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WELCOME

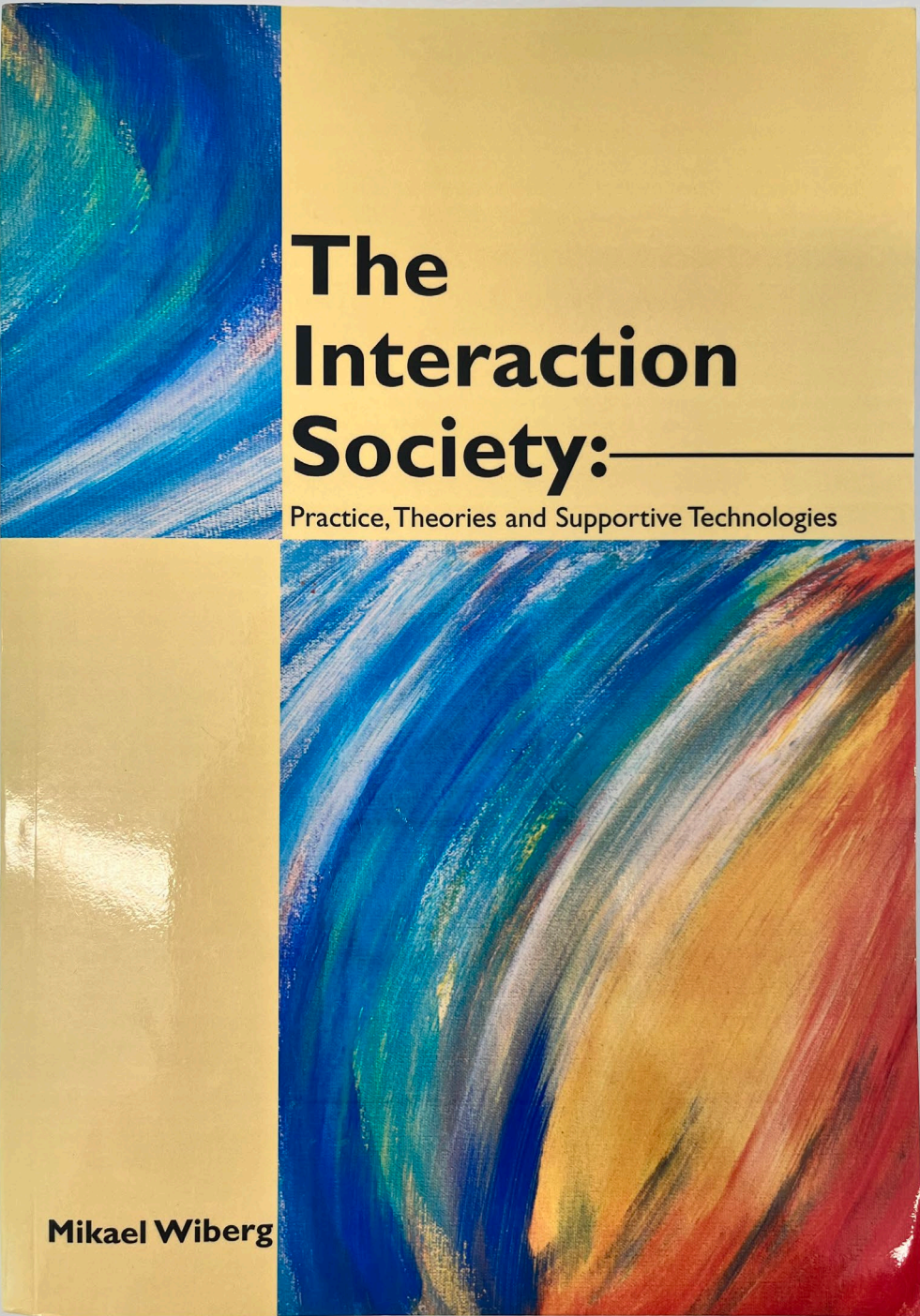


UMEÅ UNIVERSITET

Generativitet & Genialitet - Om mänskligt tänkande och AI

Mikael Wiberg, Professor

Institutionen för informatik, Samhällsvetenskaplig fakultet, Umeå universitet

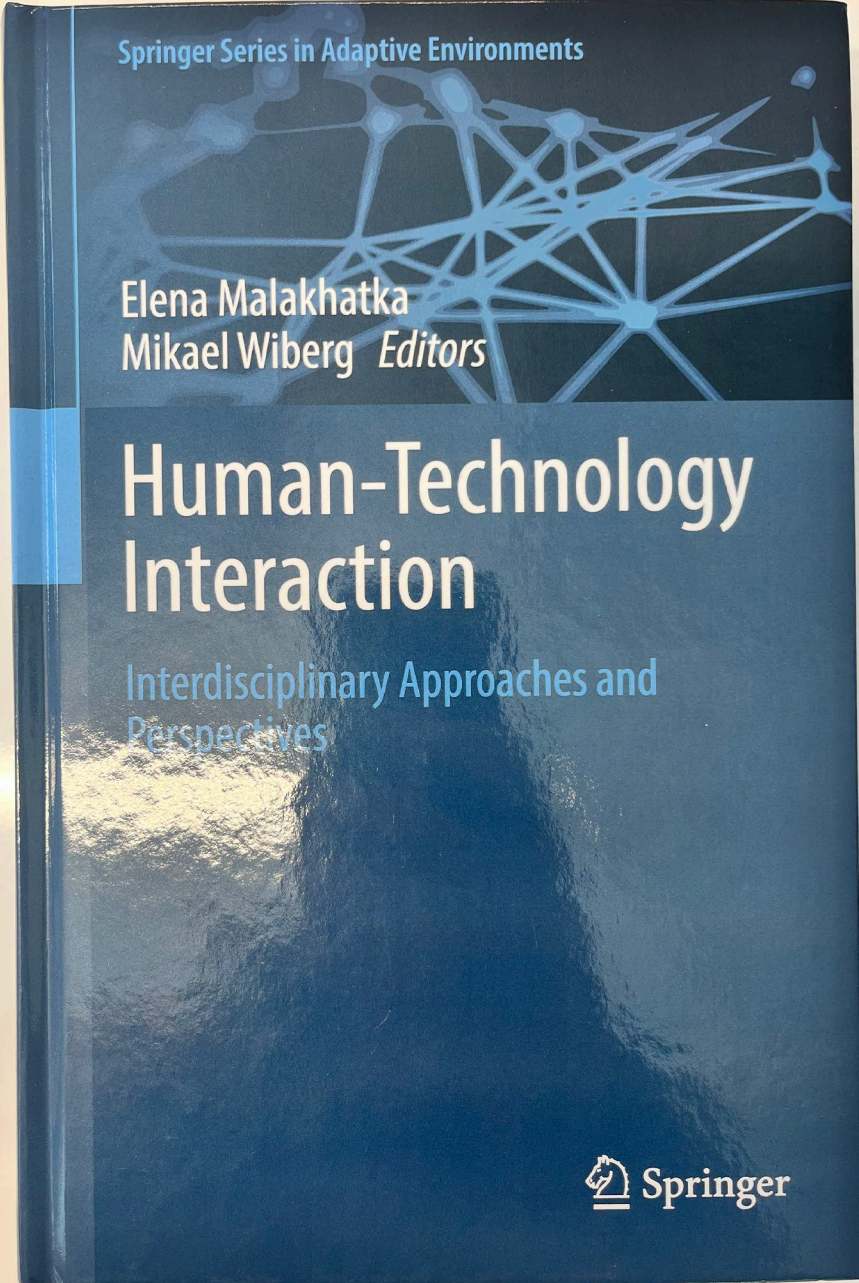


The Interaction Society:

Practice, Theories and Supportive Technologies

Mikael Wiberg

Springer Series in Adaptive Environments



Elena Malakhatka
Mikael Wiberg *Editors*

Human-Technology Interaction

Interdisciplinary Approaches and
Perspectives

 Springer

ChatGPT

The screenshot shows the ChatGPT web interface. On the left is a dark sidebar with a list of chat conversations, including "ChatGPT Explained", "ChatGPT Future Uses", and several others. At the bottom of the sidebar are options for "Upgrade to Plus", "Dark mode", and "Updates & FAQ". The main content area has a title "ChatGPT" and three columns: "Examples" with sample prompts, "Capabilities" with features like memory and follow-up corrections, and "Limitations" with warnings about incorrect information and knowledge cutoff. At the bottom is a text input field and two small circular icons.

chat.openai.com/chat

produkter.smhi.se... interactions — Cu... Umeå Universitet... Kronaby - Shop St... philip_metro mode

+ New chat

"ChatGPT Explained"

ChatGPT Future Uses.

Peniche - Tourist Destination

Peniche Tourist Destination

Design And Ethics Learning

Mikael Wiberg Info Unavailabl

New chat

Design Research Introduction

Introduction to Interaction De

Research Method Overview F

Fast Design Research Metho

IoT Sustainability Abstract

Clear conversations

Upgrade to Plus **NEW**

Dark mode

Updates & FAQ

ChatGPT

Examples	Capabilities	Limitations
"Explain quantum computing in simple terms" →	Remembers what user said earlier in the conversation	May occasionally generate incorrect information
"Got any creative ideas for a 10 year old's birthday?" →	Allows user to provide follow-up corrections	May occasionally produce harmful instructions or biased content
"How do I make an HTTP request in Javascript?" →	Trained to decline inappropriate requests	Limited knowledge of world and events after 2021

|



Elizabeth Churchill



Mikael Wiberg,
Umeå University

So, There's an AI Revolution? and Other Stories

Welcome to the September–October issue of *Interactions*! This issue brings together a number of topics, from reflections on artificial intelligence to considerations of how delightful app experiences can fall foul of product acquisitions and the decisions made around them.

As everyone has noticed, over the past few months the world has been churning around the impact of new innovations in AI, especially around large language models (LLMs). Big companies are vying to own the biggest leaps forward, and we are told we will be seeing many changes in how data is reimagined through the lens of AI, in how we as users will interact with information, in how we will engage and expand our creativity, and in how we will increase our productivity. With the superpowers brought to us through AI, there are huge promises being made about how we will benefit from the use of this technology—hyperbolic excitement about the potential gains AI will bring about, matched equally by profound concerns about inaccurate information dissemination, job losses, and more. Indeed, at the time of writing this, the film industry is reeling with concern about AI-developed scripts and simulated humanlike protagonists, where AI-generated content is deeply affecting the livelihood of screenwriters and actors. It is obvious that there is great potential for both positive and negative consequences.

Related to this latter concern, Bhautik Joshi's cover story directly addresses how AI tools and techniques

will affect creativity. Will creatives lose their jobs as a result of the AI “revolution”? His analysis suggests we should focus on what people can do with AI applications rather than on whether AI will replace human creators. Patrick Gage Kelley and Allison Woodruff share their approach to AI explainability, entreating us as designers and researchers to work on explaining the impact of AI tools and techniques at a more holistic level. Daniel Russell shares what he has been reading in the arena of human-centered AI, noting that things are changing so fast it is almost impossible to keep up.

Notably, one area on which we are hoping to see a lot more debate is the use of the term *intelligence*. As a metaphor, it is distracting and leads to some confusing conclusions about the power of contemporary AI-driven applications. One of the most important milestones in the early history of AI was the Turing test, proposed by Alan Turing in his 1950 paper “Computing Machinery and Intelligence.” The Turing test was explicitly designed to be a test of a machine's ability to *exhibit intelligent behavior equivalent to, or indistinguishable from, that of a human*. With the advances in deep learning, this debate is to some extent ramping up again, although arguably these models don't exhibit the characteristics of human intelligence and reasoning, even if their design is based on a model of neural activity in the human brain. We might need to look not only at comparisons with human intelligence but maybe also explore other metaphors, measurements, and models.

In a different sphere, Yuki Chen,

Jonaya Kemper, Erik Harpstead, Ross Higashi, and Judith Uchidiuno share research into their video game character-creation tool designed to offer character selection and customization for Black children. Too few options are typically offered, and studies showed how much the children enjoyed having a better range of skin tone, facial features, and hairstyles to choose from to create characters that they could relate to.

In addition to these articles, we are working on some new formats for sharing insights and perspectives. One example is Miriam Sturdee's *Conversations in Sketch*. Miriam will be interviewing HCI and UX professionals and illustrating conversations in a comic-style format. She will also be inviting other artists and “sketchnoters” to illustrate key themes and topics. As well as experimenting with new formats, we will be moving away from strongly themed issues toward loosely related features around topics like human-computer interaction and food, digital civics, and children and technology. We are aiming to include contributions that emphasize work at the intersection of design, research, engineering, and product development, while maintaining the magazine's focus on critical perspectives.

Finally, before closing, we'd like to invite submissions in all our current and emerging categories, and are seeking volunteers to curate content. Please get in touch if you have energy, time, and great ideas.

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From Humans to AI: A Timely Debate on Human-AI Relations

Welcome to the January–February issue of *Interactions*! Taking a moment, we've been thinking about the “new year” and the idea of shared time and calendaring—and about how so much of our lives is managed by various kinds of calendars. When it comes to the year, now 2024, we are working on the globally recognized Gregorian calendar, introduced in 1582 by Pope Gregory XIII. Its broad adoption over centuries was transformative for global communication and trade; it promoted standardization, reducing confusion and inconsistencies when it came to arranging meetings, agreeing on time-lines and deadlines, and orchestrating multichannel and multi-stakeholder trade negotiations. Its adoption was particularly important for the Catholic Church, for whom maintaining the accuracy of the date of Easter was paramount. The Gregorian calendar has had a lasting impact on history, science, and global affairs, providing a more accurate framework for recording events and tracking the passage of time, an essential factor for historical research and scientific studies. Can you imagine the extra work involved in scheduling research studies or organizing conferences without an agreed calendar?

Which brings us to this issue of *Interactions*.

While we have taken a number of things for granted in HCI/IXD over the past few decades, including a focus on human-centered design, human activities and labor, and ways of designing interactive tools for people, some of these ideas are now being challenged as we move toward completely entangled human-AI relationships. In that

vein, kicking off 2024, our cover story foregrounds discussion on human-AI relations by focusing on the value of AI approaches and techniques. As of January 2024, we have all endured almost a year of marketing, as well as research and engineering advances, in AI approaches. Scholars and practitioners of HCI, IXD, and UX have been busy considering if and how we need to “rebrand” ourselves, exploring potential changes in our thinking about our domain and in our daily practice. Our cover story this issue, authored by Albrecht Schmidt, Passant Elagroudy, Fiona Draxler, Frauke Kreuter, and Robin Welsch, addresses whether large language models (LLMs) and generative AI will change the way we design and implement interactive systems. Reminding us that human-centered design (HCD) puts the human at the center of interactive systems design, the authors pose several questions, including: Can we use AI techniques and conduct HCD explorations without actively including people in the process? And would such approaches still be considered HCD? Through examples, they explore these questions and leave us with food for thought about the changing nature of HCD, UX, and HCI in the era of AI and LLMs.

In addition to our cover story, we have a feature article from Wei Xu and Zaifeng Gao exploring frameworks for human-AI teaming (HAT) as a new design paradigm. They propose a conceptual framework of human-AI joint cognitive systems (HAJCS) and offer a summary of how to evaluate the nature of the human-AI relationship.

Neven ElSayed, Eduardo Veas, and Dieter Schmalstieg use a comic book format to explore a speculative design

scenario around readily available, personalized, on-the-go mobile analytics. Thinking beyond steps counted by the sensors on your watch or phone, the authors explore how augmented reality in real-world settings could help people interact with analytics that count, quantify, and reflect their personal activities and behaviors.

In her first column for *Interactions*, Jie Li walks us through the pros and cons of A/B testing in corporate contexts. She reminds us that, while we think of A/B testing as part of our digital landscape of everyday interaction, such tests have been conducted in many contexts over decades. Local supermarkets and department stores run what are essentially A/B tests; for example, Li writes, “they might rearrange popular products at the entrance or back of stores, or change the direction of escalators to evaluate which variation optimizes customer shopping flows or generates more sales”—that is, what we in the online app and service world call *engagement*.

Finally, our Exit offering returns to the core, most highly valued items on the Internet: cats! In their exploratory art-meets-science work, researchers at the University of Nottingham and artist collective Blast Theory have created a space for cats (yes, real cats that purr) where AI is in the service of entertaining and creating an ideal play environment for cats. According to Blast Theory, Cat Royale is “a utopia where cats live in harmony with artificial intelligence,” including an AI-backed robot that plays with them.

We hope you enjoy this issue of *Interactions*! As always, we invite you to consider submitting to the magazine.

Elizabeth Churchill and Mikael Wiberg
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AI finns inom många olika fält, kategorier och former. En enkel förklaring av **Artificiell generell intelligens** är att AI ska klara av uppgifter som en människa klarar av. Den definitionen är dock väldigt generaliserad och skapar ibland oro hos vissa med anledning av en rädsla för att exempelvis *bli ersatt i sitt arbete av en robot*.

• **Artificiell intelligens (AI)**

En form av intelligens kopplat till maskiner eller teknologi - i kontrast med **naturlig intelligens** som återfinns hos människor och djur.

Frankenstein

FRANKENSTEIN

MARY SHELLEY

ANNOTATED FOR SCIENTISTS,
ENGINEERS, AND CREATORS
OF ALL KINDS

EDITED BY

DAVID H. GUSTON, ED FINN, AND
JASON SCOTT ROBERT

Skapande av liv
Möta det främmande
Science fiction



Third Wave Artificial Intelligence

	First Wave (1950s–1970s)	Second Wave (1980s–1990s)	Third Wave (2006–)
Major advances in technologies	Early symbolism and connectionism school, production systems, knowledge inference, preliminary expert systems	Statistical model in speech recognition and machine translation, artificial neural network in pattern recognition, expert systems	Breakthroughs in applications of deep learning in speech recognition, pattern recognition, big data, high-performance computers
Human needs	Not satisfied	Not satisfied	Starting to provide useful and real problem-solving AI solutions
Focus	Technological solutions	Technological solutions	Integrated solutions: ethical design, technological enhancement, human factors design
Characteristics	Academia driven	Academia driven	Technological enhancement and application + a human-centered approach

Wei, Xu (2019) Toward human-centered AI, interactions 26(4):42-46, DOI: 10.1145/3328485

Eliza

Welcome to

EEEEEE	LL	IIII	ZZZZZZ	AAAAA
EE	LL	II	ZZ	AA AA
EEEEEE	LL	II	ZZZ	AAAAAAA
EE	LL	II	ZZ	AA AA
EEEEEE	LLLLLL	IIII	ZZZZZZ	AA AA

Eliza is a mock Rogerian psychotherapist.

The original program was described by Joseph Weizenbaum in 1966.

This implementation by Norbert Landsteiner 2005.

ELIZA: Is something troubling you ?

YOU: Men are all alike.

ELIZA: What is the connection, do you suppose ?

YOU: They're always bugging us about something or other.

ELIZA: Can you think of a specific example ?

YOU: Well, my boyfriend made me come here.

ELIZA: Is it important to you that your boyfriend made you come here ?

YOU: He says I'm depressed much of the time.

ELIZA: I am sorry to hear that you are depressed.

YOU: It's true. I am unhappy.

ELIZA: Can you explain what made you unhappy ?

YOU:



Innehåll/Datorn i Utbildningen nr 5/99
Vil du läsa hela tidningen. [Beställ här](#).

2 Det goda samtalet

Lärare behöver det goda samtalet, skriver Peter Becker i sin ledare. Samtalet som ett led i den professionella reflektionen kan jämföras med mentorskap i andra branscher. Det är en central och nödvändig del i det lärande som numera förväntas vara lika långt som livet.

16 **Hundtrimmare drömjobb**

"Tjopp, tjohej! Jag heter Max och jag bor här i Jobblandet. Vuxna säger att dom går till jobbet men vart tar dom då vägen?". Max är en trevlig, hårig kompis, ja, han är faktiskt en hund, som kan hjälpa oss i skolan att på ett enkelt och lustfyllt sätt ge eleverna deras första yrkeslivsorientering. Gunilla Celén recenserar "Max i Jobblandet".



AI

CHATGPT
OpenAI



Filosofen Kant betonade hur **genialitet**
som unik mänsklig förmåga handlar
om att "*befria sig från naturliga
mekanismer och regelstyrda program*"

HOWARD GARDNER

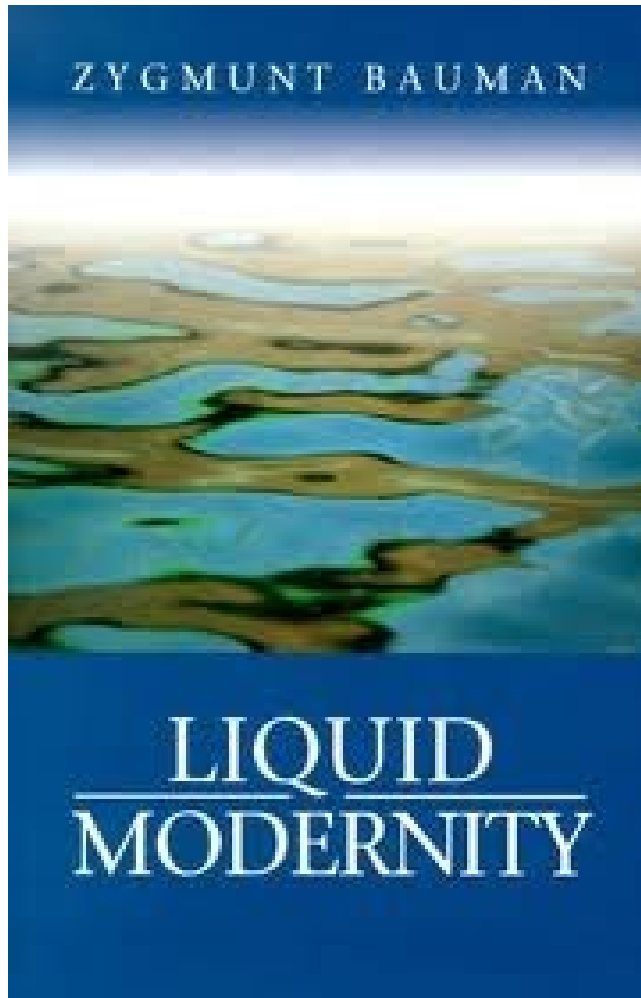
*frames of
mind*



The Theory of Multiple Intelligences

linguistic, musical, and logical/mathematical capacities,
as well as spatial and bodily intelligences





"We have moved away from a "heavy" and "solid", hardware-focused modernity to a "light" and "liquid", software-based modernity"

Digital Oil

Machineries of Knowing

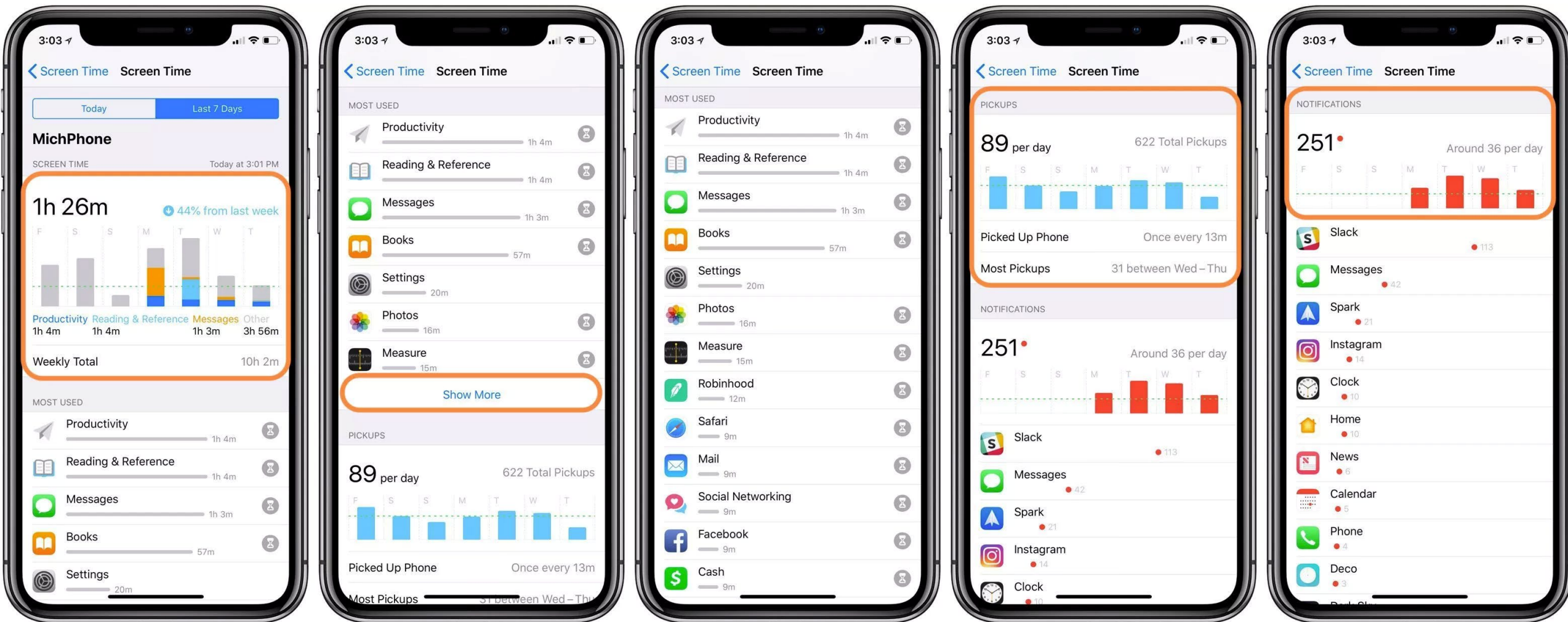
Eric Monteiro



Mikael Wiberg

The Materiality of Interaction

Notes on the Materials
of Interaction Design



Precisera data



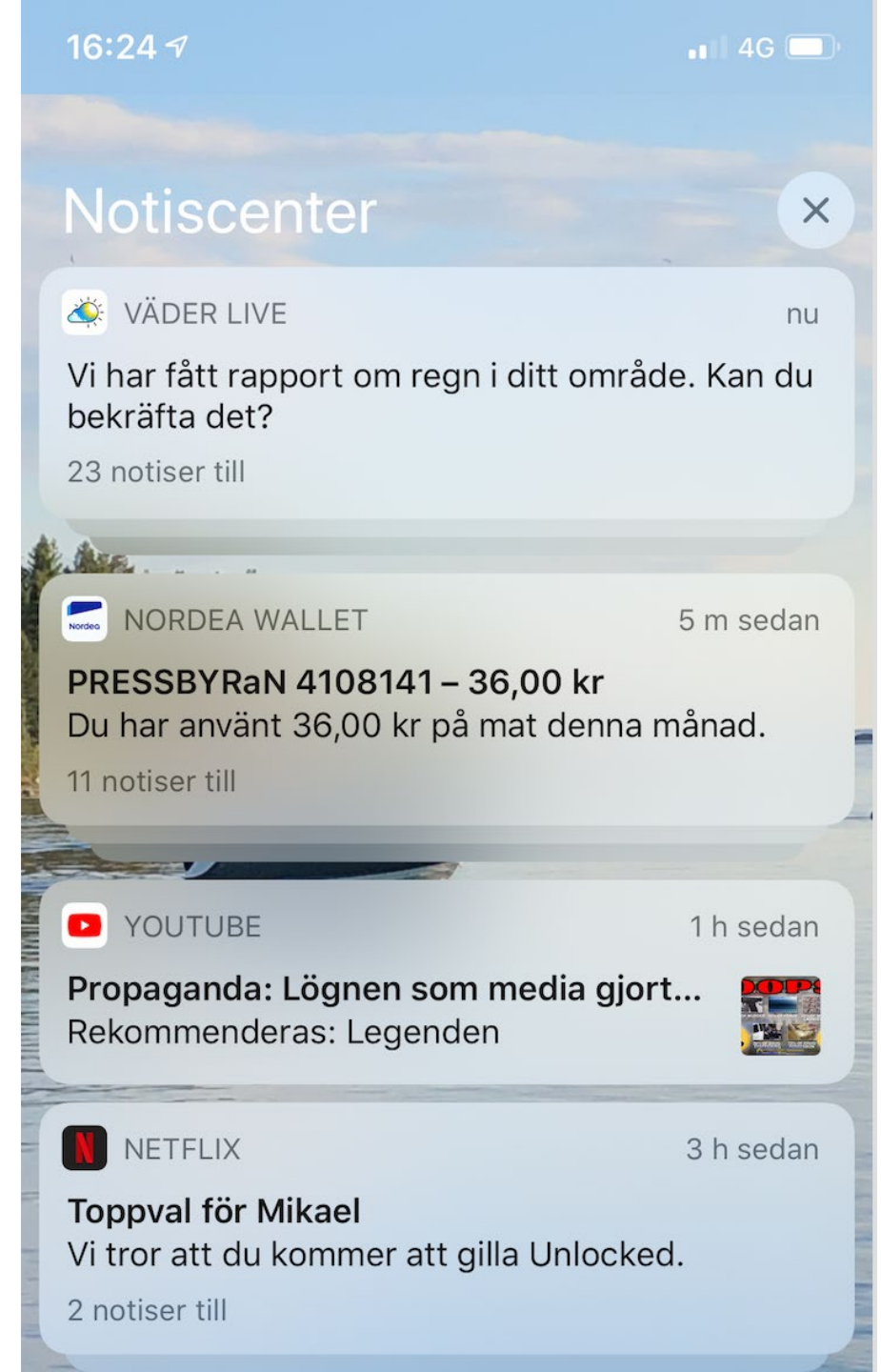
Kategorisera data



Rekommendation utifrån
data

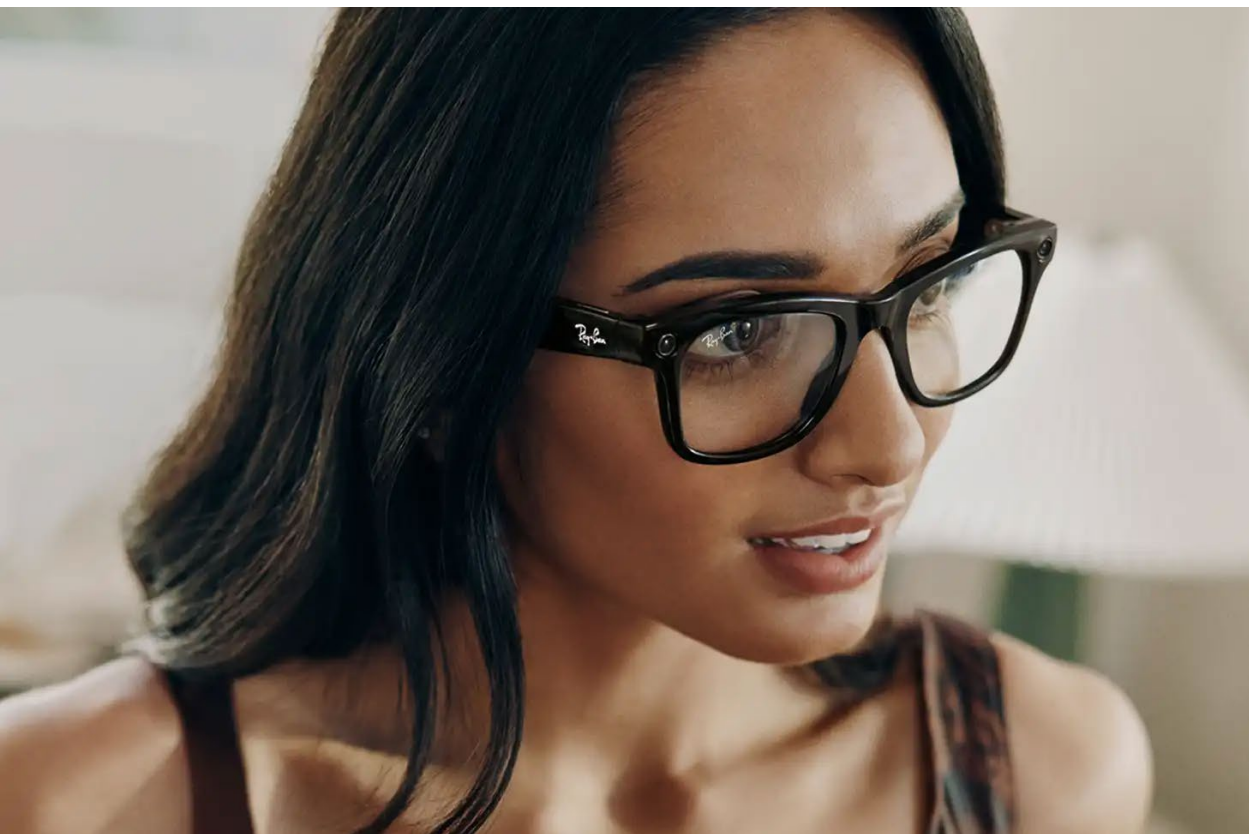


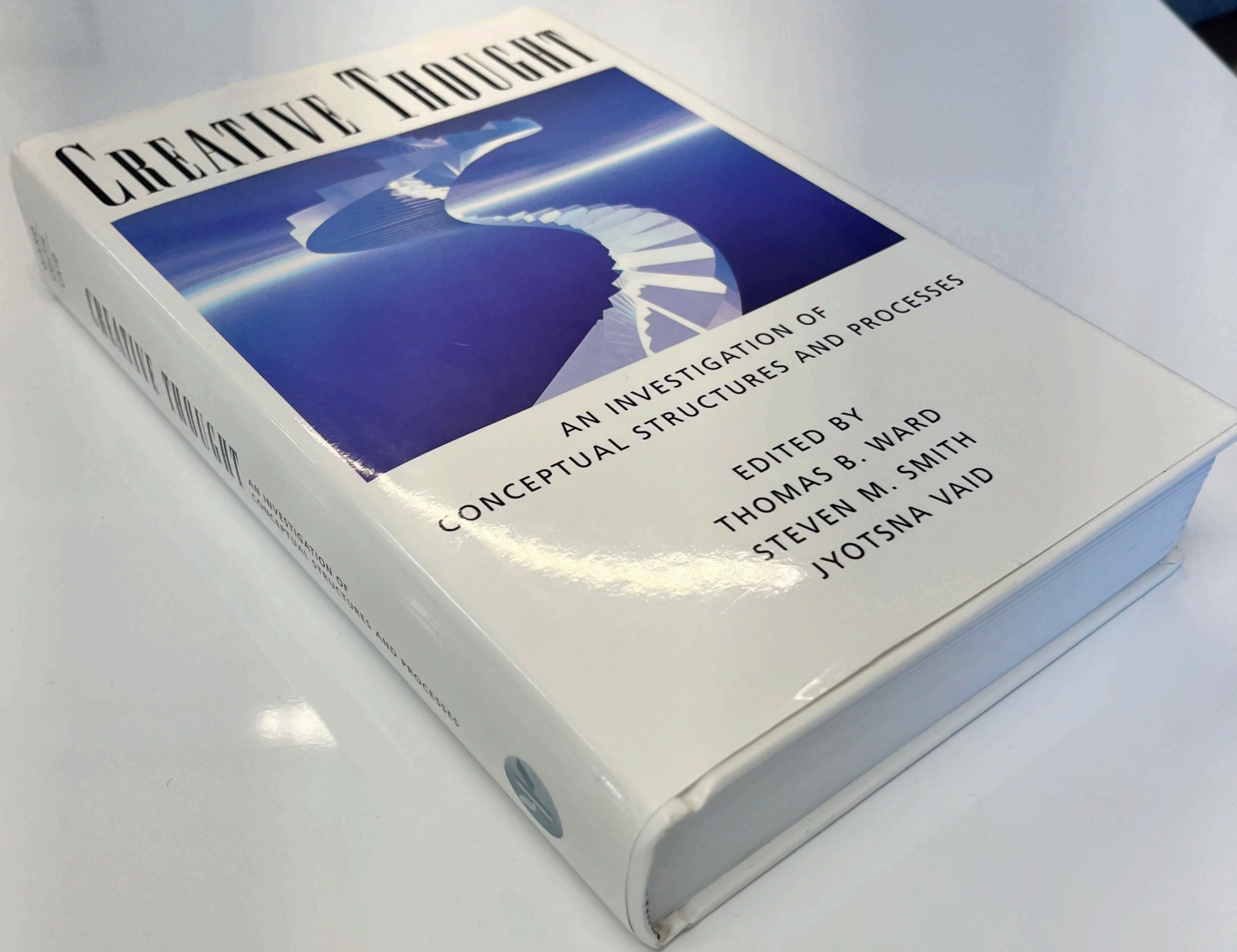
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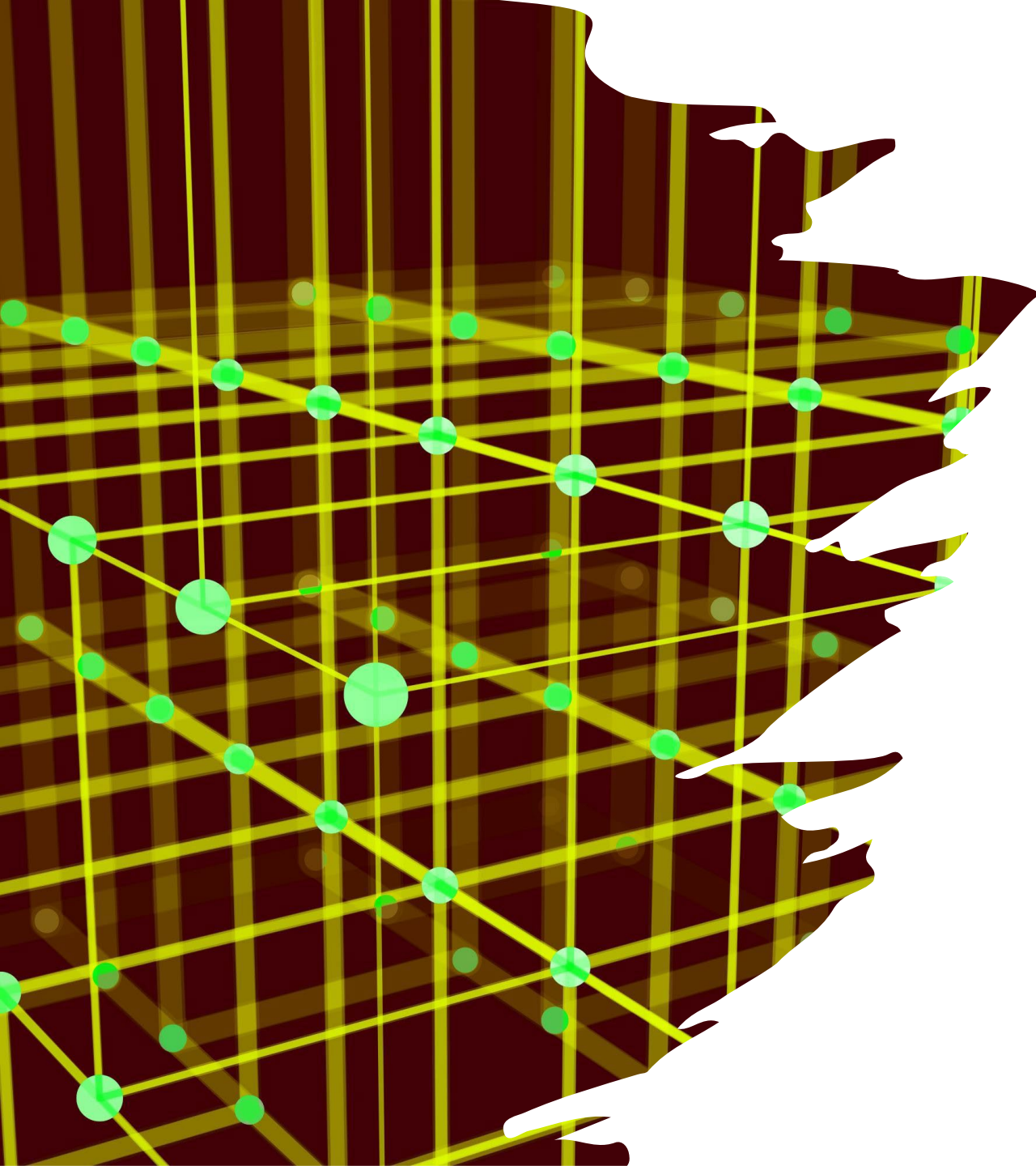


Oral-B Genius X – with AI



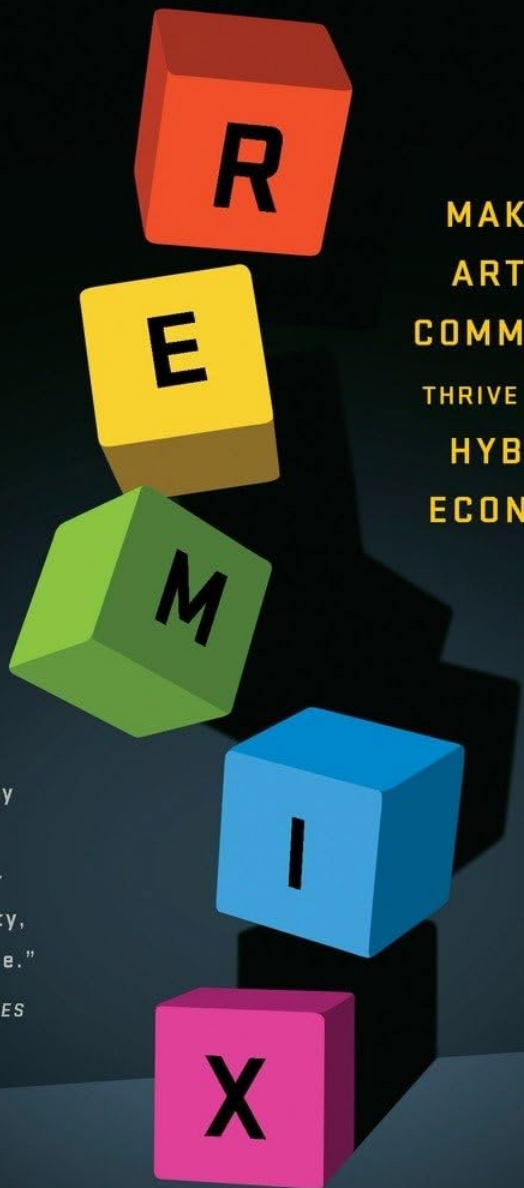


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Generative AI

Capacity of
"relating to or
capable of
production or
reproduction"



MAKING
ART AND
COMMERCE
THRIVE IN THE
HYBRID
ECONOMY

"A splendidly
combative
manifesto—
pungent, witty,
and persuasive."

—FINANCIAL TIMES

LAWRENCE LESSIG

author of *Code and Other Laws of Cyberspace* and *Free Culture*



LAWRENCE LESSIG

FREE CULTURE

THE NATURE AND FUTURE OF CREATIVITY

"A powerfully argued and important analysis... it is also surprisingly
entertaining." —THE NEW YORK TIMES BOOK REVIEW

Has AI Surpassed Humans in Creative Idea Generation? A Meta-Analysis

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Abstract

Has AI surpassed humans in creative idea generation? This question has gained traction as generative AI (GenAI) has become widely used to support creativity. To evaluate this, we examined the first wave of experimental studies comparing human and GenAI-prompted creative idea generation by conducting a meta-analysis of 17 studies comprising 115 effect sizes. The results showed a small but non-significant pooled effect favoring GenAI. Initial analyses suggested greater originality in GenAI ideas, but sensitivity analysis showed this was driven by a few studies with very large effects. No significant differences were found between human ideas and those generated by prompting specific GenAI models (GPT-3, GPT-3.5, GPT-4). Funnel plots and asymmetry tests indicated no evidence of publication bias, supporting the findings' validity. This meta-analysis finds no empirical support suggesting that GenAI has surpassed humans in creative idea generation. We discuss sociotechnical and sociocultural approaches as crucial for shaping human and artificial creativity.

CCS Concepts

• **Human-centered computing** → Human computer interaction (HCI); HCI theory, concepts and models; • **Computing methodologies** → Artificial intelligence; • **General and reference** → Document types; Surveys and overviews.

Keywords

Generative Artificial Intelligence, Creativity, Idea Generation, Meta-analysis

ACM Reference Format:

Alwin de Rooij and Michael Mose Biskjaer. 2025. Has AI Surpassed Humans in Creative Idea Generation? A Meta-Analysis. In *36th Annual Conference of the European Association of Cognitive Ergonomics (EACE) (ECCE 2025)*, October 07–10, 2025, Tallinn, Estonia. ACM, New York, NY, USA, 11 pages. <https://doi.org/10.1145/3746175.3746189>



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<https://doi.org/10.1145/3746175.3746189>

1 Introduction

On November 30, 2022, the American company OpenAI released the chatbot 'ChatGPT'. This happened after several years of developing the underlying large language model (LLM), first introduced, indirectly, when OpenAI published its initial research in June 2016. Following its introduction, ChatGPT, powered by GPT-3.5, reached one million users in just five days. Two months later, the chatbot was reported to have 100 million active users, an uptake that dwarfs previous digital innovations such as TikTok and Instagram where the same milestone was reached in about nine months and 2.5 years [32]. Generative artificial intelligence (hereafter 'GenAI'), including transformer models (text), diffusion models (image), and recurrent neural networks (sound), is now widely used for creative purposes, from everyday problem solving to integration within the workflows of creative professionals. Many GenAI implementations enable users to design input queries and instructions using natural language, known as 'prompting', to guide and shape GenAI output. The rapid adoption of such GenAI coincided with the proposition, bolstered by high-profile studies such as [33, 38], that GenAI has *surpassed* (most) humans in creative idea generation. The contention, then, is that when ideas generated by humans are compared to those generated by prompting GenAI, ideas by GenAI are more likely to be judged as creative.

This proposition is intriguing and often appears in public debates on GenAI vs. human creativity, and so it warrants further scrutiny as creative idea generation historically has been seen as a proxy for human creativity. It requires *commensurability* to make the comparison meaningful. This means investigating the types of interaction that involve GenAI. Here, the distinction by Karimi et al. [37] is expedient to distinguish between a) creativity support tools, i.e., tools built by HCI researchers to support human creativity in everyday and professional contexts; b) computational creativity, i.e., AI researchers building algorithms that generate creative output with minimal human intervention; and c) computational co-creativity, i.e., when HCI and AI researchers build tools to support more dialogical forms of human-AI co-creation, including GenAI. Our research interest here is the second category, b) *computational creativity*; specifically, studies where GenAI is singularly prompted to generate creative ideas for a given problem or challenge. At the time of writing, two-and-a-half years after the launch of ChatGPT as the first publicly successful, general-purpose GenAI tool, we investigated the *first wave of research studies* that

Beyond Algorithms: Why Humans Are Irreplaceable by GenAI

by Cassie Valenzuela Poon | Jun 10, 2025 | Uncategorized | 0 comments



GenAI and the Crisis of Creative Labor: Automation, Augmentation, and the Artist's Role

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Abstract

This paper discusses how generative AI (GenAI) is reshaping creative labor through three interrelated transformations: the automation and platformization of creative tasks, the redistribution of economic value and authorship, and the redefinition of creative skills and competencies. Rather than framing GenAI as either a threat or a tool, the analysis foregrounds its role as a structural force that reorganizes workflows, market dynamics, and professional norms. The paper highlights how creative work is increasingly governed by digital infrastructures and algorithmic interfaces, raising urgent questions about recognition, attribution, and sustainability. These developments are analyzed within the broader context of how computing can simultaneously exacerbate and alleviate crises, arguing that GenAI exposes deep institutional and economic tensions in creative industries.

CCS Concepts

• Human-centered computing → HCI theory, concepts and models.

Keywords

HCI, generative artificial intelligence, creativity, creative work, identity

ACM Reference Format:

Peter Dalsgaard. 2025. GenAI and the Crisis of Creative Labor: Automation, Augmentation, and the Artist's Role. In *Adjunct proceedings of the sixth decennial Aarhus conference: Computing X Crisis (AAR Adjunct 2025)*, August 18–22, 2025, Aarhus N, Denmark. ACM, New York, NY, USA, 5 pages. <https://doi.org/10.1145/3737609.3747116>

1 Introduction

Creative industries have long balanced cultural prestige and economic precarity. Today, this uneasy balance faces disruption through generative AI (GenAI). Tools like ChatGPT, DALL-E, and Midjourney automate key creative tasks previously defined by human expertise, and in the process reshaping workflows and altering the nature of creative labor. This paper argues that GenAI intensifies structural pressures within creative fields, manifesting not just as job displacement but as deeper transformations in labor conditions,

economic redistribution, and professional roles. The crisis framing of creative labor highlights these transformations as sociotechnical shifts rather than purely technological disruptions. Not only do they streamline production, they also shift creative agency and economic benefits - often toward platform providers and technology developers [24], as authorship and attribution become ambiguous, challenging traditional models of recognition and compensation [20]. This paper examines three interconnected dynamics in this development: first, how GenAI-driven automation and platformization reshape creative practices; second, how these changes redistribute economic power and complicate attribution within creative industries; and third, how the proliferation of GenAI transforms the skillsets required from creative professionals.

2 Automation and the Platformization of Creative Work

Generative AI tools have rapidly entered the workflows of creative professionals, fundamentally altering how creative labor is performed. While they were initially positioned as augmentations of human creativity, these tools in practice often shift the locus of creative agency away from creators toward automated platforms. Tasks that were once perceived as intrinsically human - ideation, composition, stylistic expression - are now increasingly automated through algorithmic processes [10] [11]. This automation differs significantly from previous digital tools, which typically augmented human skills by enabling more precise or rapid execution of creative ideas. While GenAI can also function in this way, it also stands out from previous tools due to its capability for generating novel outputs with minimal human input, blurring the distinction between human and machine creativity [9]. Some designers and writers increasingly find themselves curators or editors rather than originators, their roles recalibrated around prompting and refining algorithmically produced content [3] [21]. This restructuring represents a profound shift in the nature of creative labor, one that carries implications for professional autonomy and economic viability [12]. A notable consequence of this automation is the pressure it places on creators to deliver rapid, high-volume outputs to remain competitive, particularly on freelance marketplaces and content-production platforms. Platforms like Fiverr or Upwork, now saturated with AI-enhanced production tools, recalibrate expectations for turnaround times and cost efficiency. This reshapes market standards to favor algorithmically optimized creative outputs [9], and creative professionals for better or worse may feel compelled to use GenAI in order to remain competitive and win clients. This trend represents a functional deskilling where craft-based expertise loses economic value relative to proficiency in prompt engineering or algorithmic

WHEN ALGORITHMS DELEGATE TO HUMANS: EXPLORING HUMAN-ALGORITHM INTERACTION AT UBER¹

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Algorithms are increasingly seen as capable of autonomously initiating and managing interactions with humans—for example, through delegating the rights and responsibilities for successful outcomes of shared tasks without human intervention. While research into such interactions primarily focuses on dyadic configurations, complex settings where multiple agents work together have become a nexus of more nuanced interactions that go beyond the dyad. This paper explores such interactions through the lens of delegation by investigating how many algorithms delegate to many humans in a multi-agent setting. Analyzing patent data and interviews with drivers and passengers, we unpack delegation in the context of the ride-hailing application Uber. We theorize distributed delegation as a construct capturing collective hybrid appraisal, collective hybrid distribution, and collective hybrid coordination, in which a collective of algorithms delegates by drawing on inputs from multiple human agents. Our findings highlight that distributed delegation is collective, hybrid, and relational by nature, and demonstrate the extent to which human inputs are necessary for collectives of algorithms to exercise the capacity to delegate. Distributed delegation as a continuum of algorithmic and human involvement poses a challenge for recent theories suggesting the unprecedented autonomy of algorithms from humans.

Keywords: IS delegation, human-AI interaction, artificial intelligence, algorithms, patents

Introduction

Recent advancements in artificial intelligence (AI) have led to claims of information systems (IS) artifacts, in general, and model-based algorithms, in particular, becoming increasingly agentic (Baird & Maruping, 2021; Murray et al., 2021; Zhang et al., 2021). Such algorithms are thought to be imbued with agency, which is “the ability to accept rights and responsibilities for ambiguous tasks and outcomes under uncertainty and to decide

and act autonomously” (Baird & Maruping, 2021, p. 316). Claims of algorithms’ increased agency (Zhang et al., 2021) are based on their perceived autonomy, which is the capacity to act independently without human intervention, enabling them to make decisions and act with material outcomes (Berente et al., 2021). Growing algorithmic autonomy has led to widespread fears about loss of control and the concern that AI based on such algorithms is becoming too powerful, resulting in concerns about human displacement and obsolescence.²

¹ Erik Monteiro was the accepting senior editor for this paper. Stefan Seidel served as the associate editor.

² <https://futureoflife.org/open-letter/pause-giant-ai-experiments/>



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AAR Adjunct 2025, Aarhus N, Denmark

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From Human-Human Collaboration to Human-AI Collaboration: Designing AI Systems That Can Work Together with People

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Abstract

Artificial Intelligent (AI) and Machine Learning (ML) algorithms are coming out of research labs into the real-world applications, and recent research has focused a lot on Human-AI Interaction (HAI) and Explainable AI (XAI). However, Interaction is not the same as Collaboration. Collaboration involves mutual goal understanding, preemptive task co-management and shared progress tracking. Most of human activities today are done collaboratively, thus, to integrate AI into the already-complicated human workflow, it is critical to bring the Computer-Supported Cooperative Work (CSCW) perspective into the root of the algorithmic research and plan for a Human-AI Collaboration future of work. In this panel we ask: Can this future for trusted human-AI collaboration be realized? If so, what will it take? This panel will bring together HCI experts who work on human collaboration and AI applications in various application contexts, from industry and academia and from both the U.S. and China. Panelists will engage the audience through discussion of their shared and diverging visions, and through suggestions for opportunities and challenges for the future of human-AI collaboration.

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Article

GenAI Creativity in Narrative Tasks: Exploring New Forms of Creativity

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Abstract: This study examined generative artificial intelligences (GenAIs), as popularized by ChatGPT, in standardized creativity tests. Benchmarking GenAI against human performance, the results showed that ChatGPT demonstrated remarkable fluency in content generation, though the creative output was average. The random nature of AI creativity and the dependency on the richness of the training database require a reassessment of traditional creativity metrics, especially for AI. Our findings highlight the integral role humans play in guiding AI to foster genuine originality, suggesting the need for future research in human–AI co-creation and the development of robust AI creativity measurement mechanisms.

Keywords: generative artificial intelligence; creativity; EPoC; assessment

Cobots in knowledge work

Human – AI collaboration in managerial professions

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ABSTRACT

Current technological developments, as well as widespread application of artificial intelligence, will doubtlessly continue to impact how people live and work. In this research, we explored synergies between human workers and AI in managerial tasks. We hypothesized that human-AI collaboration will increase productivity. In the paper, several levels of proximity between AI and humans in a work setting are distinguished. The multi-stage study, covering the exploratory phase in which we conducted a study of preferences using 10-item Likert scale, was conducted with a sample of 366 respondents. The study focused on working with different types of AI. The second and third phase of the study, in which we primarily used qualitative methods (scenario-based design combined with semi-structured interviews with six participants), focused on researching modes of collaboration between humans and virtual assistants. The study results generally confirmed our hypothesis about increased productivity due to enhanced human-AI collaboration, proving that the future of AI in knowledge work needs to focus not on full automation but rather on collaborative approaches where humans and AI work closely together.

1. Introduction

This study aims at exploring synergies between human workers and AI in managerial tasks and verifying a hypothesis about increased productivity due to human–AI collaboration. There are many existing examples of humans collaborating with technology in workplaces. One prominent instance of such close co-working stems from robotics. Cobots (also known as collaborative robots) are robots intended to interact with humans in a shared space (Veloso, Biswas, Coltin, & Rosenthal, 2015). They are mainly applied in industrial and manufacturing tasks to assist people in achieving professional goals (Pittman, 2016). For instance, Universal Robots (Andersen, 2015) is a company that specializes in creating cobots for production facilities. The cobots are designed to be scalable and applicable in diverse use cases. They are in the shape of robotic arms that lift objects and assemble parts. A technician's involvement is necessary for setup; however, at a later stage, users can act as teachers to the robot, by programming it and showing it the actions it is supposed to take. With new advancements, various new types of interfaces have come into existence. Thanks to major progress in applying deep learning methods to natural language processing, some of these interfaces use refined and complex natural language, voice or gestures (Russell & Norvig, 2010). Such interaction

makes the robot seem like another sentient being, sometimes leading to undesired outcomes, like repulsion or fear. This type of response is known as the “Uncanny Valley” effect (Ciechanowski, Przegalinska, Magnuski, & Gloor, 2018).

Several recent studies have addressed the issue of collaboration with artificial intelligence, mostly focusing on work performed with robots. Some works have explored human–robot teaming scenarios, known as Human–Robot Collaboration, with the general goal of enabling safe, seamless, effective teamwork between groups of humans and robots (Scassellati & Hayes, 2014) or automated advising agents in real-world human–multi-robot team collaboration tasks (Rosenfeld et al., 2017). Other research works focused on domain-specific human–artificial collaboration systems, for instance in the field of transportation and logistics (Klumpp, 2018). Different types of research related to human–AI collaboration focus on virtual agents and online systems. For instance, Creative Artificial Intelligence Systems (CAIS) encourage new modes of creative practice with users through cognitive and emotional UX factors. They also focus on co-creativity between humans and AI and what this means for the role of designers and artists today (Feldman, 2017).

Nowadays, various enterprise bots are designed to help in knowledge-intensive and creative work. Using advanced natural



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NÄR AI BLIR KRAV, OCH MÅTT PÅ PRODUKTIVITET

Så, från rekommendationer om "minskad skärmtid" till krav på ökad AI tid

"boost employee engagement"

Meta too has an 'AI ultimatum' for employees, similar to that of Google and Microsoft

TOI Tech Desk / TIMESOFINDIA.COM / Updated: Oct 06, 2025, 18:50 IST

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AA

Meta is aggressively pushing employees to adopt AI tools, deploying tracking dashboards and a gamified system to monitor usage. This aligns with similar mandates from Google and Microsoft, making AI proficiency a critical workplace expectation. Some Meta departments, like Reality Labs, face ambitious adoption targets, influencing performance. This industry-wide shift underscores that embracing AI is crucial for career progression and company competitiveness in Silicon Valley's rapidly evolving tech landscape.

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Meta is aggressively pushing employees to adopt AI tools, deploying tracking dashboards and a...

Meta is intensifying pressure on employees to embrace artificial intelligence tools, joining tech giants [Google](#) and Microsoft in making AI adoption a critical component of workplace expectations and performance evaluation.

The Facebook parent company has deployed dashboards to track how extensively teams use AI and created a gamified system to boost employee engagement with the technology, Business Insider reported. Expectations vary across departments, with some staff encouraged to experiment while others face specific adoption targets that could influence their standing within the company.

Meta's hardware division Reality Labs has set an ambitious goal of achieving over 75% AI adoption among employees, up from the current 70% utilisation rate, according to sources familiar with the matter. This represents a dramatic increase from just 30% in June, signalling the company's aggressive push toward AI integration across all operations.

STATEMENT ONE: WORD WORD WORD WORD WORD WORD
WORD WORD WORD WORD WORD WORD WORD ...

Douglas Engelbart, 1962

Augmenting the human intellect

Artifacts, Language, Methods, Training

'A lifetime's worth of wisdom'
Steven D. Levitt, co-author of *Freakonomics*

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Thinking, Fast and Slow

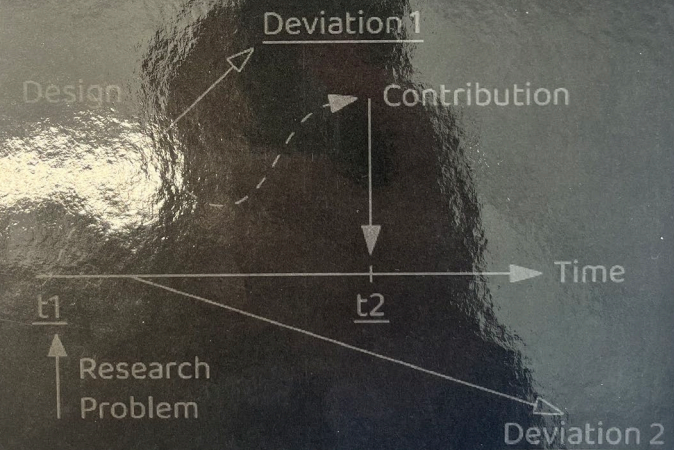


Daniel Kahneman
Winner of the Nobel Prize



FAST AND SLOW

Methods for Timely HCI
and Interaction Design Research



MIKAEL WIBERG

A Chapman & Hall Book

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Ett av mina bästa ögonblick inträffade när vi hade en genomgång av ett nytt vårdprogram för cancermisstänkta hudförändringar. En mycket sympatisk hudläkare höll en bra genomgång av ett genomtänkt vårdprogram. Då frågade en bekymrad kollega:

- Men om förändringen är över två centimeter, hur gör vi då?
- Ja, svarade dermatologen, då gör ni så här...
- Men om förändringen är över två centimeter och det inte finns ett px?
- Ja, men då gör ni så här...
- Men om förändringen är över två centimeter och det inte finns ett px och patienten står på Waran?
- Ja, svarade dermatologen lugnt, då tillämpar vi vårdprogrammet TS.
- TS? Vilket vårdprogram är det?!
- Tänk själv!

FRÅN AI TILL TS



Automation of interaction—interaction design at the crossroads of user experience (UX) and artificial intelligence (AI)

Mikael Wiberg^{1,2} · Erik Stolterman Bergqvist³

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Abstract

Interaction design/HCI seems to be at a crossroads. On the one hand, it is still about designing for engaging user experiences (UX). Still, on the other hand, it seems to be increasingly about reducing interaction and automating human-machine interaction through the use of AI and other new technologies. In this paper, we explore this seemingly unavoidable gap. First, we discuss the fundamental design rationality underpinning interaction and automation of interaction from the viewpoints of classic theoretical standpoints. We then illustrate how these two come together in interaction design practice. Here we examine four examples from already published research on automation of interaction, including how different levels of automation of interaction affect or enable new practices, including coffee making, self-tracking, automated driving, and conversations with AI-based chatbots. Through an interaction analysis of these four examples, we show (1) how interaction and automation are combined in the design, (2) how interaction is dependent on a certain level of automation, and vice versa, and (3) how each example illustrates a different balance between, and integration of interaction and automation. Based on this analysis, we propose a two-dimensional design space as a conceptual construct that takes these aspects into account to understand and analyze ways of combining interaction and automation in interaction design. We illustrate the use of the proposed two-dimensional design space, discuss its theoretical implications, and suggest it as a useful tool—when designing for engaging user experiences (UX), with interaction and automation as two design materials.

Keywords Automation of interaction · Engaging interaction · User experience · UX · AI

1 Introduction

Interaction design/HCI seems to be at a crossroads. Artificial intelligence (AI) is sweeping across our field, changing the nature of computing [30]. AI is making it possible to automate functions and activities that, until now, have been deemed to be done by people. At the same time, there is also a growing interest in user experience (UX), not at least in the tech industry, where the experience of active and engaged interaction with digital systems is emphasized. As suggested by [14], these two directions are also

fundamentally interdependent and interrelated, and accordingly, “given the expansion of the field, there is a continued need for HCI contributions” [14, p. 99]. At the same time, these two developments—automated functionality and engaged interaction—seem to pull in different directions. On the one hand, an ambition to off-load, delegate, and minimize the need for human-computer interactions by using modern (AI) technology. This *automation of interaction* represents a shift from human-machine interaction as the primary activity to scenarios where intelligent machines can do these things for us without the need for (obvious) interaction. On the other hand, the interest in UX suggests a need to understand human-machine interactions as a foundation for the design of engaging interactions. While we could see these two trends as distinct developments, we suggest that there is a more complex relationship where these two are tightly interlinked.

There is a growing body of research on automation of everyday life (see, e.g., [6]) and how to work with automation in design for engaging interaction with interactive

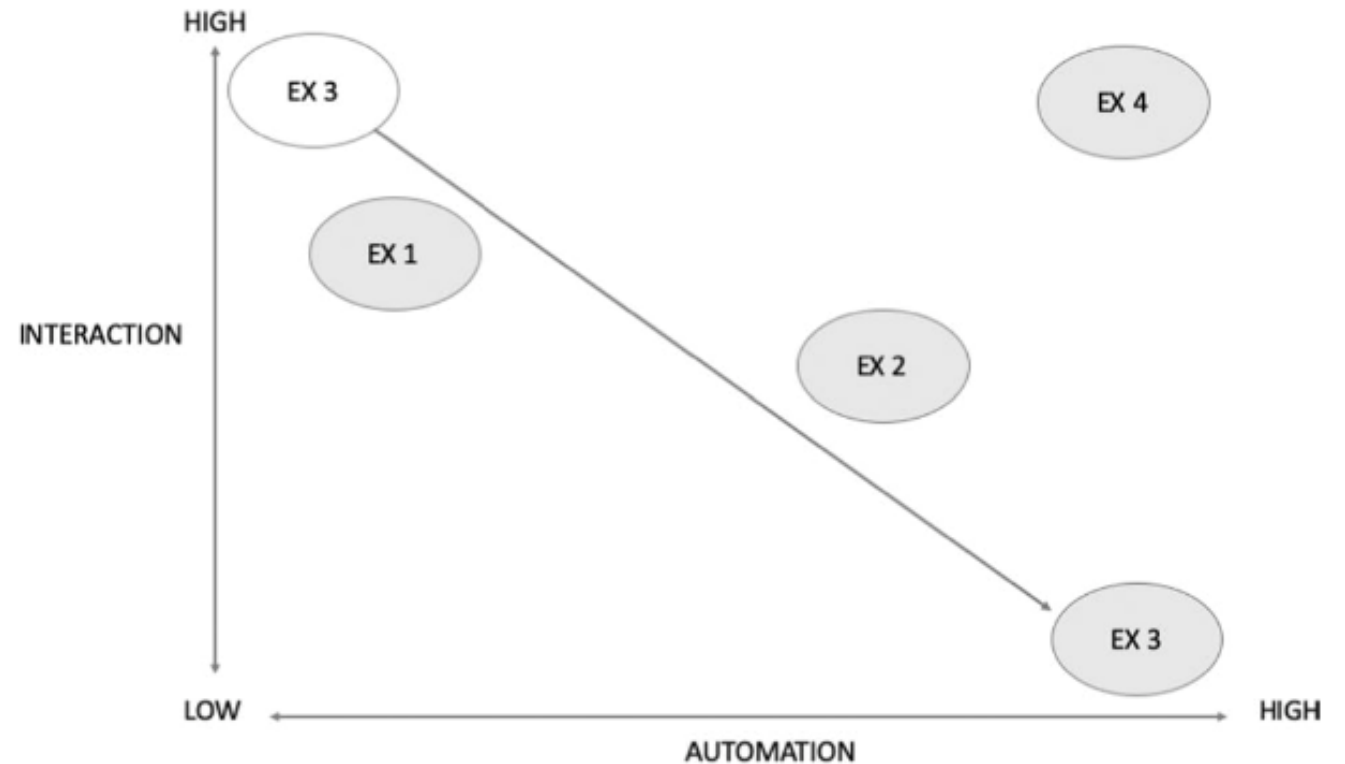


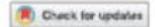
Fig. 2 Possible relationships between interaction and automation

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A new practice?

Compositional interaction design—changes in design practice and its implications for teaching and research

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ABSTRACT

In this article, we focus on *compositional interaction design* as an emergent professional practice in interaction design. We propose that compositional interaction design practice can be defined as a practice of knowing, mapping, configuring, customizing and connecting elements to form larger compositional wholes. We demonstrate how this practice demands new compositional skills, new methods and a changed division of labours. We suggest that this contemporary practice can be understood in terms of how different computational components are integrated to form interactive products and services. We illustrate this new practice with two concrete examples. Our first example illustrates compositional interaction design at a small scale, whereas our second example illustrates compositional design at a larger scale. We also discuss how this emergent practice relates to other streams of development (e.g. craft-oriented HCI and human-centred design) and we discuss what implications this shift may have to interaction design educational programs aimed at preparing students for this emerging professional practice.

KEYWORDS

Interaction design; design practice; compositional interaction design; interaction design research; compositional design

1. Introduction

In HCI research, there is a tendency to focus on the new and novel, and on the next big thing. ‘Novelty’ is a key criterion for how research is evaluated, and the field commonly strive to contribute to practice. However, it is not research alone that changes the field. Practice changes over time as a consequence of new technology and changing social, economic and political circumstances. We argue that HCI research needs to reflect upon such changes of practice as part of our research agenda. This interplay between HCI research and practice is important, and this paper contributes to this relation by highlighting one particular and not so well-documented change of practice and its

fundamental implications for HCI research and for our study programs in interaction design. HCI students should be prepared for professional practice by being provided suitable conceptual tools and models for understanding contemporary practice. When practice changes, the understanding and models taught need to change accordingly. We will look more closely at one such change.

In this paper, we focus explicitly on *one* particular change of practice. We label this emerging practice ‘*compositional interaction design*’. While our focus is on this emerging design practice, we simultaneously acknowledge how ‘composition’ has been a recurring notion in HCI to address whole-part relations in design

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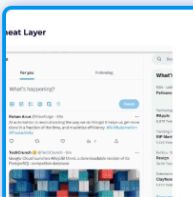
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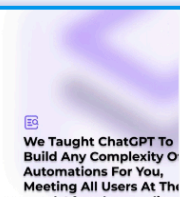
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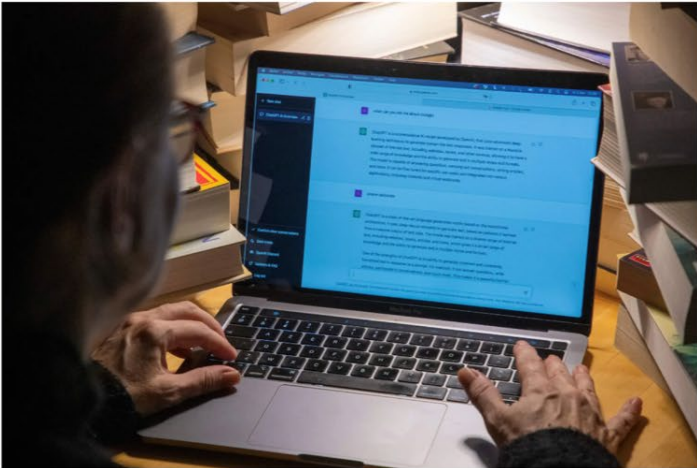
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'Prompt engineering' is one of the hottest jobs in generative AI. Here's how it works.

Aaron Mok Mar 1, 2023, 10:30 AM



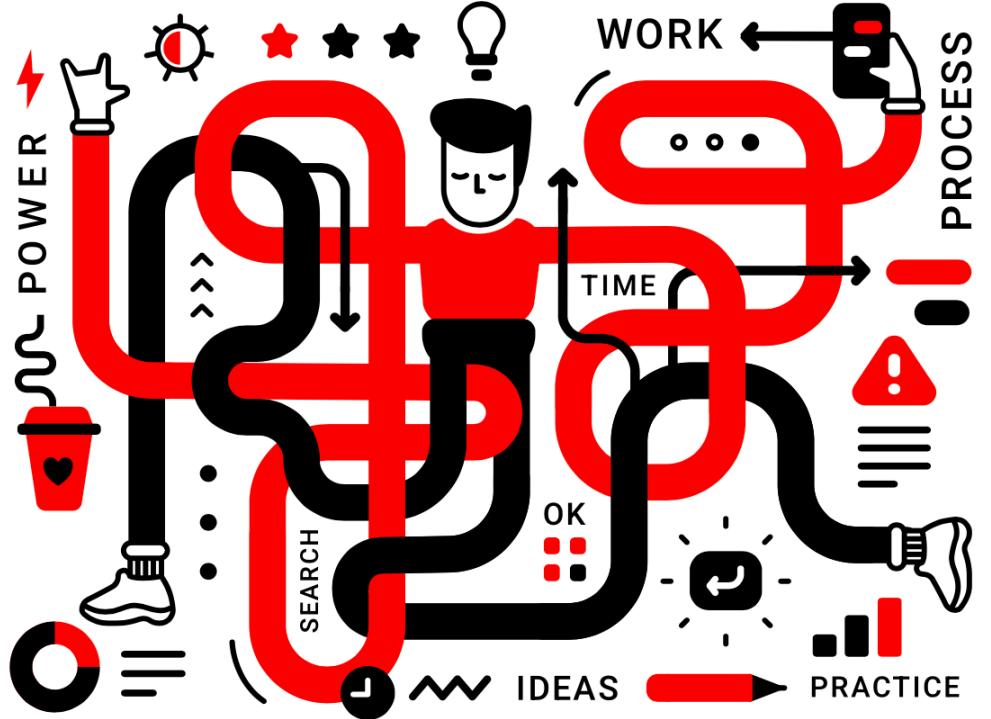
Prompt engineers are experts in writing prose rather than code to test AI chatbots.

Nicolas Maeterlinck / Getty Images

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TACK!

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