

Industry – The Basis for Prosperity

Strategic Focus Area: **Advanced Manufacturing**

Bern 13. November 2017

Gerd Folkers

„De-industrialization is certainly underway. (...) Therefore, they prefer to speak of transindustrialisation, meaning a structural shift to modern, future-oriented, new technology-based industries.“

Wo jeder Zehnte überflüssig ist, Report aus der englischen Provinz, Von Wilfried Kratz, Die Zeit, 2. Januar **1981**

de-industrialization vs. trans-industrialization

- de-industrialization : from manufacturing to service
- trans-industrialization : synergy effects of „advanced manufacturing“

Science & Technology

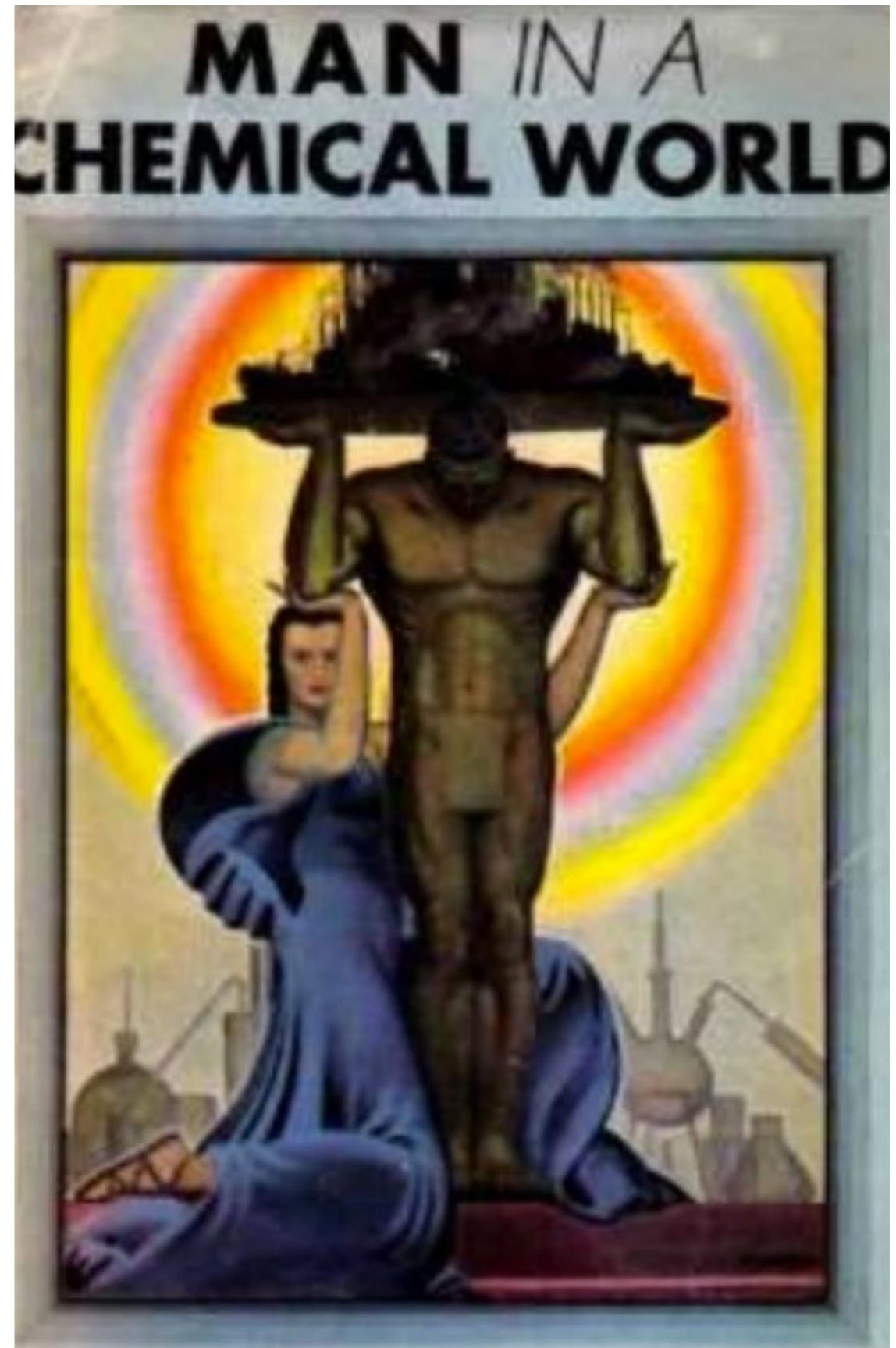
- are the most important drivers for transindustrialisation
- transformation of disciplines by AI will generate unprecedented synergies



Eise Eisaga, wool merchant 1770

Cressy Morrison
*Man in a Chemical
World*
1937

„Chemical Industry upheld
by Pure Science, Sustains
the Production of Man’s
Necessities“



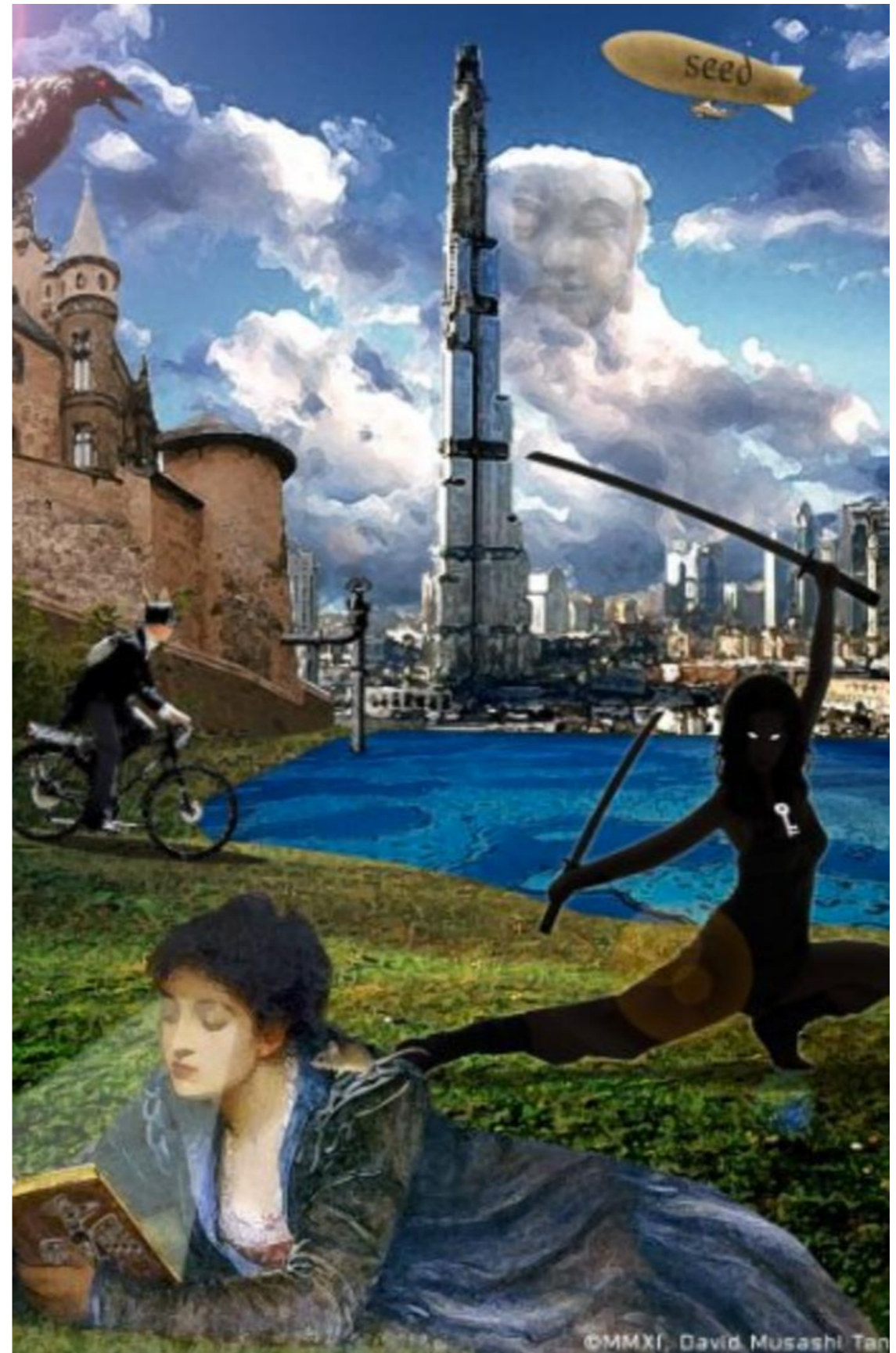
Neal Stephenson

The Diamond Age

1997

FEED vs. SEED

„Matter compilers receive their raw materials from the Feed, a system analogous to the electrical grid of modern society. The Feed carries streams of both energy and basic molecules, which are rapidly assembled into usable goods by matter compilers. The Source, where the Feed's stream of matter originates, is controlled by the Victorian *phyle*. (...) has an economic element as well, with the Feed representing a centrally-controlled distribution mechanism, while the Seed represents a more flexible, open-ended, decentralized method of creation and organization.“

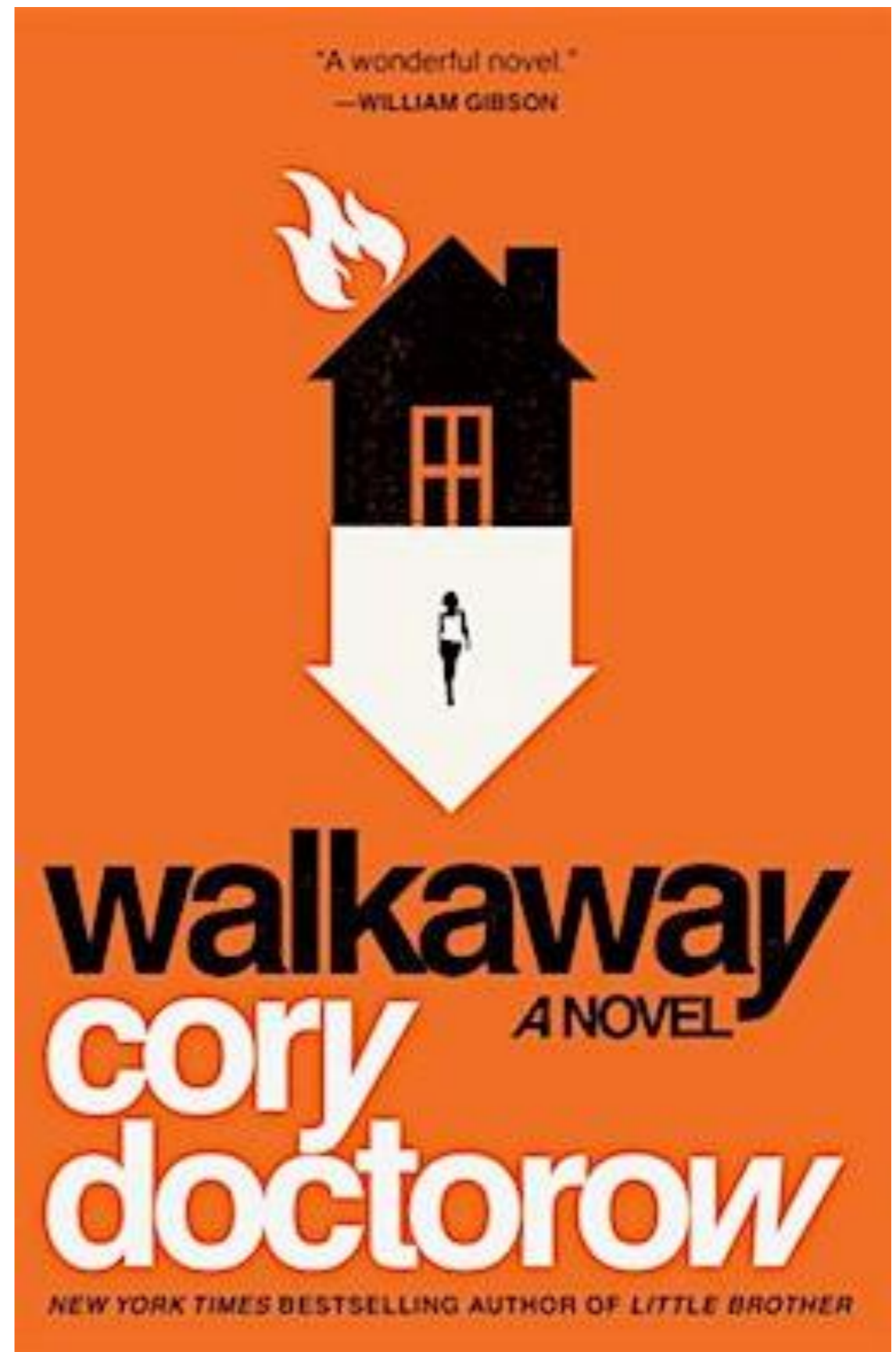


Cory Doctorow *Walkaway*

2017

Open Source creates
post-scarcity society

„With the advent of 3D printing – and especially the ability to use these to **fabricate even better fabricators** – and with machines that can **search for and reprocess waste or discarded materials**, they no longer have need of Default for the basic essentials of life, such as food, clothing and shelter.“



cohort -type

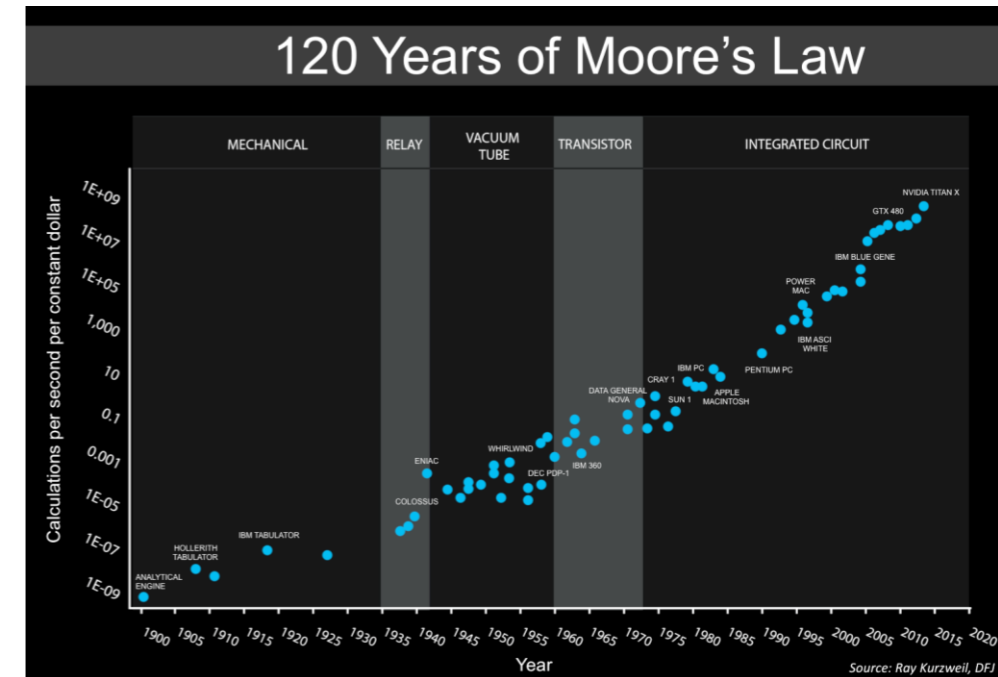
The CAVEATs

e.g. in Biomedicine,
individual to cohort
adaption....

...will generate large synergy
effects, based on trans-
industrialization, fostered by
AI

Is the patient still in the focus
?

transindustrialization: Meehan 2005: Why TV is not our fault.



individual -type

b Rate of decline over 10-year periods

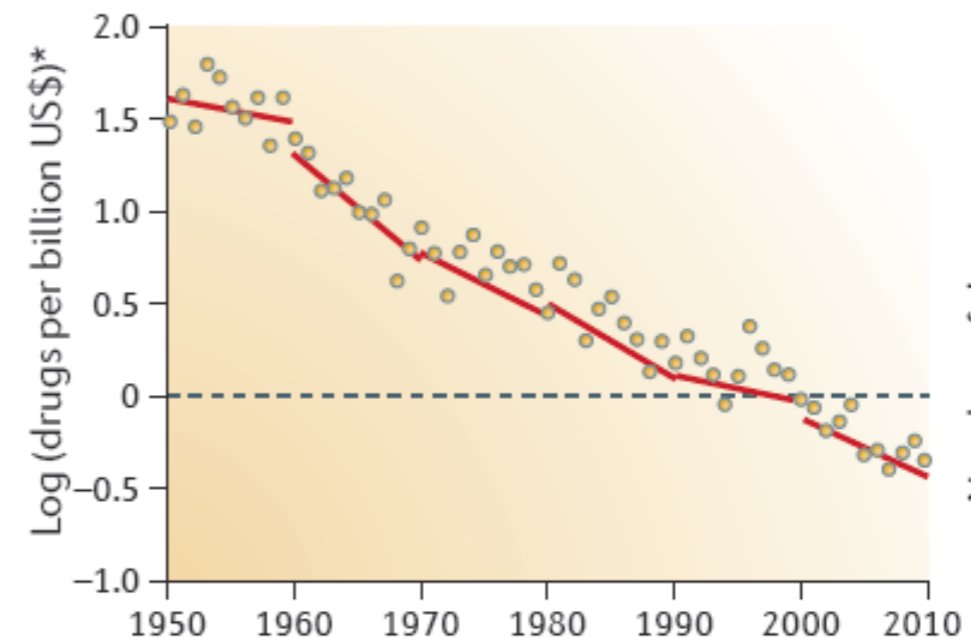


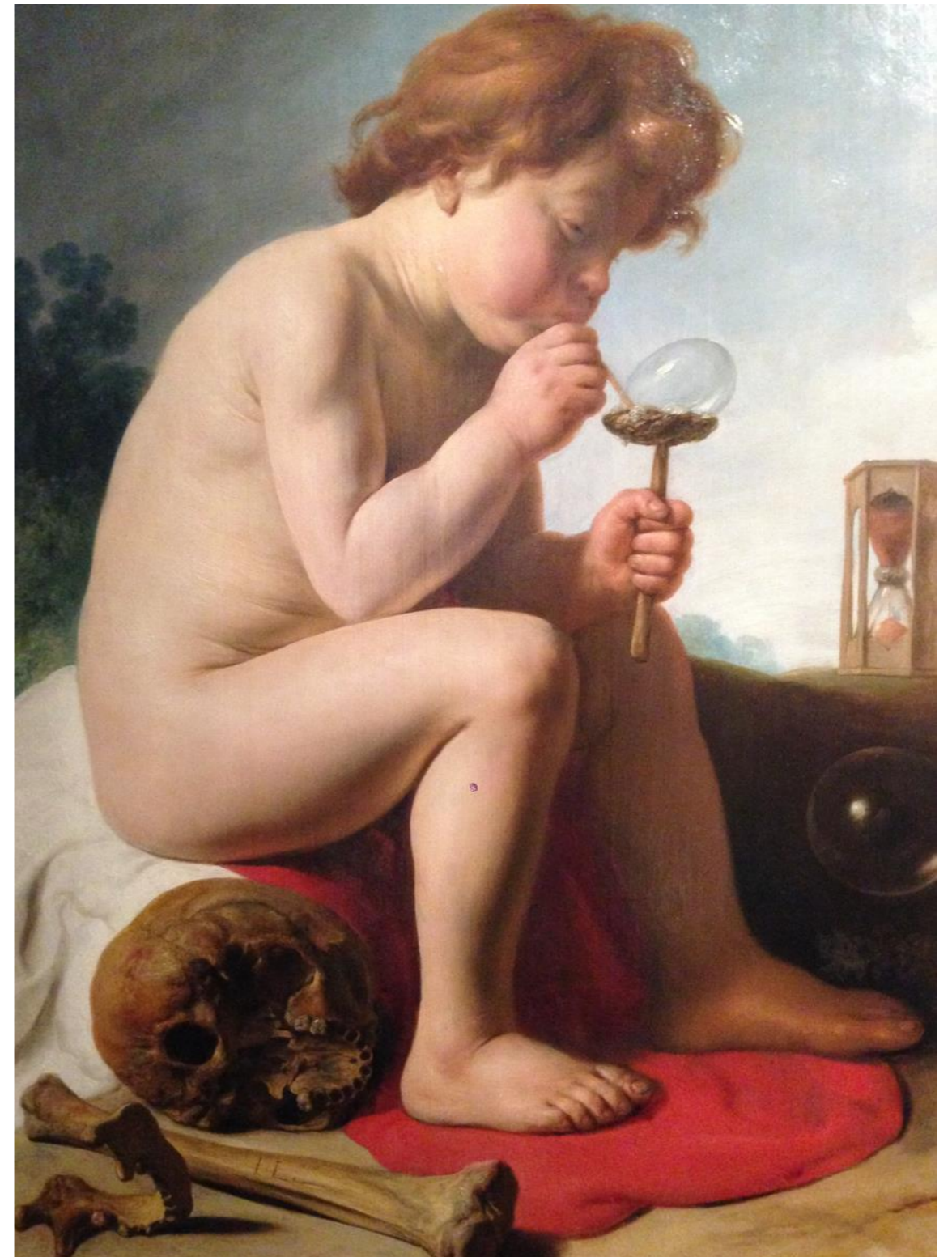
Figure 1 | Eroom's Law in pharmaceutical R&D.

curare pro
reparare

from repair to
care

transindustrialisation needs
a philosophical shift,

...probably according to
Heidegger's „Sorge“
(Martin Heidegger, Sein und
Zeit 1926)



Jan Lievens 1645, Bulles de Savon

„Sorge“, „cura“, „care“, „concern“

- (...), the term „care/concern“ should describe a mode of being of man, which is not limited to the cognitive or spiritual contemplation of the world, but first stands in practical dealings with the world, which can then also form a theoretical understanding of the world.
- ..needs political, legal, institutional conditions to support changes and benefit, instead of regulate them