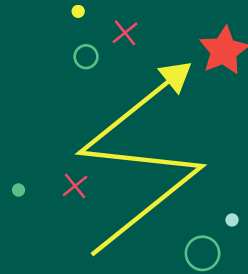




Cambridge Assessment
International Education



What will “**success**” mean in our transforming world?

VALERIE HANNON
Cambridge September 2018

Everything starts with
the story we tell
ourselves about
ourselves

We need a new
narrative for education,
one that starts with
our purpose



WHAT IS LEARNING FOR?

Should this be our explicit purpose?

Today, education has to be about
learning to thrive in a transforming world



Thrive

SCHOOLS REINVENTED
FOR THE REAL
CHALLENGES WE FACE

Valerie Hannon
with Amelia Peterson

"*Thrive* offers a compelling analysis that should inspire and deepen the public conversation about education for all our children, here and now, and for the future."

SIR KEN ROBINSON



What good evidence do we have
about the coming 30 years?

The Future

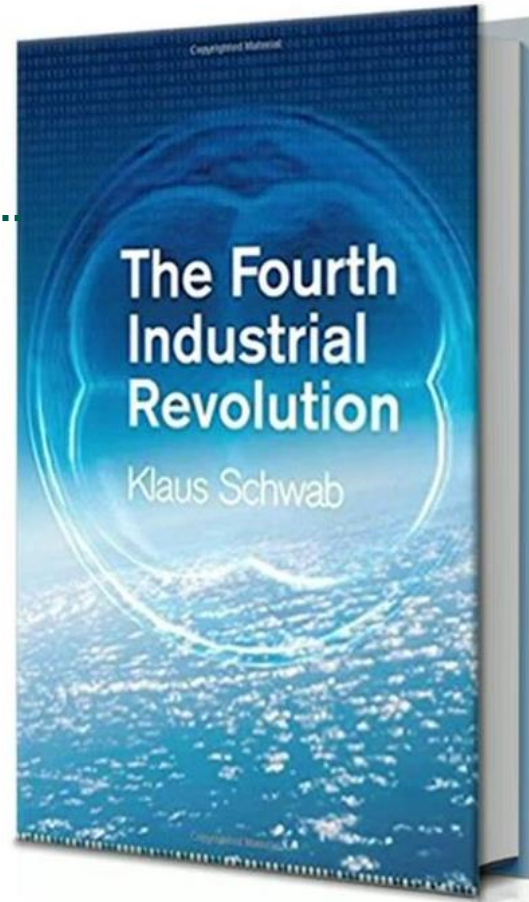
Al Gore

“There is a clear consensus that the future now emerging will be extremely different from anything we have ever known in the past. It is a difference, not of degree, but of kind”

The Future
Al Gore, 2013

The Fourth Industrial Revolution

Klaus Schwab



“The changes are so profound that, from the perspective of human history, there has never been a time of greater promise or potential peril. My concern, however, is that decision makers are too often caught in traditional, linear (and non-disruptive) thinking or too absorbed by immediate concerns to think strategically about the forces of disruption and innovation shaping our future.”

World Economic Forum Founder
and Executive Chairman

Professor Klaus Schwab, Jan 2016



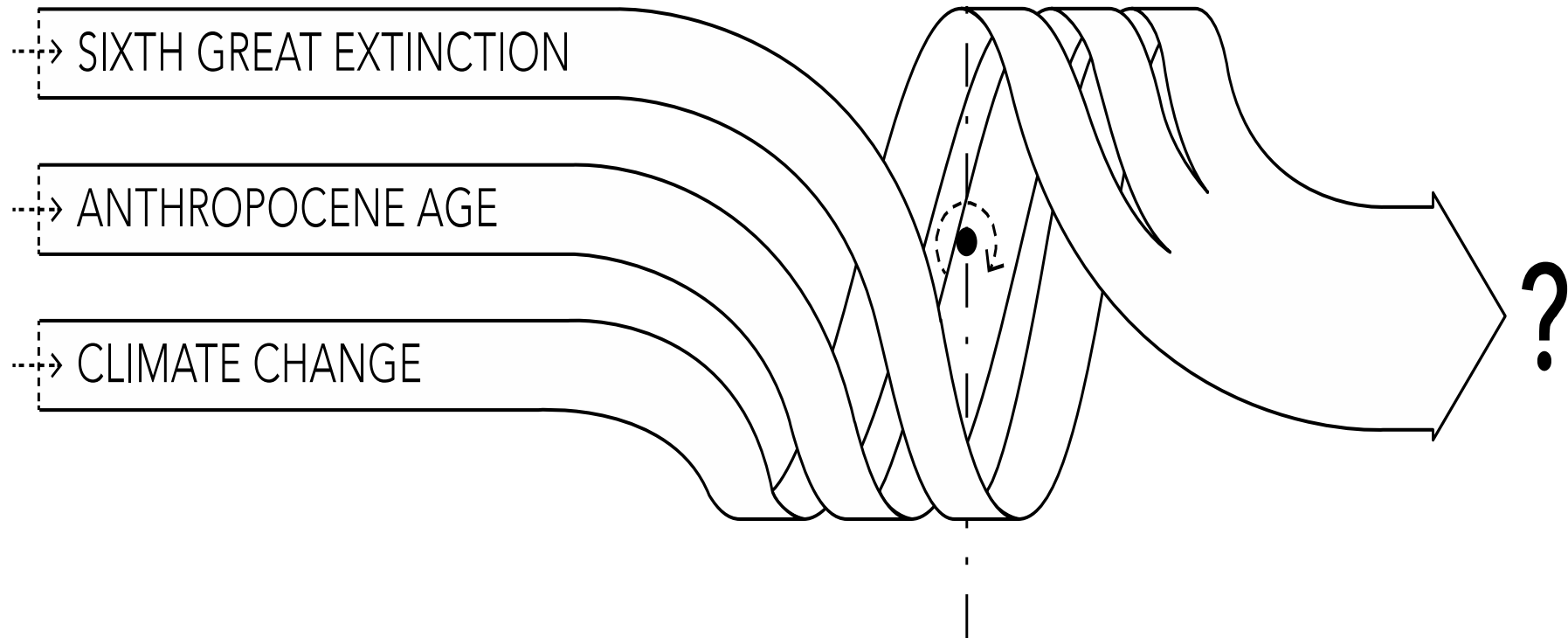
The evidence suggests that 3 major tipping points, or 'pivots' will distinguish the C21st:

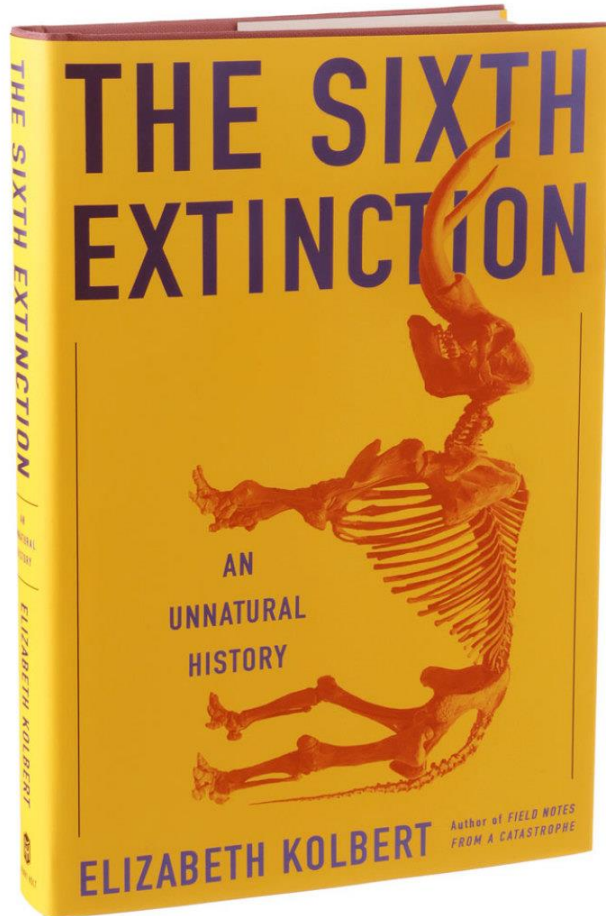
***our planet**

***apotheosis of technology**

***our evolution**

OUR PLANET AT A TIPPING POINT?



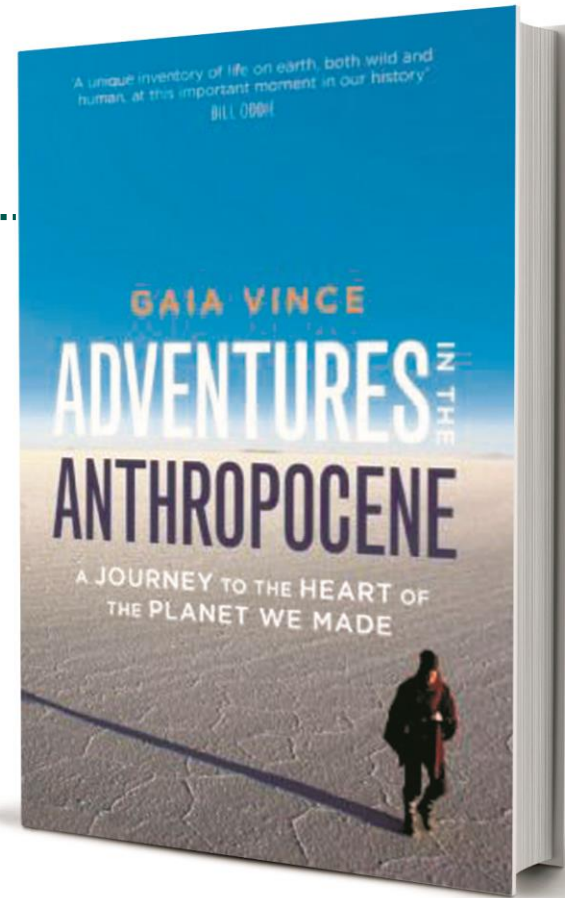


The Sixth Extinction

Elizabeth Kolbert

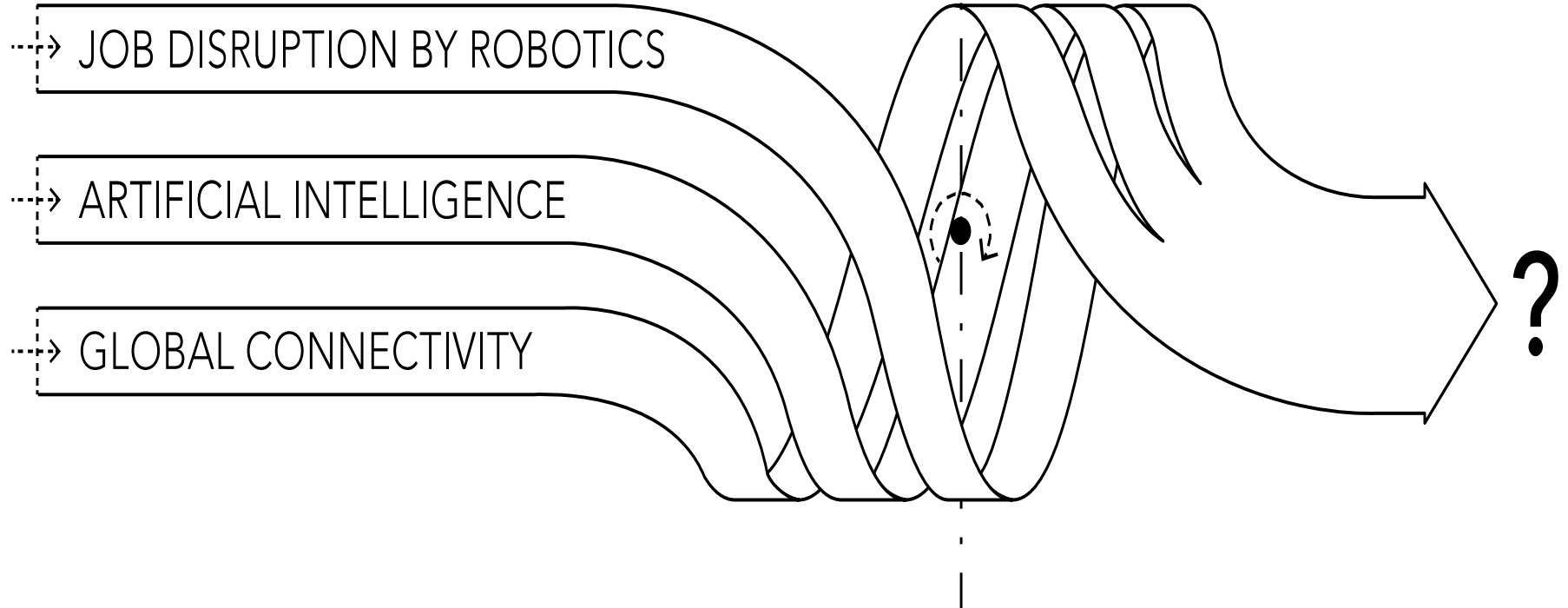
Adventures in the Anthropocene

Gaia Vince

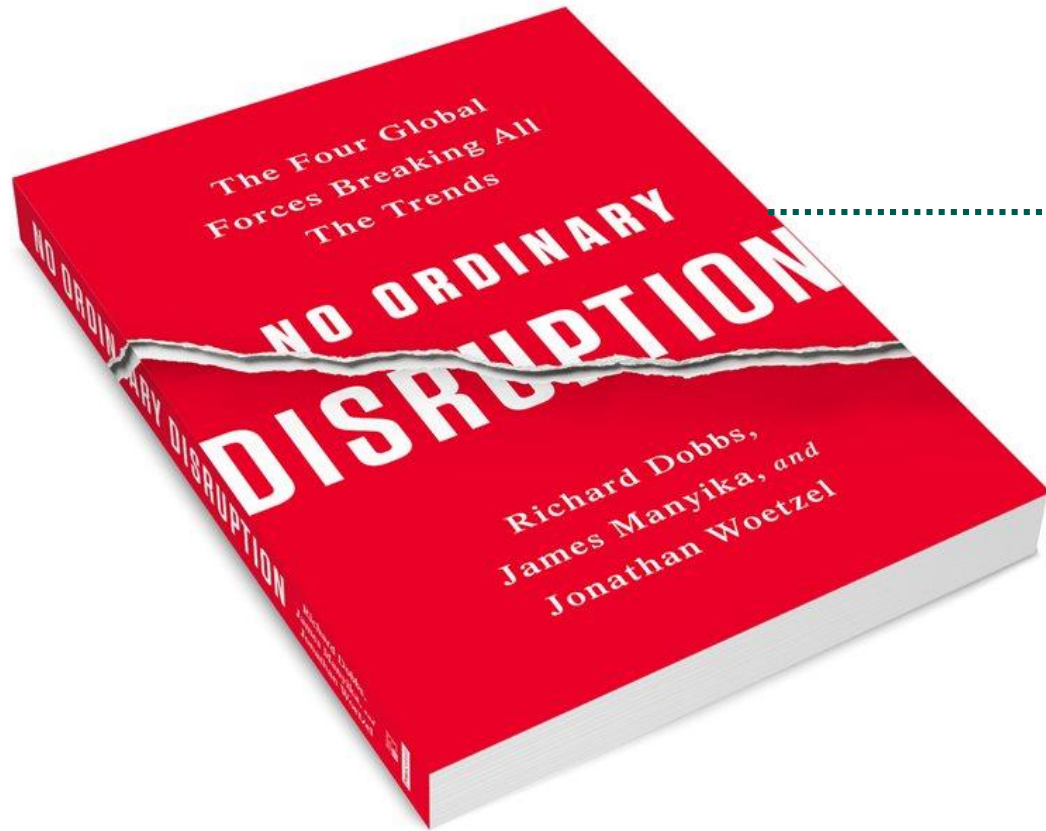




TECHNOLOGY IN CONTROL?







No Ordinary Disruption

*Richard Dobbs,
James Manyika and
Jonathan Woetzel*

Robots will steal your job

Federico Pistono

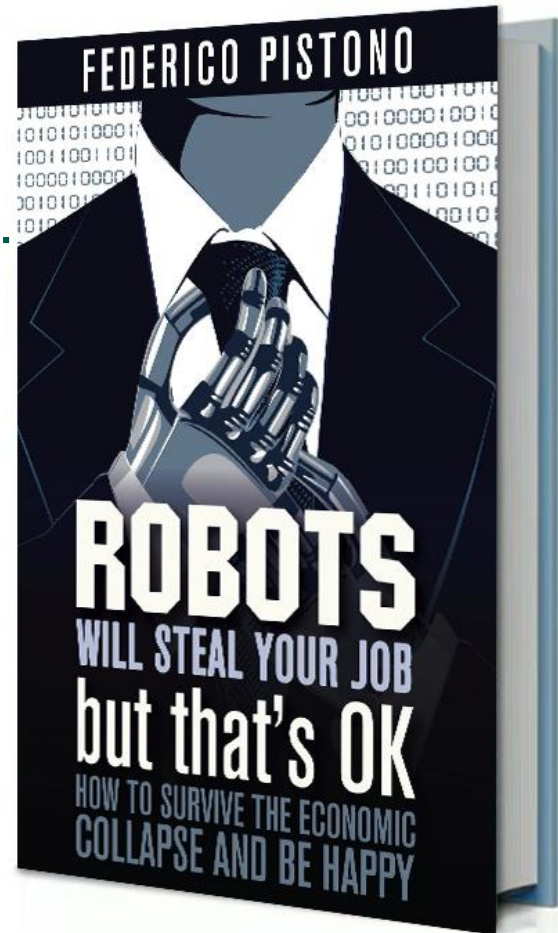
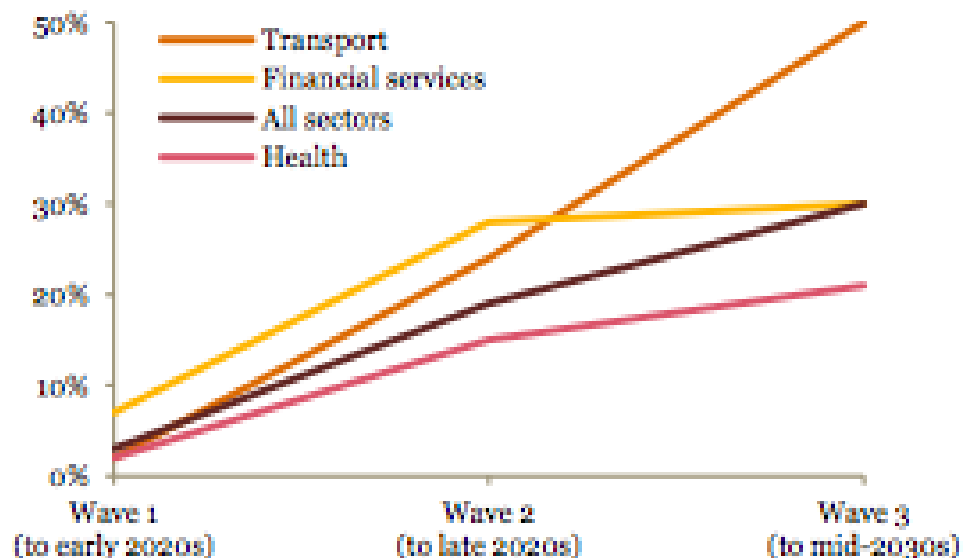


Figure 1 – Potential job automation rates by industry across waves

% of existing jobs at potential risk of automation



Source: PwC estimates based on OECD PIAAC data (median values for 29 countries)



\$15tn

*Potential boost to global GDP from
AI by 2030*

3%

*of jobs at potential risk of
automation by early 2020s*

30%

*of jobs at potential risk of
automation by mid-2030s*

44%

*of workers with low education at
risk of automation by mid-2030s*



Nao meeting
customers







Project Debater

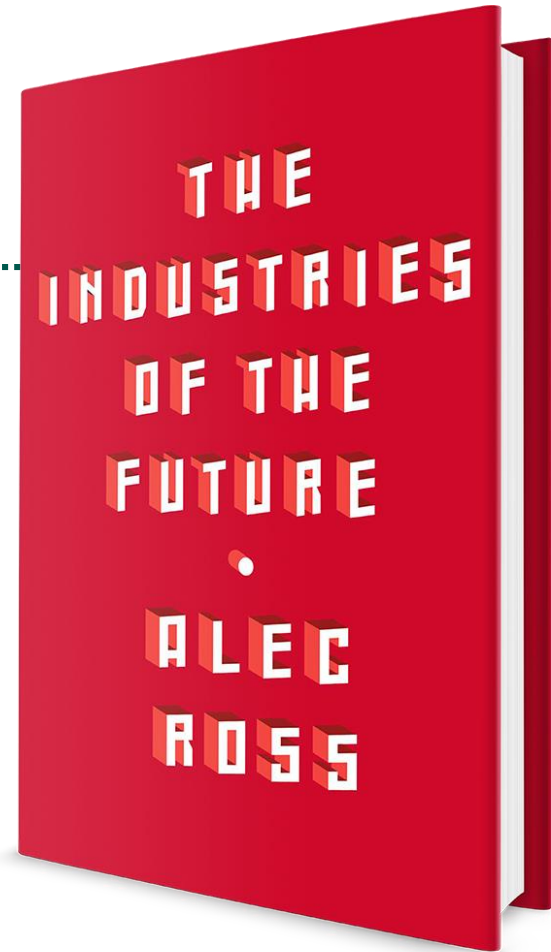
Dan Zafrir





The Industries of the Future

Alec Ross



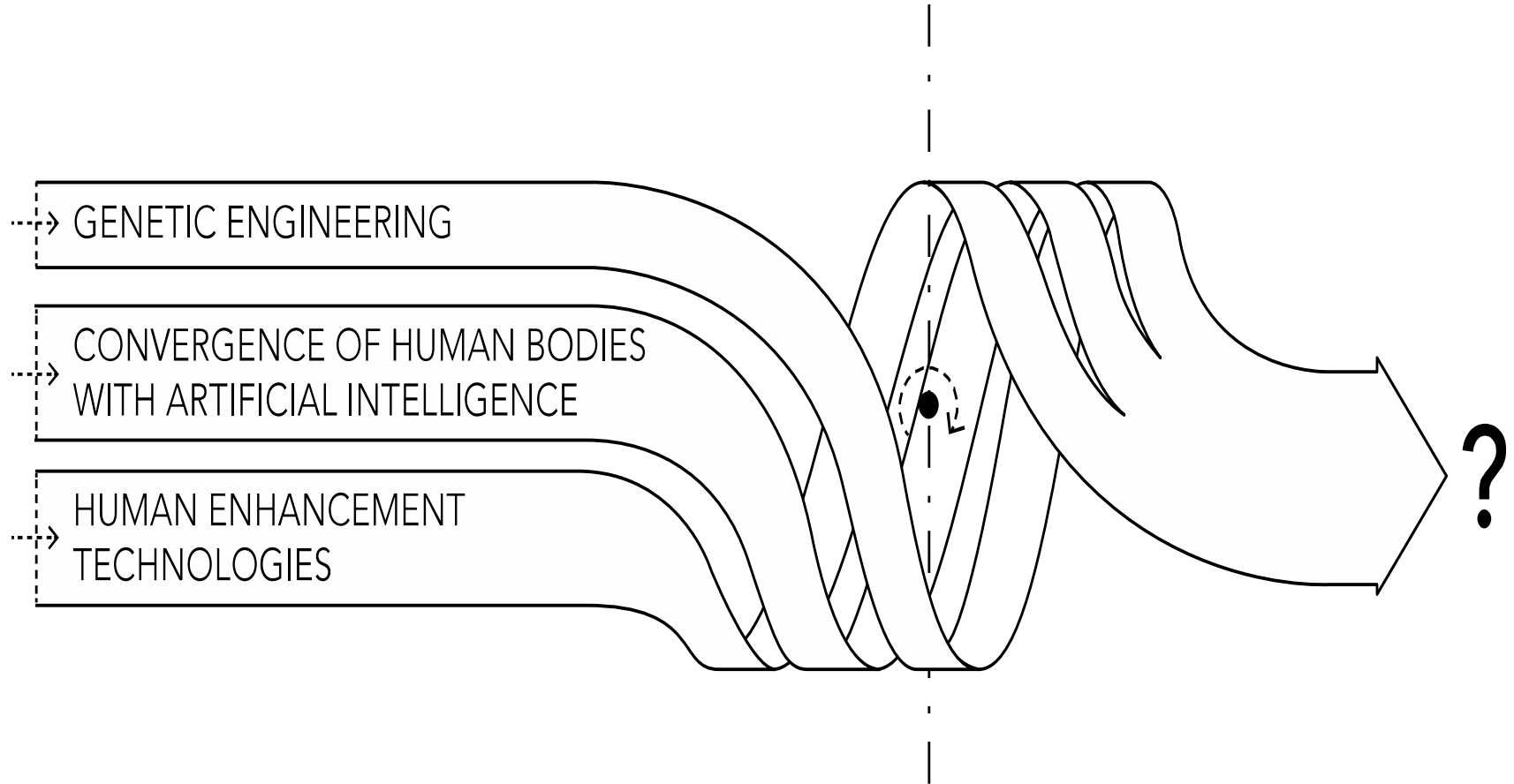


The Industries of the Future

Alec Ross

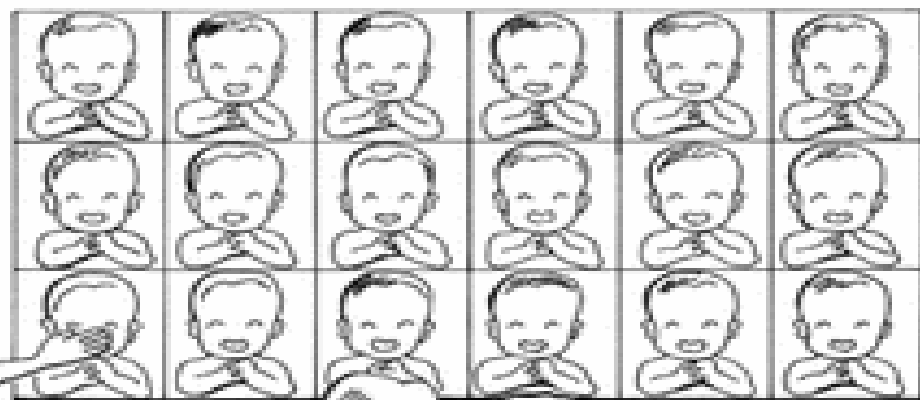
- ▶ Robotics
- ▶ Genomics
- ▶ Code-ification of new arenas – e.g. money
- ▶ Cybersecurity
- ▶ Big Data

EVOLUTION IN OUR HANDS?





THESE ARE
THE SAMPLES
OF DESIGN



KURT

The Artificial Human of Today (below 5mio.\$)



stents



artificial skin



bio engineered ear



artificial blood
(oxycyte can carry
5 times more oxygen
than hemoglobin)



RFID
implant
neurostimulator/
implanted drug
delivery system

portable
dialysis



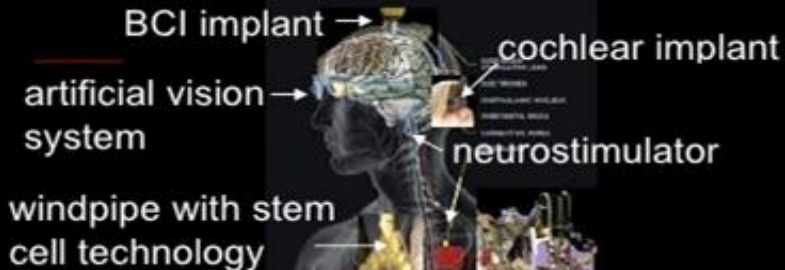
bionic liver
machine



artificial lung



intelligent leg
prosthesis



BCI implant

artificial vision
system

cochlear implant

neurostimulator

windpipe with stem
cell technology

bionic arm

artificial heart

implantable
insulin pump

bionic hand

hip replacement

artificial foot



“intelligence-augmentation”

Coming up.....

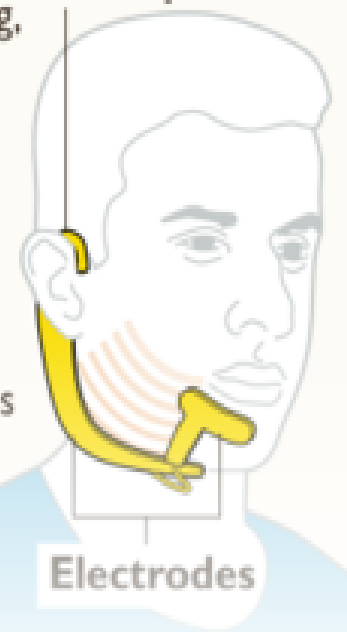
- Facebook’s *mind-computer interface*
- Elon Musk: *implanted electrodes*

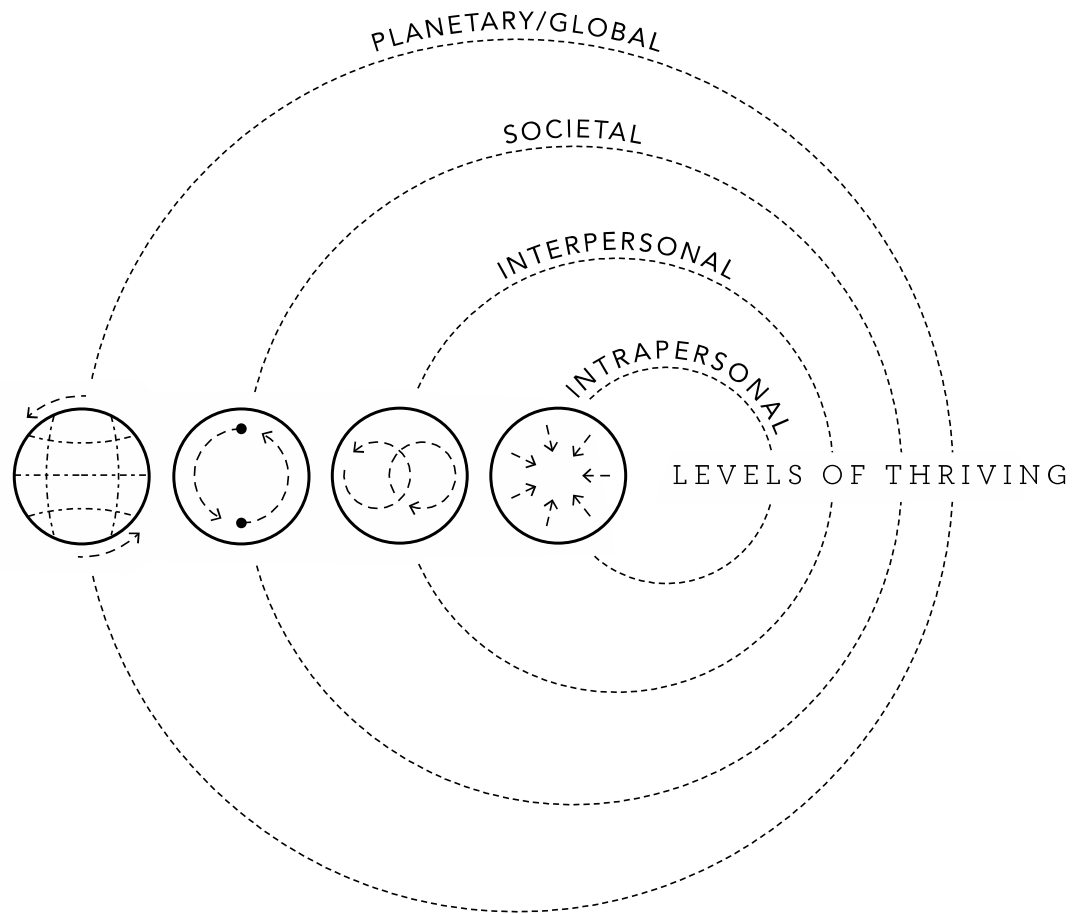
How it works

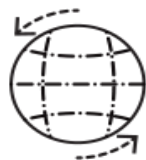
1 Without speaking, neuromuscular signals are picked up from your face and jaw

2 The signals are converted to words and responses sent to bone-conducting headphones

Headphones







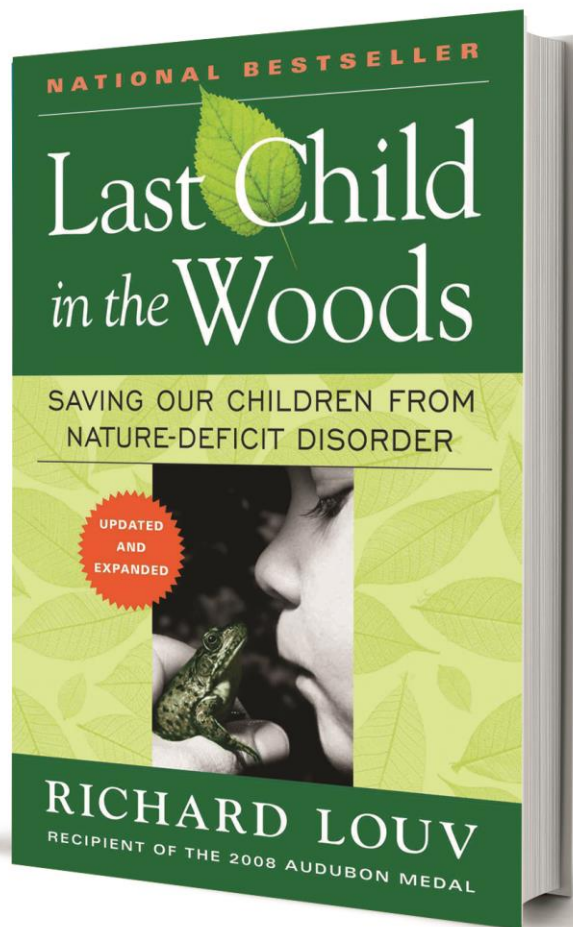
PLANETARY/GLOBAL

Live sustainably

Protect the Earth's
eco-system

Acquire global
competence





Last Child in the Woods

Richard Louv



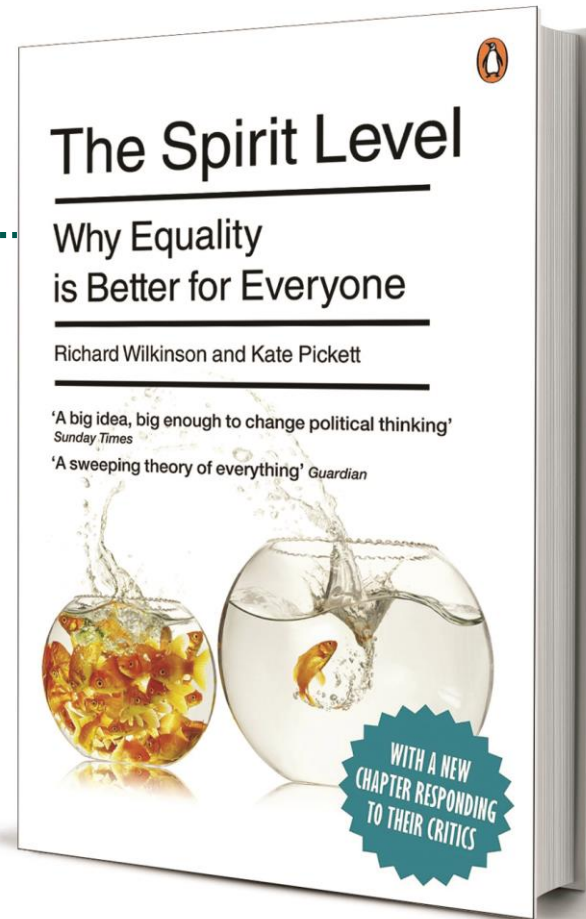
SOCIETAL

Navigate a
disrupted &
uncertain
landscape of work

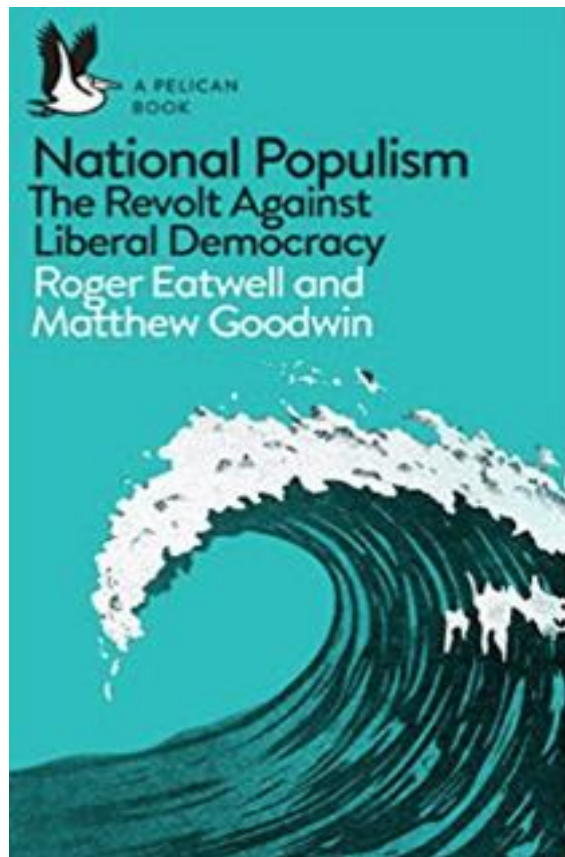
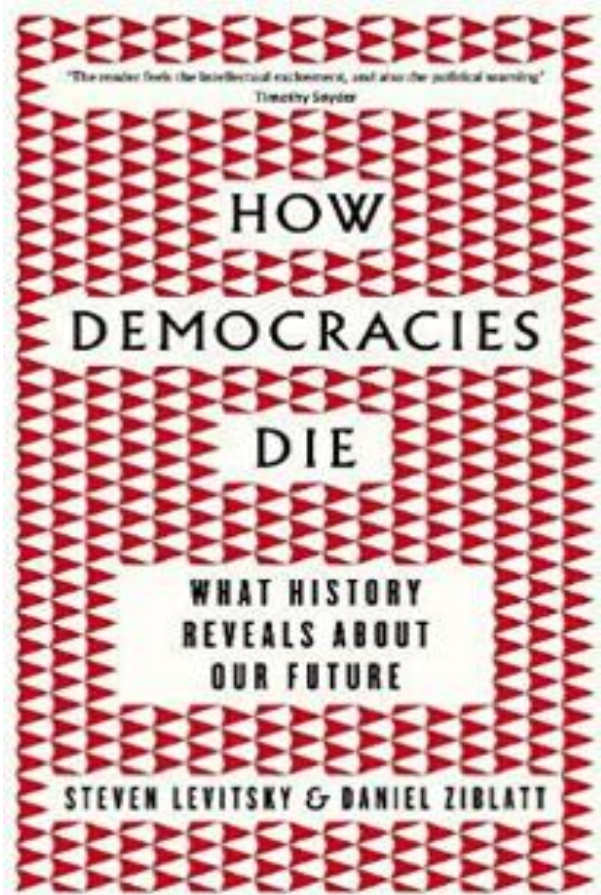
Reinvent a
participative,
authentic and
meaningful
democracy

The Spirit Level

*Richard Wilkinson
and Kate Pickett*



Are we in an age of
“democratic disappointment”?



“To find ways of creating democratic processes and institutions that are fit for the 21st century, locally, nationally and internationally is a daunting, complex, long term challenge. But shouldn't we at least be looking?”

Chief Executive, RSA
Matthew Taylor, 2016



SOCIETAL

Navigate a
disrupted &
uncertain
landscape of work

Reinvent a
participative,
authentic and
meaningful
democracy

CAREER PATHS ARE CHANGING.



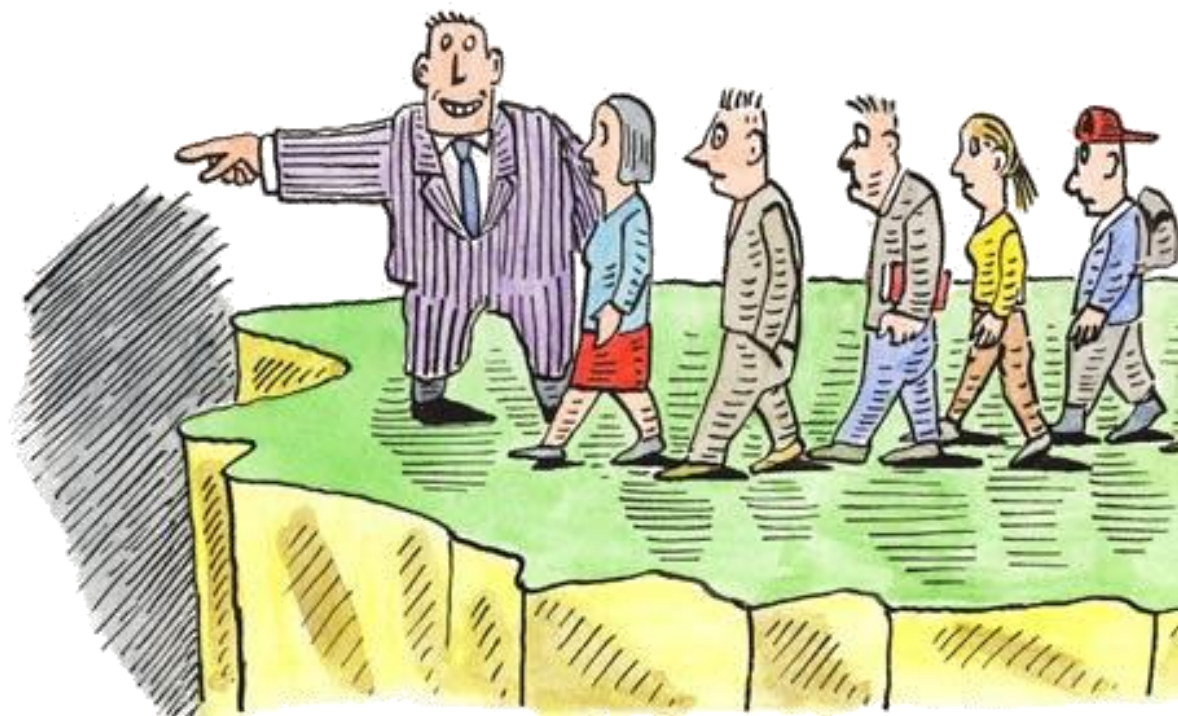
20TH CENTURY

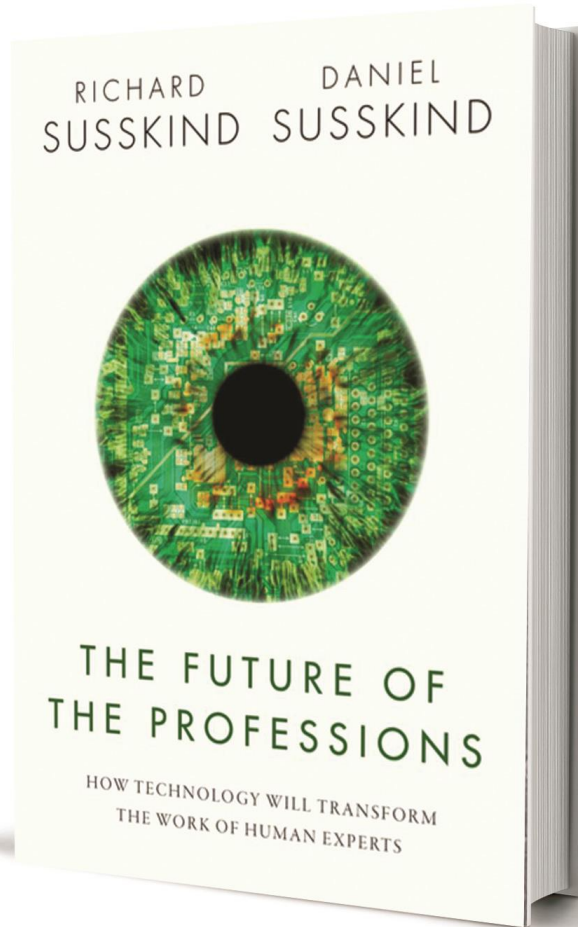
1-2 jobs, mastery of one field



21ST CENTURY

Predicted to work 17 jobs, 5 careers





The Future of the Professions

*Richard Susskind and
Daniel Susskind*



most professional jobs can be '*unbundled*'

- ▶ Can we rely on 'human exceptionalism'?
It will not lie in our cognitive functions...
- ▶ The Susskinds offer *empathy*
- ▶ But many people prefer interacting with machines – and would you look for empathy in your tax lawyer or surgeon?

Let's write the future
with robots that have what
it takes to collaborate.



abb.com/future

A diagram consisting of four concentric circles. The innermost circle is solid black. The second circle from the center is dashed black. The third and fourth circles are dotted black. The text 'INTERPERSONAL' is positioned between the second and third circles, with a dashed line extending from the end of the word to the right.

INTERPERSONAL

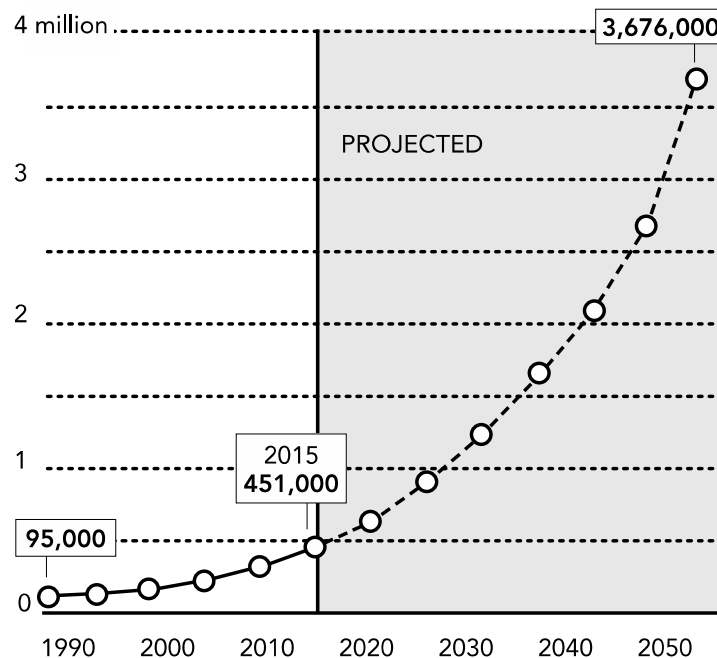
Loving and respectful
relationships in
diverse,
technologised
societies

Engage with, and
learn from, other
generations



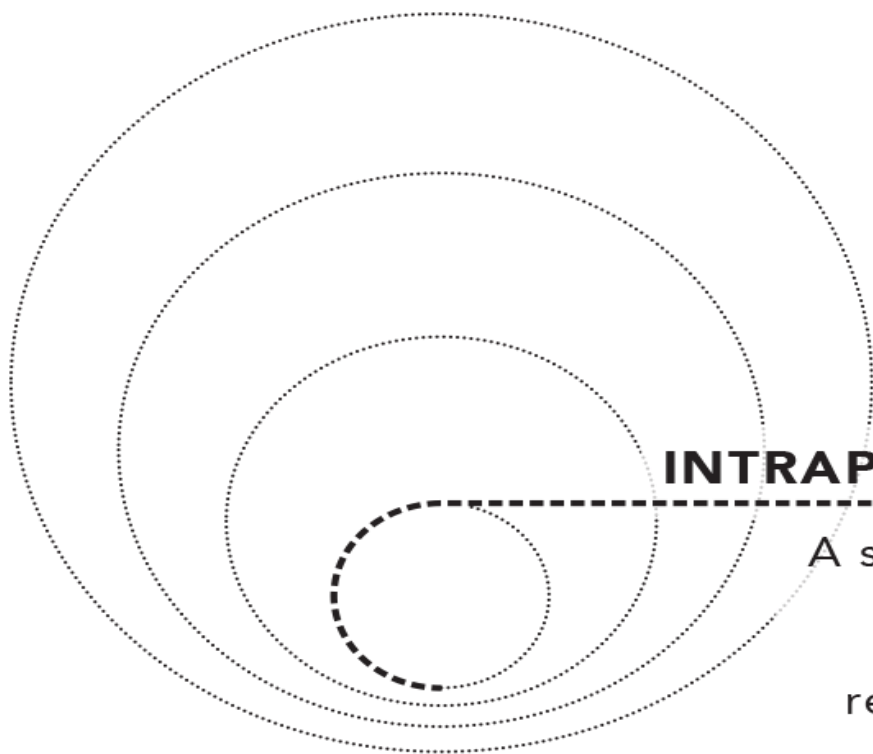


The world's
population of
centenarians
is set to grow
8-fold



Source: United Nations,
Department of Economics
and Social Affairs 'World
Population Prospects:
2015 Revision'

PEW RESEARCH CENTRE



INTRAPERSONAL

A secure sense
of self

responsibility
for personal
health, fitness
and well-being

Time

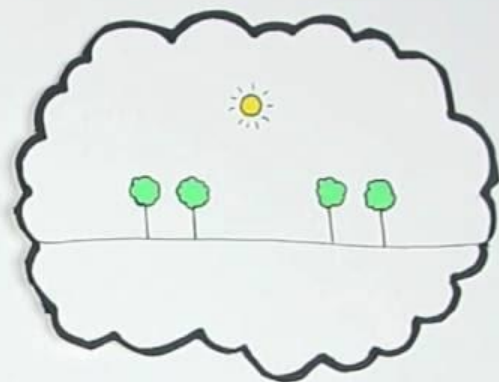
Magazine



Never Offline.

The Apple Watch is just the start.
How wearable tech will change
your life—like it or not

BY LEV GROSSMAN
AND MATT VELLA



mind full or mindful ?

To create the ‘conditions for success’, we must understand what ‘success’ really is and will be.

Thriving is the true goal.