Work
Models Future
Mike Amundsen
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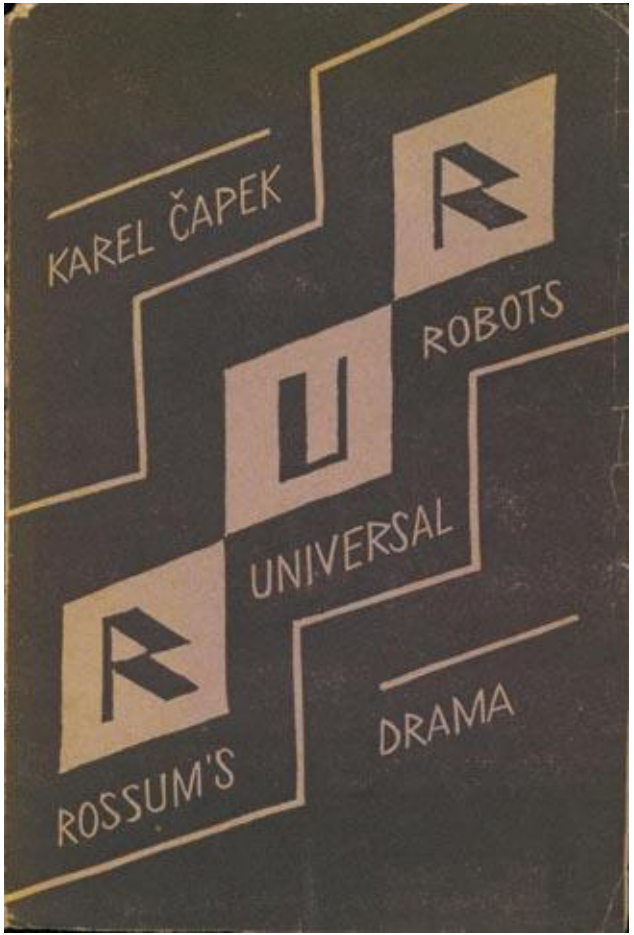
Work Models Future

- **Work** vs. Jobs
- **Models** for Automation
- Making/Being the **Future**



1920

Karel Capek is best known for his science fiction including the play *R.U.R.* (*Rossum's Universal Robots*), which introduced the word *robot*.

Robot

From Proto-Slavic **orbota* (“hard work, slavery”) derived from **orbъ* (“slave”), ultimately from Proto-Indo-European **h_3erb^h* (“to change or evolve status”), the predecessor to **$h_3órb^hos$* (“orphan”).[1] Cognate with German *Arbeit*, Dutch *arbeid*, and Middle English *arveth* (“difficult; hard”).

Noun [edit]

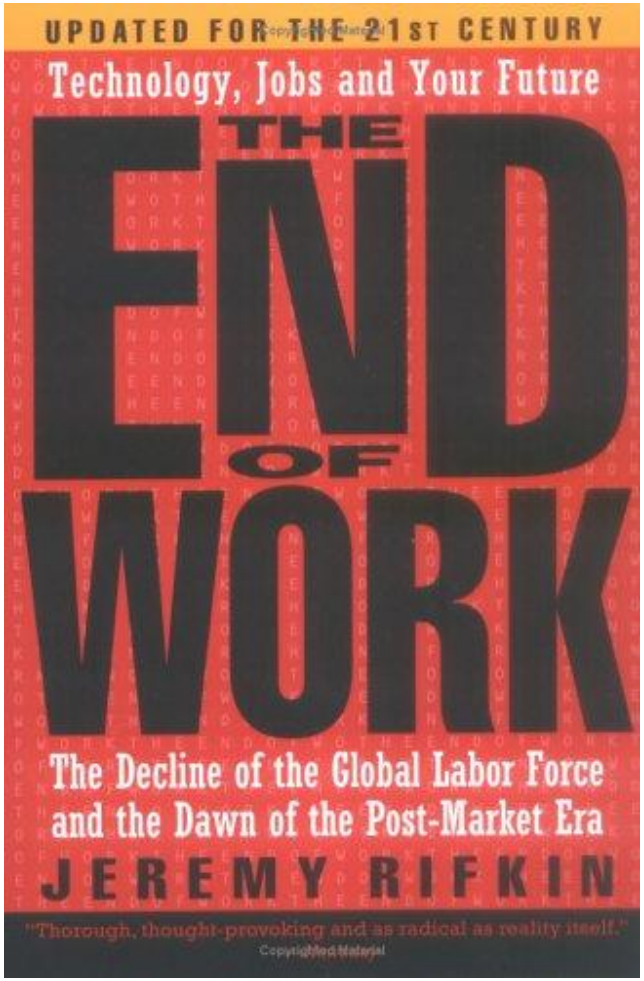
robota *f*

1. serfdom, villeinage
2. (*colloquial*, *usually pejorative*) any arduous work; drudgery, grind, slog

Work

“Terrible things may happen, but that cannot be avoided.”

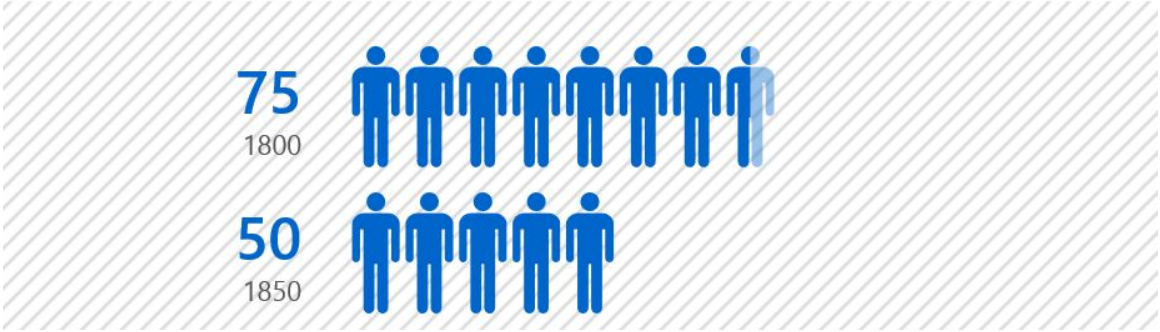
-- Rossums’ Universal Robots, Karel Capek


UPDATED FOR THE 21ST CENTURY
Technology, Jobs and Your Future
THE END OF WORK
The Decline of the Global Labor Force and the Dawn of the Post-Market Era
JEREMY RIFKIN
"Thorough, thought-provoking and as radical as reality itself."

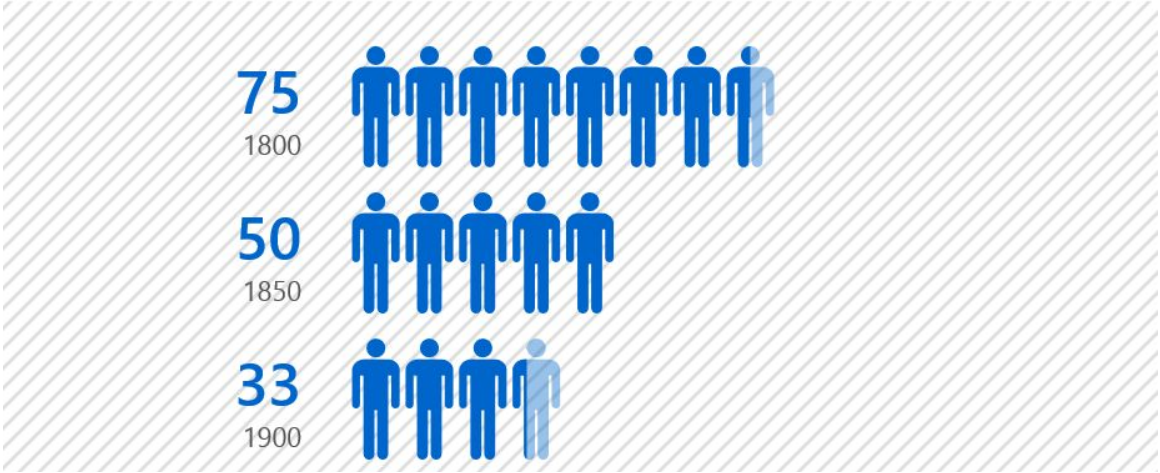
1995

Farmers in USA (% of pop)

Farmers in USA (% of pop)



Farmers in USA (% of pop)



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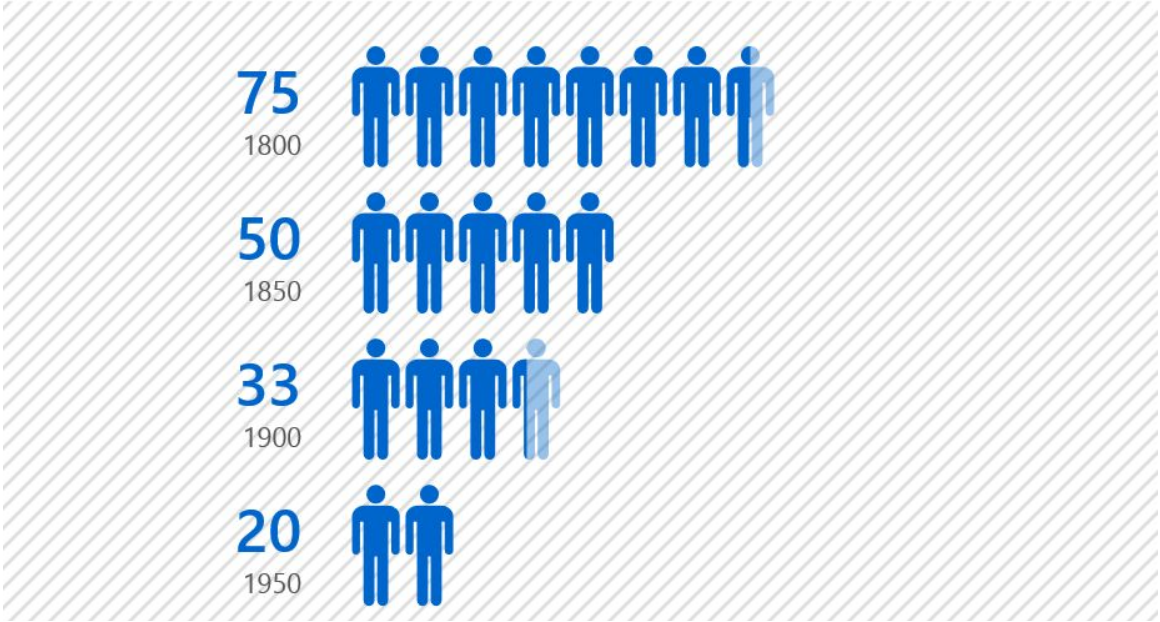
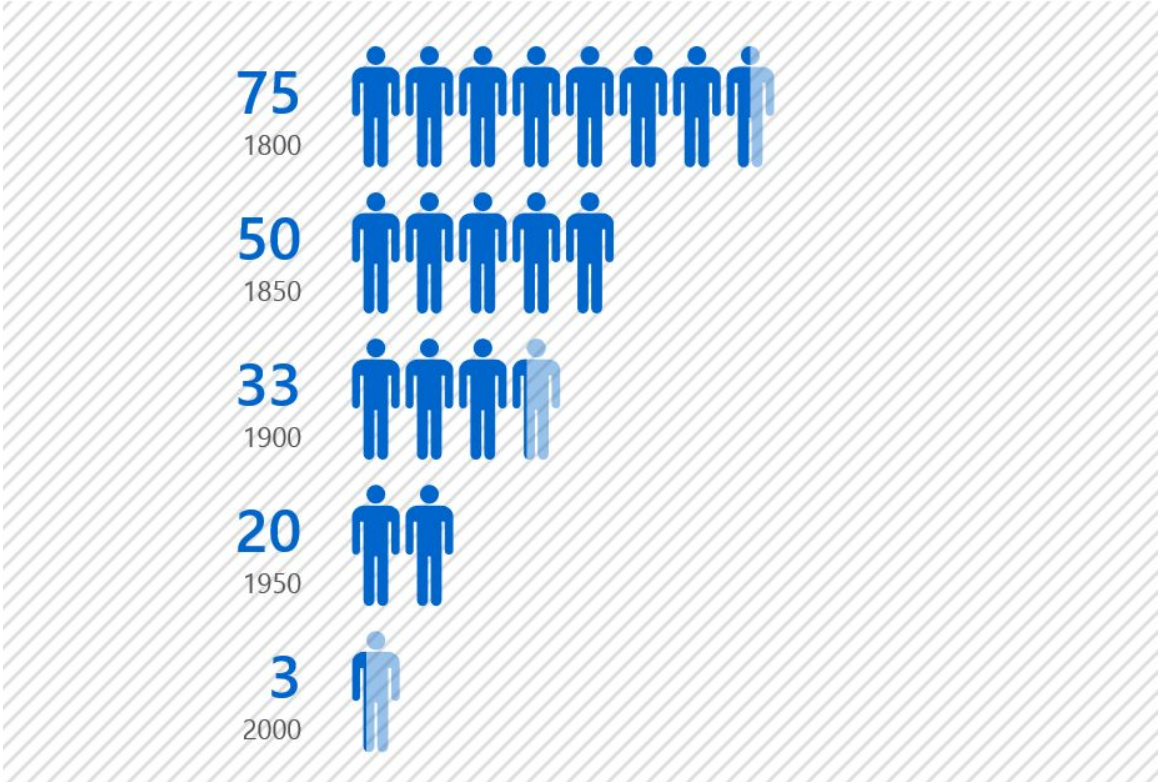
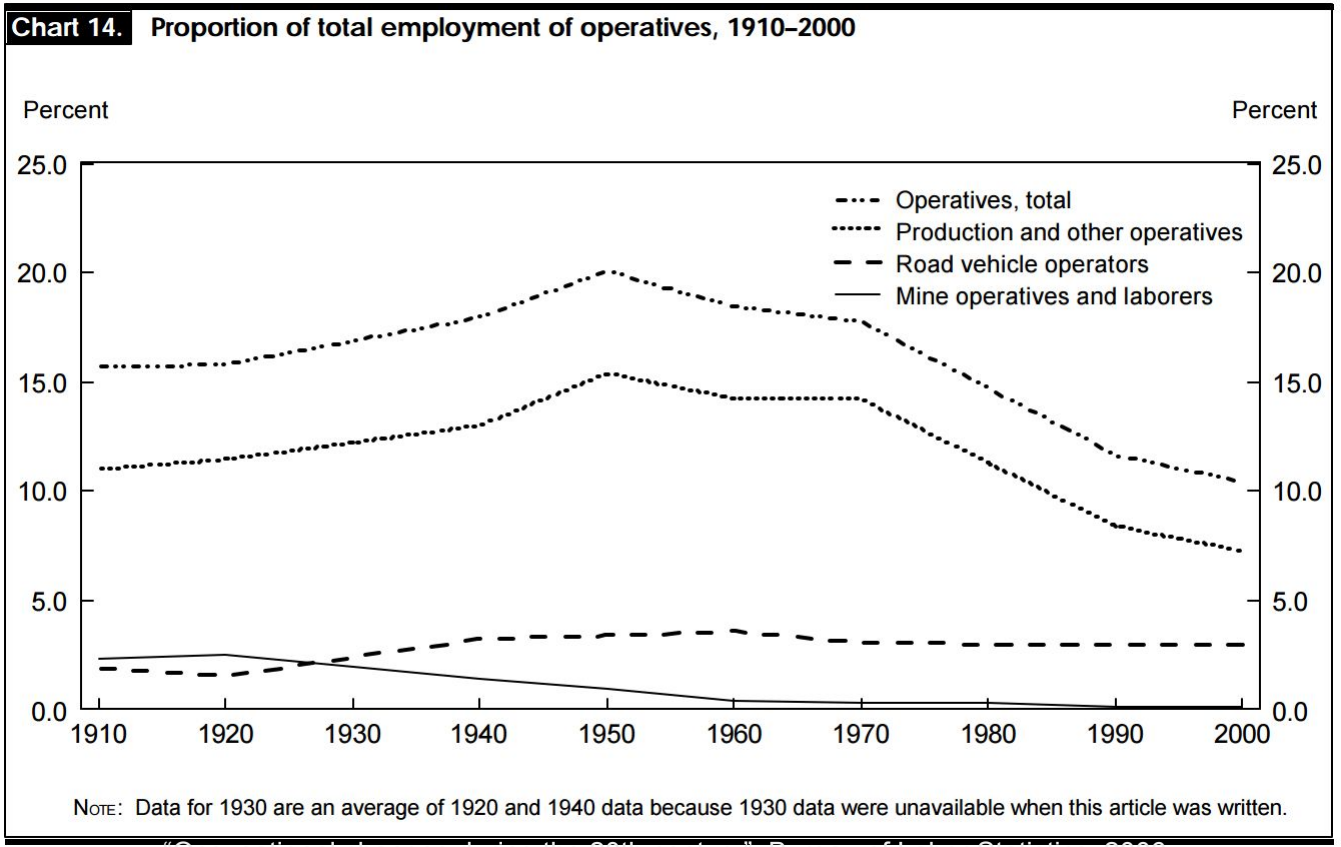


Farmers in USA (% of pop)



“Operatives” in the US (assembly, drivers, mining)



“Occupational changes during the 20th century”, Bureau of Labor Statistics, 2006

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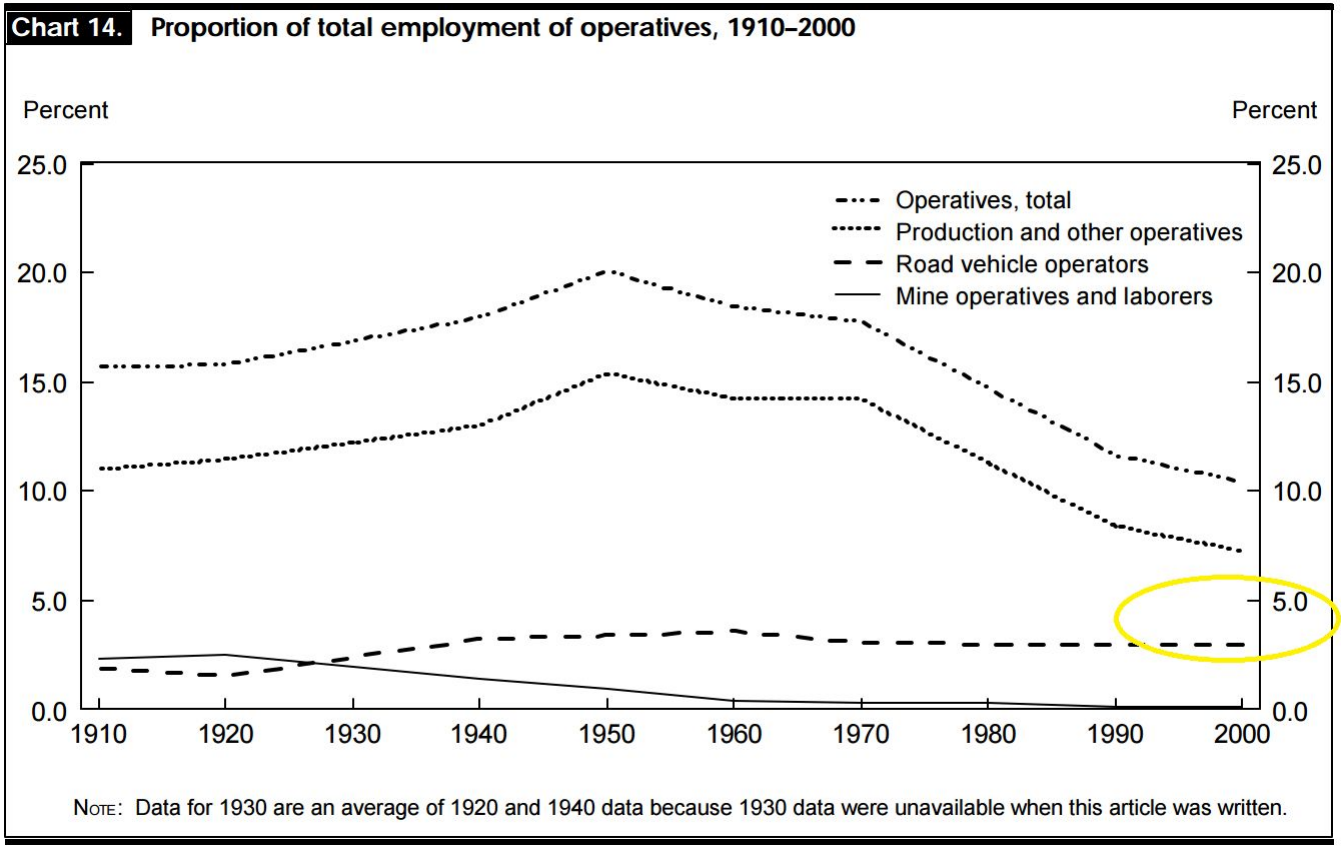
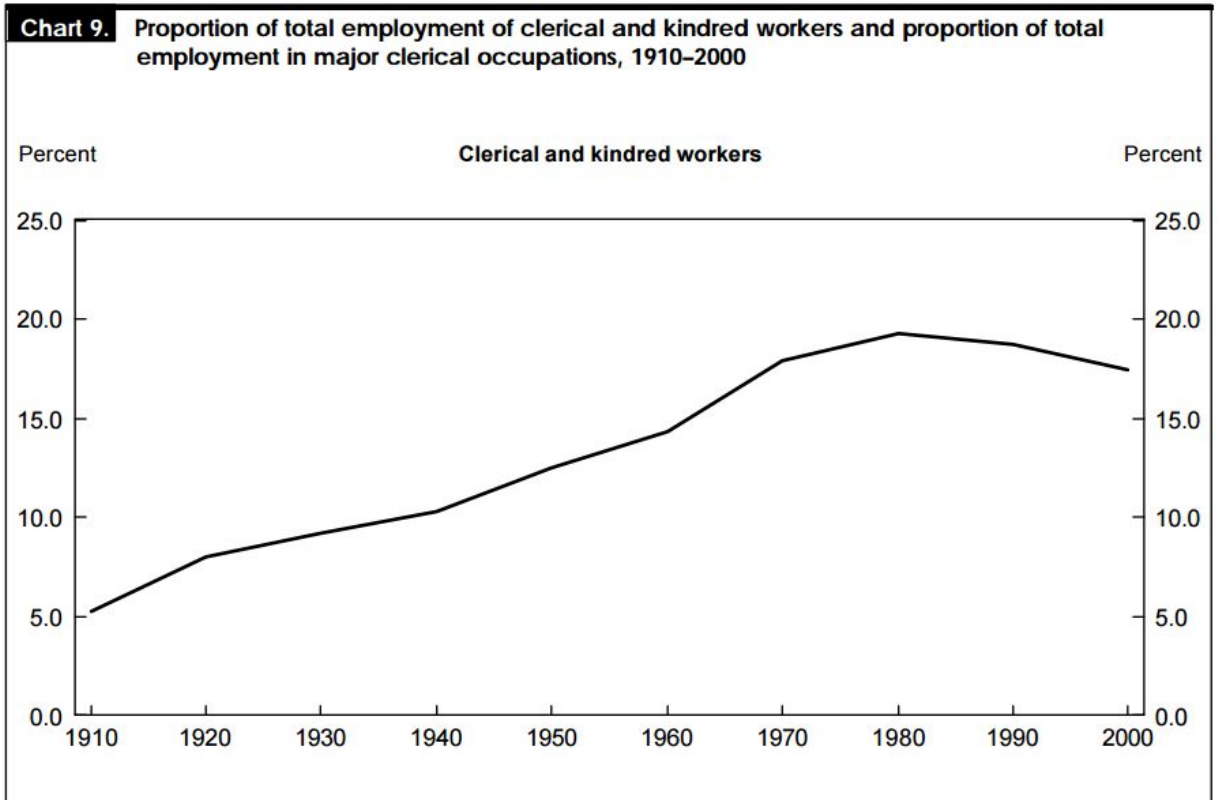


Clerical workers in the US (1900-2000)



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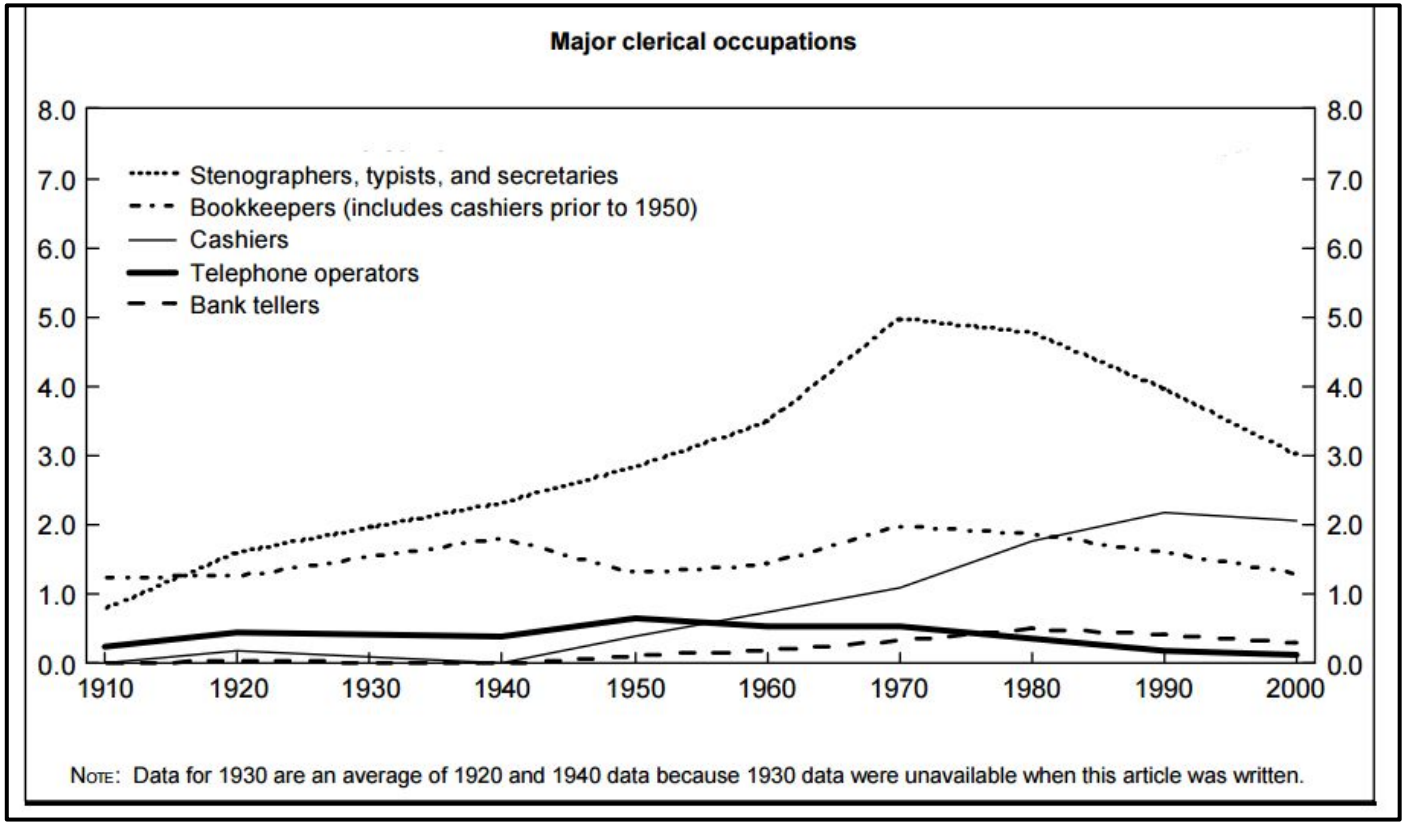

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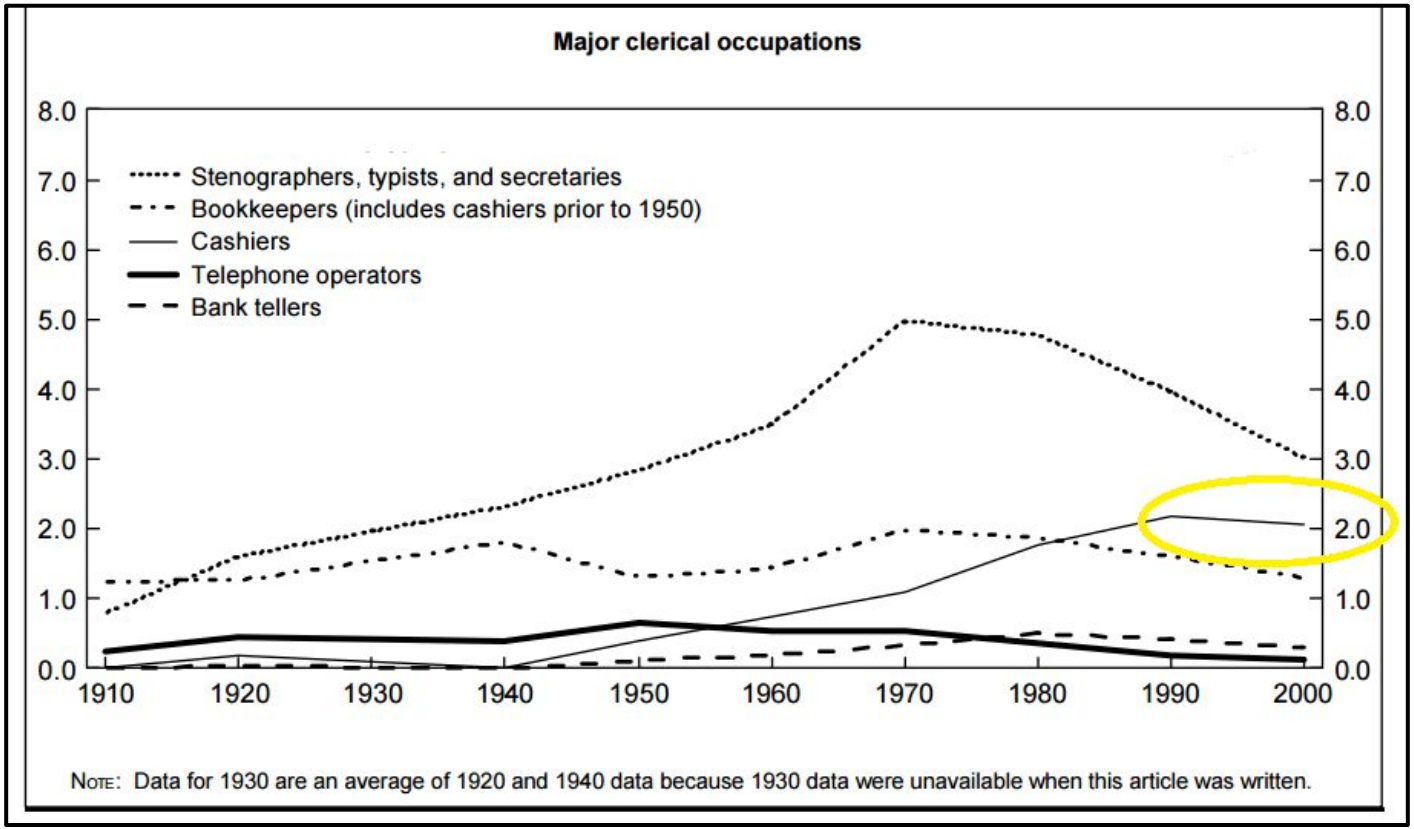
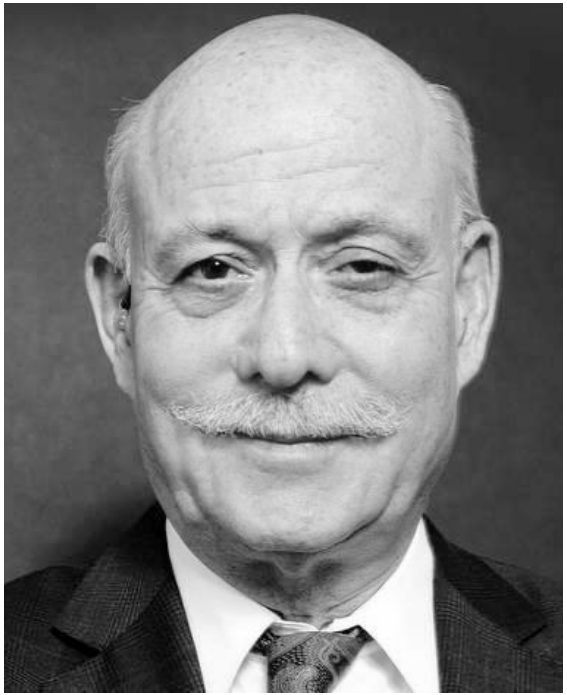


"Occupational changes during the 20th century", Bureau of Labor Statistics, 2006

“We are entering a new phase in human history - one in which fewer and fewer workers will be needed to produce the goods and services for the global population.”

Jeremy Rifkin, 1995



job[1]

/jäb/

noun

noun: **job**; plural noun: **jobs**

1. a paid position of regular employment.
   "jobs are created in the private sector, not in Washington"

work

/wərk/

noun

1. activity involving mental or physical effort done in order to achieve a purpose or result.
   "he was tired after a day's work in the fields"

We all need work, we don't need a job.

The "demand" economy

on-demand

on-demand

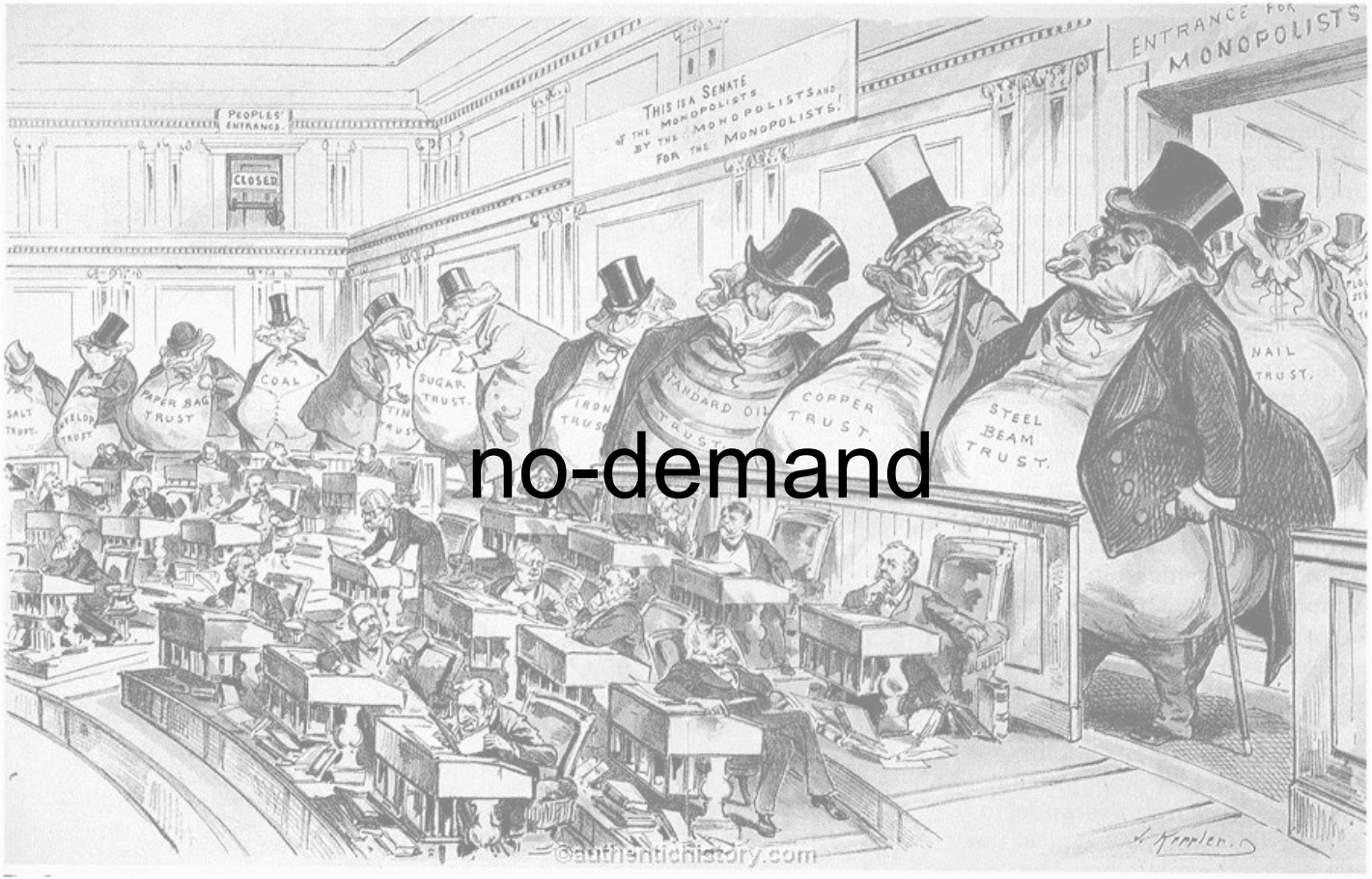
on-demand

in-demand

in-demand

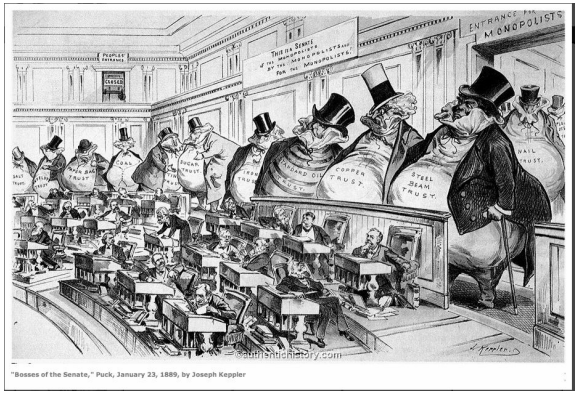
in-demand

no-demand

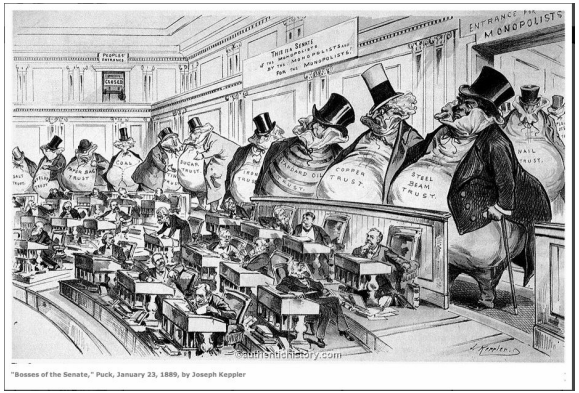


"Bosses of the Senate," Puck, January 23, 1889, by Joseph Keppler

no-demand


ENTRANCE TO
MONOPOLISTS
COPPER TRUST
STEEL BEAM TRUST
"Bosses of the Senate," Puck, January 23, 1889, by Joseph Keppler

The "demand" economy



"Bosses of the Senate," Puck, January 23, 1889, by Joseph Keppler

WORK
?
LIFE
BALANCE

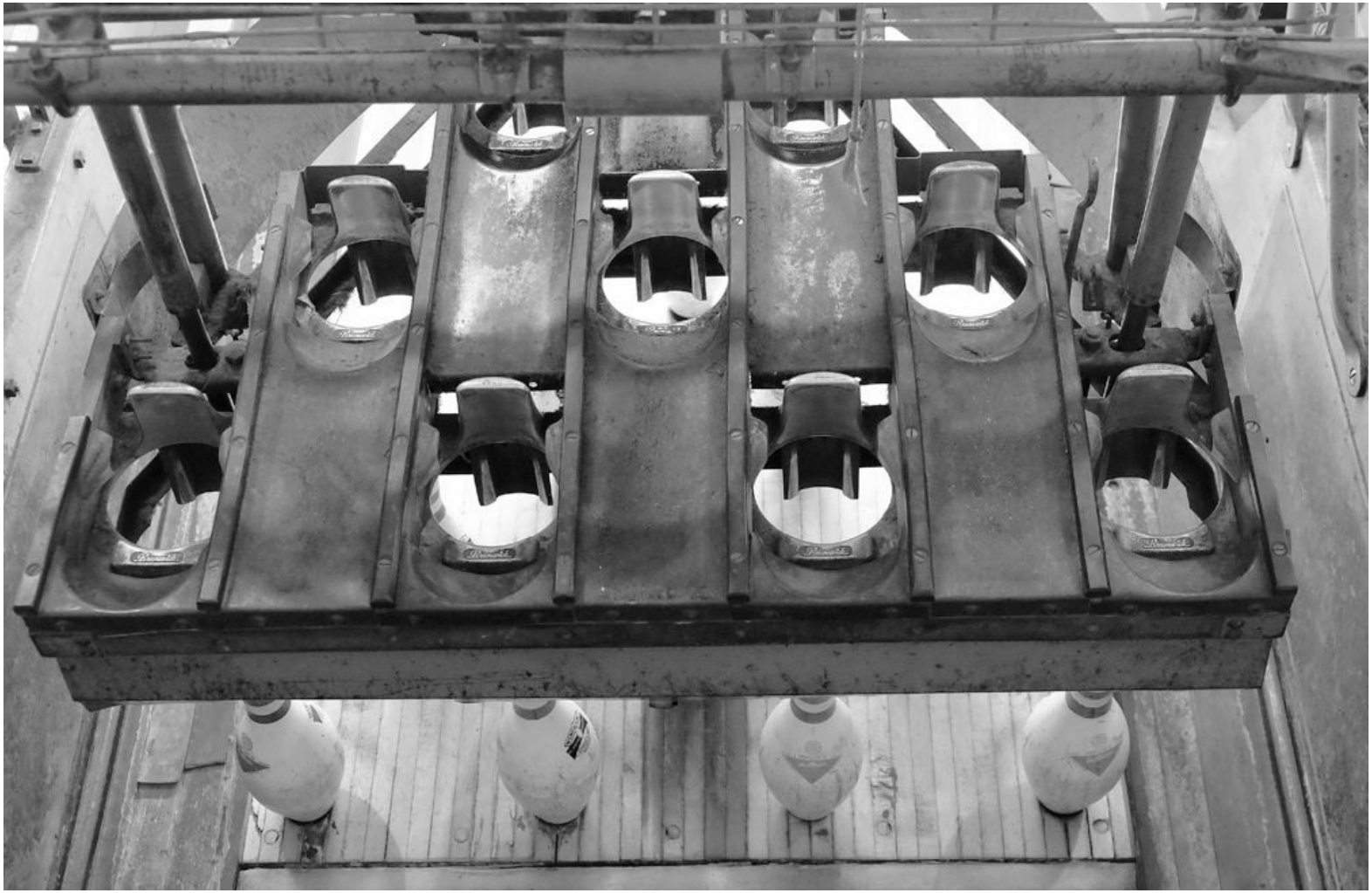
WORK
?
LIFE
BALANCE

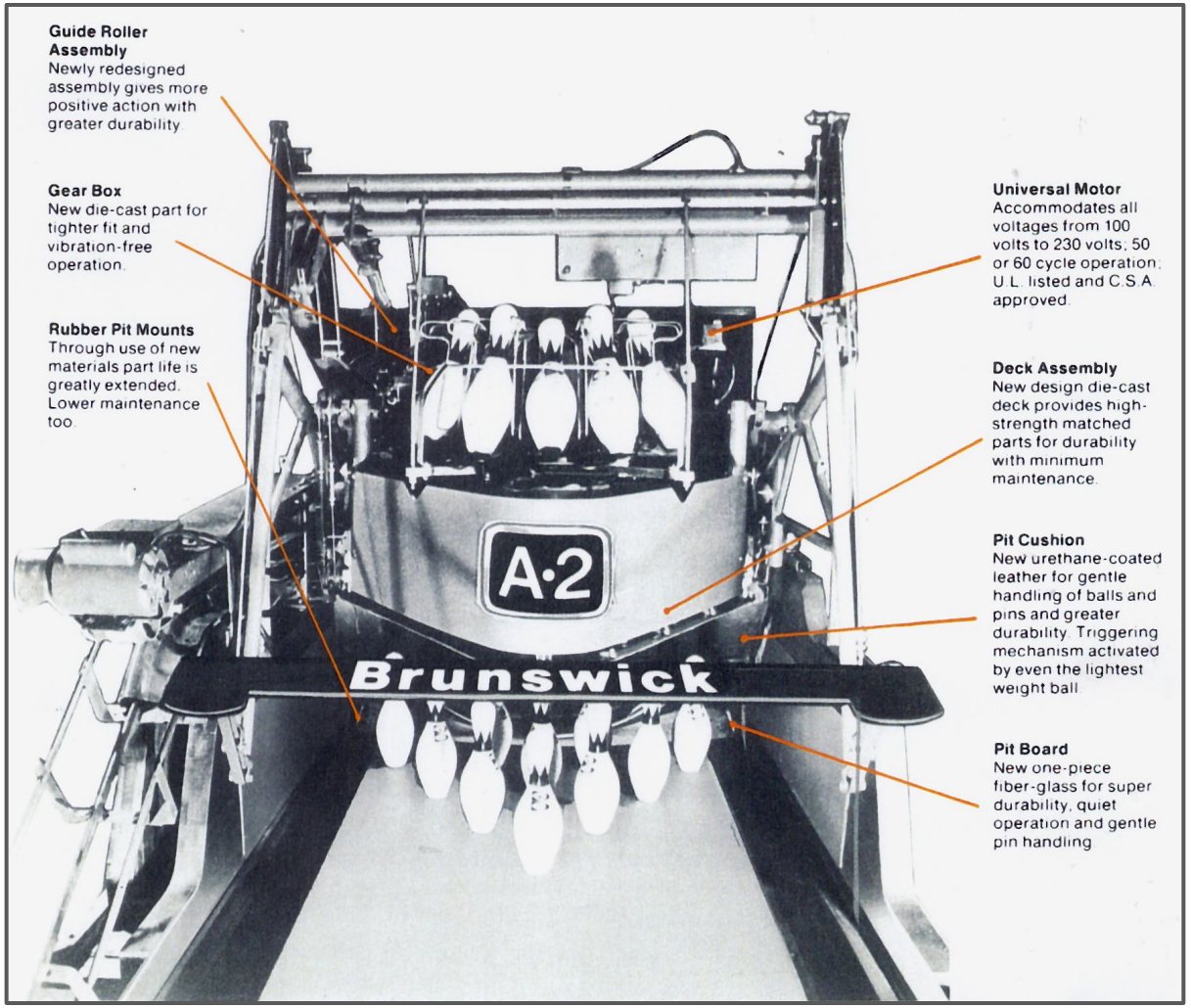
Models

“A new world has arisen: the Rule of the Robots!”

-- Rossums’ Universal Robots, Karel Capek

Let's go bowling...





Guide Roller Assembly
Newly redesigned assembly gives more positive action with greater durability.

Gear Box
New die-cast part for tighter fit and vibration-free operation.

Rubber Pit Mounts
Through use of new materials part life is greatly extended. Lower maintenance too.

Universal Motor
Accommodates all voltages from 100 volts to 230 volts; 50 or 60 cycle operation; U.L. listed and C.S.A. approved.

Deck Assembly
New design die-cast deck provides high-strength matched parts for durability with minimum maintenance.

Pit Cushion
New urethane-coated leather for gentle handling of balls and pins and greater durability. Triggering mechanism activated by even the lightest weight ball.

Pit Board
New one-piece fiber-glass for super durability, quiet operation and gentle pin handling.

Stage 1: Humans do the work

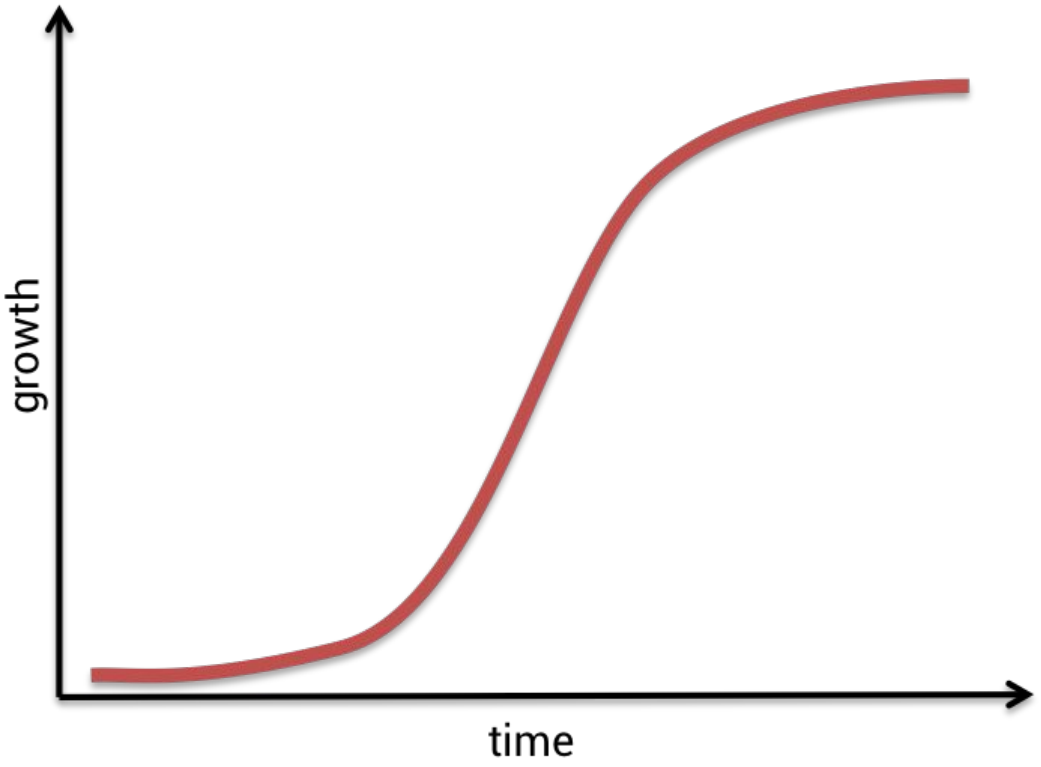
Stage 1: Humans(?) do the work

Stage 2: Machines augment humans

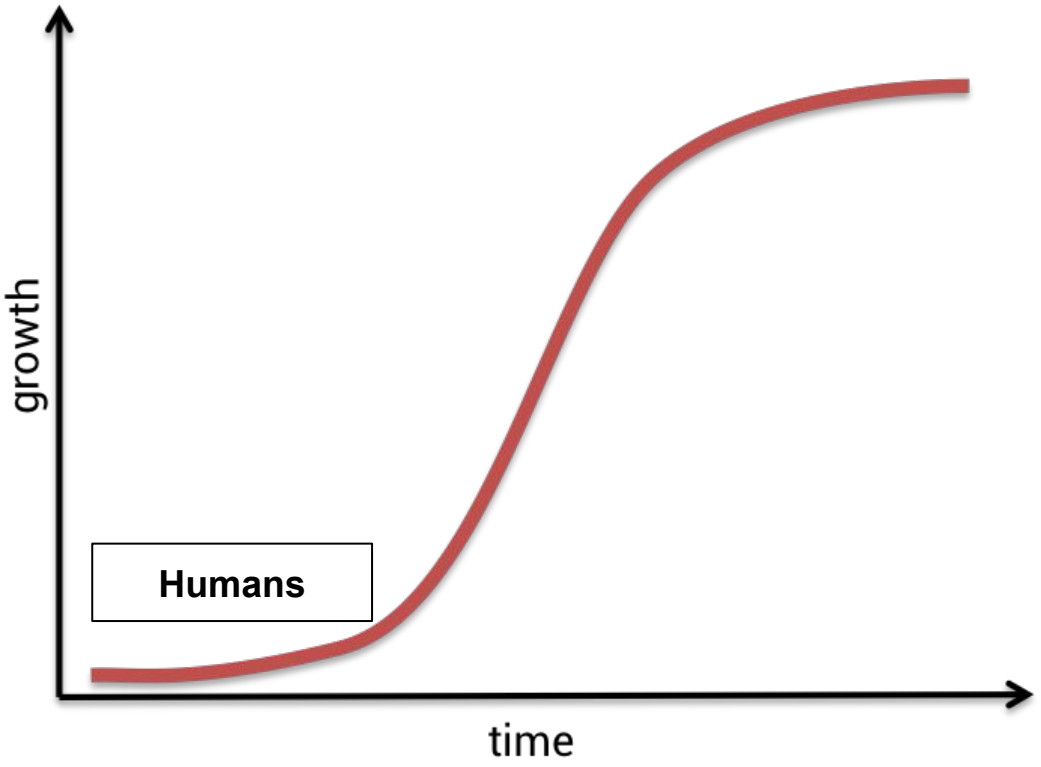
Stage 3: Humans tend the machine

Stage 4: Machines work unattended

Stages on the S-Curve



Stages on the S-Curve



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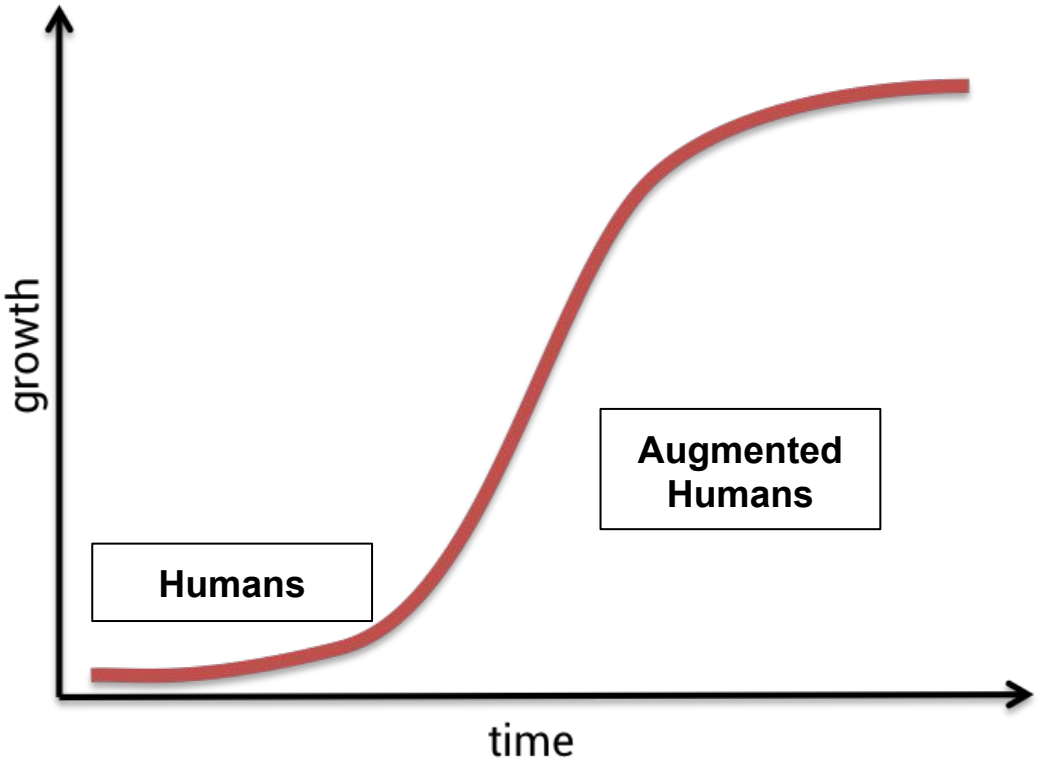

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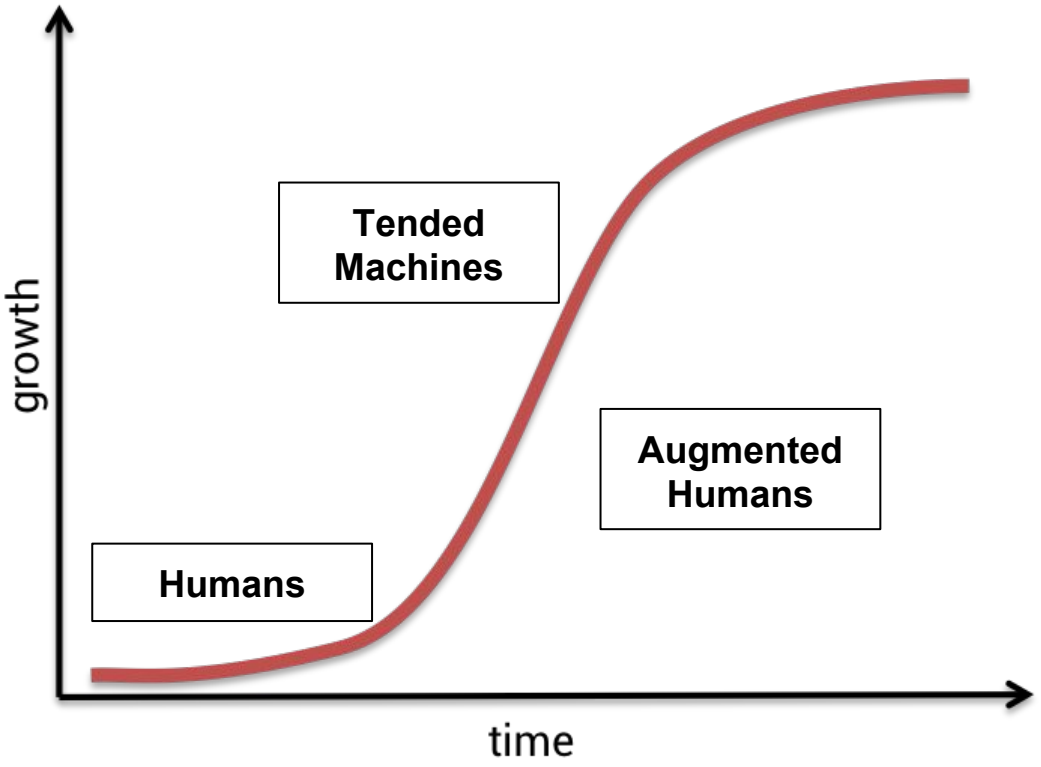

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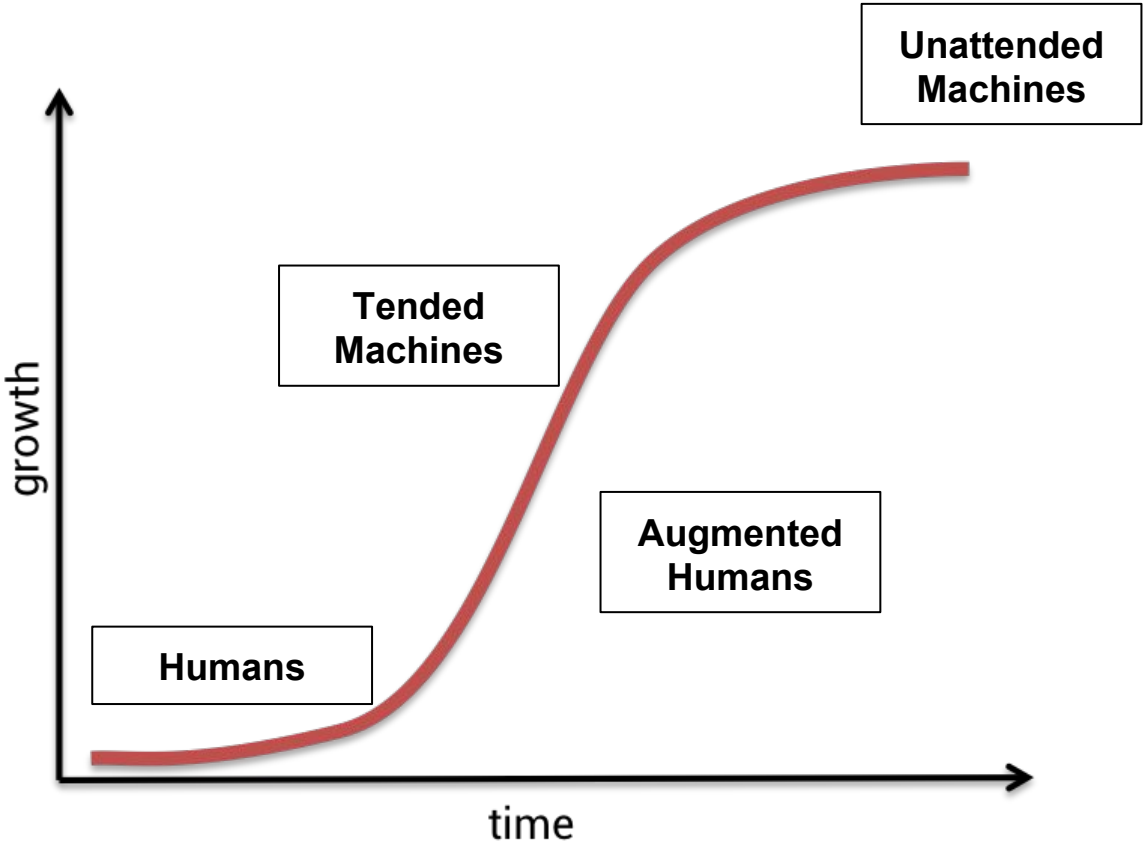

Where are we on the S-Curve?

Division
Agriculture, Forestry and Fishing
Mining
Construction
Manufacturing
Transportation, Communications, Electric, Gas and Sanitary service
Wholesale Trade
Retail Trade
Finance, Insurance and Real Estate
Services
Public Administration

Where are we on the S-Curve(s)?

Division
Agriculture, Forestry and Fishing
Mining
Construction
Manufacturing
Transportation, Communications, Electric, Gas and Sanitary service
Wholesale Trade
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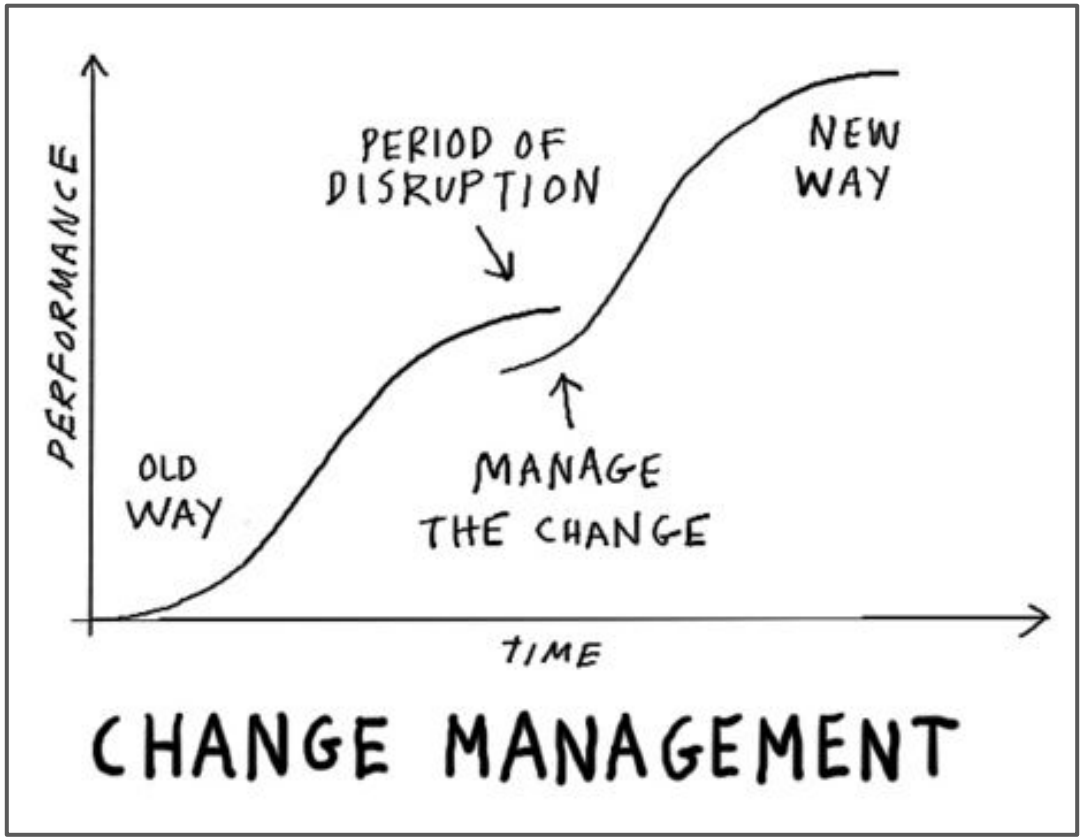
Finance, Insurance and Real Estate
Services
Public Administration

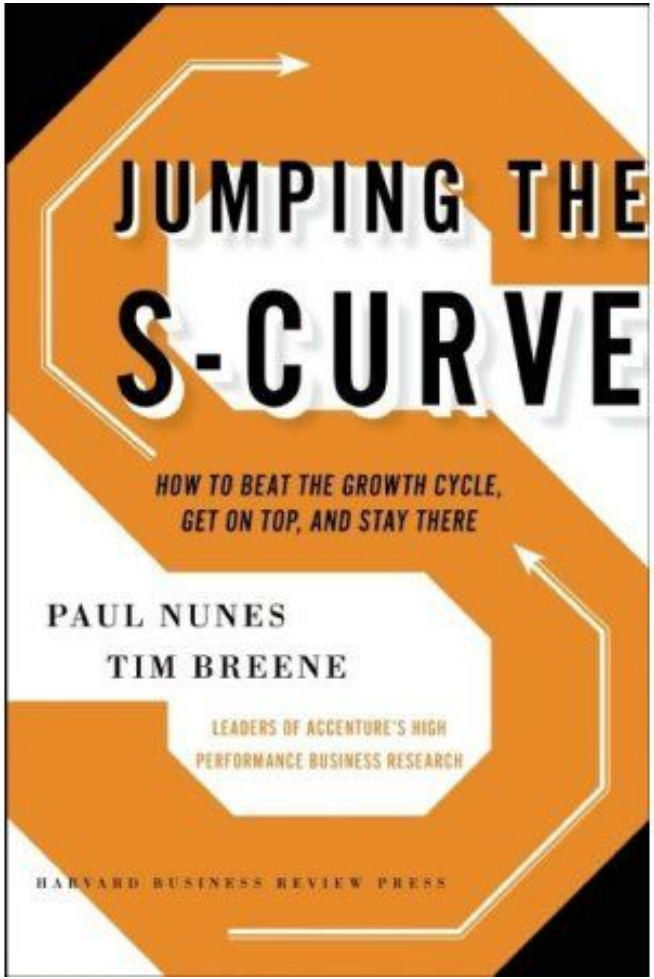
"Hands off the wheel" at Amazon

"The algorithms could be overridden by humans if they thought there was a mistake. But as the algorithms proved their worth, it became necessary for employees to justify why they were overriding the software."

https://qz.com/1304987/amazon-has-already-begun-automating-its-white-collar-jobs/

Identifying Disruption




JUMPING THE
S-CURVE
HOW TO BEAT THE GROWTH CYCLE,
GET ON TOP, AND STAY THERE
PAUL NUNES
TIM BREENE
LEADERS OF ACCENTURE'S HIGH
PERFORMANCE BUSINESS RESEARCH
HARVARD BUSINESS REVIEW PRESS

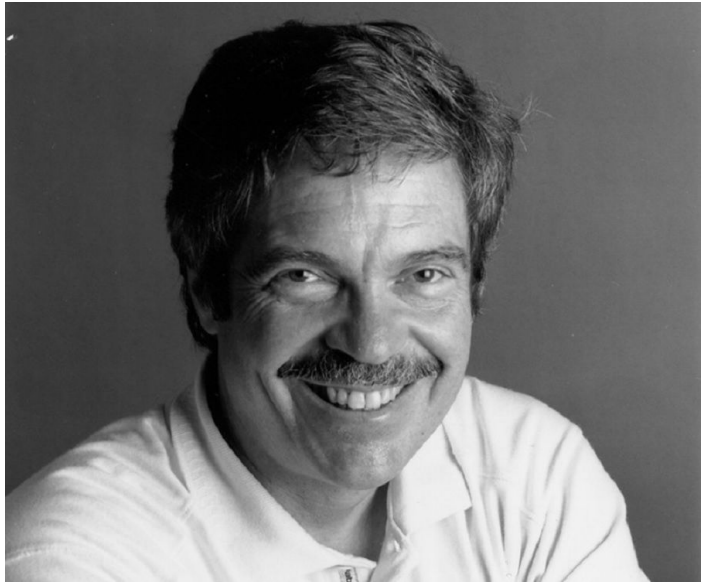
Future

“Everybody will live only to perfect themselves.”

-- Rossums’ Universal Robots, Karel Capek

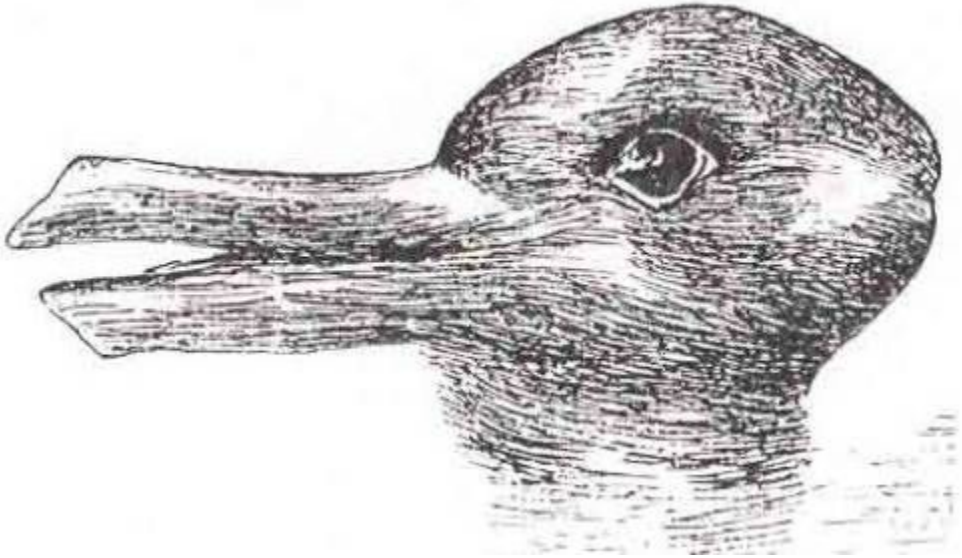
"The best way to predict the future is to invent it."

-- Alan Kay

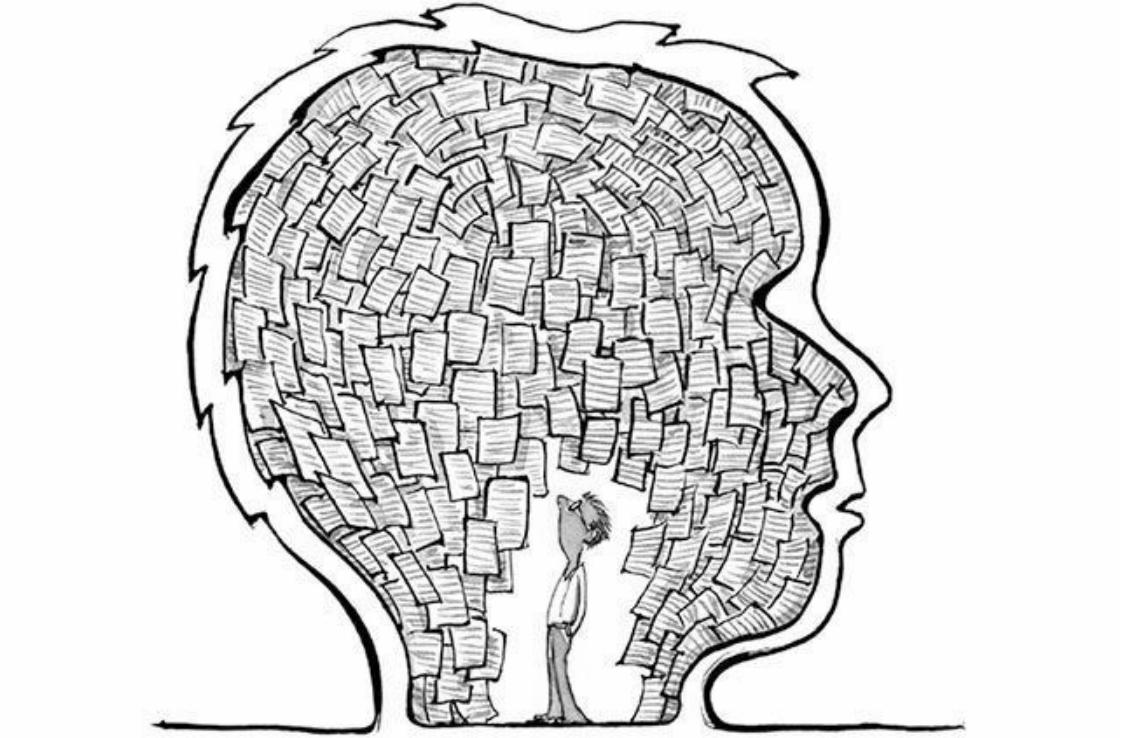


A recipe for inventing the future...

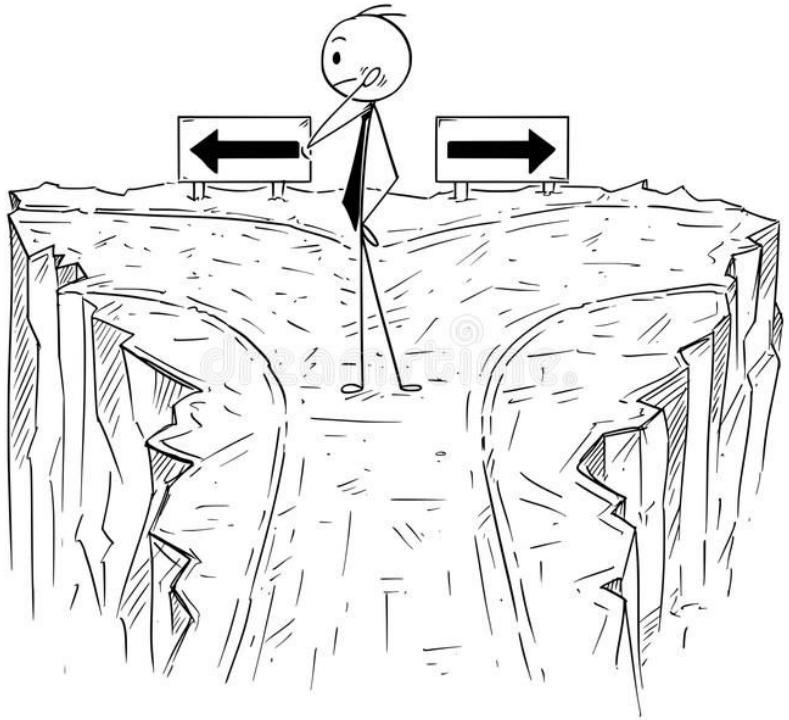
We don't see the world, we filter it.



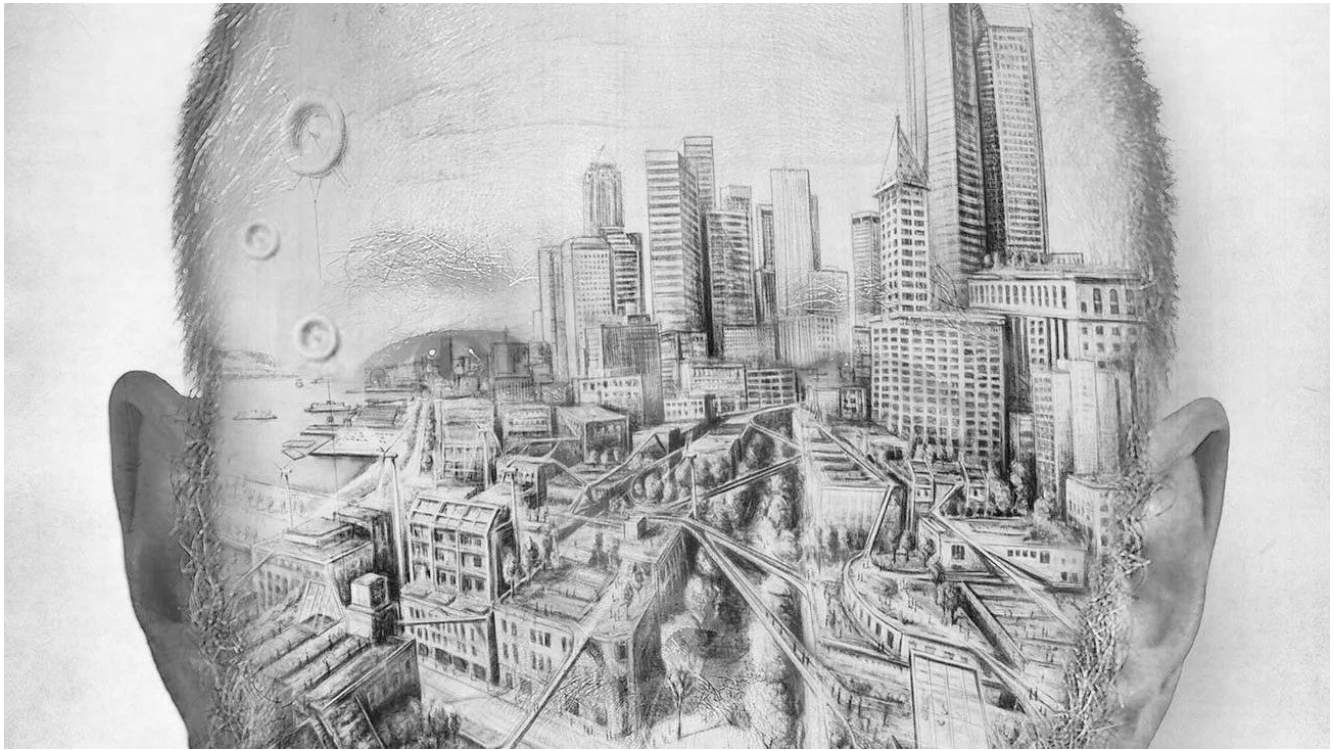
Our assumptions are the sum total of our saved filters



Our choices are governed by our assumptions



Thus, we choose our future



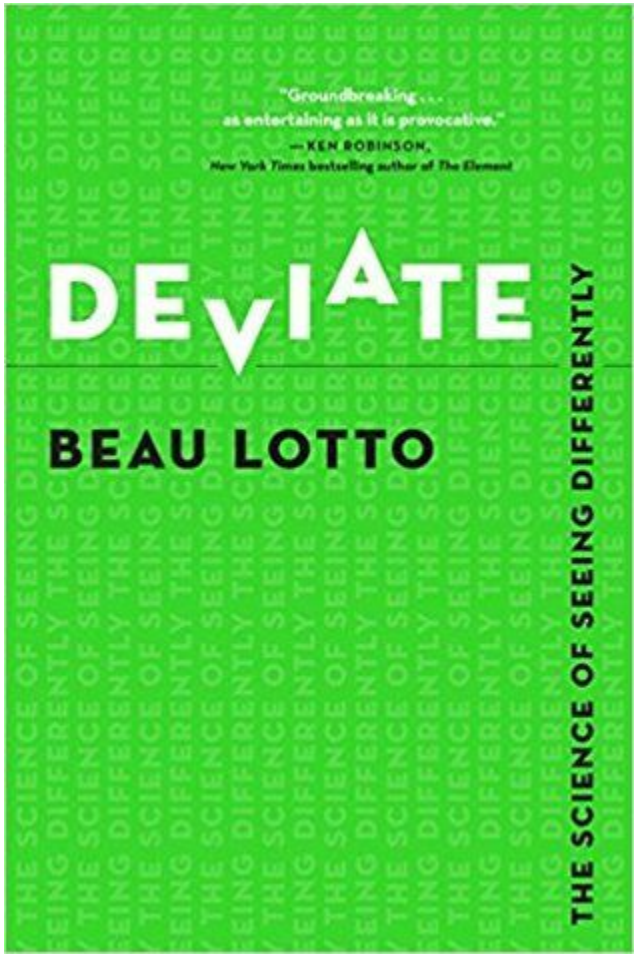
Want to change the future?

That's easy…

That's easy…

Change the past!

"Re-meaning the past." -- Beau Lotto


"Groundbreaking . . .
. . . as entertaining as it is provocative."
— KEN ROBINSON,
New York Times bestselling author of The Element
DEVIATE
BEAU LOTTO
THE SCIENCE OF SEEING DIFFERENTLY

"Our perceptions are an ongoing, ever-growing. ever-changing story, and our brain allows us to be not just passive listeners to that story, but also the storytellers as well."

-- Beau Lotto

Learn the API for changing the future

"Actively seeking contrast is the engine that drives change."

-- Beau Lotto

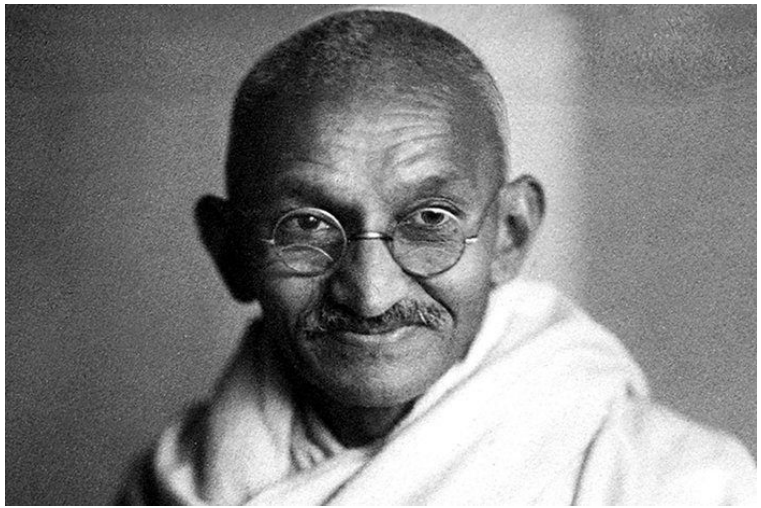
active

"Actively seeking contrast is the engine that drives change."

-- Beau Lotto

"Be the change you want to see in the world."

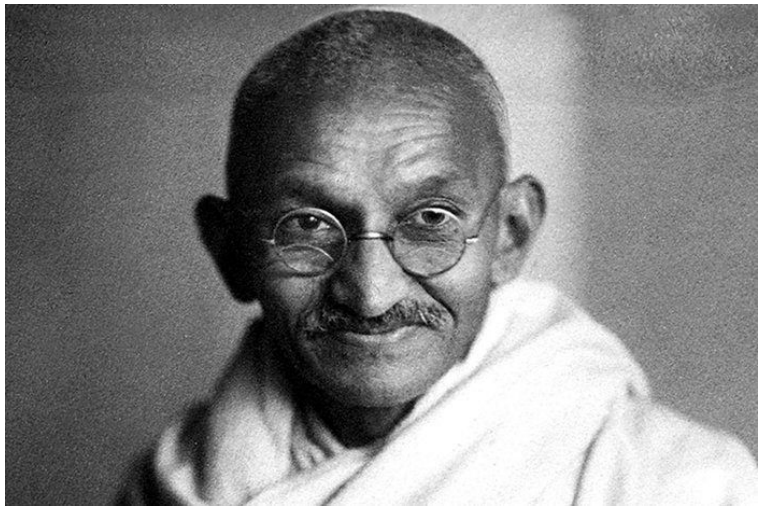
-- Gandhi



personal

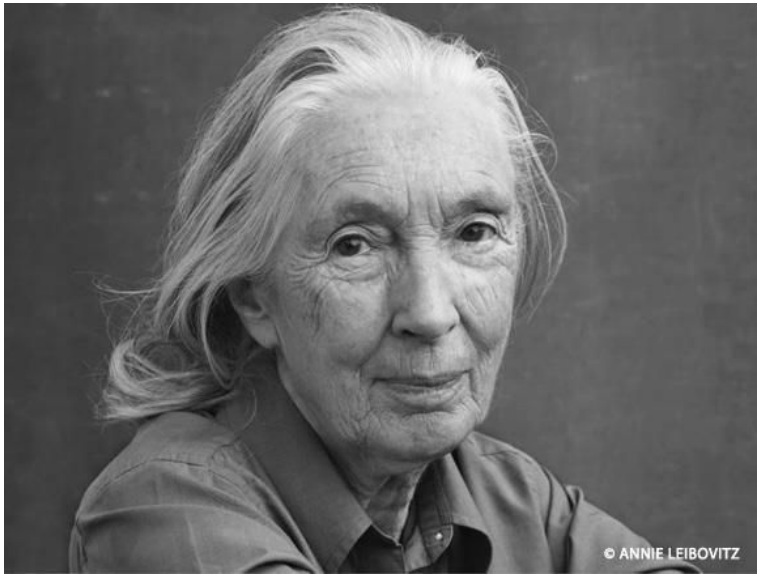
"Be the change you want to see in the world."

-- Gandhi



"Every individual makes a difference."

-- Jane Goodall



incremental

"Every individual makes a difference."

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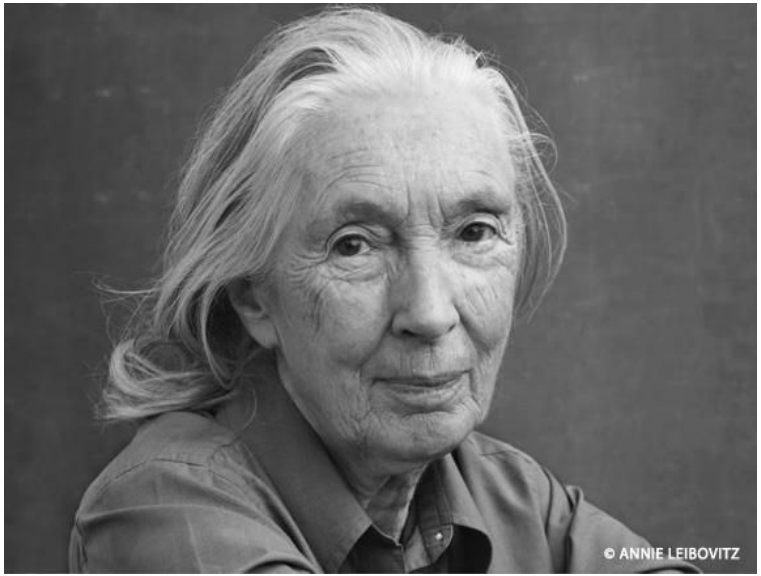


The "Future API"

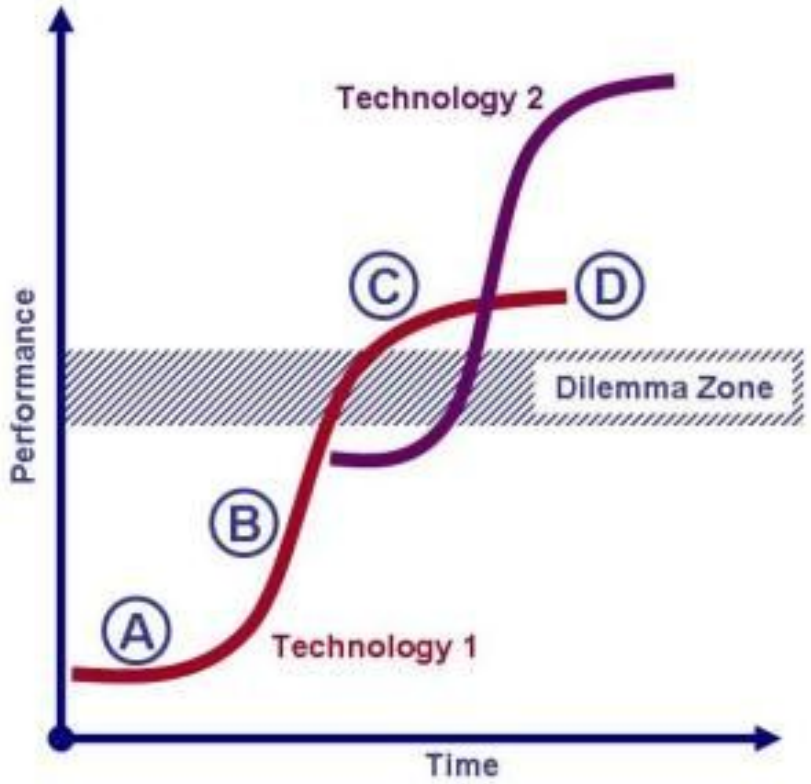
- Active
- Personal
- Incremental

So...

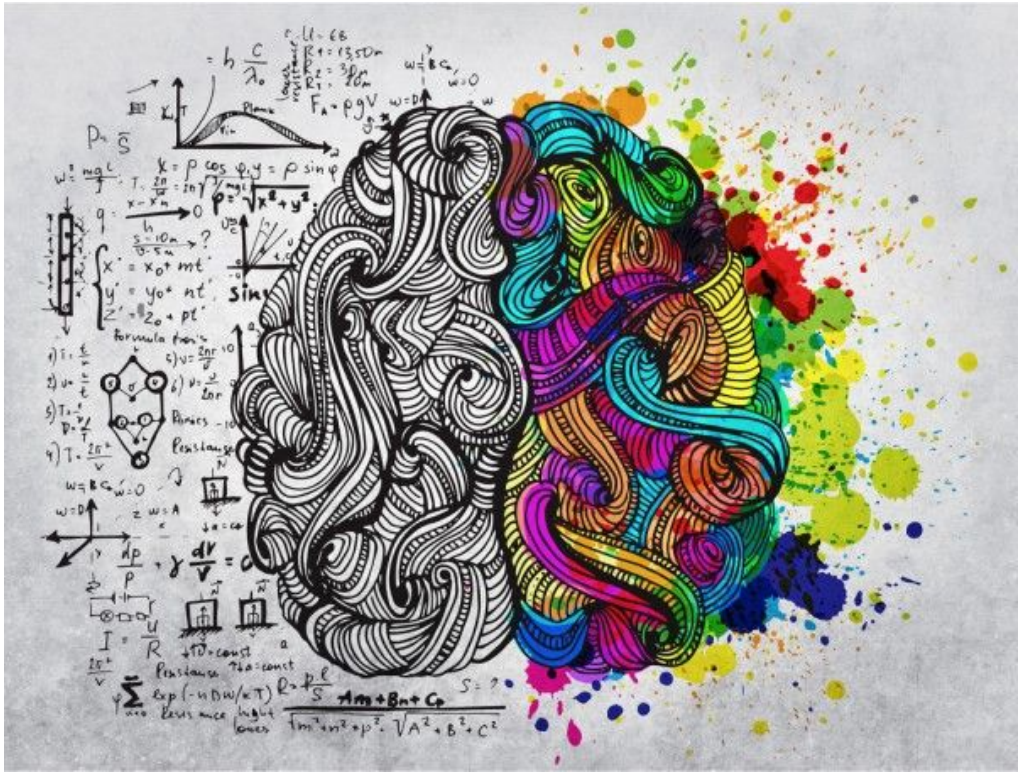
Challenge Questions

What would a world of no jobs, but lots of work, look like?

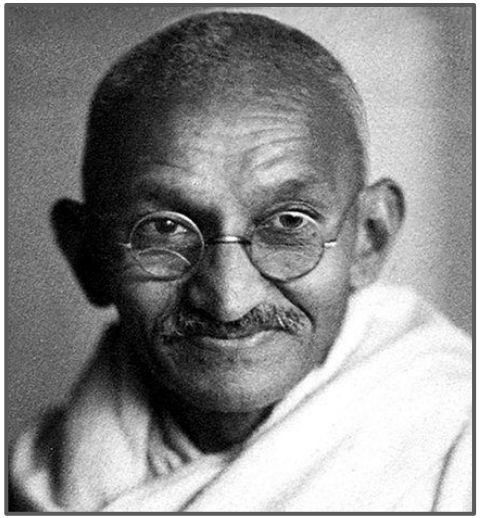
How do we deal with the S-Curves?

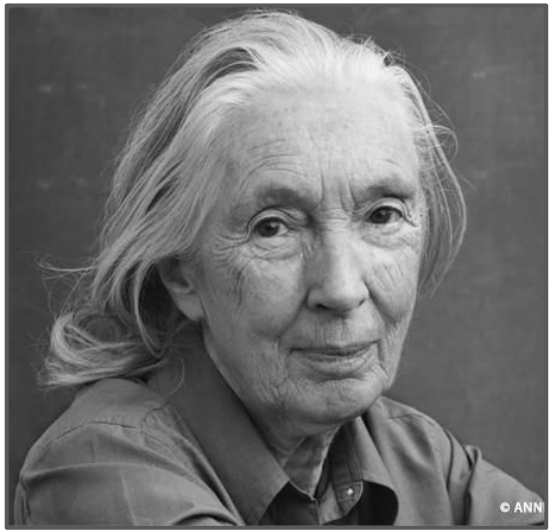


How do we enable re-meaning the past?



How do we scale the "Future API"?





The **work** we do creates the **models** for the **future**.

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