

»Evolution, Revolution, or Disaster: Political Implications of Design as Problem Solving«

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Outline

Part I

Design history

Problem definition as a political act

Part II

Design and economy

Power relations and impact

Part I

*»The problem is not the problem.
The problem is your attitude about the problem.«*

Captain Jack Sparrow

Design History

The great design movements were
utopian,
political,
or at least reformist.

design = »material culture« + »how do we want to live?«

Design History

Arts and Crafts

product quality, impoverishment, alienation

De Stijl (1917-1931)

visions of future living, »collective future«

Bauhaus (esp. the late Bauhaus since 1928)

rational and cooperative design, affordable housing

William Morris

(1834 – 1896)

professed communist
agitating against industrialization


books:

»The Earthly Paradise «

»Utopian News from Nowhere«

...





Life in a Peaceful
New World

Who defines the laws of paradise?

Do we know better?

No. Not necessarily. Sometimes yes, more often no.

But should we therefore give up trying to know and do better?

Does »objective scientific truth« exist?

Well, no.

But should we give up academic research in consequence?

Design History

Ulm School of Design (1953–1968)

technology as part of culture and agent for societal change
rebuilding the country politically and materially

Ecological Design (1970s)

low-tech solutions, reuse of material

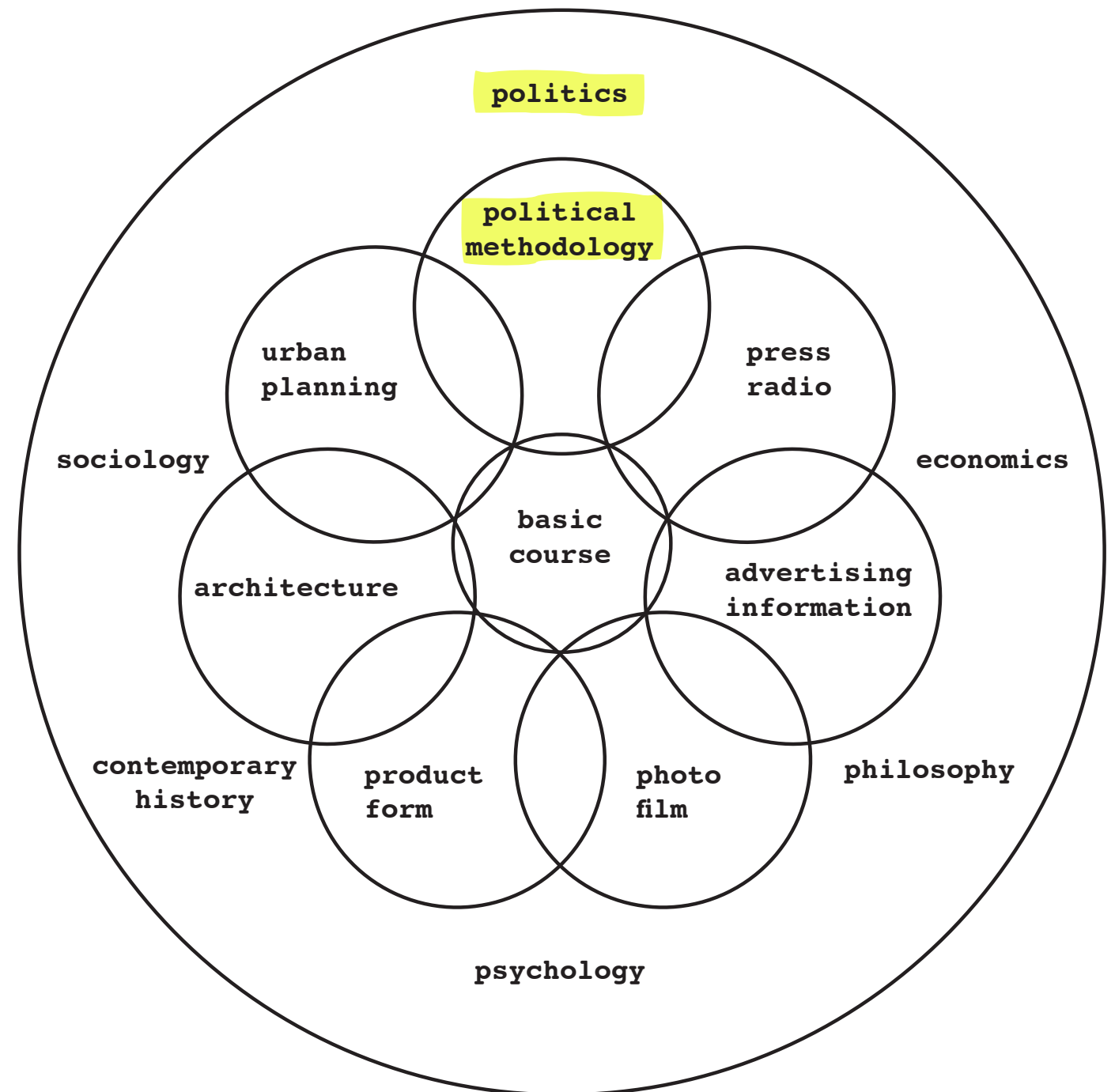
Participatory Design (1970s)

shifting power from »decision makers« to workers and employees

Initial Ulm School Concept

In 1950, 7 subjects are planned:

1. **Politics**
2. Journalism
3. Broadcasting
4. Photography
5. Advertising
6. Industrial design
7. City planning



Design As »Problem Solving«

The great design movements tackled the specific pressing problems of their times.

Do we do that **today?**

If design is problem solving, **what then are the problems?**

Design As »Problem Solving«

global problems with complex systemic implications

energy consumption, population growth, resources, health, world trade and finance, transport, industrial and agricultural technology, climate change ...

Systemic Constraints



*»when they design a tin can opener,
[they accept] the configuration of the can.*

*The tin can designer in turn,
accepts the configuration of the can opener.
This is **a constraint**.«*

Lucius Burkhardt

Systemic Constraints



»Improvements« by user centred approaches may lead to more comfort, but also to **more energy** and **resource consumption** and **waste**

Two Types of Failures

»A **type 1** failure has occurred if the plan does **not accomplish** what was intended.

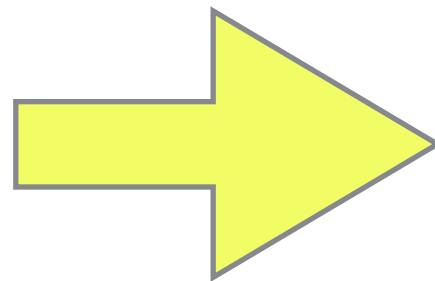
A **type 2** failure has occurred when the execution causes **side and after effects** that were unforeseen and unintended, and prove to be undesirable«

Horst Rittel

Systemic Constraints

Addressing the problem on a **higher systemic level** may lead to novel ways of ...

food preservation,
storage,
distribution,
or eating habits
and community rituals



more complexity
more work
less money

The Problem with the Design Problem

The definition of a problem often already suggests its solution:

- a) Our products look cheap.
- b) Our products are of low quality.

- a) There are too many refugees.
- b) There are too many wars.

- a) Our software lacks an online help system.
- b) Our software is not self-explanatory.

Problem Definition

*»the division of phenomena into
changeables and invariants.«*

Horst Rittel

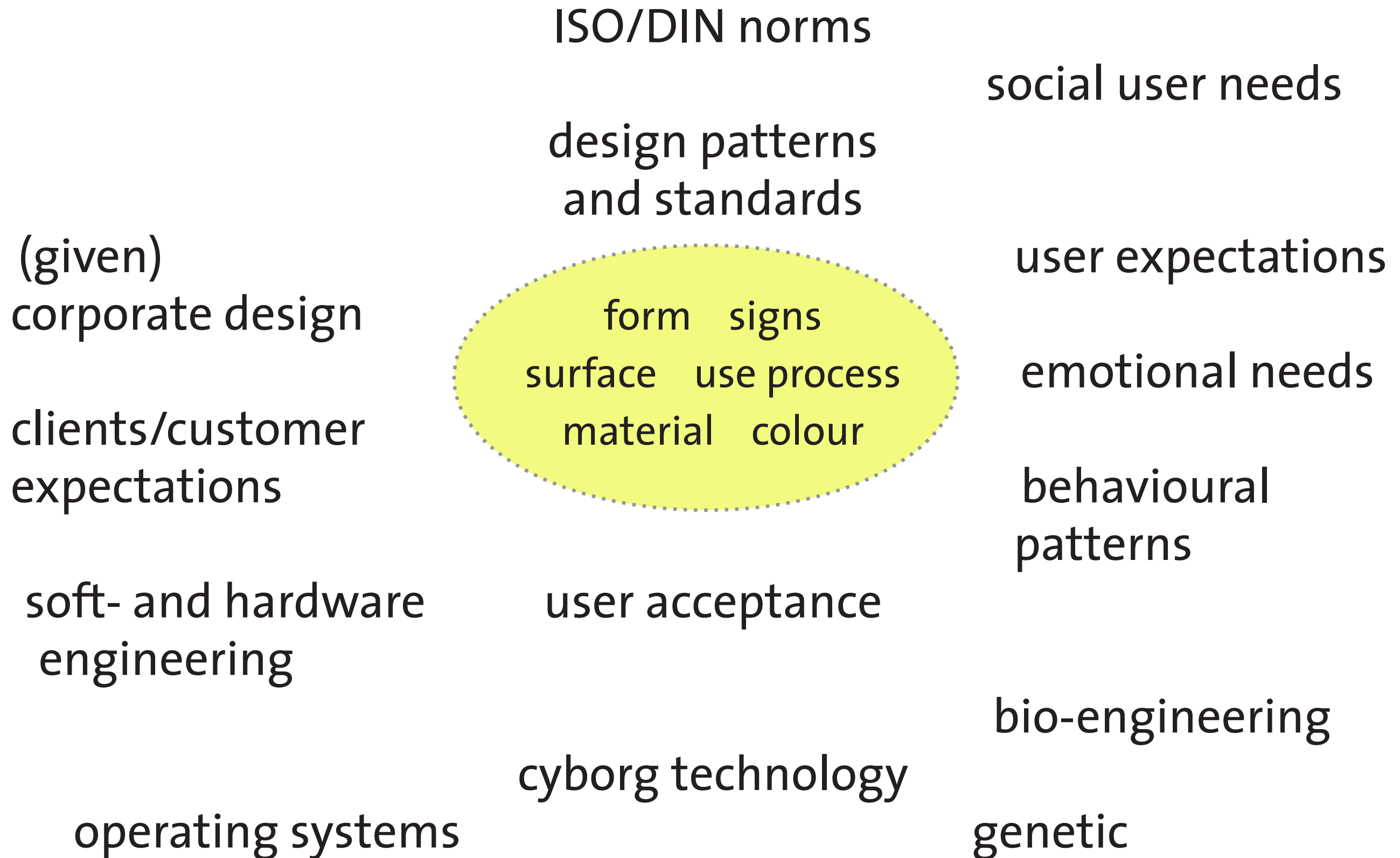
Constraints?

»Every constraint is something the designer **does not want to change**.«

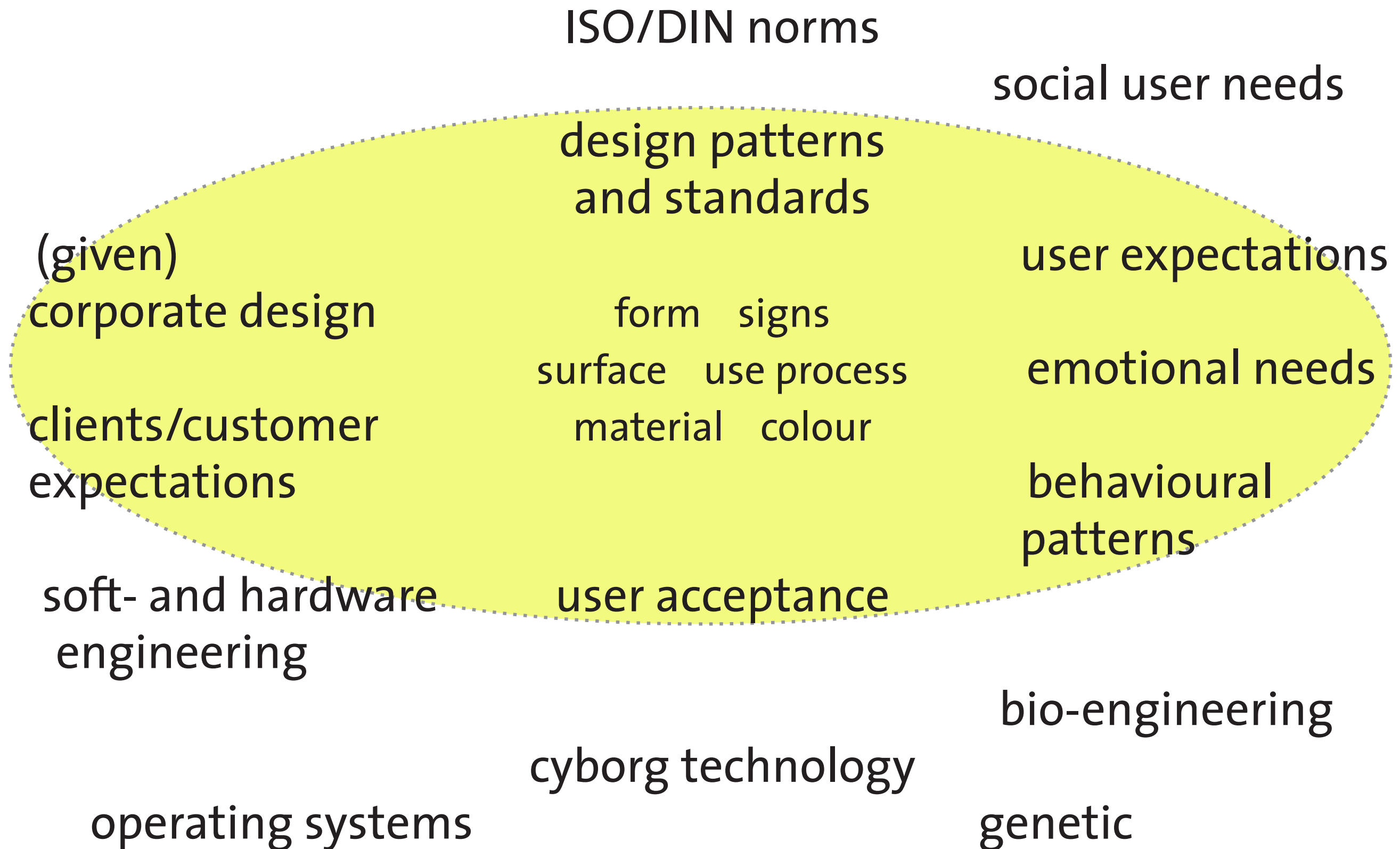
»Constraints are decided, selected, and **self-imposed**, and not implied, derived or logical necessities.«

Horst Rittel

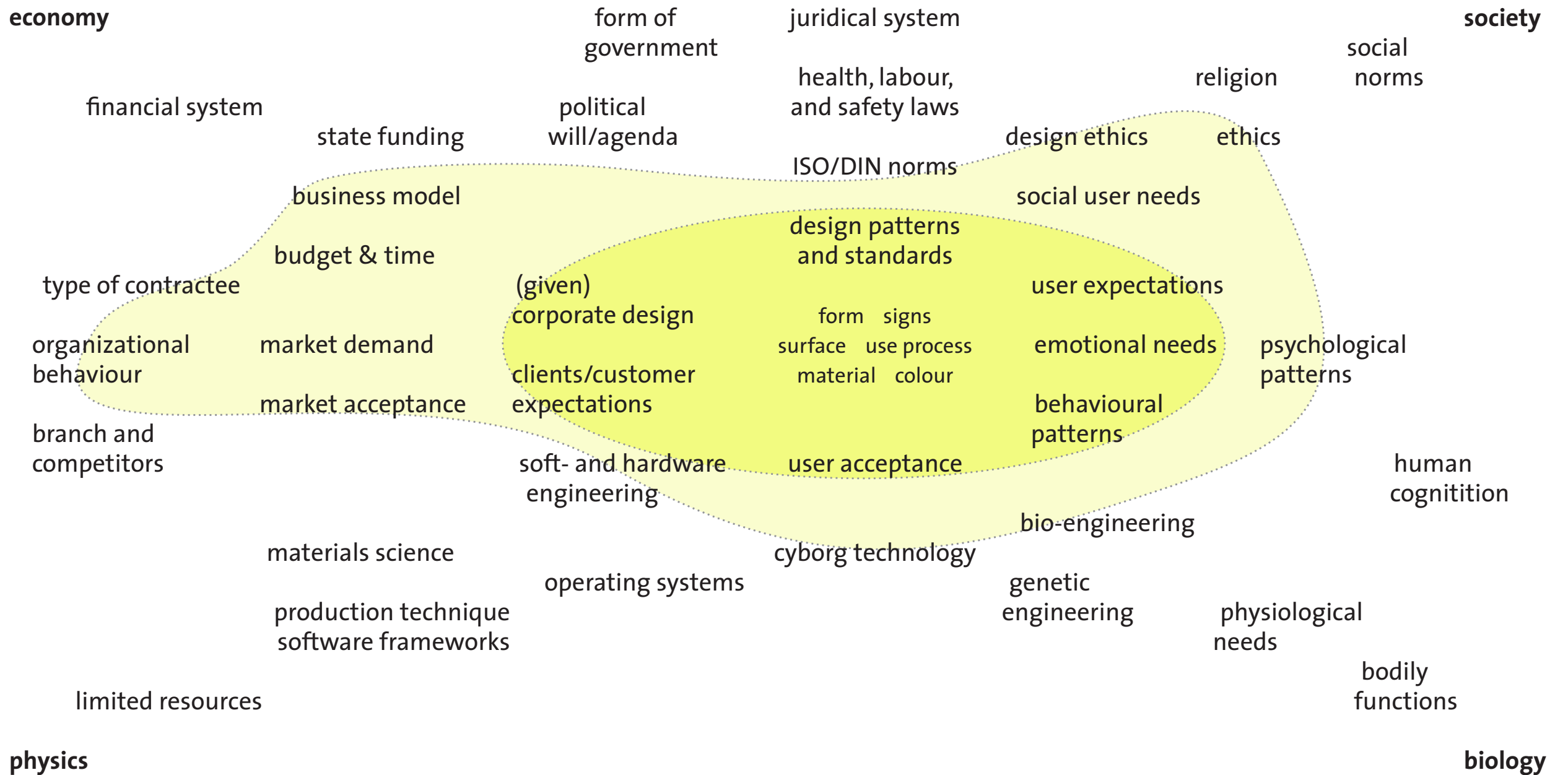
Design Space of Conventional Practice



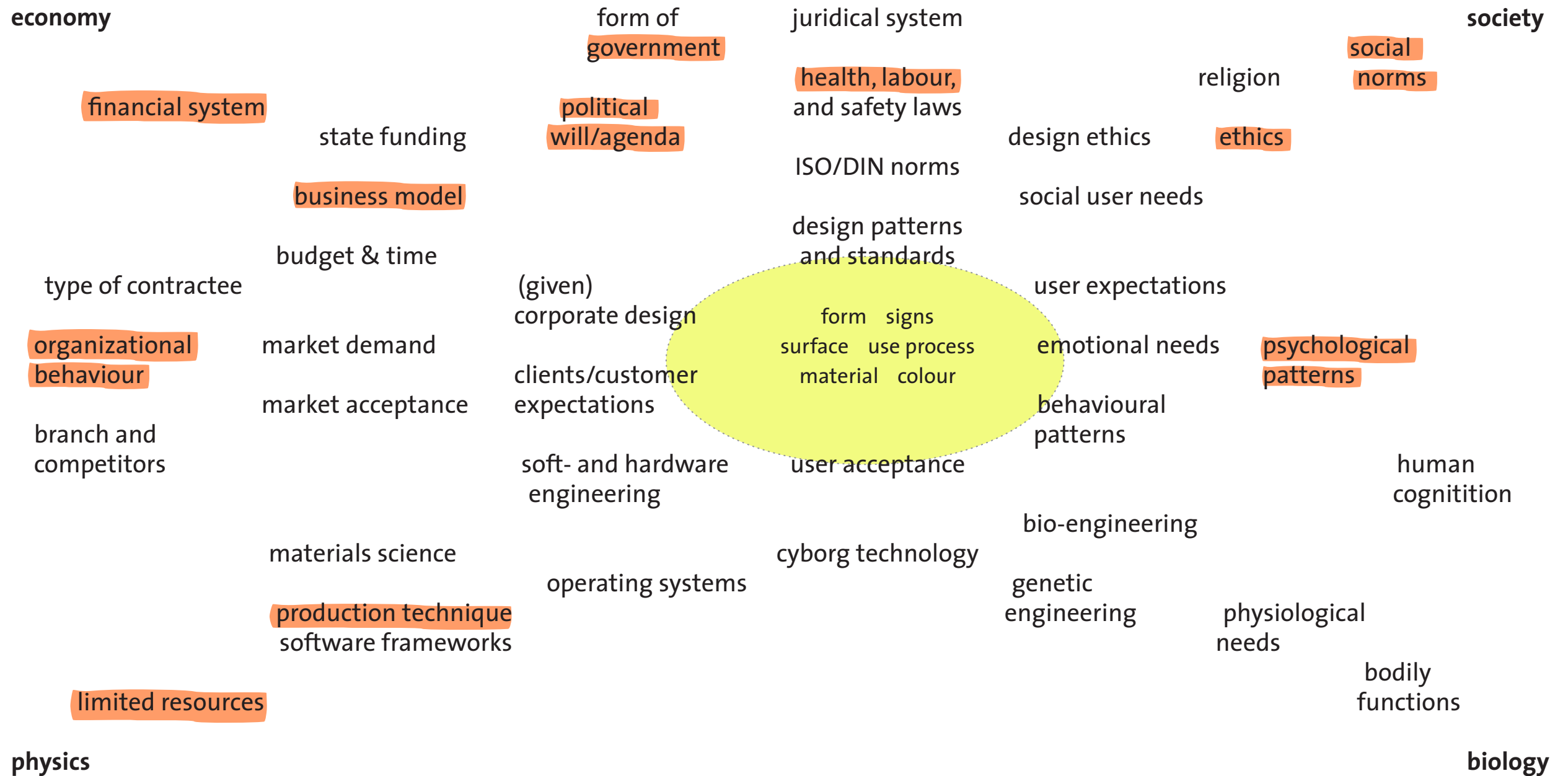
Design Space of »Innovative« Practice



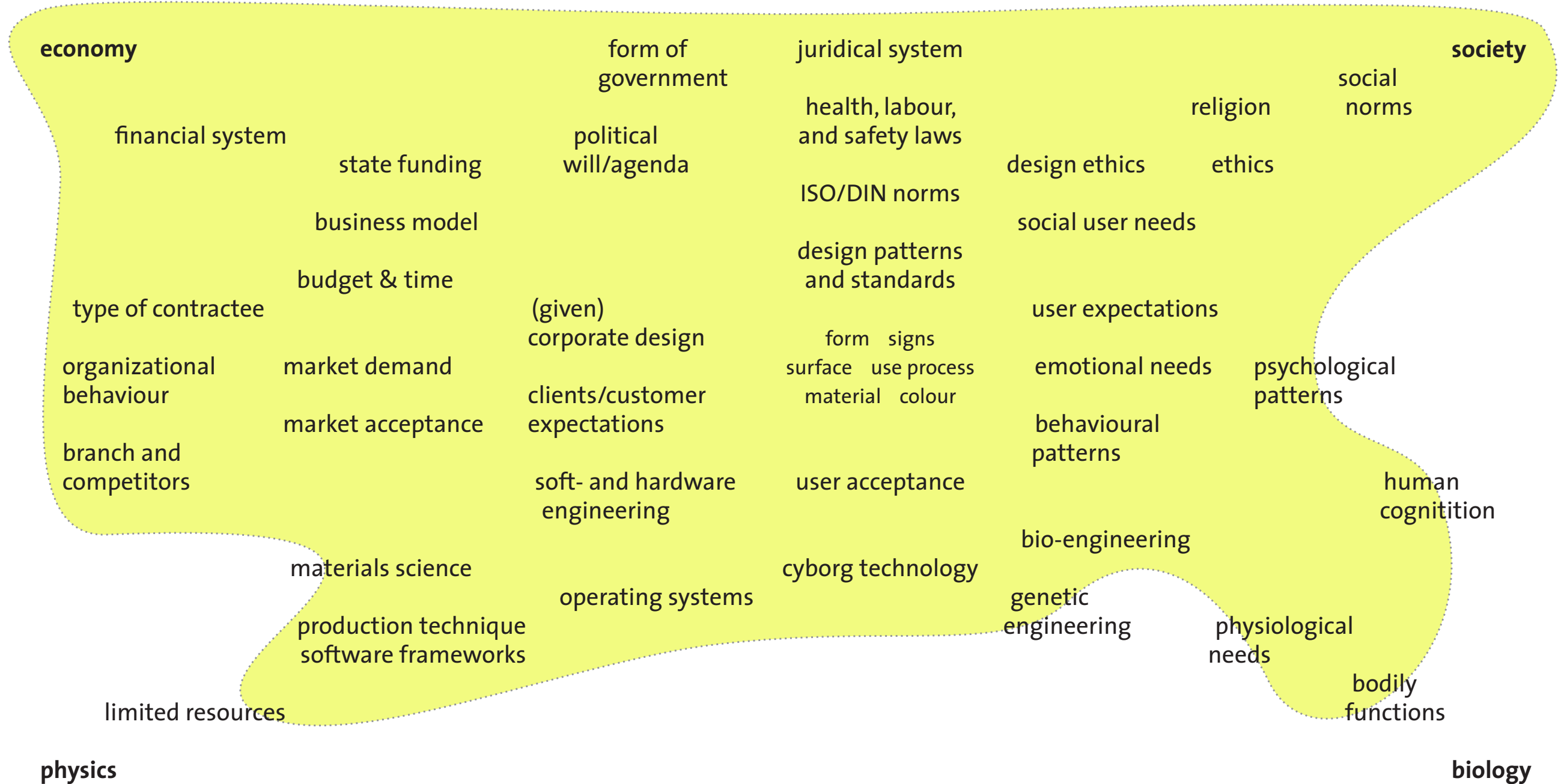
Extended Design Space



Average Practice vs. Critical Problems



Variant Space



Variant Space

All this is human-made and subject to change – be it by design, evolution, revolution, or disaster.

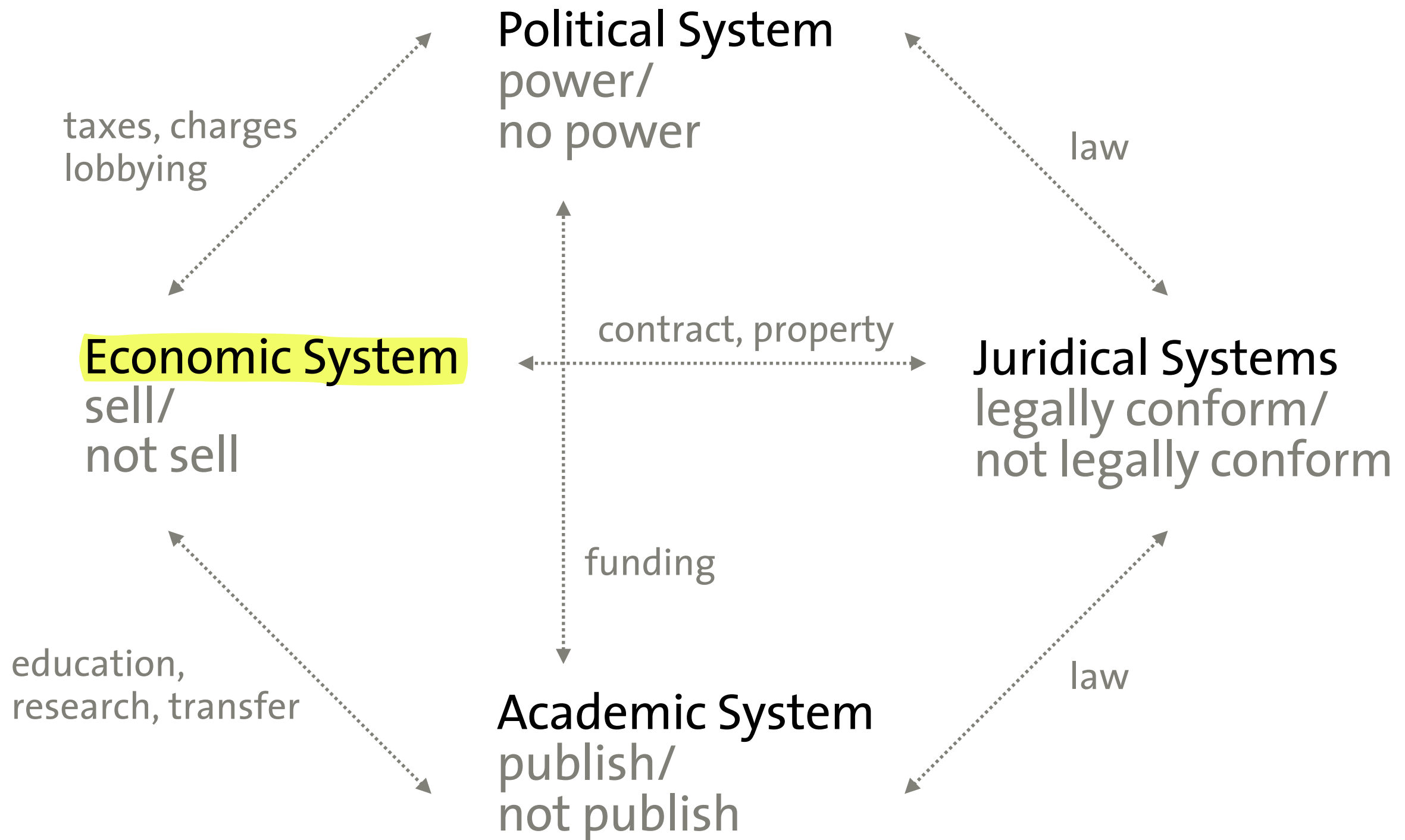
Deciding what we consider invariant, sets our political position – and if what we do contributes to evolution, revolution or disaster.

Part II

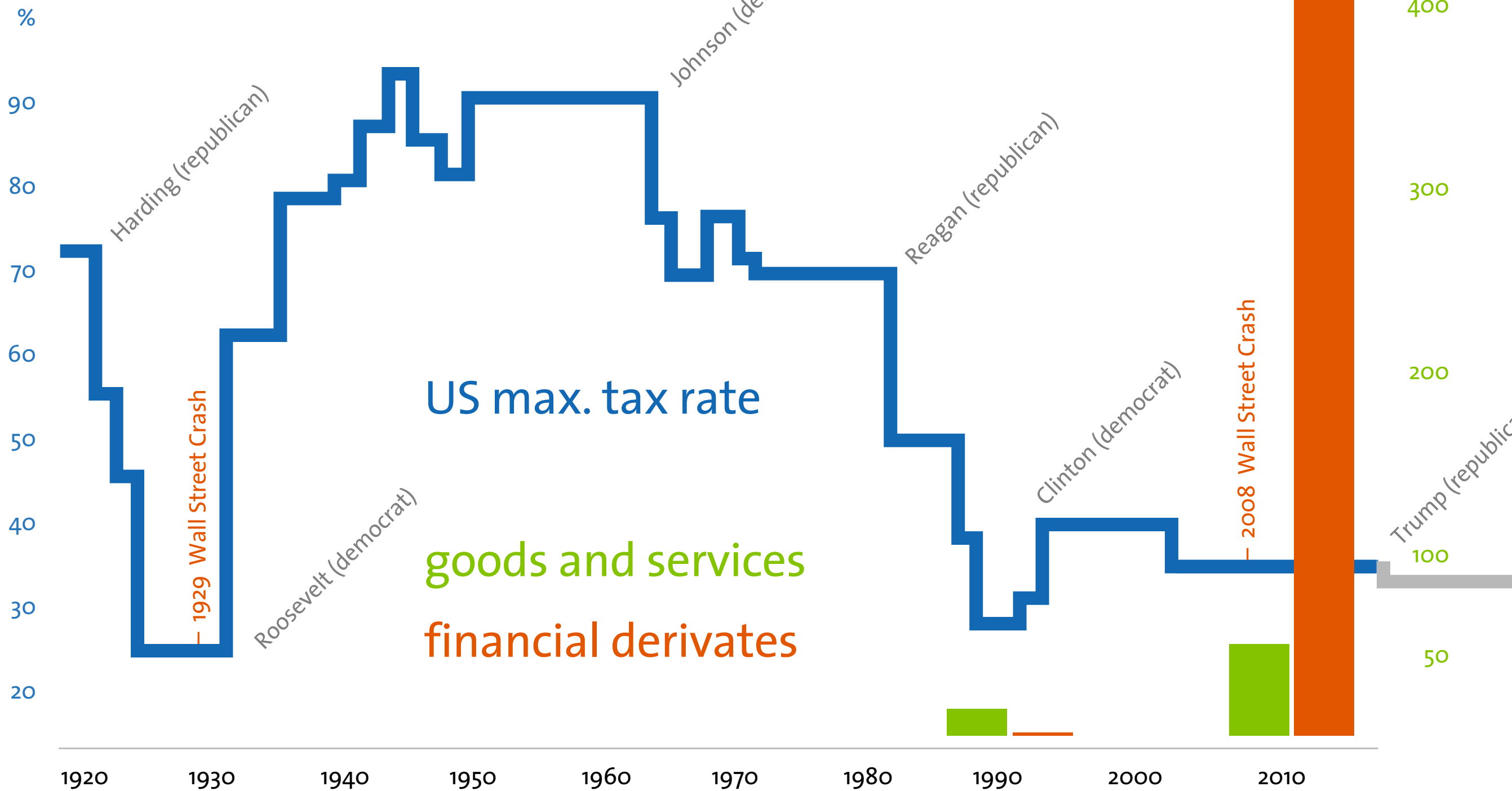
It's the economy, stupid!

Bill Clinton

Design: Part of the Economic System



Finance & »Real« Economy, Tax



The Concept Behind the Red Bar

Capitalism

The Problem Has a Name



Occurrences of the term
»Capitalism«

1 (in 416 content pages)

Only in a historical review
of the 19th century (!)

0 (in 478 pages)

The Economic System

We had debates over our education system.

We had debates over our transportation system.

We even had a debate [...] over our health [...] insurance systems. [...]

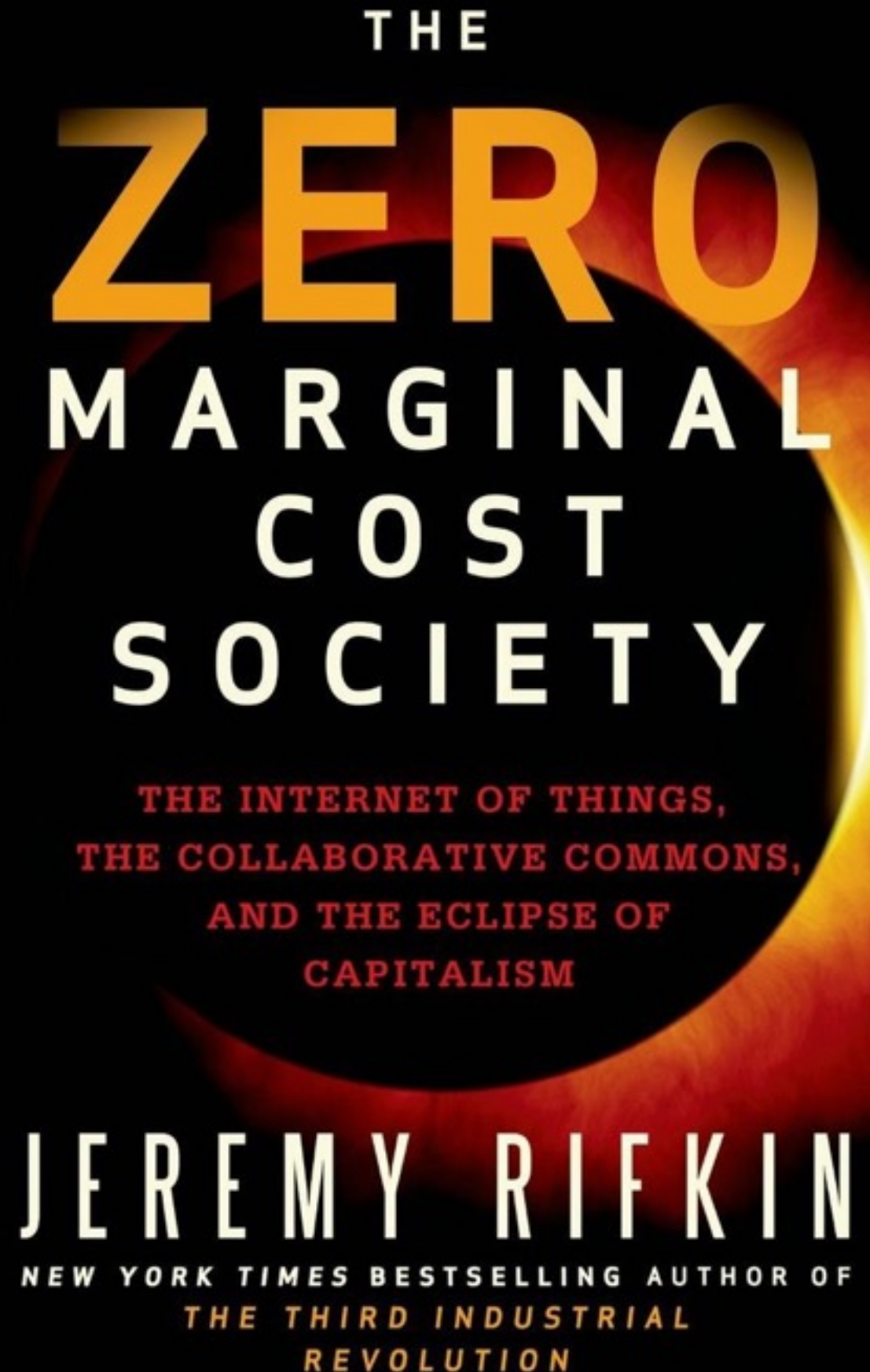
*But for the last half century we could not [...] debate our **economic system** – it was **a taboo**.*

Richard D Wolff

Sharing Economy

Jeremy Rifkin (2014):

»... the **eclipse of capitalism**«?
– delusive hope of digitalization to reform and eventually erode capitalism.



Evolution, Revolution, or Disaster: Political Implications

Digital Economy

Nicolas Negroponte (1995):
»bits instead of atoms« –
delusive hope of digitalization
being a green technology

THE ROAD MAP FOR SURVIVAL ON
THE INFORMATION SUPERHIGHWAY

being digital

NICHOLAS NEGROPONTE

‘Knowledgeable, argumentative and entertaining, Nicholas
Negroponte writes about the future with the authority of
someone who has spent a great deal of time there’

Douglas Adams

Evolution, Revolution, or Disaster: Political Implications of Design a

Digital Capitalism

sign in search more International

theguardian

home > tech UK world sport football opinion culture business lifestyle all

Apple The networker

Digital capitalism produces few winners

Apple, Amazon, Facebook and Google might get little financial benefit

shaping our economy today—and tomorrow.”
HAL VARIAN, Chief Economist, Google

THE SHARING ECONOMY

THE CYBERTARIAT COMES OF AGE

Labor in the Global Digital Economy

URSULA HUWS

“Ursula Huws is without peer as an analyst of life in contemporary capitalism.”
—LEO PANITCH

COGNITIVE CAPITALISM, EDUCATION AND DIGITAL LABOR

KEYBOARD -- Y

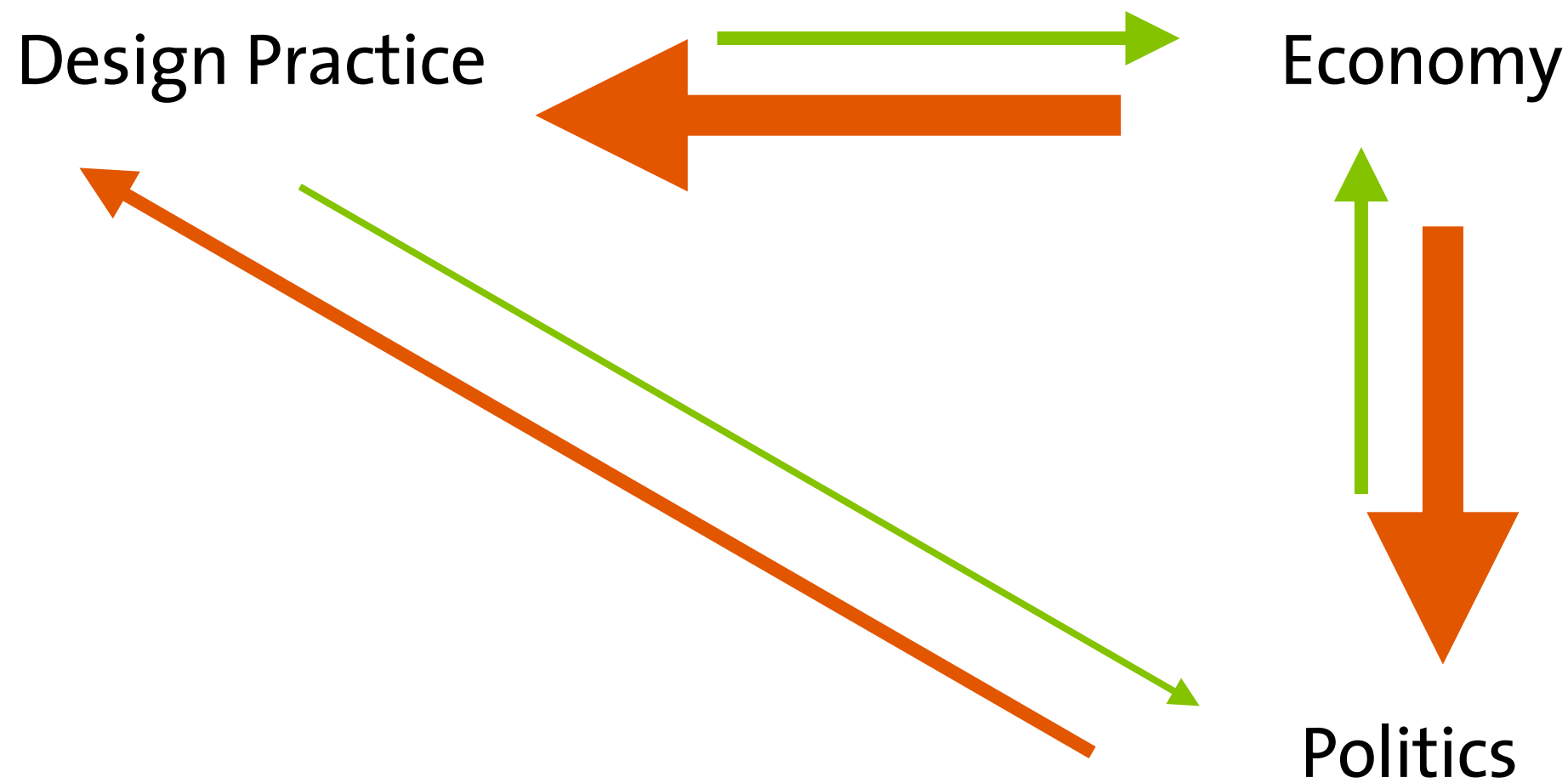
JOYSTICKS

OF EMPLOYMENT AND THE CROWD-BASED CAPITALISM

JIN SUNDARARAJAN



Relations of Power and Change Impact



Systemic Impact and Effort

possible impact becomes ...

... bigger with available effort

... bigger with leverage

... smaller with systemic depth

Systemic Impact and Effort

$$I = E * L / D_s$$

Impact (I) equals Effort (E) multiplied by Leverage (L), divided by systemic Depth (D_s) or if the equation is solved for Effort (E):

$$E = I * D_s / L$$

Effort (E) equals Impact (I) multiplied by systemic Depth (D_s), divided by Leverage (L)

To increase impact on society/economy,
the necessary effort and leverage tends to infinite.

Since effort is limited,
the decisive question is **how to increase leverage?**

Conclusion

Problem definition is a political* act.

Design (i.e. deciding on solutions) is political*.

Today, design practice is rather **part of the problem** than part of the solution.

In order to change design practice we have to change economy.

If we want to **increase impact** (by leverage) we have to get our hands dirty in **politics** and economy**.

* non-institutional but having (also unconsciously or unintended) effects on society

** influencing opinion making and institutional policies: activism, NGOs, parties, etc.

thanks.

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Annex: the neither a nor b manifesto

(a)

~~affirmative~~
problem solving
design as process
provides answers
~~in the service of shareholders~~
~~for how the world is~~
science fiction
futures
~~fictional functions~~
change the world to suit us
narratives of production
anti-art
research for design
applications
design for production
~~fun~~
concept design
consumer
~~makes us buy~~
innovation
ergonomics
user-friendliness

(b)

critical
problem finding
~~design as medium~~
asks questions
in the service of society
for how the world ~~could be~~ *should*
social fiction
~~alternative worlds~~
~~functional fictions~~
~~change the us to suit the world~~
narratives of consumption
~~applied art~~
research through design
implications
~~design for debate~~
~~satire~~
conceptual design
citizen
makes us think
~~provocation~~
rhetoric
ethics

after Dunne A. and Raby F. a/b manifesto, 2009
<http://www.dunneandraby.co.uk/content/projects/476/o>