

**Challenging the Paradigms:
What AI Really Changes – and What It Doesn't**

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Instead of an Agenda

- 1) AI Challenging Paradigms
- 2) ... in Business
Highly skilled, cognitive jobs
IS-based management revolution
- 3) ... in Media
Media as a Business
Democracy-relevant journalism
➔ IS Research for the good of society
- 4) ... in Academia
- 5) Punchlines, food for thought, and fun

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AI (?) Challenging the Paradigms?

'Hype' – 'Paradigm' – 'Habit'

Paradigm: established way of doing things within industry or organization
foundational framework, model, or set of beliefs
⇒ dictating operations, decision making, problem solving
Source: Thesaurus

Hype: Intensive, often exaggerated publicity to create excitement or anticipation for product, event, or person
Source: Thesaurus

Habit: A usual manner of behaving or doing
Synonyms & similar words:

- practice
- custom
- pattern
- routine
- addiction

Source: Thesaurus

"We" barely agree on what AI is and, more importantly, what it is not!

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Artificial Intelligence (AI)

AI Technologies systematically 'use' also unstructured data

Based on data and algorithms
machines 'can' (?)

- understand
- interpret
- learn
- interact

Turing Test
(Alan Turing 1950)

IBM's Watson

AI something with machines & "cognitive"

Most (employees)

- Click
- Facel
- Cell
- RFID
- Real
- Wearables / Sensors
- Cars etc.
- Nature (winds, clouds, animals, plants)

Daily produced new data
250,000 Libraries of Congress

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AI Evolution
(one of many, many views)

1990-2022 Training Algorithms	2025 Agentic AI	??? AGI
Task-specific algorithms	Decision support	Autonomously acting AI
↓	↓	↓
Fundamental models	Autonomously acting AI	Human-like intelligence
- Machine Learning - Deep Learning - Transformer Models - Multi-modal Models	- Reasoning - Memory & context - Orchestration - Multi-agent systems	- Summaries - Style and tone personalization - Q&A

Ambition
Impact independent from AI Evolution!

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AI, Algorithms, and Data Changing Jobs

Role of Technology
(AI, Algorithms, and Data)

Task	routine	non-routine (ex)
manual		driving household
cognitive		medical diagnosis content creation managing others

Boundaries not always obvious !
(e.g., chess, jeopardy, driving, ...)

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AI, Algorithms, and Data Changing Jobs

Machines increasingly completing cognitive tasks / **decision making**

Employment

'Bath Tub' (Acemoglu & Autor '13)

H Skill Level L

Daron Acemoglu
- Nobel Laureate '24 -

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AI, Algorithms, and Data Leading to a Management Revolution

... overturning existing power structure

HiPPO
Highest Paid Person's Opinion
McAfee, Brynjolfsson '12

AI / Algorithms / Data
Recommending Systems

⇒ Changing Decision Making

"Data-driven decision making"
Brynjolfsson, McAfee '14

⇒ No sector should underestimate the momentum !

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AI 'Applications' in Media

Content creation Text generation, scripts, subtitles, translations; voices, sounds, videos	Personalization Real-time recommendations, adaptive playlists, user profiles	Process Automization Highlight clips, camera work, broadcast planning
Streaming Optimization Dynamic bitrate, churn prediction, audience targeting	Archive Intelligence Archive and keyword indexing, search	Compliance & Quality Assurance Regulations, copyrights, broadcast rights

After: Koehler (IAIS) '26 © Prof. Dr. Claudia Loebbecke - Media and Technology Mgmt. Group - University of Cologne

Abundance of Information / Content / Intelligence

Common Good ↔ "Only scarce goods are expensive goods."

"Every child will have an AI tutor that is infinitely patient, infinitely compassionate, infinitely knowledgeable, infinitely helpful"

"Intelligence is about to be a commodity."

"fundamental belief in abundance of intelligence"

"We see a future where intelligence is a utility, like electricity or water, and people buy it from us on a meter."

"intelligence explosion" um 2030; das gesamte Big-Tech-Narrativ ist ausdrücklich auf "a future of abundance" gerichtet

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AI in Media

"The media, shaping our views by creating a meta-narrative of how we see the world, are **disproportionally in the hand of a few**, often the very rich." ⚡

Joseph Stiglitz, 2024-04-30, LSE Talk

Two Norm / Value Systems

Economics	Journalism
Utility maximization	Diversity ⇒ Not objectively measurable Other (disputable) norms: Timeliness, relevance, correctness, distribution

⚡ 'Journalistic' authenticity ⚡

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A Picture says more than 1,000 Words ...



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AI Can be Tricky ...

Almost impossible to distinguish between authentic versus synthetic information!



Salvador Dali, †1989
Deepfake 2021

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Abundant, AI-Generated, Fake (?) Content

Generative Pre-trained Transformer (language model):
Text based Text / Image / voice / Video generation
[Coding]

- Calculating probabilities
- Trained with huge (!) data sets
- Dialog-oriented user interface (chatbot)

Truly disruptive ...

Perhaps **LOWER quality**, but **huge 'market' potential**.
Putting all kinds of markets - incl. media / journalism - at risk!

⚡ Impact on democracy ⚡

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Impacts of AI Generated, 'Fake' Content

Concentration / Centralization	Privacy / Security / Data Protection
'Mass Amateurization'* / Prosumers	

* Shirky '08

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Concentration / Centralization

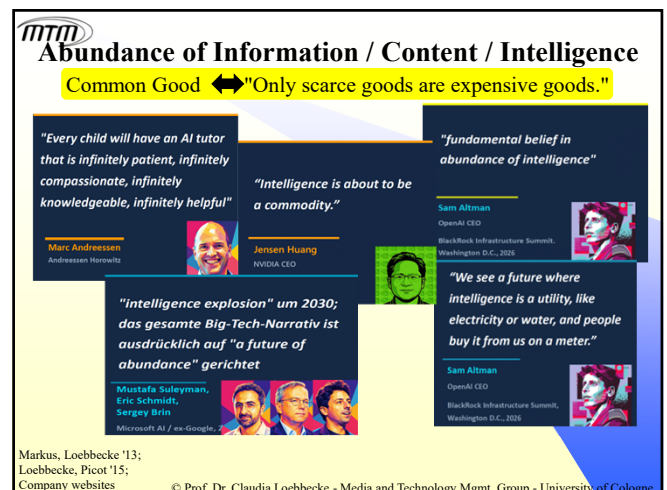
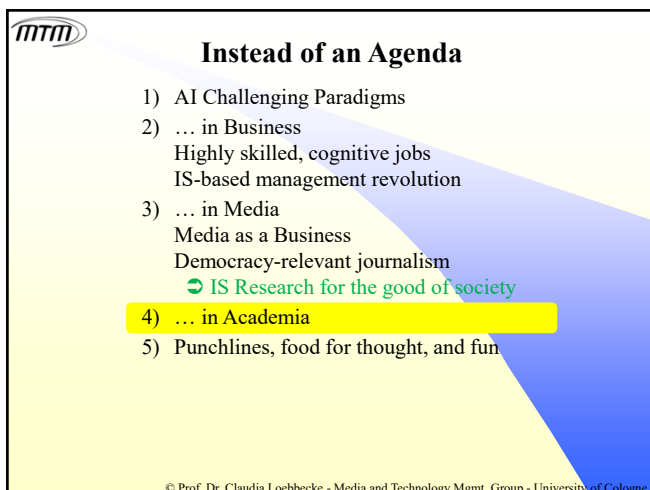
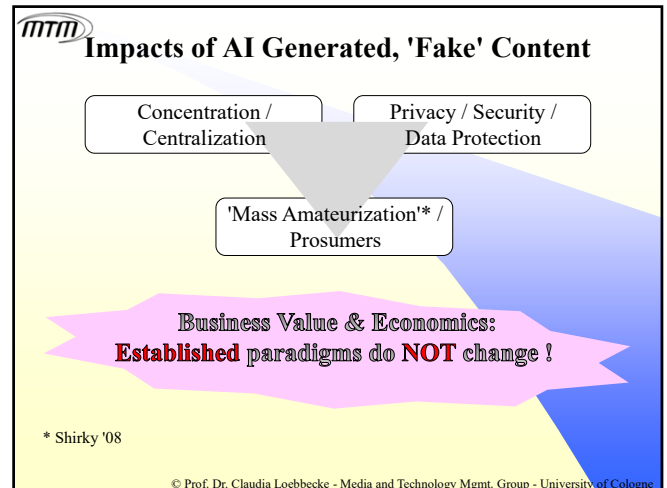
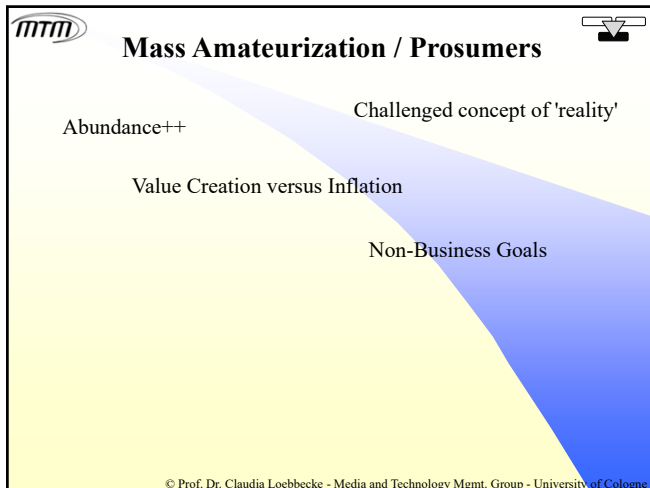
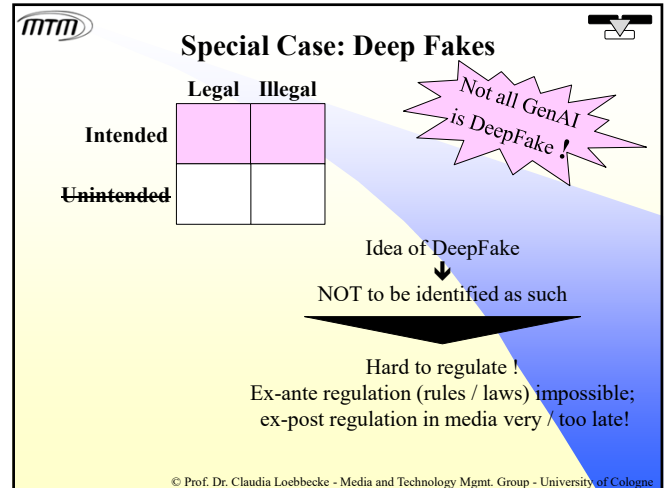
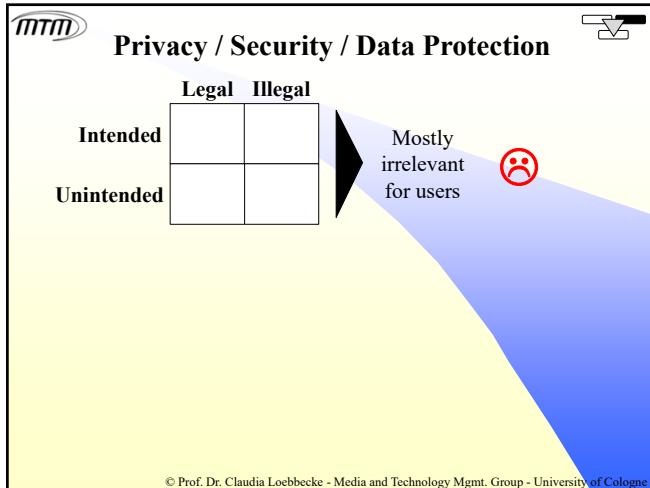
Economics of Digital Goods!

Network effects
The big gets bigger, the small gets smaller!

Impact on media sector

Economics: Advertising revenue, 'Big Tech' regulation?
Society/Opinion: "Never only one voice!"

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AI and Academia
– Some Things Do Not Change –

Many similarities to other content sectors!

We know more than we can say !
Polanyi '74
Personal Knowledge, University of Chicago Press
RA to Einstein !

Acquiring knowledge takes **time**
regardless of technologies
(Prusak, Presentation, Harvard University Presentation '03)

... and will not change!

If so, what knowledge or skills shall we teach / will make the difference ?

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Three Simplified Punch Lines

We see and foresee "it" (= AI challenging the paradigms) everywhere,
but not in our own profession !
**It is easier to accept that you face competition
than to accept that you to face obsolescence / being outdated.**

→ No sector should underestimate the momentum !

AI, digitization, and possibility to manipulate won't go away
– love it or hate it ... –

→ Best you can do: BE AWARE and do not forget !

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Food for Thought / Discussion

- Empowering and substituting highly **skilled, cognitive jobs?**
- Triggering **management revolution?**
- Questioning concept of **'reality'?**
- Challenging **democracy-relevant journalism** and democracies?
→ **Potential of IS Research to do good to society?!**
BUT underlying economic paradigms do not change!

My view: **Biggest risk is not any technology,
but the missed opportunity to use it to our advantage.**

AND: No Transformation without (Your) Human Brains !

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So, ...

hopefully,
you all agree with

 Edith Piaf
and enjoy the
'Wind of Change' to

**Thank you for your attention
and the invitation to this 'glory conference' ☺!**

Questions, Comments, Complaints ?

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