

Graph Technology & Infrastructure Inversions

“Electric light did not come from the continuous improvement of candles.

Dominant technological improvement...

e.g. Automobiles

THE movement in favour of horseless carriages will not be checked because a well-known builder of fire-engines has no faith in the future of the autocar. Mr. Merryweather calmly dismisses the matter by stating that even if the "four-miles-an-hour-and-red-flag" Act were done away with, there could be no scope for carriages without horses. Nothing is more certain than that the Act will be repealed or be modified to such an extent that the autocar will be allowed a fair field. Mr. Merryweather, however, shows how little he knows when he talks of the horseless carriage as "an amusing toy for adults." If he lives to be many years older, he will find out his mistake.

07.01.1896, The Yorkshire Herald

BAN ON HORSELESS CARRIAGES
Washington Commissioners Afraid They Will Frighten Horses.
 WASHINGTON, Aug. 14.—The commissioners of the District of Columbia have refused to allow horseless carriages to be used on the streets of Washington. John A. Hughes, a merchant, applied for permission to use a horseless delivery wagon, and in refusing the permit the commissioners placed a ban on all horseless vehicles on the ground that they frighten horses and are likely to cause runaways and accidents.

21.08.1897, The Weekly Leader

FOURNIER ON THE AUTOMOBILE FACE.
Says Successor to "Bicycle Face" Is the Result of Nervous Tension
 The "automobile face" is the successor to the "bicycle back," the "bicycle face" and the "board walk foot." Henri Fournier speaks as follows on this latest physical peculiarity:
 "The most careful chauffeur cannot avoid being shocked every time he takes a spin. I do not think that any other sport known to man affords so much excitement. One needs a stout heart and a strong nervous system as well as keen eyes to indulge in this most modern pastime, for I do not believe that navigating a flying machine brings a man into contact with more perils.
 "The automobile face is no joke. It is the startling presentation in the human physiognomy of the record of thousands of dangers passed or, rather, close escapes from danger. I have nev-

19.02.1902, The News-Herald

... is context dependent:
Horses vs. cars on unpaved roads



Kenneth Melvin Wright, 1927

Infrastructure inversion

with context dependence of dominant improvement

In general, new technology suffers from unsuitable infrastructures until there is sufficient pressure or incentive to improve it.

The new infrastructure not only makes the new technology efficient to use, but generally also improves the performance of old technologies (and can provide access to completely new types of use).

Bowker, Antonopoulos

Better infrastructure for transport:

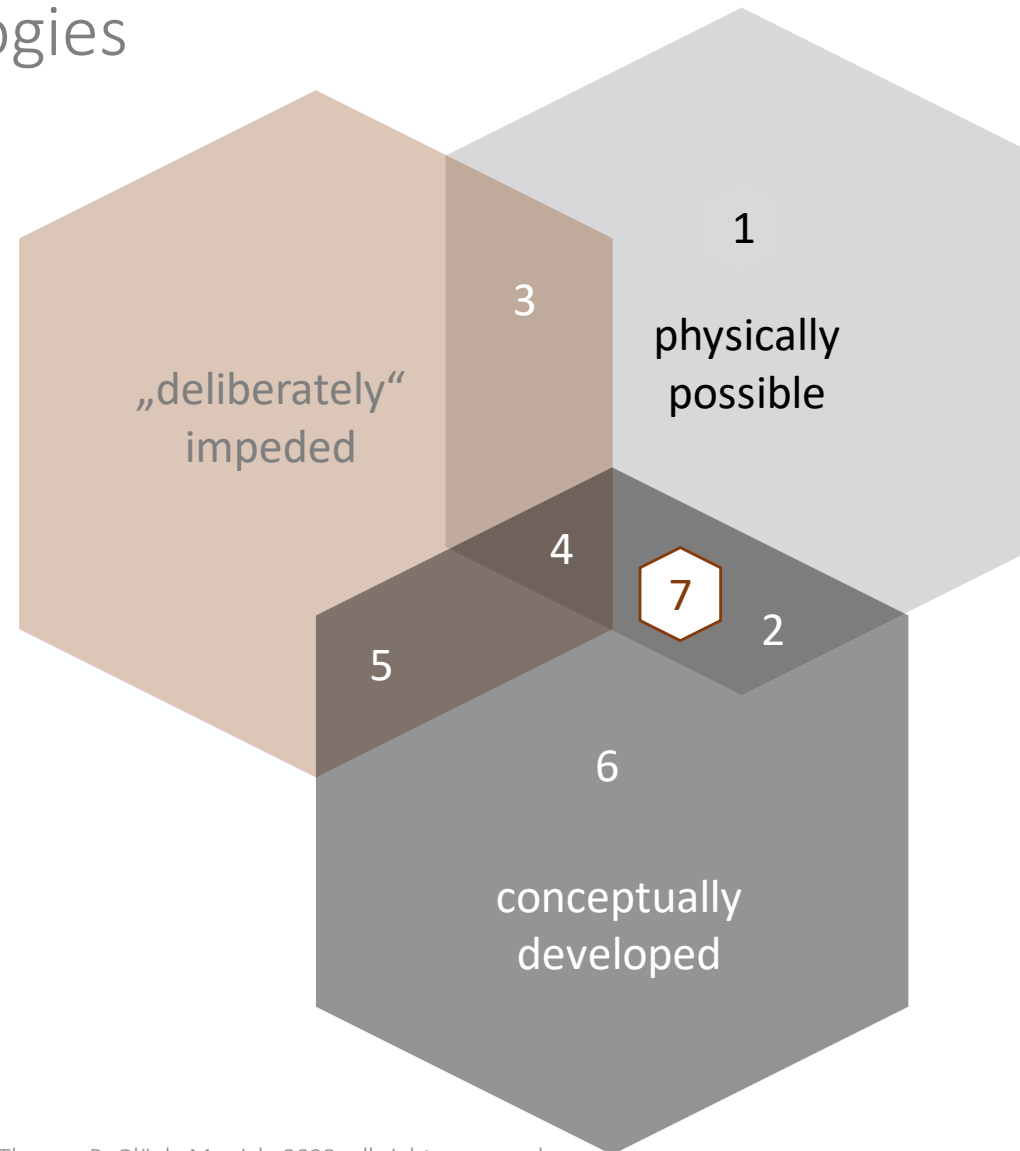
Rescue from suffocating in horse shit

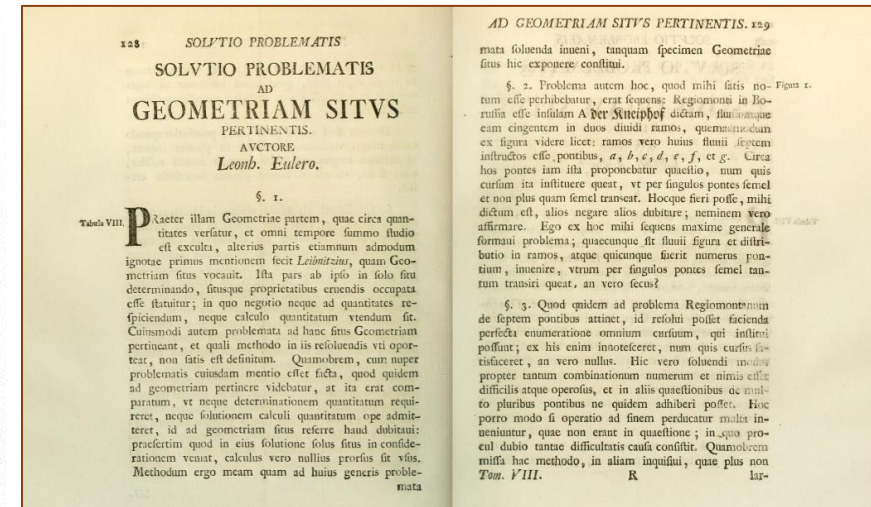


Organizational infrastructure

Information and its technologies

- 1  , Moore's Law, ...
- 2 feasible solution space
- 3 resistance due to (perceived or actual)
 - beneficiaries of a status quo or
 - those disadvantaged by a change
- 4 „unpermissioned innovation“
- 5  „There are more things in your philosophy than are dreamt of in heaven and earth“
- 7 realized solutions

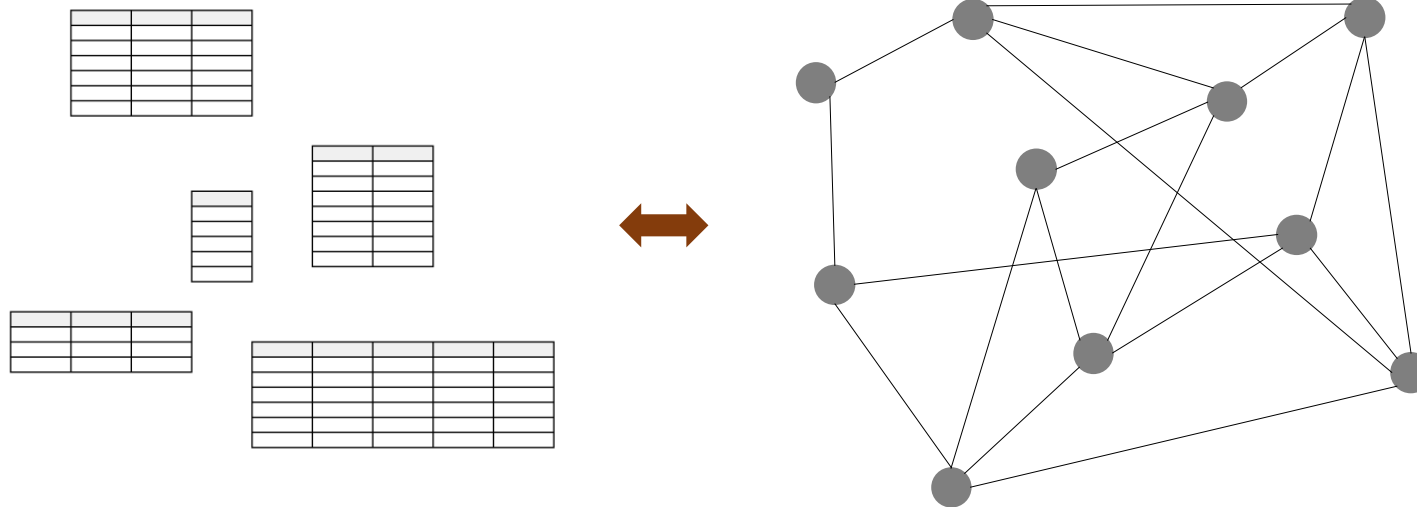




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Good analysts think in ~~tables~~ graphs

Relational technology systematically fails due to relational complexity



»By 2025, *graph technologies will be used in 80% of data and analytics innovations*, up from 10% in 2021, facilitating rapid decision-making across the enterprise.«

Gartner Market Guide: Graph Database Management Solutions, 30 August 2022

Graph dominates relational

Ashby's law in action

Relational (e.g. Oracle)

complicated data models

schema dependencies

complex queries

expensive visualization

queries won't terminate

Graph (e.g. neo4j)

intuitively understandable

schema independence

simplified queries

visualizations out of the box

results within milliseconds

....

⇒ **graph technology enables fundamentally new, better and faster solutions.**

Use cases

Who needs fast and cost-efficient transparency, anyway?

Graph technology radically improves processes, which potentially need

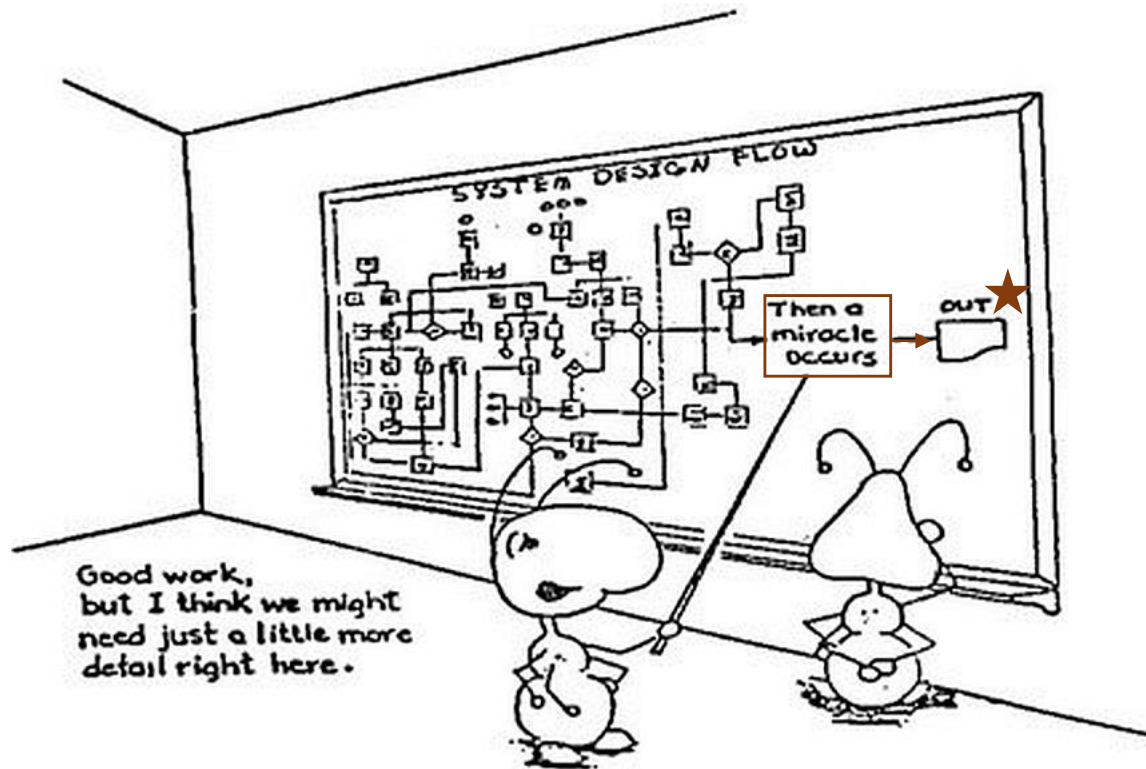
- „all“ information
- „immediately“ and
- with minimal compromise or cost.

It helps, for example,

- to bridge the traditional gaps between IT and business, and
- provides a cost-effective and high-performance governance basis,
- in addition to perfect support for business-specific analyses,
- it enables the integration of heterogeneous systems,
- provides dominant improvement potentials for data-driven processes, as well as
- an easy implementation of fundamentally new solutions, which would be impossible without graph technology (!)

Complicated vs. complex

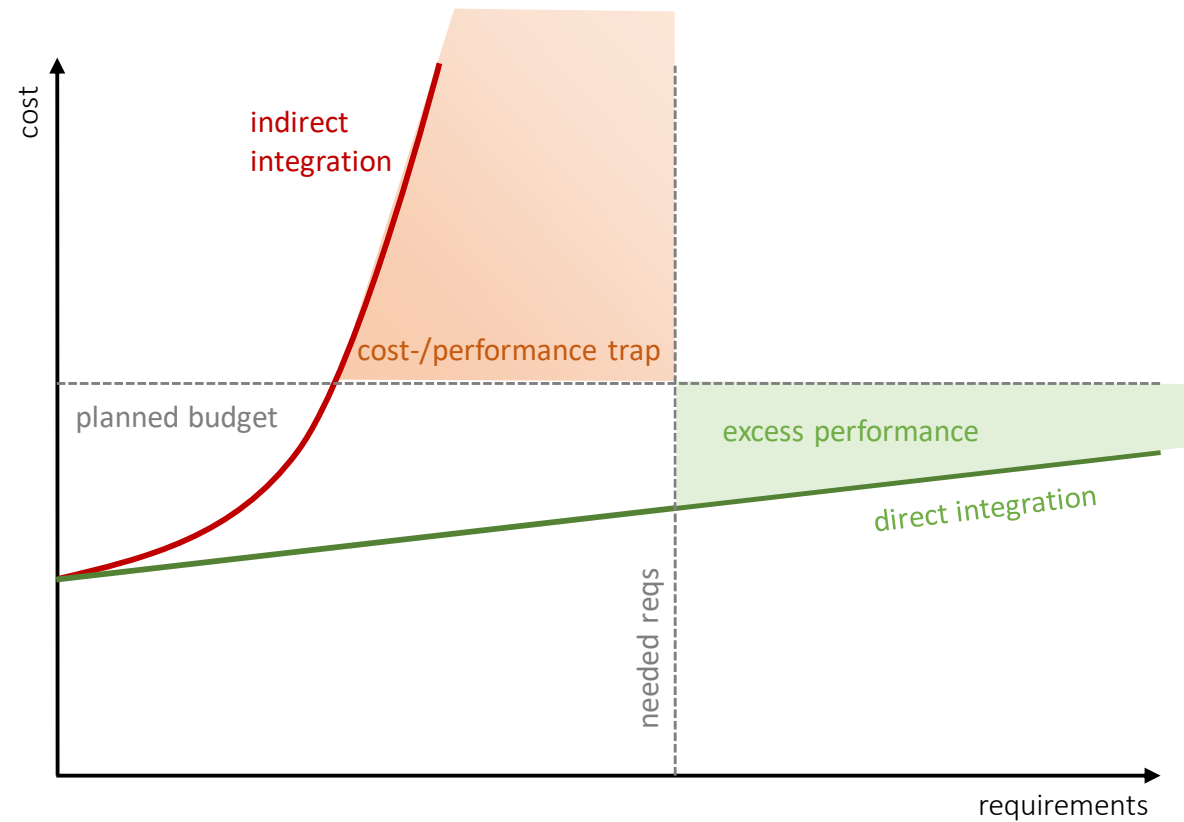
Integrate or discard and redevelop?



★ organizational steering, advanced analytics, system harmonization/migration, ...

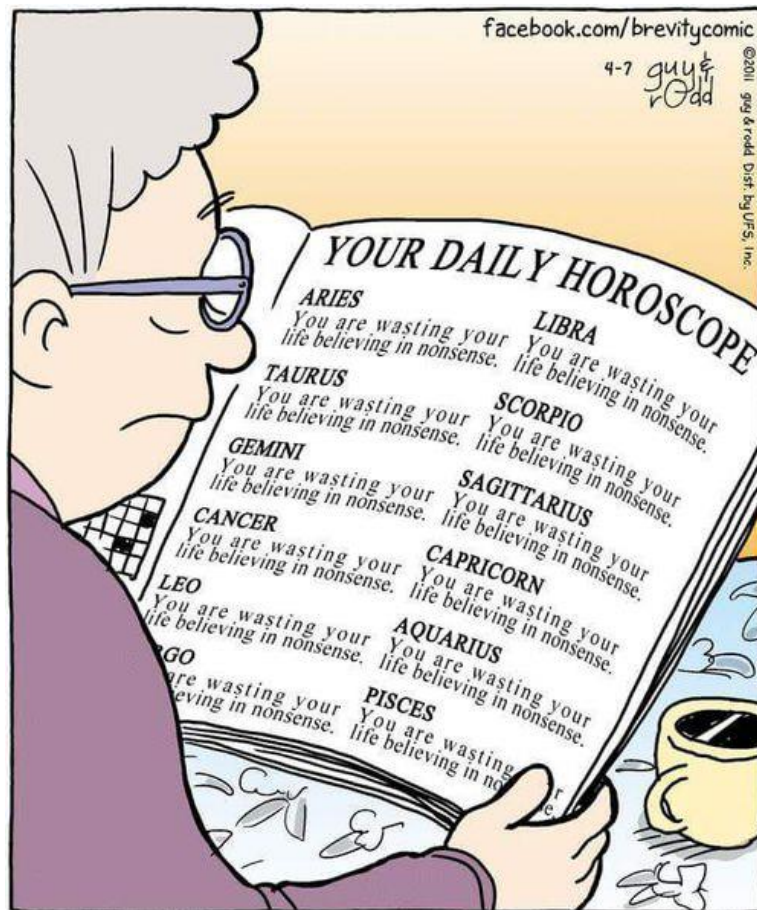
Integration alternatives

Indirect: unavoidable cost-performance-gaps



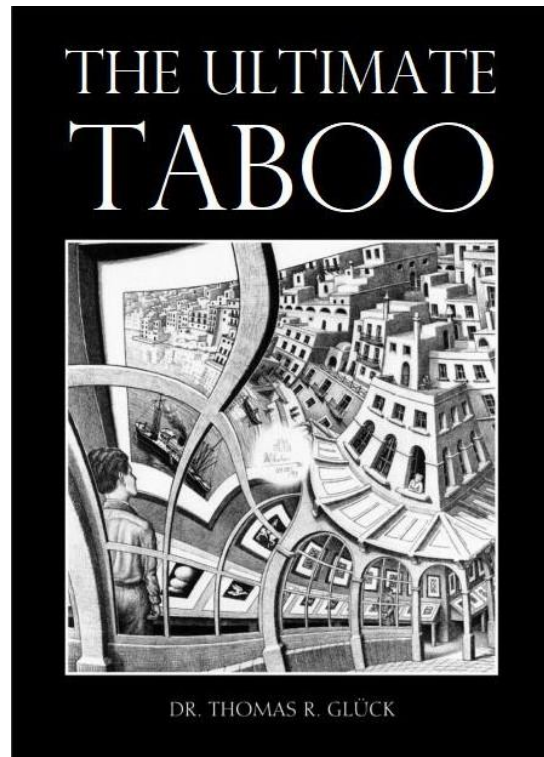
Infrastructure inversion of knowledge

You are wasting your resources believing in nonsense.



Infrastructure inversion of knowledge

Inverse information quality treatment



What is knowledge?

How can we improve its quality?

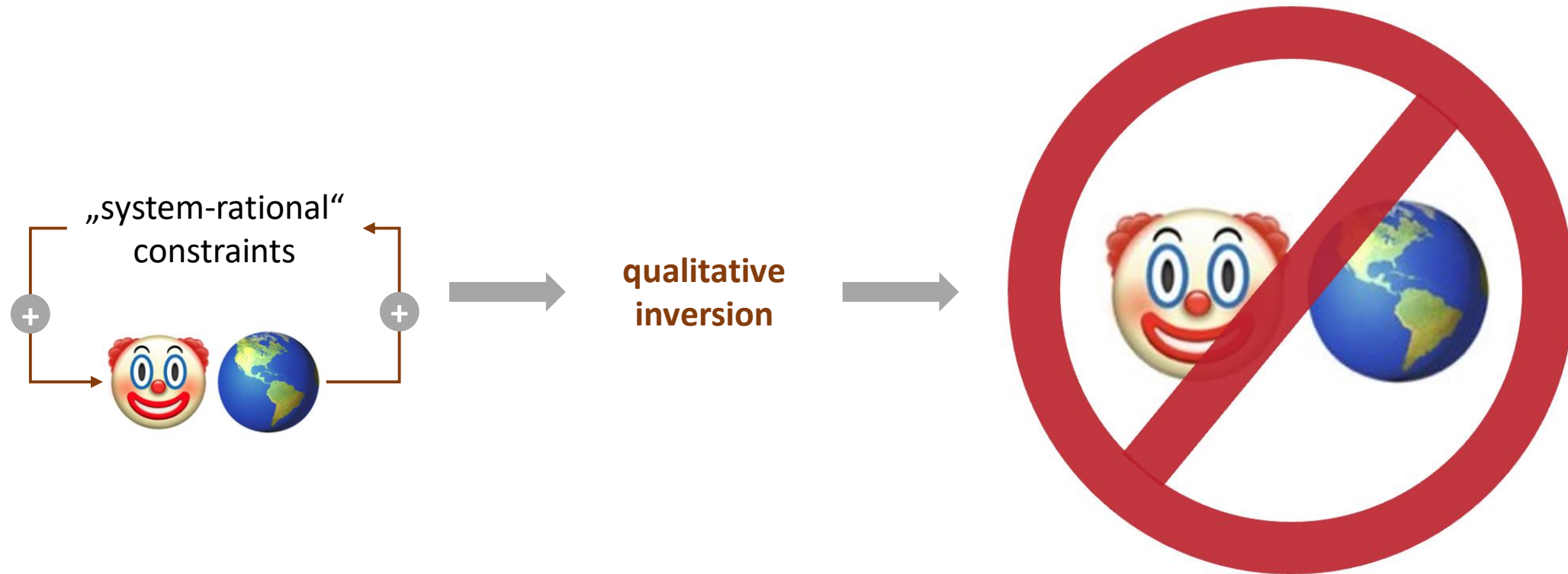
Radical simplification and pragmatic solution
by *inversion*:

In order to draw a boundary to knowledge,
one must know both sides of this boundary
(i.e. one must know what one *cannot* know).

By considering the empirical phenomenon
of *Passive Disinformation*, knowledge quality
becomes concretely treatable.

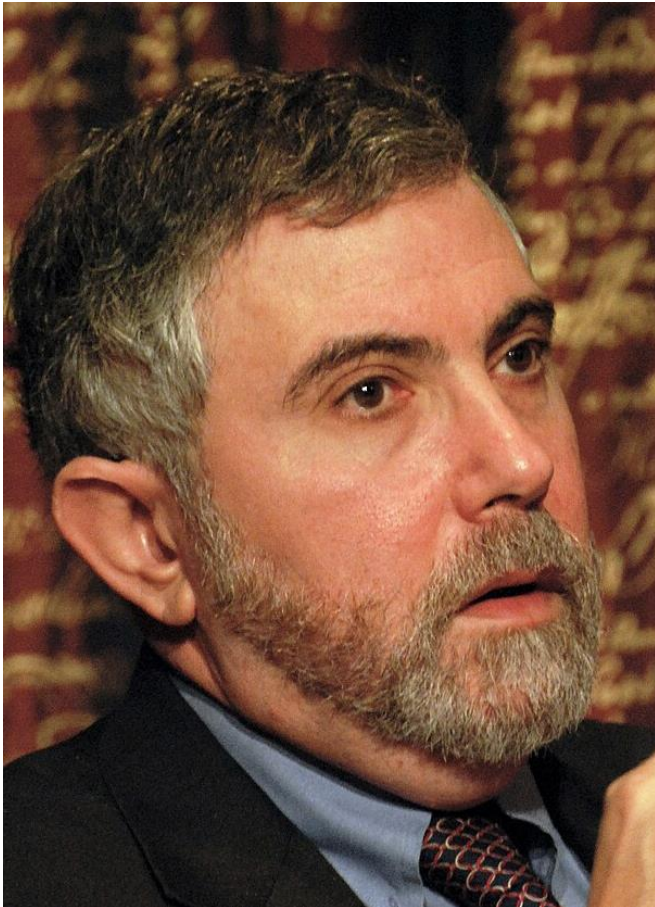
Better infrastructure for organizations:

Rescue from suffocating in bull shit



Infrastructure inversion of values

„The internet is just a passing fad.“

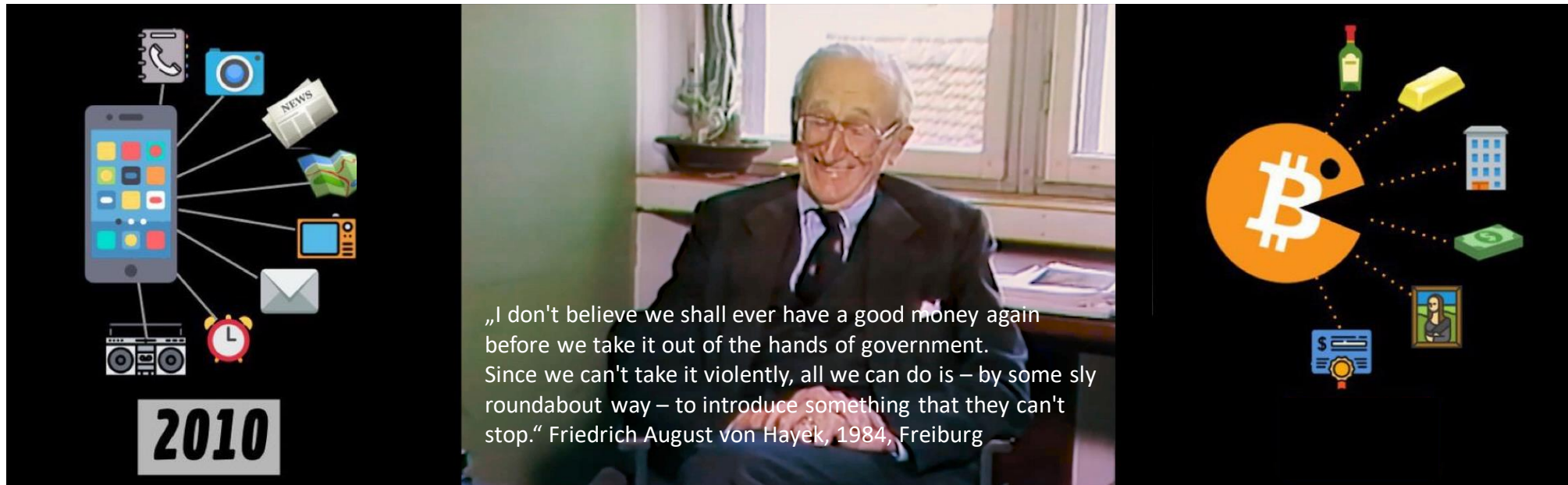


„By 2005 or so, it will become clear that the internet’s impact on the economy has been no greater than the fax machine’s“

Paul Krugman

Infrastructure inversion of values

Next disruption phase of the internet?



Infrastructure inversion of values

Values sui generis: Reformation as faith inversion



Preconditions of a reformation:

- 1) Rent-seeking monopolistic service provider
- 2) Technological revolution as catalyst for change
- 3) New economic class: people with something to fight for
- 4) Credible strategies for defense and escape

Tuur Demeester

Infrastructure inversion of values

Value network technology as inverse community of faith?



Bitcoin has got „the ability to convey your energy not [just] across 10.000 miles but across 10.000 days. [...] Every great religion, every great institution has **keepers of the flame**. [...]

A thousand years ago, [if] i wanted to keep a religion alive, I had an altar in my home.

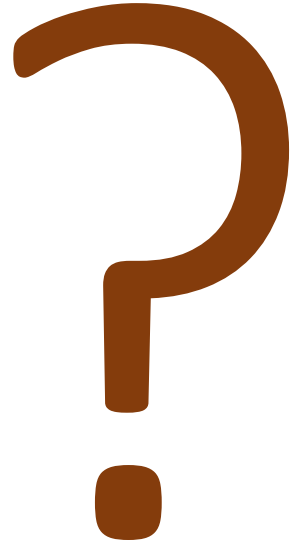
So the idea of an altar or a shrine [...] are structures where people go to worship.

And the worshipping is the feeding of the flame. [...]

And **the flame of Bitcoin is the node and the mining rig.**“

Michael Saylor

*Inverse dogma: **Don't trust, verify.***



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Thank you :-)

