

AI for social good: *a critical multiplex approach*

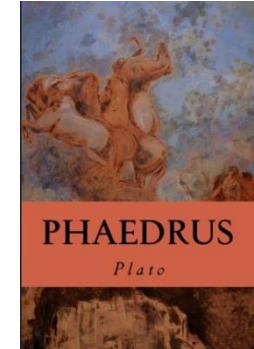
JUNAID QADIR

Professor of Computer Engineering, Qatar University

Technology optimists and skeptics



More than 2,000 years ago, Plato dramatized the tension between technology proponents and antagonists in his dialogue Phaedrus, through the myth of **Theuth — the inventor of writing — and Thamus, the skeptical king.**



It is incorrect to think that technology only works only in a single way (either-or approach) or even that it is neutral



"Every technology is both a burden and a blessing; not either-or, but this-and-that."



Wholistic Growth Requires Balancing Values through a both-and approach

Either-Or World vs. Both-And World

OR



Convergent problems — *often found in the realm of the natural sciences*

Yield to methods such as mathematics, experimentation, or optimization.

Examples: Solving Maxwell's equations; predicting the orbit of a planet.



These (tame) problems can be solved once and for all.

AND



Divergent problems — *often found in policy and design.*

They require judgment, negotiation, and ethical reflection, and dialectical thinking, often without a final or optimal resolution.

Examples: managing water allocation in drought-prone regions.



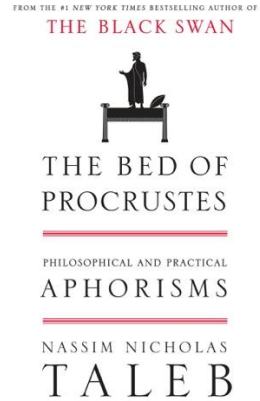
These are open-ended (aka wicked) problems that cannot be solved in the conventional sense.



Latin meaning of the word "complexus", "That which is woven together"

What happens if we treat a divergent problem like a convergent one?

Reductionism and its Antidote



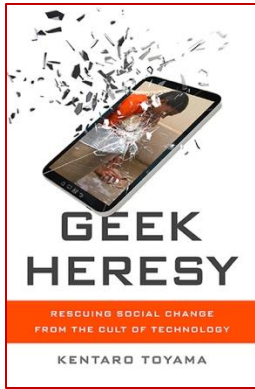
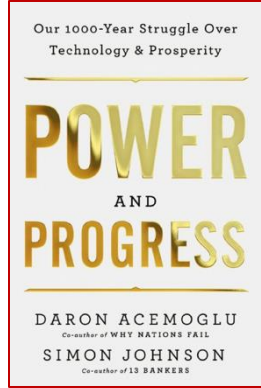
Procrustean Fallacy
Stretching or Constricting
Reality to Fit the Model



Multiplexity (Arabic: Maratib) is the science of the one and the many, which fundamentally underlies reality. Multiplexity provides a multi-layered understanding of reality, knowledge, and truth, and language.
[Senturk et al.]



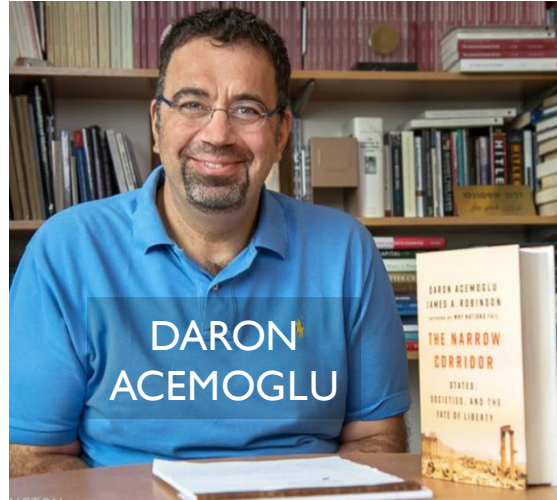
Technology and Shared Prosperity



Technology amplifies intent & capacity and cannot substitute for them

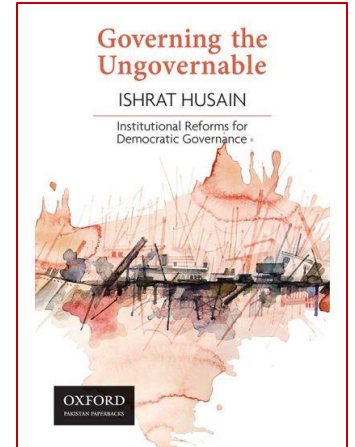
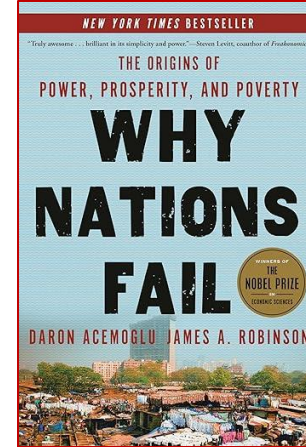
Technology does not automatically translate into shared prosperity

Current AI mostly designed to control, not empower



Development is a divergent problem.

Shared prosperity and liberty requires constant negotiation and is a balancing act between state and social actors



More than policies & tech., it is the inclusiveness of institutions (both political and economic) that dictate nations' trajectory

PAKISTANI PROBLEMS
Weak (extractive) institutions, elite capture, clientelism, myopism, lack of continuity

We should embrace technology, critically.

A Wholistic Both-And Critical AI Approach

WIN-WIN

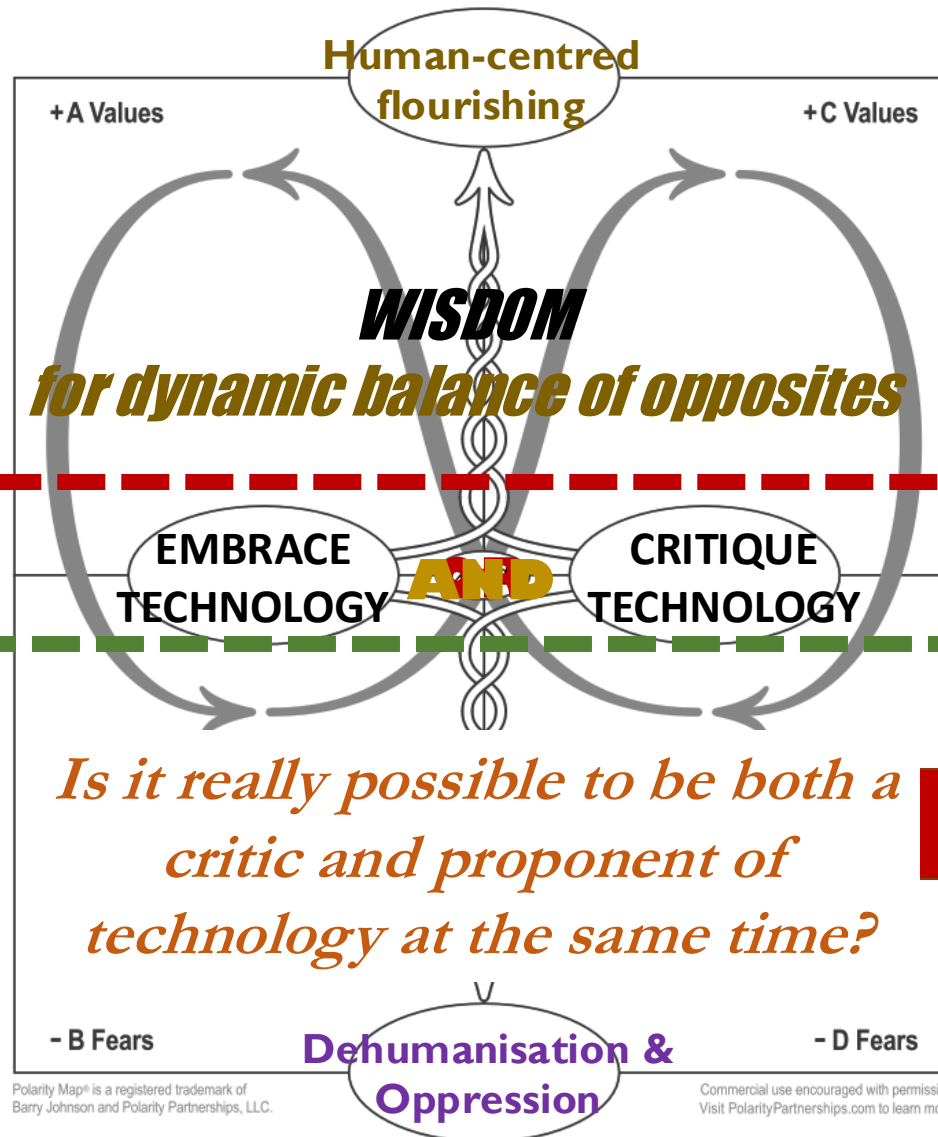
Upsides (EMBRACE TECHNOLOGY)

- Accessible, scalable, efficient services
 - Innovation drives social impact.
- Citizens are empowered & connected.

Downside (UNCRITICAL EMBRACE)

- Technocratic overreach
- Loss of agency and privacy
- Hidden harms and widening inequalities

LOSE-LOSE



Upsides (CRITIQUE TECHNOLOGY)

- Rights and dignity are protected.
- Risks are anticipated early.
- Accountability and justice are upheld.

Downside (UNCRITICAL SHUNNING)

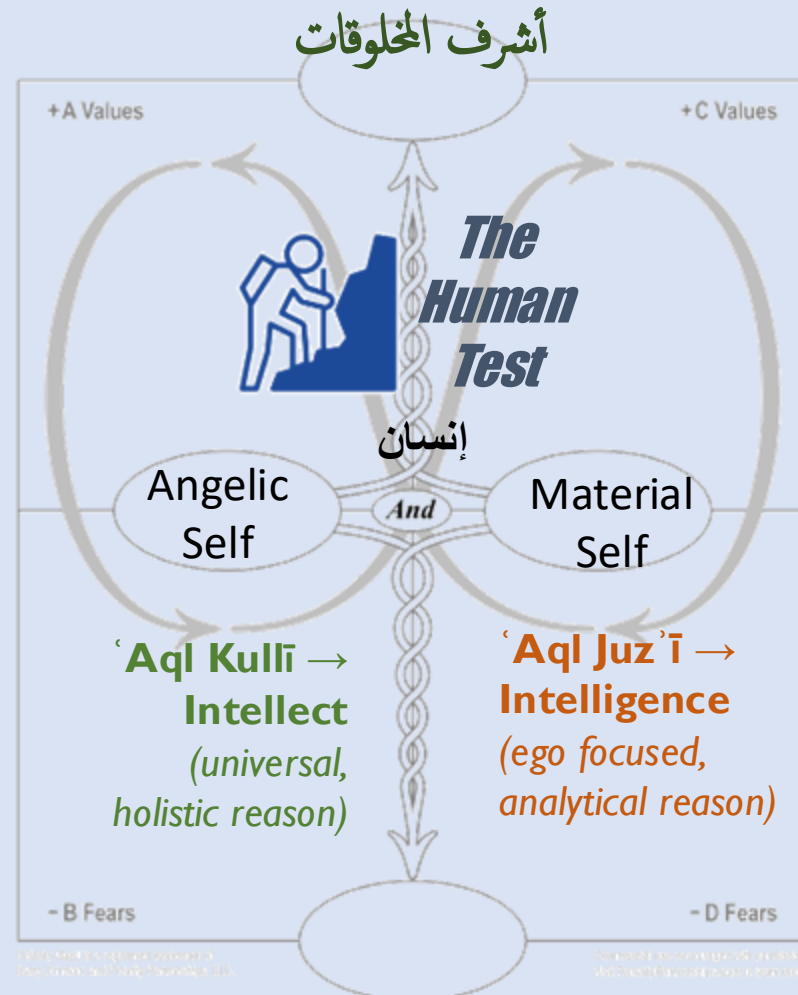
- Lost opportunities for positive change
- Institutional stagnation
- Falling behind global capabilities

YES

Multiplex View of Human Beings and Progress

TECHNOLOGY
ALWAYS INVOLVES
HUMAN
ETHICAL/POLITICAL
CHOICES

*The success of our experiments
with technology will only mirror
the success we have with our
“divergent problems”*



OUR ETHICAL DUTIES

مسؤولية

أمانة

اختيار

اجتهاد

إحسان

أخلاق

ارتفاع

حكمة

رأي كلي

INCLUSIVE ECONOMIC
AND POLITICAL
INSTITUTIONS

CHECKS AND
BALANCES

STRENGTHENED
CIVIL SOCIETY

Thank you!

jqadir@qu.edu.qa