



USŪL ACADEMY

R o o t e d R e v i v a l

التجديد المؤصل

Multiplex Systemics

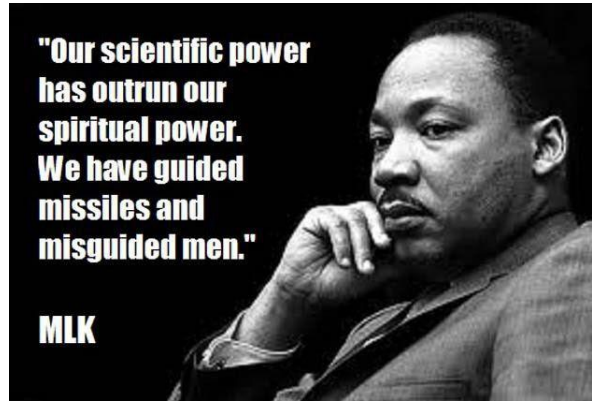
for AI Governance and Open Civilization

JUNAID QADIR

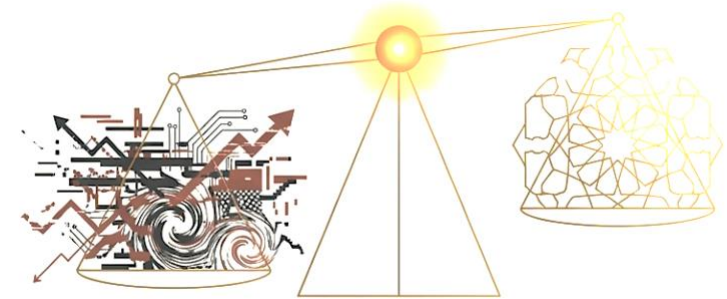
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The World Today is Out of Balance

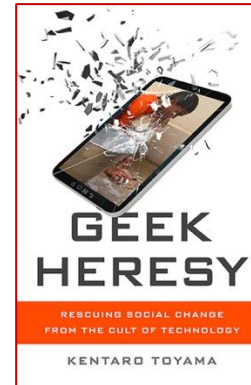
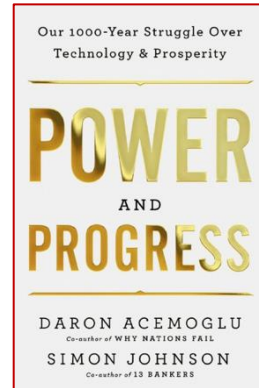
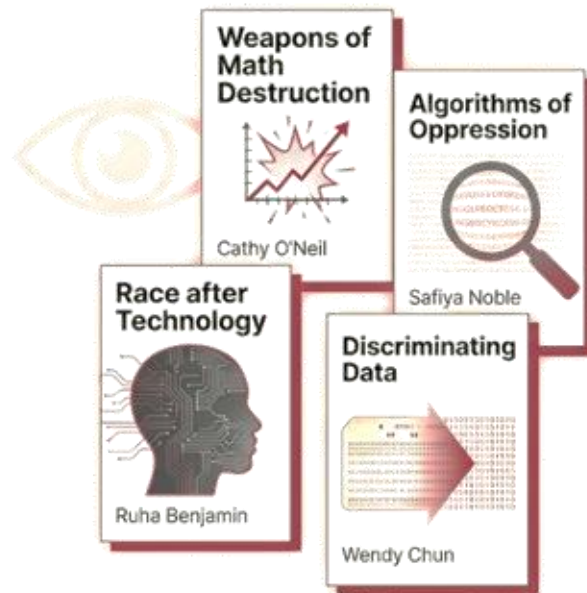
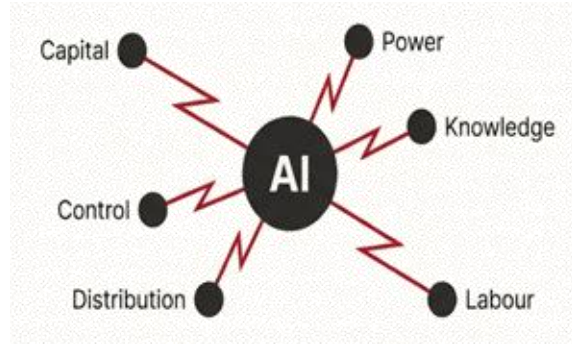


Technology is used as a tool for enslavement, genocide, domination, exploitation, manipulation, erasure



AI not Automatically Benevolent or Malevolent

AI is political through and through.



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 (AND CANNOT BE AUTOMATED)

Multiplexity for tackling the world in its richness

(Avoiding Impoverishment of Complex Reality)

Multiplexity is a translation of the Arabic term “marātib”, which literally means hierarchy or levels.

Multiplexity provides a multi-layered understanding of reality, knowledge, and truth, and language.

Supports Both-And Thinking instead of Either-or Thinking.



*multiplex
ontology*

LEVELS OF EXISTENCE
(MARATIB AL-WUJUD)



*multiplex
epistemology*

LEVELS OF KNOWLEDGE
(MARATIB AL-'ULUM)



*multiplex
methodology*

LEVELS OF METHODS
(MARATIB AL-USUL)

Multiplexity & open civilization

The Stakes of Our Choice for AI Governance



OPEN Civilization

- *Recognizes other civilizations*
- *Affirms right to coexist*
- *Pluralistic, just, flourishing*



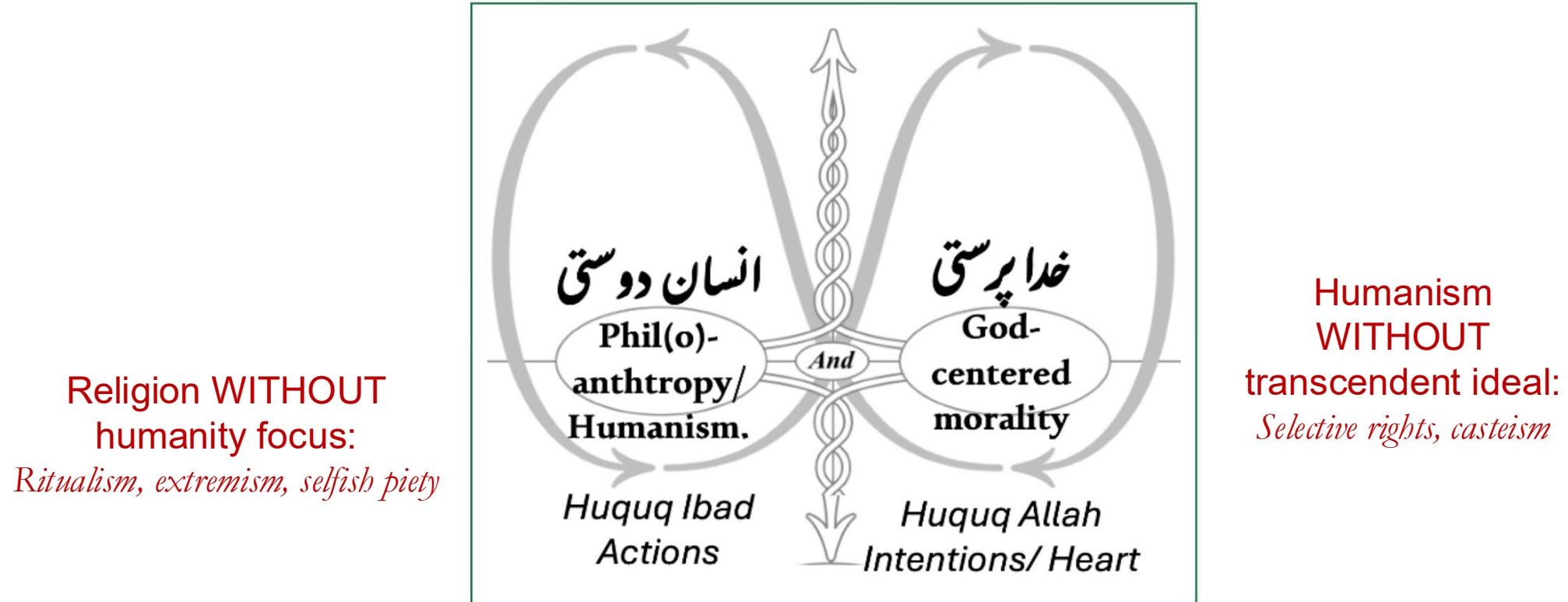
CLOSED Civilization

- *Does not recognize others' rights*
- *Hegemonic, exclusivist*
- *Extractive, monocultural*

Neo-colonialism in AI

- Large LLMs concentrate power
- Marginalize Global South
- Erase indigenous knowledge
- Data extraction & labor exploitation

Multiplexity as a new basis for AI Governance



God-centeredness (Khudā Parastī) is the prerequisite for stable philanthropy (Insān Dostī) and shared prosperity.

Classical Questions & AI Governance

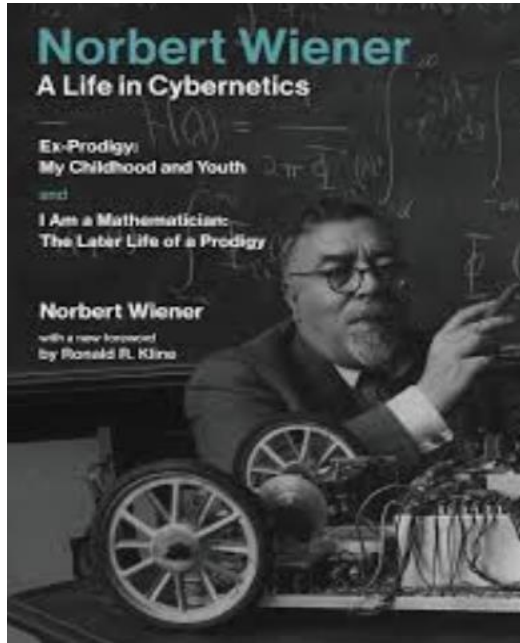
ONTOLOGY *What exists? What is a human being?*

TELOS/ PURPOSE *What is our purpose?*

ETHICS *What should we do?*

PRACTICAL WISDOM *How should we act?*

Purpose of AI: Building Beneficial AI



*“If we use, to achieve our purposes, a mechanical agency with whose operation we cannot interfere effectively ... we had better be quite sure that the **purpose** put into the machine is the **purpose** which we really desire.”*
[Weiner, 1960]

- 1) How is the technology that I am working on going to be used?
- 2) Who will benefit or suffer from it?
- 3) How much, and what social impact, will it have?

الرأي الجزئي

al-rā'y al-juz'ī:

*Judgement based on
restricted purposes*

الرأي الكلي

al-rā'y al-kullī:

*Judgement based on
universal purposes*

Autotelic technology and religion of technology

The notion of a "post-religious" age is a **myth**.
We live in an age of **intense religiosity**.

Religion = a shared system of meaning that legitimizes norms, values, and authority
Even "secular" systems have norms, values, and authority - they are religions too

The Unexamined "Religions" of Modernity:

Hyper-individualism

*Economic growth
at all costs*

*Technological
solutionism*

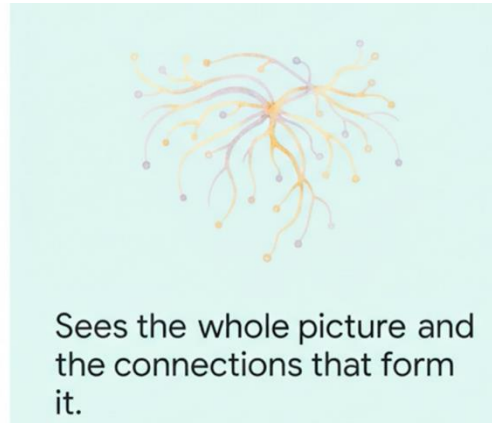
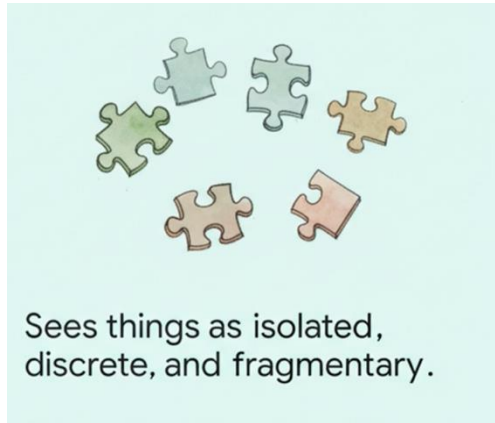
*The religion
of power*

Implication for AI Governance:

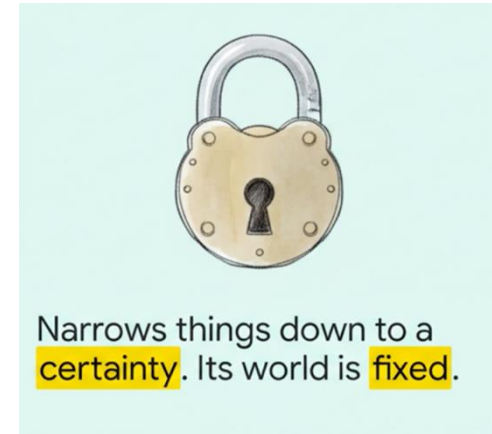
We must **consciously choose** our foundational system of meaning and values for AI.
Is it profit? Power? Or divine justice and human flourishing?

Beyond reductionism: facets of multiplexity

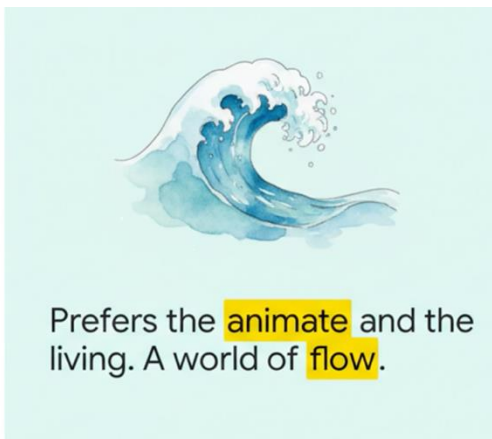
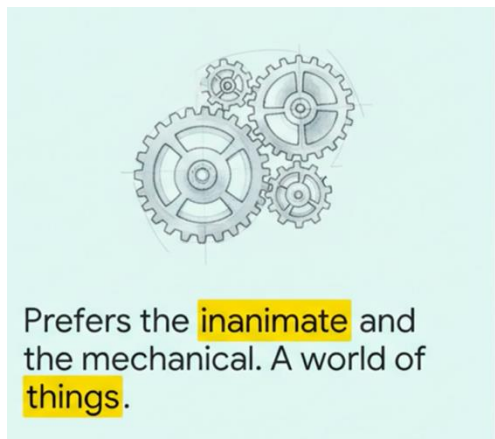
Holistic dimension



Openness to imagination



Openness to life



Reductionism + Holism



The ills of AI: *actual and imagined*

The Streetlight Fallacy: Misplaced Search

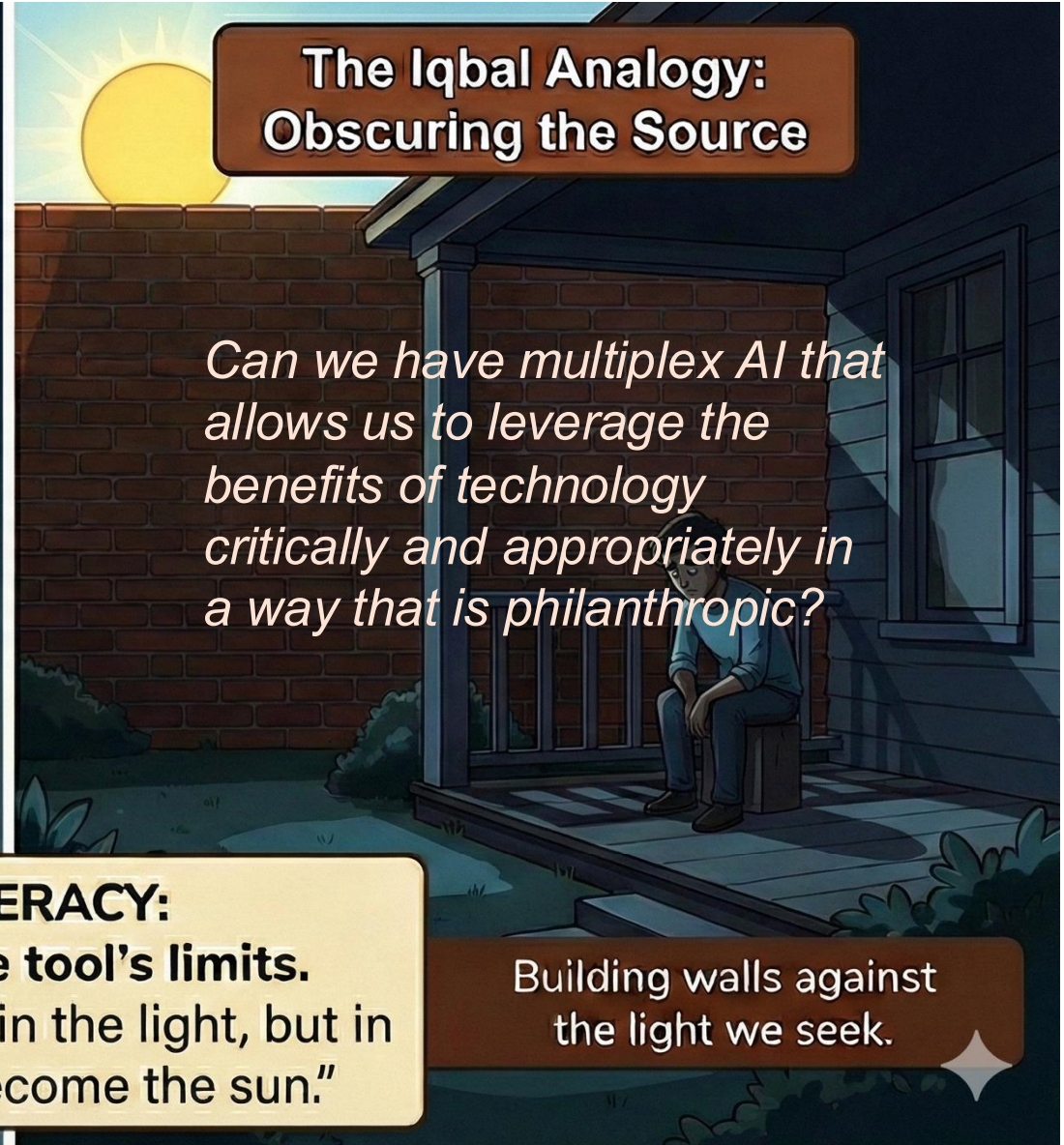


Searching where it's easiest,
not where the answer lies

AI LITERACY:

Knowing the tool's limits.
"The fault is not in the light, but in
asking it to become the sun."

The Iqbal Analogy: Obscuring the Source



*Can we have multiplex AI that
allows us to leverage the
benefits of technology
critically and appropriately in
a way that is philanthropic?*

Building walls against
the light we seek.

Multiplex AI for an Open Civilizational Future

(three dimensions of openness)

SYSTEMIC
DYNAMIC/ SYSTEMIC 

Openness to Emergence

Loops, not lines
Circles, not pyramids
Feedback and emergence

HORIZONTAL
BOTH-AND 

Openness to Perspectives

Both-And thinking
Neither-Nor (wasatiyyah)
Polarity navigation

VERTICAL
VALUE-ORDERED 

Openness to Transcendence

Value ordering
Higher guides lower
Aql Kulli over Aql Juzzi

Dimension 1: *Systemic (Dynamic) Multiplexity*

Thinking in Loops, Not Lines - Circles, Not Pyramids

Modern society is complex; modern technology is complex
Simple linear models fail - we need **SYSTEMIC THINKING**

The Circle of Justice

(da'irat al-siyasah)

A circular system of **mutual dependence**,
not command hierarchy

This is BOTH-AND and NEITHER-NOR

Key Systemic Principles:

- Feedback loops: effects shape causes
- Emergence: whole > sum of parts
- Requisite variety: governance must match complexity

Mechanistic vs. Holistic thinking

**Appropriate for convergent (“tame”/
non-living system) problems**

*e.g., engineering, accounting, purely technical
systems*



The Carpenter (Engineering Mindset).
Controls materials. Static plans. Linear.

- *Engineers outcomes*
- *Controls materials*
- *Fixed blueprint*

**Appropriate for divergent (“wicked”/
living system) problems**

*e.g., governance, education, health (socio-
technical systems)*



The Gardener (Ecological Mindset).
Cultivates conditions. Living systems. Feedback loops.

- *Cultivates conditions*
- *Works with living systems*
- *Tends and adapts*

It's a mistake to apply a pure technical “carpenter”-like approach to governance problems. We need a **Both-And approach.**

Systemic multiplexity requires us to recognize that a living system (including socio-technical systems) cannot be treated as non-living systems indiscriminately fruitfully for a long time.

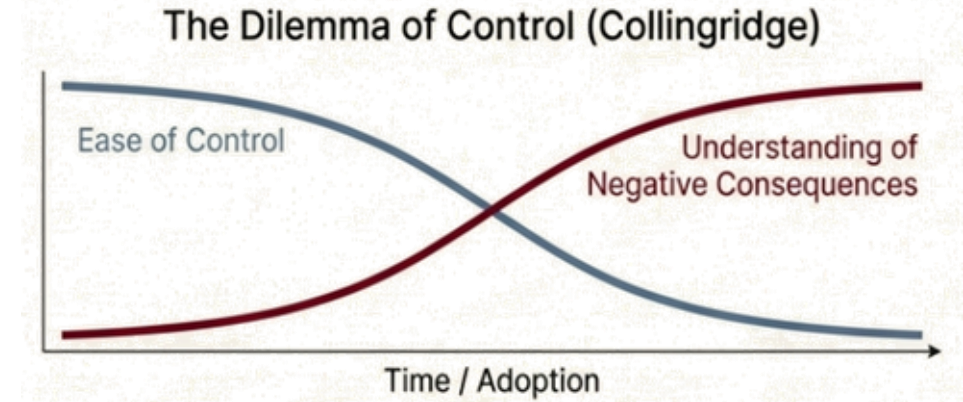
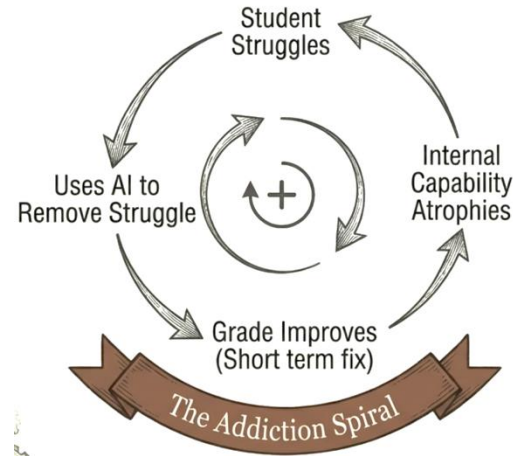
Dynamic Dimension of Multiplexity (Emergence)

IATROGENICS

*The Wounds that
the Healer Gave*

MATTHEW EFFECT: REINFORCING LOOPS

RICH GET RICHER POOR GET POORER



The Parable of the Boiled Frog



“Because of feedback delays within complex systems, by the time a problem becomes apparent it may be unnecessarily difficult to solve.”

— Donella H. Meadows

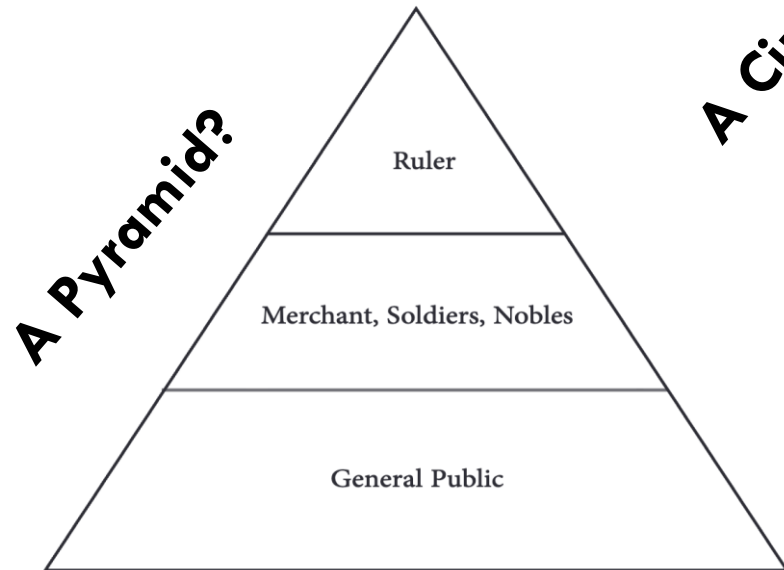


“Systems are perfectly designed to achieve the results they are currently achieving.” —Edward Deming

Polycentric approach — Governance Structures

Which figure should we use to denote the structure of a state?

Monocentric Order
("Gargantua")



Pyramidal Political Structure

A Circle?

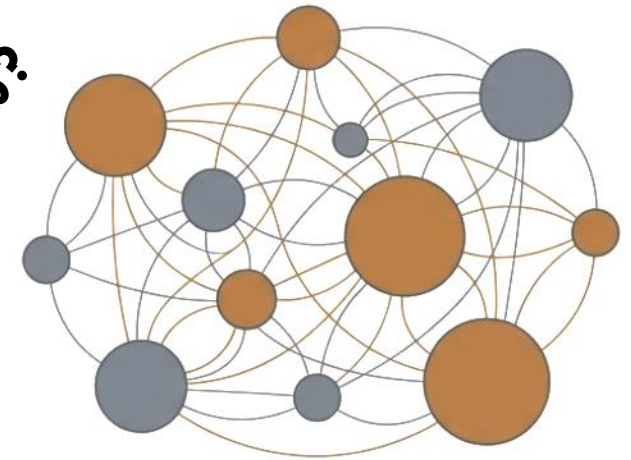


Circle of Justice

Kinalizade & Ibn Khaldun

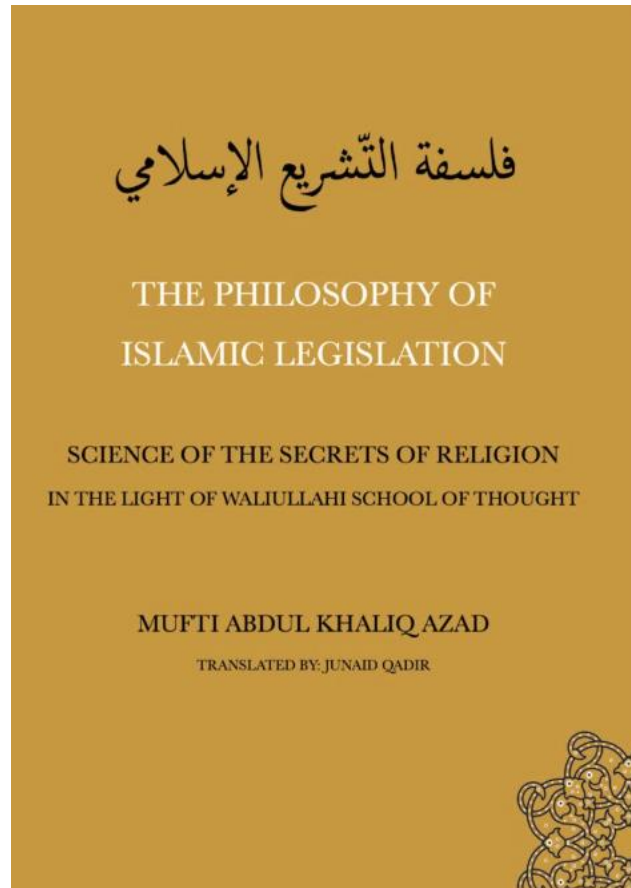
Polycentric Order
(Top-Down with Bottom-Up)
(Neither Top-Down nor Bottom-Up)

A Web?



Nobel prize winner Elinor Ostrom's work shows how this (multiplex) approach is more suited for sustainable change.

Towards a systemic understanding of social good (*maslahah*)



Crafting a Better World: The Philosophy of *Irtifāqāt*

إِرتِفَاقَاتٌ

The 18th-century thinker Shāh Walī Allāh of Delhi introduced the concept of *irtifāqāt*: relying on beneficial things to bring about improvement.

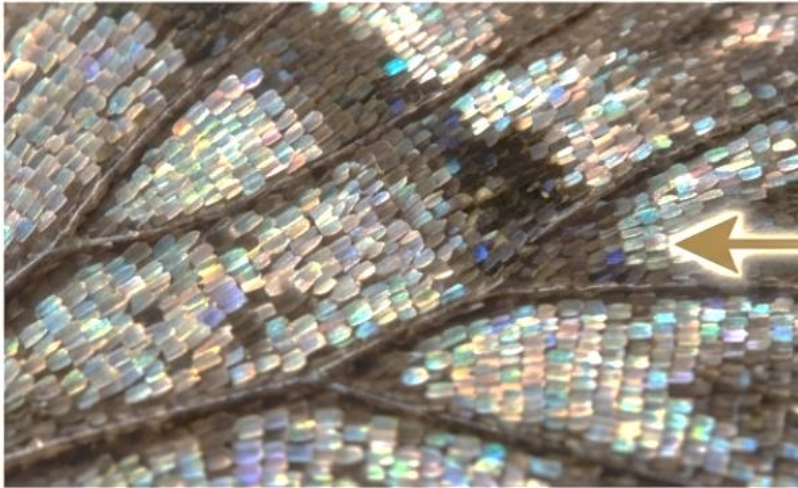
This framed technology as **essential** to civilization and divine **stewardship**, from digging wells and building dams to governance. He argued technology

He argued **technology imitates nature**, using the **queen bee's systematic** organisation as for how technology orders things for human benefit.

“Civilization and the comforts it provides are integral to a developed notion of stewardship.”

AI Governance to ensure AI has universal benefits

(whose interests are prioritized in AI development)



***Al-ra'y al-juzzi* (Particular Reason)**

Calculative, fragmented, and focused on immediate needs and individual gratification. This is the domain of technical optimisation.



***Al-ra'y al-kullī* (Universal Reason)**

Holistic, purpose-oriented, and concerned with the general good of society and the cosmic order. This is the domain of wisdom.

Dimension 2: Horizontal Multiplexity

Both-And Thinking - Navigating Polarities, Avoiding Extremes

The Disease of Reductionism:

- Thinking of a PART to be the WHOLE
- Taking the MAP for the TERRAIN
- Either/Or thinking forces false choices

AI Governance Polarities - Not Problems to Solve, but Tensions to Navigate:

Innovation <-> Precaution

Autonomy <-> Safety

Efficiency <-> Flourishing

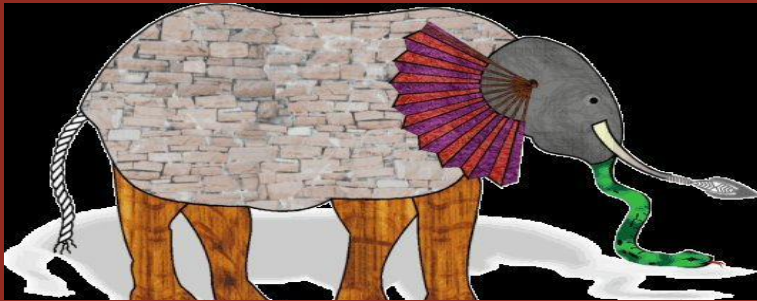
Transparency <-> Privacy

Global <-> Local

Wisdom emerges from navigating tensions, not eliminating them

The Elephant and the Six Blind Men

A Story of Partial Seeing - Analogy for Horizontal Multiplexity



Each is **partly right** - but mistakes their part for the whole The elephant is ALL of these - and **more than any single description**

Trunk

"A snake!"

Leg

"A tree!"

Ear

"A fan!"

Tusk

"A spear!"

Side

"A wall!"

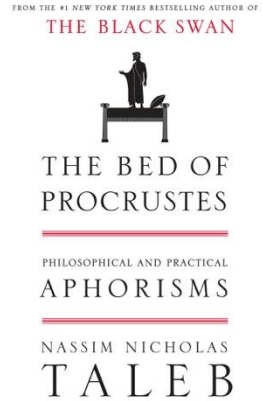
Tail

"A rope!"

Open Civilization Insight:

Multiple perspectives, each contributing, none totalizing - reality is MULTIPLEX

Reductionism and the Ontological Loop



Procrustean Fallacy
Stretching or Constricting
Reality to Fit the Model



**VICIOUS
LOOP**

*Wrong Model —
Procrusteanism
— Model Reified.*

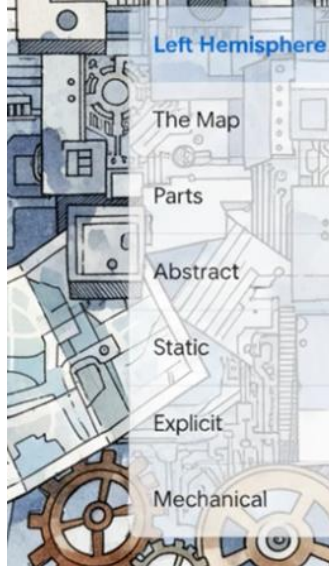
**A self-reinforcing loop where an
inadequate model reshapes reality until
we observe what we expect to see**

FLATTENING ONTOLOGICAL LOOP AT THE HEART OF “UNIPLEX AI”

- Humans are **reduced downward** to mechanism, optimization, predictability
- Machines are **inflated upward** to intelligence, agency, even moral standing

Polarity thinking: going beyond either/or logic

Interdependent pairs that need each other to be successful over time



Both-And Critical Embrace of Technology

The Technocratic Approach



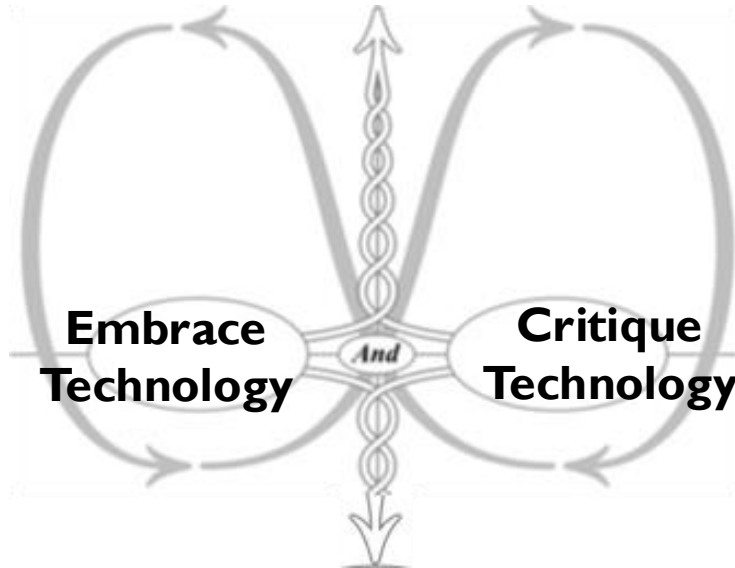
View: Treats AI governance as an optimisation problem.



Tools: Better metrics, audits, and value-balancing mechanisms.



Flaw: Assumes existing power structures and epistemological foundations are sound. Fails to address the “why”.



The Critical Approach



View: Deconstructs how AI amplifies structural oppression.



Tools: Power analysis, postcolonial critique.



Flaw: Excels at diagnosis but often struggles with prescription beyond resistance, risking a descent into relativism.

We need to leverage technology but also watch out taking a broad view of its harmful consequences to mitigate such risks

Dimension 3: Vertical Multiplexity

Value-Driven Harmonization - Higher Ideals Guiding Lower

The Master and His Emissary

(Iain McGilchrist's Story)

A wise king sent an emissary to govern a distant province.

The emissary was skilled and effective - but one day **forgot he served the master**.

He ruled for his own ends; the kingdom fell into disorder.

The Lesson:

Emissary (technique, efficiency, 'Aql Juz'i)
must serve

Master (wisdom, purpose, 'Aql Kulli)

When emissary usurps master -> **RUIN**

When properly ordered -> **HARMONY**

This is also directed **BOTH-AND**:

We need BOTH master AND emissary - but in right relation

And **NEITHER-NOR**: Neither master without emissary (naive idealism) nor emissary without master (tyranny of technique)

Ideals/ Objectives for Marshalling Diversities

Multiplexity aligns with the dynamic Iqbalian concept of Khudi and Wholeness-Making (Kamāl), where one focuses on unifying multiplicities under the pursuit of ideals and objectives.



(Dr Rafiuddin, “Ideology of the Future”)

“Imagine a coach being pulled by a dozen horses each of which is free to move in any direction if likes... Its movement will be fitful and haphazard. This happens if there is no driver inside the coach to direct and control the horses. *The animal is like driverless coach. [...]*

It cannot check, oppose or limit the satisfaction of any of its instinct for the sake of a higher and, indeed it has no higher end to pursue. [...]

It is always the case of one instinct opposing another, the stronger taking the place of the weaker and the weaker yielding automatically to the force of the stronger.

Such is not the case with man whose personality is like a coach which is being controlled by a driver.”

Instrumental reason and Holistic Intellect

علم را بر تن زنی مارے بود
علم را بر دل زنی یارے بود



Fling it on the body, and knowledge becomes a serpent;

Fling it on the heart, and it becomes a friend.

**Purpose of
Multiplex
Education:**

Metanoia

انقلاب

صُبحِ ازل یہ مجھ سے کہا چتر سیل نے
جو عمتِ کائناتِ سلام ہو وہ دل نہ کر قبول

Insan al-Kamil & Madinah al-Fadilah (*Virtuous Individuals and Collectives*)

Insan al-Kamil

(The Perfected Human)

Self-making through metanoia/inqilab

Madinah al-Fadilah

(The Virtuous City)

Society ordered toward flourishing

Iqbal's Vision:

Orchestration around higher ideals that **marshal diversities** - not suppress them

Hurriyyah (true freedom): Emerges only from right ordering under divine guidance

NEITHER imposing uniformity NOR abandoning coordination - orchestrated diversity

Justice and Equity – Importance of Social Justice

'ADL

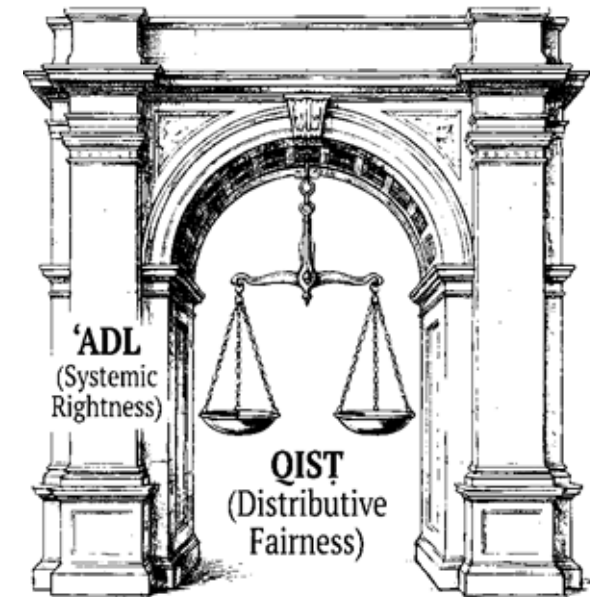
(Systemic Justice)

Right ordering of the whole
Is the PURPOSE just?

QIST

(Distributive Justice)

Fair allocation of
burdens/benefits
Are OUTCOMES fair?



The Gap in Current AI Ethics:

Current focus: **Qist** (bias metrics, fairness, equitable outcomes)

Neglected: **'Adl** - Is the fundamental PURPOSE rightly ordered?

Example: Facial recognition with equal error rates serving mass surveillance (violates 'Adl)

Continuous Multi-Faceted Reconciliation

(rather than mere token technical alignment)

PERSONAL Conciliation

Cultivating wise practitioners

Character, phronesis, virtue

SOCIAL Conciliation

Establishing just institutions

'Adl, polycentric governance

TECHNICAL Conciliation

Achieving human-AI fit

Safety, robustness, interpretability

All three are mutually dependent:

- Technical without Personal -> sophisticated tools for harm
 - Technical without Social -> perpetuates injustice
- Social without Personal -> institutions without wisdom

The principle-practice gap persists because we focus overwhelmingly on technical conciliation

A Vision for Philanthropic AI

Vision for technology that serves humanity (philanthropic) precisely because it is grounded in a reality beyond humanity (God-centered).

1. Grounded in Universal Reason (al-ra'y al-kullī):
Prioritising holistic wisdom over fragmented optimisation.

2. Embraces Complexity (Multiplexity):
Using 'both-and' thinking to navigate tensions horizontally and hierarchically.

3. Operationalised through Justice ('Adl & Qisṭ):
Demanding both systemic rightness and fair distribution.

4. Enabled by Independence (Ḥurriyyah):
Recognising that ethical agency requires freedom from capture.

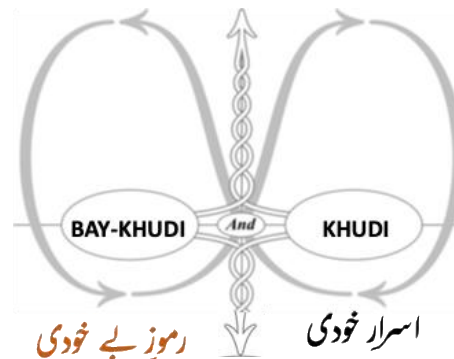
“كُنْتُمْ خَيْرَ أُمَّةٍ أُخْرِجَتْ لِلنَّاسِ تَأْمُرُونَ بِالْمَعْرُوفِ وَتَنْهَوْنَ عَنِ الْمُنْكَرِ وَتُؤْمِنُونَ بِاللَّهِ”

“You are the best community (*ummah*) brought forth for humanity (*ukhrijat li'l-nās*): you command what is right, forbid what is wrong, and believe in Allah.” (Qur'an 3:110)

SYSTEMIC
DYNAMIC/SYSTEMIC 
Openness to Emergence

HORIZONTAL
BOTH-AND 
Openness to Perspectives

VERTICAL
VALUE-ORDERED 
Openness to Transcendence



1. Virtuous Ethics
(Al-Akhlāq al-Fāḍilah)

**2. Empirical Sciences
& Technology**

3. Universal Outlook
(Al-Ra'y al-Kullī)

Thank You!

RELATED WORKS

EDUCATION/ AI ETHICS

1. Qadir, J., & Senturk, R. (2026). *An Islamically-inspired critical pedagogy in the AI era: A multiplex framework for fostering wisdom*. In W. Holmes (Ed.), *Handbook of Critical Studies of Artificial Intelligence and Education* (Elgar Handbooks in Education). Edward Elgar Publishing. ISBN: 9781035335862. *(Forthcoming)*.
2. Qadir, J., & Senturk, R. (2026). *Multiplex systemics for wholeness-making: Toward a more holistic philosophy of educational technology*. In S. Al-Maadeed, M. Saleh, & R. Kumar M. (Eds.), *AI for Inclusive Education*. Elsevier. *(Forthcoming)*.
3. Qadir, J., & Senturk, R. (2026). *Educating for the AI era: Harnessing the wild GenAI horse through multiplex AI humanities and critical AI literacy*. In A. F. Aysan, H. M. U. Qadri, & H. Ali (Eds.), *Artificial Intelligence and the Future of Islamic Finance*. Taylor & Francis. *(Forthcoming)*.
4. Qadir, J., & Arshad, M. R. (2026). *The Ghazalian project for the AI era: A critical Islamic framework for guiding AI development*. In R. Senturk (Ed.), *Ghazali on Education* (Islamic Education Book Series). Brill. *(Forthcoming)*.

HEALTHCARE/PSYCHOLOGY

Qadir, J., Maddah, D., Qoronfleh, M. W., & Senturk, R. (2025). *Toward multiplex health: Integrating complexity, normativity, and open science*. *Frontiers in Psychology, Consciousness Research, Research Topic: Spirituality and Religion: Implications for Mental Health*.
<https://doi.org/10.3389/fpsyg.2025.1603474>

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