year's talk? ...

**Slide 2**

selecting for "best" *individuals* can cause a cooperative society to collapse

**Slide 3**

Generalizing the core design principles for the efficacy of groups

David Sloan Wilson[a,b,*], Elinor Ostrom[c], Michael E. Cox[d]

"... the principles have a wider range of application than Common-Resource Pool groups, and are relevant to nearly any situation where people must cooperate and coordinate to achieve shared goals."

Elinor Ostrom

Governing the Commons
The Evolution of Institutions for Collective Action

**Slide 4**
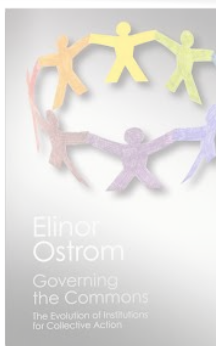
this year ...

# Learning Adaptiveness

| automated away? | adaptive (agile) | adaptive elements |
|---|---|---|
| | | |

## Let's talk about that GPT-3 AI tweet that shook designers to the core

"We're going to get automated — it's just a matter of time."

## GPT-3

From Wikipedia, the free encyclopedia

**Generative Pre-trained Transformer 3 (GPT-3)** is an autoregressive language model that uses deep learning to produce human-like text. It is the third-generation language prediction model in the GPT-n series created by OpenAI, a for-profit San Francisco-based artificial intelligence research laboratory.[2] GPT-3's full version has a capacity of 175 billion machine learning parameters. GPT-3, which was introduced in May 2020, and is in beta testing as of July 2020,[3] is part of a trend in natural

OpenAI                                                          API    PROJECTS

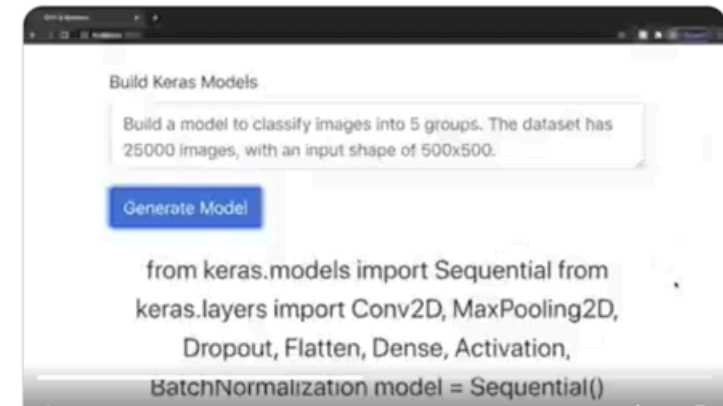Discovering and enacting the path to safe artificial general intelligence.

# GPT-3



# AIs Generating AIs!



**Matt Shumer** ⚡ @mattshumer_ · Jul 25
AI INCEPTION!

I just used GPT-3 to generate code for a machine learning model, just by describing the dataset and required output.

This is the start of no-code AI.

Build Keras Models

Build a model to classify images into 5 groups. The dataset has 25000 images, with an input shape of 500x500.

Generate Model

from keras.models import Sequential from keras.layers import Conv2D, MaxPooling2D, Dropout, Flatten, Dense, Activation, BatchNormalization model = Sequential()

# HW Design Too! Generative Design



Learning Machines
are *finally*
starting to do
"knowledge worker"
**routine expertise**

## Slide 1

Automation Supplanting Humans

1. routine math
2. routine movement
3. routine info workflows
4. **(next) routine expertise**

   >with powerful task-specific LMs

13

## Slide 2

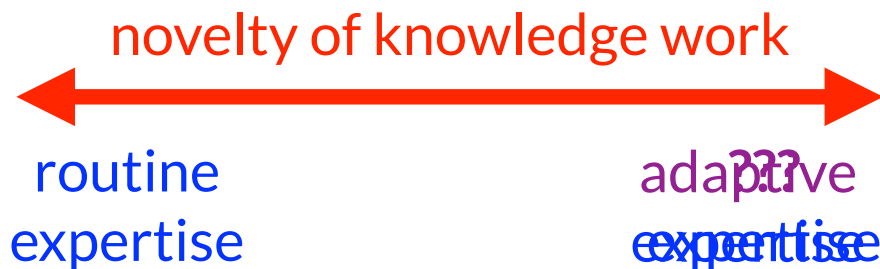Let's talk about that GPT-3 AI tweet that shook designers to the core

"We're going to get automated — it's just a matter of time."

## Slide 3

**novelty of knowledge work**

←——————————————→

routine expertise | adaptive expertise ???

*will be automated by LMs* | *human value-add (for now)*

## Slide 4

**"human value-add (for now)"** ...

16

## MAJOR AI Paper! Towards *Adaptive LMs*

On the Measure of Intelligence

François Chollet *
Google, Inc.
*fchollet@google.com*

November 5, 2019

"The intelligence
of a system
is a measure of its
**skill-acquisition efficiency**"

## Measure of ***Human*** Adaptive Expertise?

"The intelligence [adaptive expertise]
of a [human] system
is a measure of its
**skill-acquisition efficiency**"

## increasingly, job skill will be
**skill in multi learning
over
skill in single doing**

| automated away? | **adaptive (agile)** | adaptive elements |
|---|---|---|
| | | |

**Slide 21**

## Writing The Agile Manifesto

### The Snowbird Meeting and the Manifesto

"We considered a bunch of names, and agreed eventually on 'agile' as we felt that captured the *adaptiveness* and *response to change* which we felt was so important to our approach."

21

**Slide 22**

"We considered a bunch of names, and agreed eventually on 'agile' as we felt that captured the *adaptiveness* and *efficient response to change* which we felt was so important to our approach."

22

**Slide 23**



23

**Slide 24**

## Adaptive (Agile) Development

efficient Sprints
*& incremental*

efficient change
*& adaptive*

low transaction costs

low *change* costs

*most* info & coaching

*least* info & coaching

24

most so-called 'agile':
iterative & incremental
not
*adaptive*

there has been a
low focus on
learning & applying
**low cost of change** &
**adaptive expertise**

| automated away? | adaptive (agile) | adaptive elements |
|---|---|---|
|  |  |  |

Two Domains of Change & Adaptiveness



**organization**                    **product**

**supporting** & **opposing** elements for...

**low cost of change & adaptive expertise?**

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**Supporting** Examples: **Product**

> org design

  – generic titles, feature teams

> practices

  – low coupling, mobbing, clean code, ATDD, "Flutter", MT PBR, few technologies

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**Opposing** Examples: **Product**

> org design

  – most opposites of "supporting"

  – projects, Contract Game, various measurements

> practices

  – most opposites of "supporting"

  – reviews, separate repos

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**Supporting** Examples: **Organization**

> org design

  – flatter, generic titles

> practices

  – engaged senior mgmt, budget for improvement

## **Opposing** Examples: **Organization**

> org design

  – most opposites of "supporting"

  – ChangeX Center of Excellence, remote
    workers

> practices

  – most opposites of "supporting"

  – ChangeX jargon, ChangeX "local bible"

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photos of last 4 slides

exercise