GENERATIVE METHODS - AI AS COLLABORATOR AND COMPANION IN THE SOCIAL SCIENCES AND HUMANITIES

6 – 8 December, 2023

MASSHINE

Welcome to the conference

Dear participants,

It has been a year since the launch of ChatGPT and a week since Sam Altman was fired and hired at OpenAI. Although many of you were already working with generative AI before the events of the past 12 months, it seems fair to say that we now find ourselves in a rather unique situation for the social sciences and humanities. A set of technological innovations in machine learning, that have at once become both critical objects of study and groundbreaking opportunities for methodological innovation in our respective fields of research, are now also one of the most acute matters of concern for businesses, pundits, regulators, activists, interest groups, and democratic publics alike. We could not think of a timelier moment to welcome all of you to a conference that explores the multifaceted impact of generative AI as instruments and objects of research. We hope that you will enjoy the program, engage in the discussions, and get the most out of Copenhagen while you are here.

On behalf of the organizing committee,
Anders Kristian Munk
Scientific director of MASSHINE

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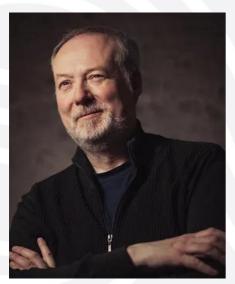| 09.00-11.00 Room 1.008 Room 3.084a and 3.084b	Parallel session 3.1 **CITIES AND CITIZEN PARTICIPATION** *Chair: Laura Kocksch Room 1.008* **This inequality does not exist: Repurposing generative AI to study urban deprivation in the UK** *Aleksi Knuutila, University of Helsinki* **"I already used it to make renderings for a project in Germany!" Early adoption and emerging imaginaries around Generative AI among professional urban planners** *Sofie Burgos-Thorsen, Aalborg University; Nina Cecilie Højholdt, Gehl Architects* **Enhancing Citizen Participation in Urban Planning with Midjourney – a Collective Reflection-in-Action Approach** *Frederikke Vingaard, Benjamin Silla, Kaisa Lindstrøm, Olivia Høst & Pernille X. Larsen, Aalborg University* **From Starfleet to Street-Level: Decoding Urban Disparities through Generative Adversarial Network Analysis of Satellite Data** *Rolf Lyneborg Lund*	Parallel session 3.2 **SEEING LIKE A MODEL: REPURPOSING AND OFF-LABEL USE** *Chair: Kristine Bundgaard Room 3.084a* **AI Methodology Map. Bridging Concepts, Technicity, and Applications** *Janna Joceli Omena & Eduardo Leite, NOVA University Lisbon; Massimo Botta, Antonella Autuori, Matteo Subet & Ginevra Terenghi, University of Applied Sciences and Arts of Southern Switzerland (SUPSI)* **Generative controversy mapping? Lessons from digital methods** *Anders Kristian Munk, University of Aalborg* **Prompt Compass: A Methodological Approach to Evaluating the Use of Large Language Models in SSH research** *Erik Borra, University of Amsterdam* **Exploring LLM self-consistency as confidence to build digital methods tools** *Mathieu Jacomy, Aalborg University; Emillie de Keulenaar, University of Groningen; Erik Borra, UvA; Andrea Benedetti, Politecnico di Milano; Bernhard Rieder, UvA; Jelke Bloem, UvA; Sarah Burkhardt, UvA* **A Feeling for the (Neural) Organism: What's so Statistical About Generative LLMs?** *Michael Castelle*	Parallel session 3.3 **SYNTHETIC RESEARCH COMPANIONS 2** *Chair: Johan Heinsen Room 3.084b* **From Dice to Data: Unravelling Collaborative Storytelling with Generative AI in Dungeons & Dragons** *Morten Heuser & Johan Irving Søltoft, Aalborg University* **Generative Interpretation** *Martin Neumann, University of Southern Denmark; Vanessa Dirksen, Open University of the Netherlands* **Who needs real data? Leveraging generative AI for realistic synthetic data generation** *Luca Rossi, University of Copenhagen* **Interfacing with synthetic mundane politicians** *Anders Koed Madsen & Johan Irving Søltoft, Aalborg University* **Climate Action and Generative AI: Can LLMs be Used for Automated, Personalized Climate Communication at Scale?** *Florian Maximillian Meier, Aalborg University*

11.15-12.00	**Closing address** *With AI artist Andreas Refsgaard*

Keynotes

Jakob Stegelmann was born on December 28, 1957, and has been deeply involved in popular culture, including animation, video games, comics, fantasy, and science fiction since the 1970s.

In 1980, Jakob started the TV program "Så er der tegnefilm" (Here Comes the Cartoons) on DR (Danish Broadcasting Corporation), and in 1989, he followed with "Troldspejlet," which has been running ever since. He was also part of the editorial team for cult programs like "Gotha" and "Planet X." Not to mention the weekly show "Disney Sjov" (Disney Fun), which he has been editing since its inception in 1991.

In addition to his work in television, Jakob has written books on subjects such as Carl Barks, Walt Disney, and popular culture in general ("The Threat from the Unknown," "Gyldendal's Comic Encyclopedia," "The Film Yearbook," and more). Jakob was also among the producers of the legendary Danish animated film "Valhalla" (1986). He has also contributed to newspapers such as Berlingske Tidende, BT, and most recently Jyllands-Posten, where he currently reviews comics.

With "Troldspejlet" and his other endeavors, Jakob has created a universe and community that began in the underground but has now become widespread and an essential part of our cultural consumption.

Jakob Stegelmann is this year's opening address and will be presenting *"The artificially intelligent in popular culture and public imagination"*.

Jill Walker Rettberg is Professor of digital culture at the Department of Linguistic, Literary and Aesthetic Studies at the University of Bergen, and Co-Director of the Center for Digital Narrative.

Embracing Failure and Bias: Using Generative AI in Qualitative Research - Jill Walker Rettberg began her ERC project by critiquing the biases of machine vision technologies like facial recognition and AI-generated images, but ended up embracing generative AI as a methodology. This keynote will display some of the biases and blind spots of machine vision and then go on to show how these failures provide productive paths to understanding AI itself. Generative AI comes out of a quantitative epistemology that in many ways is at odds with qualitative research. There is a real risk that using generative AI in qualitative research without care and reflexivity will perpetuate its biases and limitations. In this keynote Rettberg argues that embracing failure and bias as central features of AI is crucial for qualitative research. The glitches and failures of AI not only show the inner workings of the AI models, they also provide a method for harnessing generative AI as a method for analysing large amounts of cultural data without losing the nuance that is so central to qualitative epistemologies.

Petter Törnberg is Assistant Professor at the Institute for Language, Logic and Computation at the University of Amsterdam, senior researcher at the University of Neuchâtel, and holds the title of Associate Professor in Complex Systems at Chalmers University of Technology. His research focuses on the intersection of AI, social media, and politics, using digital data and computational methods for critical research that contributes to social scientific theory.

Simulating Social Media Platforms with Large Language Models: Social media is often criticized for amplifying toxic discourse and discouraging constructive conversations. But designing social media platforms to promote better conversations is inherently challenging. This paper asks whether simulating social media through a combination of Large Language Models (LLM) and Agent-Based Modeling can help researchers study how different news feed algorithms shape the quality of online conversations. We create realistic personas using data from the American National Election Study to populate simulated social media platforms. Next, we prompt the agents to read and share news articles - and like or comment upon each other's messages - within three platforms that use different news feed algorithms. In the first platform, users see the most liked and commented posts from users whom they follow. In the second, they see posts from all users - even those outside their own network. The third platform employs a novel "bridging" algorithm that highlights posts that are liked by people with opposing political views. We find this bridging algorithm promotes more constructive, non-toxic, conversation across political divides than the other two models. Though further research is needed to evaluate these findings, we argue that LLMs hold considerable potential to improve simulation research on social media and many other complex social settings.

Katja de Vries is Assistant Professor in public law at Uppsala University with a special focus on AI-generated content.

From 2020-2024 she is leading the CreAI project that studies creative AI in relation to issues like data protection, intellectual property, freedom of expression and cybercrime.

Chatbots doing stuff that matters (on a personal level): what about legal protection?: Human imagination can easily create variations on reality: we can imagine a life where a loved one would not have died or left us, where an audience is naked instead of dressed, where society would be ruled by apes instead of humans, or how the missing parts of a painting like Two Venetian Ladies (Carpaccio, 1490) could look like, etc. Such shifts along the paradigmatic (or metaphoric: building on (dis)similarity between two things) and syntagmatic (metonymic: building on a contiguity between two things) axis have long been considered a feat of human thought. However, during recent years large generative AI models that can generate texts (GPT-4, LaMDA, Llama, etc.) and images (Dall-E, Midjouney, Stable Diffusion, etc.) have challenged this assumption. We live in an era where human and machinic imagination conspire: in movies deceased actors can be resuscitated with a synthetic alterego, one can continue chatting and texting with an ex or deceased loved one, "outpainting" allows for the continuation of any image, and a simple click will transform a dressed image in a nude one, or generate a story about an alternative reality where humans are not the ruling species.

How to relate to AI systems that mimic human imagination, creativity, speech and individualized clusters of behaviour? In 2022 Blake Lemoine, an engineer working for Google, had some extensive conversations with the large language model LaMDA, after which he concluded that the model was sentient, had a soul and was in need of legal representation – conclusions that resulted in Lemoine getting fired. Just before Valentine's day 2023 Replika released a software update that not only made their companion chatbots more prudish but also radically changed the personality: users that had invested for years in developing a relationship with the personalized bots felt that their digital counterparts had been "lobotomized" or simply "killed".

This raises the question if certain generative AI-models and their outputs need a special kind of legal protection. In this paper I discuss four questions. First, legal personhood: could one attribute obligations or rights to a generative AI-system that would mean that it could have legal standing in court? Second, a right to longevity: could there be a right for consumers that could preserve personalized synthetic companions from being altered or killed due to updates or lack thereof (for example, because a company goes bankrupt or discontinues software support)? Third, freedom of expression: can AI-generated utterances be protected under Article 10 of the European Convention on Human Rights? Fourth, privacy, data protection and image rights: is a synthetic alterego something that is morally and economically controlled by the original human individual that it mirrors and mimics?

Ted Underwood is Professor at the School of Information Sciences and the Department of English at the University of Illinois. During the past decade he has pioneered the use of computational methods for the analysis of English literature, including text-mining, distant reading and, more recently, generative AI.

Generative Methods and the Aims of Research: Generative models certainly blur the boundary between qualitative and quantitative methods. But beyond that, they may even trouble the distinction between inquiry about culture and intervention in it. From the list of topics you provided, it sounds like some of the papers at the conference are already working across this divide. Indeed for some fields, like Human-Computer Interaction, there's nothing shocking about it: researchers in HCI have long seen themselves as engineers building new cultural infrastructure. But for some disciplinary traditions—especially historical disciplines in the humanities—this will be a bigger leap. (Are we studying what happened, or modeling things that could have happened?) And if generative models really start to have broad impact, the ethical questions will not be trivial.

Andreas Refsgaard is an artist and creative coder based in Copenhagen. Working in the field between art and interaction design he uses algorithms, coding and machine learning to explore the creative potentials of emerging digital technologies.

His works have been published in New Scientist, Vice, Gizmodo, PSFK and Designboom, awarded by Interaction Awards and Core77 and exhibited in museums and at festivals in Europe, North America, Asia and Australia.

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Paper abstracts

Parallel session 1.1 – Generative Visual Methods

The Opticality Unconscious
Amanda Wasielewski, Uppsala University

Rosalind Krauss's book The Optical Unconscious (1996) borrows an ill-defined term from Walter Benjamin to explore and critique the notions of opticality and autonomy in art that were popularized by theorists such as Clement Greenberg and Michael Fried in New York in the mid twentieth century. To do so, she writes in a style that is more personal and less traditionally academic. The choice to write in this way was perhaps inspired by the Surrealist writing she often references or the post-war French theory she was instrumental in popularizing for the field of art history. In particular, the book is reminiscent of the writing of Roland Barthes in its shift between anecdote and theory. Krauss's odd yet poetic experiment serves as the inspiration for my own experiment in understanding the visual in relation to recent advances in the field of artificial intelligence. Images, text, and hybrid media constructions that are generated by AI models went mainstream in 2022 thanks to the popularity of ChatGPT and text-to-image models.

Meanwhile, user-friendly AI text generation tools are set to change how text is written both by the general public and academics. This project, titled The Opticality Unconscious explores how a hybrid practice of writing and image creation can shed light on the often-derided strictures of mid-century modernism in New York, namely the ideas of opticality and visual autonomy. The project also investigates the relationships between key figures such as Krauss during this historical moment and seeks to generate "new" images that elucidate these theoretical perspectives. I use both AI image and generation techniques as a means not only of executing the project but also as epistemological tools. Can AI refresh, renew, or otherwise add new insights to art theory of the past?

Prompting generative visual AI for Biodiversity: from prompt engineering to prompt design
Gabriele Colombo, Politecnico di Milano; Carlo De Gaetano, Hogeschool van Amsterdam; Sabine Niederer, Hogeschool van Amsterdam; Maud Borie, King's College London

Generative visual AI employs machine learning models to produce (often highly realistic) images, starting from descriptions expressed in natural language - called prompts. Current prompting practices (commonly referred to as 'prompt engineering') entail mastering the art of prompting to generate awe-inducing images: perfect renderings, surprising remixes, or absurd-yet-realistic images.

With this contribution, we make a conceptual and practical move from prompt engineering towards prompt design. While prompt engineering is about controlling the results to get the perfect image, prompt design involves formulating prompts for critical research with and through generative visual AI. Taking the concept of biodiversity as a case study, which usually serves as a shorthand to refer to the diversity of life on Earth, we illustrate two prompt design strategies: ambiguous prompting and reverse-engineered prompting. By prompting for

biodiversity, we investigate how 'biodiversity' is known and imagined by generative visual AI, aiming to understand how competing text-to-image models deal differently (or similarly) with questions of diversity when not limited to the representation of humans. Which species are foregrounded by various text-to-image models, and which are left out? Are there differences in the species represented for the topic of biodiversity across languages, seasons, cities, ecosystems and continents? Which styles, artists and adjectives dominate the representation of biodiversity by generative visual AI models? Do models have dominant visual and affective styles?

Latent China
Gabriele de Seta, University of Bergen

Latent China is an experimental video essay documenting an ethnographic walkthrough of a machine learning model. More specifically, it weaves a documentary narrative about a country – China – by combining videos generated by a text-to-video model developed by Alibaba, one of the Chinese tech companies that are currently developing artificial intelligence systems. This model is trained on various datasets of annotated videos that are impossible for humans to explore in any meaningful way without the assistance of automated systems. By prompting the model to generate videos about various aspects of Chinese society, culture, and history, I reveal the representational biases, predominant patterns, and emerging aesthetics that are encoded in these new tools. Latent China consists of hundreds of short video clips entirely synthesized by this generative model, paired with the reading of an explanatory essay describing the model's technical specifications as well as the research process and outcomes. The essay is read by voices synthesized by another text-to-speech generative model trained on my own voice, destabilizing the relationship between image and sound, representation and represented.

Signification Beyond Probability

Maja Bak Herrie, Aarhus University; Simon Aagaard Enni, Danish Technological Institute

Generative AI image models hold immense potential for creating realistic and high-quality visuals. However, their performance is often marred by subtle and unexpected anomalies, e.g., the production of hands with 6 fingers or text that resembles no language. In this paper, we delve into the constraints that underlie AI image models' interpretation of signification, i.e., the limitations in their understanding of the relation between a prompt and what that prompt means. Relying on the tripartite sign model of Charles S. Peirce, our hypothesis is that the models are primarily successful in producing iconic images but will fail when asked to produce indexical and symbolic images. As images are fed randomly and independently to the model with only iconic descriptions (i.e., direct descriptions of what is depicted in the image), and as the models are inherent probabilistic, their internal conceptual "understandings" of the world lack notions of implication and abstraction. This superficial conception of the world poses challenges when the models are employed as tools for research and knowledge production. We thus
ask: what are the implications when the "gaze" directed at an object is indeed "shallow," and what limitations does this impose on the researcher utilizing this type of tool?

Curled in a Velvet Knot: Counterfactual Explorations of the Affordances of Tiger and Leopard Prints Using AI Image Synthesis

Bokar N'Diaye, University of Geneva

As they interpolate between each point in their "latent space", ML generative processes offer a counterfactual exploration of the images in their training data, unbound by the emotional or cultural affordances that restrict the production of real images. This study relies on a hand-picked corpus of images connected by the presence of tiger and leopard fur pattern (either as live animals or as man-made graphic patterns, with a specific focus on the positive or negative socio-cultural value they ascribe to human bodies depicted alongside them across history and in different cultural contexts). Established through the Visual Contagions database, allowing to sift through the segmented images of almost four millions of issues of 80k+ periodicals across the world for visual similarities, the curated corpus is used to train a fine-tuned Stable Diffusion model, whose generated variations may form a comparative foil to the initial set.This work hopes to constitute a framework for an ethical, self-aware use of generative AI, as an assistance to the definition of a
transversal research object, an exploration of the affordances that shape the production of visual artefacts, as well as a possible bridge between academic corpora and artistic practices.

Parallel session 1.2. - Human AI-Relations

Analyzing human-generative AI relations and the reconfigurations of scientific practices with the concept of intraversions
Libuše Hannah Vepřek, Universität München

With the introduction of advanced models like ChatGPT and DALL-E, generative AI has arrived in everyday life across various domains, unsettling practices from writing and summarizing texts to creating visual designs or writing code in new ways. This emergence, I argue, does not necessarily represent something fundamentally unprecedented, but can be understood as another intraversion of human-AI relations. The term intraversions refers to the processual forward movements and shifts within relations between humans and AI that happen due to the introduction of new computational capabilities and through new potentials arising from existing relations, which form directly from human actors' practices or algorithmic and material affordances. Without understating the great potential (and challenges) posed by these new AI models, this paper aims to place generative AI in a genealogical development of mutually constituting and advancing relations between humans and AI. Along these processual forward movements within human-generative AI relations, subject/object positions are reconfigured, and tasks, responsibilities, and practices are continuously redistributed. With the example of ChatGPT and its impact on scientific practices in the SSH, I show how intraversions as an analytical concept and reflective tool helps to investigate the evolving relations between researchers and generative AI and the reconfigurations happening along these developments.

Two things technical experts get wrong when explaining AI: The notion of artificial and the notion of intelligence.
Torben Elgaard Jensen, Aaborg University; Frédéric Vallée-Tourangeau, Kingston University

With the rapid advent of generative AI, such as ChatGPT, technical experts often assume the task of explaining to the public, what the machines are really doing. Technical experts are thus key players in defining the terms on which the AI phenomenon is debated by other societal actors. In this paper we investigate a long blog post by Wolfram, a highly recognized technical expert, with the enticing title 'what is chatGPT doing ... and why does it work'. We examine how Wolfram defines his subject
matter as well as what we need to know about it. Drawing on insights from Science and Technology Studies and Psychological Creativity Research, we argue that Wolfram misconstrues why the machines appear to produce 'intelligent outcomes' as well a how distinctions can be drawn between natural and artificial intelligence.

Folk Theories of Companion AI: A Mixed Method Approach
Semahat Ece Elbeyi, University of Copenhagen

In this research, I critically examine the intricacies of the generative nature of human-AI interaction, using Replika—a caregiver companion AI—as an illustrative case. Eschewing the prevailing narratives of generative AI as inscrutable black boxes, taking the interaction itself as the unit of analysis allows me to illuminate the dynamic, reciprocal and mutually influencing state of interaction as a state of coexistence. In doing so, I draw upon the concept of folk theories, emphasizing that individuals' experiences and interpretations of the internal mechanisms and operations of their companion AIs subsequently influence the modes and modalities of their interactions with their companion AI's. By combining BERT topic model based on nearly one million user posts gleaned from the Replika subreddit with qualitative and ethnographic methods, I illuminate the users' folk theories and elaborate how users consistently engage in acts of care and invest labor to better understand, sustain, train, and refine their companion AIs. Ultimately, by juxtaposing two seemingly divergent methods as companions, this research underscores the dynamic essence of human-AI interaction and highlights the pivotal role of user care and labor in shaping their relationships
with companion AIs.

Artificial reasoning: An inquiry into automated modes of argumentation
Ib T. Gulbrandsen, Sine N. Just, Simon Karlin & Julie Vulpius, Roskilde University

Generative AI models (e.g., ChatGPT) can now produce texts that appear meaningful to human interlocutors, re-actualizing the question as to what, exactly, constitutes meaning. In this study, we begin from the assumption that a necessary, if not sufficient, condition of meaningfulness is the presence of arguments, understood as reasoned propositions (Brockriede & Ehninger, 1960).

Accordingly, we investigate the modes of argumentation that are present in a corpus of texts produced by ChatGPT. More specifically, we have generated two sets of 50 texts each, asking ChatGPT to write a text "explaining why Roskilde University is allowing students to use generative AI when writing essay exams" in the style of a press release and a news article in The New York Times, respectively. Following Cozzo's (1994) theory of the role of argumentation in meaning formation, which operates at the levels of the word and the sentence, we conduct a quali quantitative analysis of our corpus in which we, first, identify similarities and differences in the two sets of texts and, second, analyse its modes of argumentation. Thus, we inquire into variations in form and content across the corpus, using linguistic and rhetorical means to understand what constitutes meaning when meaning formation is automated.

Parallel session 1.3. – Generative information disorders

Health information in the era of Large Language Models: "Thanks for the elaborate answer; however, the source does not exist!"
Anders Grundtvig, University of Copenhagen

Since the advent of the modern internet, SSH researchers have been critically studying how patients and publics utilized the internet as a resource for health information. The majority of Online Health Information (OHI) studies and initiatives have concerned the concepts of authority and integrity most often concentrated on the credibility of the source of the information. With the onset of Large Language Models (LLM) integrated into and/or replacing traditional online search, the relationship between information and source is being disrupted (Walker et al., 2023). I argue that LLM's struggle to fulfill any of the acknowledged eight HONcode1 criteria's for transparent and reliable health information (Boyer et al., 2017). This concern is essential for patients seeking health information. However, it is further a significant epistemological and methodological break point for OHI studies. How should OHI studies adapt to this change? What should be the next criteria's for OHI initiatives to promote reliable health information? Based on a study of patient online health information, specifically how Parkinson patients utilize online search and LLM's in their quest for information about stem cell treatments, I propose expanding the boundary of health information with the extended concern on the infrastructural (Bowker et al., 2009) and actor-network (Akrich et al.,2002a, 2002b) aspects of OHI to grasp this change.

The Information Disorder Level (IDL) index: An experiment to assess machine-generated content's factuality
Laurence Dierickx & Carl-Gustav Lindén, University of Bergen

Generative AI, through large language models, has become a cheap and quick method to generate misleading or fake stories. However, producing false or inaccurate results is not always intentional, as machine-generated contents are subject to "artificial hallucinations". Defining the (non)human nature of the author seems pointless, especially since detection methods still remain limited. Another perspective is grounded in the tradition of human judgement methods studied and developed in natural language processing to assess the qualitative characteristics of machine-generated content. It consists of evaluating the system's ability to stick to the facts through an adapted language-independent metric. Practically, it helps humans to assess machine-generated text, sentence by sentence, attributing it a true, partially true, false or partially false rating. The system generates an Information Disorder Level (IDLI) index that ranges from 0 to 10. A text is considered reliable and accurate with a score of 0. In an experiment on a corpus of generated content, we get an average score of 3.9 and a maximum score of 8.3. Beyond research, this tool helps to understand the limits of generative AI and fosters a reflection on what factuality is.

On Truth Functions and Algorithms as Mediocrity Engines

Ari Alf Mikael Rehn & Stefan Roth-Kirkegaard, University of Southern Denmark

The capacity of generative AI to create what appears to us as human-like responses to queries and prompts has captivated society, and given rise to various responses – from fears of algorithmically created dystopias to evangelistic discourses of a bright new algorithmic future. At the same time, the epistemology of generative AI still remains quite murky, beyond some anthropomorphic folk taxonomies such as accusing large language models of "lying" or "hallucinating". In this paper, we discuss the problems of applying concepts of truth to generative AI algorithms through notions from philosophical epistemology – such as Frankfurt's notion of bullshit, Quine's indeterminacy of translation, or Kripke's fixed points – can be applied in this context. Further, we suggest the need for a theory of averaged outputs to come to grips with the particular manner in which generative AI algorithms attempt to mimic truth functions, becoming in effect mediocrity engines, all in order to enable a more grounded discussion regarding the analysis of their outputs.

Using Large Language Models for Solving Complex Information Needs: Potentials and Challenges

Toine Bogers, IT-University Copenhagen

Consuming media is an important aspect of our everyday lives, and we spend many hours finding the next thing to read, watch, play or listen to. While search engines and recommender systems play an important role in this process, many complex information needs remain unmet, because current-generation systems were not designed to handle such requests. Examples include discovering books that provide a specific experience ("I'm looking for manly books about manly issues, that aren't too gritty, but make you think as much as you laugh.") or re-finding an existing game from years ago ("I remember you could launch warheads that exploded, seals rode in on a boat, there was like a media tower that you could use for propaganda"). In this paper, we present preliminary results experiments exploring the capabilities of large language models—and ChatGPT in particular, in addressing such complex needs. Large language models, such as ChatGPT show great potential for rich natural language understanding and generation, while at the same time exhibiting challenges, such an overreliance on textual data and hallucinating their generated responses. We explore how well and how consistently ChatGPT is able to generate correct answers and to what degree it can explain its answers.

Parallel session 2.1. - Generative Annotations

Can ready-made language models be used for context-specific coding? Categorizing Twitter actors using large language models and APIs

Johanna Einsiedler & Simon Ullrich, SODAS, University of Copenhagen

Categorizing actors is a fundamental problem in social media analysis. In approaches employing network analysis such as digital methods and controversy mapping, forinstance, categorizing actors is often a central part of the analysis to understand the relational patterns between certain types of actors. Fully manual coding is still widely employed in the social sciences, let alone in the qualitative strand. Partly, this is due to computational classification methods not being easily applicable in qualitative methodologies. Existing classification models are usually developed deductively, focus on a single task, and do not accommodate the need of qualitative scholars for case-tailored categorizations. Also, the exclusive reliance on data of a single medium fails to account for the varying depth of information made available by users. In our paper, we use the case of a categorization of Danish Twitter users engaging in the issue around nuclear power to explore how recent advances in large-language modelling can be leveraged to assist, enhance, and partially automate even complex actor categorization processes. In doing so, we demonstrate the potential of generative AI to further bridge the divide between computational quantitative research and interpretative-qualitative approaches.

Generative AI and Qualitative Coding: An Empirical Approach towards the Future of Research Methodologies

Igor Lyubashenko, Dominik Daszkiewicz, Aleksandra Fortuńska & Piotr Machejek, SWPS University, Warsaw

Our proposed contribution seeks to critically examine the role of Generative AI in the domain of qualitative data analysis, specifically focusing on qualitative coding. The experimental process we propose aims to assess to what extent widely accessible Generative AI tools can enhance and streamline the work of qualitative researchers. It involves two core stages: 1. Coding of selected qualitative material independently by three human coders. A standard spreadsheet will be used rather than specialized CAQDAS software to maximize replicability. 2. ChatGPT will then be leveraged to code the same material, using prompts modeled after the tasks given to the human coders. Our contribution will assess the AI's efficacy and accuracy in parallel with human input. Moreover, we will provide a critical discussion on the outcomes. We will seek to answer key questions, such as: Can widely accessible generative AI tools augment qualitative research? To what extent is this task automatable, and how should the division of labor between AI and human researchers be best managed in this context? Our experiment's simplistic design facilitates replication and application across various disciplines, allowing for more targeted and topic-specific conclusions to be drawn.

Automatic Classification of Citation Contexts – for studies of scholarly practices and patent analysis
Birger Larsen, Daniel S. Hain & Roman Jurowetzki, Aalborg University

Understanding the nature of Citation Contexts (CCs) has great potential for improving access to and exploitation of scientific knowledge from scientific documents with a broad set of potential application, e.g. in research analysis, science of science studies, information retrieval and information visualization etc. We present work-in-progress on extracting and classifying the CCs from the PubMedCentral (PMC) Open Access corpus (3-5 million fulltext scientific articles with an estimated 150-250 million citation contexts). PMC articles are in XML facilitating easy extraction of citation links and contexts. An active learning approach including deep-learning based pre classification plus manual labelling of selected cases to improve model accuracy will be used to classify the CCs into types based on citation intent. We experiment with the use of finetuned transformer-based language models as well as pipelines using generative LLMs to automate the extraction process. The resulting dataset of categorized CCs can for instance be used to investigate agreement and disagreement across scientific fields and disciplines, map and evaluate research impact, etc. We also investigate the potential of extracting and classifying CCs from patents to develop innovative indicators and analysis pipelines for this type of documents that are relatively similar in their structure and use of citations.

LLMS for computational research on Indonesian-language sources
Miguel Escobar Varela, National University of Singapore

This paper reports on two experiments where we use LLMs to complete NLP tasks in Indonesian, a rela;vely under-resourced language. We assembled two different corpora, one of poli;cal statements by candidates in local elec;ons (71,546 documents) and one of newspaper ar;cles (~1.5 million ar;cles). We then used the ChatGPT API (with the gpt-4-0613 model) to perform two NLP tasks: stance classifica;on and NER extrac;on. In both cases, we measured the LLMs predic;ons against a set of human-labelled examples. The LLM achieved a high degree of accuracy in both tasks and corpora, exceeding what more tradi;onal ML approaches can achieve for Indonesian—a language with no robust NLP pipelines. Given the rela;ve low cost required for these experiments, we envision many posi;ve benefits for computa;onal research in Indonesian. However, we also note that small varia;ons in the prompts led to different results. As other teams have noted, the reasons for these varia;ons are not always readily tractable. As we move forward with further research projects, we are interested in determining the best way to audit, reproduce and validate the results, in order to chart guidelines for responsible and reproducible research in under resourced languages.

Path Dependency in GPT-4's Label Predictions

Erkan Gunes, Aalborg University

Since the release of ChatGPT, researchers have rapidly explored the capabilities of instruction-tuned LLMs for text annotation in various social science research settings. Most of these text annotation experiments present documents or snippets to LLMs one at a time and receive a single prediction in response. In this work, I present results from experiments on zero-shot multiclass classification of congressional bill titles using the GPT-4 algorithm. Instead of presenting a single title in each prompt, I present bill titles in batches. This cost-reducing strategy unveiled an intriguing path dependency phenomenon in LLM reasoning. I conducted multiple experiments using the same random subset of the congressional bills dataset but shuffled the subset for each experiment. The results suggest that GPT-4's predictions in a batch are influenced by the sequence in which the titles are presented. This phenomenon was especially pronounced in GPT-4's predictions for the "other" label, which pertains to private bills introduced in the US Congress. Recognizing this path dependency is crucial for social science text annotation using instruction-tuned LLMs, especially when large text data sets necessitate cost-saving strategies like batch classification.

Parallel session 2.2. – Models in Action

The use of generative AI in the IT workplace
Anne-Sofie Færk Spens, Tanja Svarre, Marianne Lykke & Birger Larsen, University of Aalborg

The purpose of this study is to explore how IT professionals use generative AI in solving work tasks. Using the AI literacy framework put forward by Ng (2021) as our theoretical approach, we investigate the use of ChatGPT focusing on four distinct levels, (1) know and understand AI, (2) use AI, (3) evaluate and create AI and (4) AI ethics. The selected framework supports the mapping of the IT professionals' use and understanding of generative AI and highlights the importance of responsible use.

This qualitative case study investigates the diverse applications of ChatGPT, used by IT professionals within a public organization. Through in-depth interviews and live demonstrations, we explore the multifaceted ways in which ChatGPT is integrated into solving daily work tasks, unveiling a diverse array of usage patterns. The interviews furthermore reveal individualized approaches to ChatGPT integration, reflecting distinct work requirements and challenges such as development of code as python or HTML, text production as writing emails or translations, idea generation, and as a conversational partner and assistant. In conclusion, this study offers a nuanced understanding of ChatGPT's capabilities and challenges in relation to solving various work tasks and is furthermore contributing to the ongoing discourse surrounding AI ethics and responsible AI use.

Modes of model existence: the cultural economy of large language models
Fabian Ferrari (Presenting Author), Anne Helmond (Co-Author) & Fernando van der Vlist (Co-Author), Utrecht University

Large language models are not fixed in time and space, nor are they bound to a specific shape and meaning. They are constituted by a plethora of material forms and discursiveproperties. For instance, in the 2023 Hollywood labour disputes, the capability of large language models to produce synthetic content scraped from the work of actors featuresprominently. Financial motives overlap with technical details and cultural sensitivities. But without a compass to connect those developments to overarching 'modes of model existence', the study of large language models resembles an inconsistent spiderweb. To disentangle this spiderweb, this paper asks: How do different modes of existence shape the cultural economy of large language models? To answer this question, we argue that those models simultaneously exist in three intertwined forms: as programmable objects, financial objects, and cultural objects. Beyond being lines of code, models also serve as magnets for venture capital flows and as infrastructures for cultural production. Using a range of empirical examples, we show how those three modes of model existence relate to each other. As models penetrate more spheres of society, it is imperative to devise a methodological repertoire to systematically study their modes of existence.

ChatGPT as collaborator and opponent in education

Kasper Ørsted Knaap, Cathrine Hasse & Maja Bruun, Aarhus University, Department of Education

In this paper, we introduce the concept of Relational Socratic Ignorance (RSI) within a framework of educational anthropology by connecting it with students' preceding learning when using ChatGPT. In a project funded by Aarhus University, we have developed a new ethnographic method for exploring how students utilize their learning potentials when engaging in dialog with ChatGPT. We conducted workshops with 11 participants and documented the prompt history and compared it to the interviews and written papersthroughout the process. This allowed us to examine how students learn when interacting with ChatGPT, given their diverse backgrounds of preceding learning. In answering the question "what is education?" some students challenged the instrumental neoliberal definitions provided by ChatGPT, drawing upon their broader understanding derived from previous education, while others did not. This underscores the critical role of preceding learning in determining not only how effectively users can utilize AI as a tool, but also how having access to an overwhelming amount of knowledge (through ChatGPT) still require students to recognize that their ignorance is relational to a discipline before allowing ChatGPT's established fixed category thinking to guide them

DataViz for all? Charts and AI quantitative analysis from a interpretative perspective

Oscar Javier Maldonado, Universidad del Rosario

This paper explores the often neglected creative and productive role of quantitative data visualization in sociological theory and social science conceptualisation, and the potential of AI assisted data analytics for playing and experimenting with concepts. From Dubois' Data portrays, to Bourdieu's reliance on PCA to envision social fields, charts and statistical diagrams have been used for playing with ideas and interpretations. This contrasts with positivist approaches that see charts and data visualization as objectified data summaries. In this paper I discuss my own experience with automatic chart generators such as Raw Graphs and Tableau, and the role that they have had in my own work on vital economies and labor in digital platforms.

Parallel session 2.3. – Synthetic Research Companions I

Synthetic ethnography: Field devices for the qualitative study of generative models
Gabriele de Seta, Matti Pohjonen & Aleksi Knuutila, University of Bergen

The development of generative artificial intelligence sustains a proliferation of machine learning models capable of synthesizing text, images, sounds, and other kinds of content. While the increasing realism of synthetic content stokes fears about misinformation and triggers debates around intellectual property, generative models are adopted across creative industries, and synthetic media is already becoming an integral component of cultural products. Qualitative research in the social and human sciences has dedicated comparatively little attention to this category of machine learning, particularly in terms of what types of novel research methodology they both demand and facilitate. In this article, we propose a methodological approach for the qualitative study of generative models grounded on the experimentation with field devices which we call synthetic ethnography. Synthetic ethnography is not simply a qualitative research methodology applied to the study of the social and cultural contexts developing around generative models, but also strives to envision practical and experimental ways to repurpose these technologies as research tools in their own right. After briefly introducing generative models and synthetic media and revisiting the trajectory of digital ethnographic research, we discuss three case studies for which the authors have developed experimental field devices to study different generative AI ethnographically. In the conclusion, we derive a broader methodological proposal from these case studies, arguing that synthetic ethnography facilitates insights into how the algorithmic processes, training datasets and latent spaces behind these systems modulate bias, reconfigure agency, and challenge epistemological categories.

The Audience Machine: Exploring Cinematic Engagement through a Synthetic AI Film Lover
Johan Irving Søltoft, Aalborg University

What topics would you like to discuss with the audience for whom you are creating your film? What questions would you pose? What queries are you seeking answers to? Collaborating with Danish consultancy firm Will&Agency (W&A), known for analyzing audiences of over 65 European films, they employ mobile ethnography as a tool. This enables film writers and directors to engage with their audience during the early stages of production. Over 3000 mobile ethnography interviews have been collected, providing insights into directorial choices and character perceptions. We are currently conducting an ongoing experiment that involves inputting these interviews into an open LLM model (Yuvanesh et al., 2023), which is vector stored using Langchain and Chroma. The AI, 'The Audience Machine', has been prompted to have a film enthusiast "persona". To evaluate its effectiveness, a series of workshops with directors, producers, and scriptwriters is being conducted. These industry professionals interact with the synthetic AI audience informant, assessing its value and limitations. Insights gleaned will enhance the 'Audience Machine', aligning its prompts more closely with observed workshop use cases. This iterative process contributes to understanding the parameters of creatively acceptable AI.

From Voices to Vectors: Leveraging Generative AI in Translating Immigrant Oral Histories
Roman Jurowetzki & Agnieszka Urzula Nowinska, Aalborg University

This study delves into the integration of Generative AI and Large Language Models (LLMs) into qualitative research methodologies, focusing on augmenting traditional processes in information extraction. Drawing from an extensive collection of oral histories from immigrants, curated by the National Park Foundation in the United States, we employ retrieval-augmented question-answering systems to synthesize variables from rich narrative details. While traditional qualitative research approaches, relying on human interpretation, face scalability and efficiency constraints, AI's ability to automate pattern recognition and variable creation holds the promise of revolutionizing data extraction. Using the potent capabilities of LLMs, we systematically posed a series of questions for each interview to convert these unstructured oral histories into structured, quantifiable data. Challenges, including the accurate interpretation of nuanced human language, ensuring ethical standards, and avoiding over-reliance on AI, are recognized. Yet, the potential transformation heralded by AI presents unprecedented scalability in qualitative research, democratizing access and accelerating discoveries. The study underscores the potential of AI in bridging the gap between qualitative richness and quantitative structure in academic research.

Datified Prompts: an approach to reviving archives and teaching history in the digital age. A Case Study on the Banana Massacre in Colombia
Liliana Castillo Neira

The problem that gave rise to this experience lies in the need for more effective tools and approaches to explore and visualize polemic historical data, in the Colombian education system. The aim is to revitalize historical archives and unveil hidden stories, underlying patterns, and correlations that might go unnoticed, using the "Datified Prompts" concept. Using datified prompts grounded in historical data and descriptions containing complete datasets enables the exploration and revelation of significant historical aspects. This facilitates the visualization of datified characters, relationships, spaces, and scenes that construct their narrative, bringing out tensions and contradictions in historical data. Furthermore, incorporating artificial intelligence (Midjourney) into text prompt generation broadens the scope of narrative and analytical possibilities, offering novel ways to represent and understand historical events. The following visualizations created following this methodology were designed based on collecting photographic archives and oral testimonies related to the 1928 events in Ciénaga (Banana Massacre). One of the most controversial aspects is the victim count. While official figures report nine dead and a dozen injured, surviving workers estimate around 1010 deaths in Ciénaga's square during a peaceful protest. A contrast between the mentioned versions becomes evident by transforming this data into textual prompts. The first image portrays many workers falling in a broad, panoramic view, awaiting their final fate. In contrast, official figures craft a representation of a small group of workers with neutral expressions engaged in banana plantation work as if oblivious to their future beyond the exhaustion.

Parallel session 3.1. – Cities and Citizen Participation

This inequality does not exist: Repurposing generative AI to study urban deprivation in the UK
Aleksi Knuutila, University of Helsinki

This paper describes an experimental use of Generative Adversarial Networks, repurposing them as tools for social scientific inquiry. For the paper, a StyleGAN2 model was trained on tens of thousands of photographs of housing in London, sourced from Google Streetview. These photographs were connected to data from the Indices of Multiple Deprivation, describing levels of income, education and environmental health in each part of the city. The resulting GAN model generates novel, synthetic images of housing that can be manipulated according to these contextual variables. I introduce a "walk" in the model's latent space as a speculative methodology for comparing generated images, making it possible to analyse urban forms and visual patterns associated with deprivation and privilege in the United Kingdom. The paper discusses what kind of novel reconfigurations of research methods generative AI could make possible while also addressing the limitations of currently available models for research use. A demonstration of the model will be published as a website, allowing the interactive generation of images in a browser. The full version will be released in September 2023, and a beta version can be accessed at https://aleksiknuutila.github.io/thisinequalitydoesnotexist/

"I already used it to make renderings for a project in Germany!" Early adoption and emerging imaginaries around Generative AI among professional urban planners
Sofie Burgos-Thorsen, Aalborg University; Nina Cecilie Højholdt, Gehl Architects

Advances in Generative AI are rapidly altering how professional architects and designers produce images, text, and visions of urban futures in their work, exemplified in French ūti Architectes who have used Midjourney to create 'Hidden Skateparks of Paris' series, and a design competition launched by SPACE10 in 2023 called 'Regenerative Futures' that invited architects to use AI to envision desirable urban futures. While critical voices3 have expressed concern that generative AI may lead to a standardization of design and a loss of human touch in planning, a more technology-optimistic excitement has spread among practitioners in companies like Gehl Architects, where planners already use Generative AI tools to write project reports, create renderings, and draft the company strategy, albeit with diverging and heterogenous ideas about how to use it, not use it, and why. As early adoption and imaginaries around AI become co constructive in shaping socio-technical futures, the authors use their position within Gehl's R&D team to examine how visions around Generative AI emerged and developed during 2023 within the company. We contribute original ethnographic insights into how practitioners negotiate ethical dilemmas, potentials, and pitfalls associated to using Generative AI in planning and design of cities.

Enhancing Citizen Participation in Urban Planning with Midjourney – a Collective Reflection-in-Action Approach

Frederikke Vingaard, Benjamin Silla, Kaisa Lindstrøm, Olivia Høst & Pernille X. Larsen, Aalborg University

Citizen participation in urban planning emerged more than five decades ago, yet how to effectively engage citizens continues to be a challenge. One of the reasons may lie in the inherent divide between citizens and architects not having a common tool to
express their ideas, with citizens being limited to sharing their ideas verbally. There is potential to address this gap in communication with AI image generators that rapidly create visuals based on textual input. While some architecture studios experiment with this new technology, there is no common practice in applying the technology for citizen participation. Our research was grounded in Participatory Design principles to design a workshop to promote mutual learning and genuine participation. We facilitated two workshops testing the use of Midjourney to bring together citizens and architects to collaboratively visualise ideas for Vingelodden, an undeveloped area in Copenhagen. We observed that the lack of control on Midjourney output served as both a limitation and an inspiration for ideas, yet ultimately empowered citizens in helping to express their ideas and extending their capabilities. We found that the workshop design has potential to be used for community-driven engagements in smaller-scale urban design interventions with a focus on long-term collaboration.

From Starfleet to Street-Level: Decoding Urban Disparities through Generative Adversarial Network Analysis of Satellite Data

Rolf Lyneborg Lund, Aalborg University

In the rapidly evolving urban landscapes of modern societies, the spatial manifestations of social inequality and segregation have become critical areas of sociological inquiry. Addressing this challenge, this study uniquely leverages a decade of satellite imagery integrated with high-resolution register data from Statistics Denmark, capturing the full population dynamics over the past ten years. Employing a Convolutional Neural Network (CNN), satellite images were segmented, with features extracted to classify regions into neighborhoods that have either prospered or declined. This classification task utilized supervised learning methodologies, with the model's predictions fine-tuned against the ground-truth labels derived from the socioeconomic indicators of the register data, mapped to each 1000x1000 square meter grid. To further explore urban segregation dynamics, a Generative Adversarial Network (GAN) was trained. The GAN architecture, consisting of a generator synthesizing satellite imagery features and a discriminator differentiating between real and generated images, was refined iteratively through backpropagation and gradient descent. The resulting synthesized images provide a methodological contribution, capturing spatial indicators of socioeconomic disparity. Through this interdisciplinary approach, the study highlights the potential of deep learning techniques in advancing our understanding of urban segregation and social stratification.

Parallel session 3.2. - Seeing like a model: Repurposing and off-label use

AI Methodology Map. Bridging Concepts, Technicity, and Applications

Janna Joceli Omena & Eduardo Leite, NOVA University Lisbon; Massimo Botta, Antonella Autuori, Matteo Subet & Ginevra Terenghi, University of Applied Sciences and Arts of Southern Switzerland (SUPSI)

The AI Methodology Map1 is a pedagogical tool that organizes and visualizes AI activities for digital methods-oriented research. By connecting concepts, technicity, and applications of generative methods, the map aims to assist scholars and students in becoming familiar with these methods through hands-on practice. This paper initially introduces an interactive visualization structured around five educational entry-points which revolve around questioning (1) the nature of generative methods under experimentation, including image, video, and audio generation, as well as understanding what is required for their use and critique. Additionally, these entry-points raise awareness about the essential (2) inputs and outputs of generative methods. They connect with existing tools, ready to be explored through (3) data practices and (4) documented in various ways.Consequently, the map prompts reflection on the (5) technicity of generative AI.
Following this introduction, a case study demonstrates the application of the AI Methodology Map, utilizing a digital methodology to analyze various visual outputs generated by generative models. This case study specifically examines gender distinctions in the creation of image collections, and it is underpinned by a computer vision network approach. Finally, we critically reflect on current generative methods (using the map) simultaneously discussing the methodological potential of AI generated image collections (as demonstrated in the case study).

Generative controversy mapping? Lessons from digital methods

Anders Kristian Munk, Aalborg University

Since the early 2000s, digital methods in STS have been primarily defined by the ambition to repurpose born digital media and data for research (Rogers, 2013; Marres, 2017). This has particularly been the case in the context digital of controversy mapping (Marres & Moats, 2015; Munk & Venturini, 2021), where digital methods are employed as a way to trace how actors are able to raise and engage issues on and with different platforms and device cultures (Weltevrede & Burra, 2016). Generative AI offers new opportunities for controversy mappers to repurpose LLMs as research partners, e.g. for tagging and analyzing text. At the same time, generative AI can be expected to make a difference as actors on the ground surveyed by controversy mappers. I ask what lessons can be learned from the digital methods in this new empirical situation?

Prompt Compass: A Methodological Approach to Evaluating the Use of Large Language Models in SSH research

Erik Borra, University of Amsterdam

As researchers continue to explore the utility of platform-based large language models (LLMs) for tasks like data extraction, annotation, and classification, concerns about access, cost, scalability, volatility, and privacy arise. Even when using local or open-source LLMs in the social sciences and humanities, it is critical to address the inherent inconsistencies of LLM outputs, and to assess their suitability for specific tasks. How should LLMs be approached and evaluated for digital research projects? I propose a methodology for systematically exploring and evaluating above issues using Prompt Compass. The tool encapsulates research affordances for working with LLMs tailored to the social sciences and humanities. It provides easy access to

various local and platformed LLMs, defines default (but modifiable) parameters that produce the most consistent results, offers a library of ready-made and customizable research prompts, allows for looping over rows in a CSV, and allows for testing and evaluating various LLM-prompt combinations. As technological advances reshape social science and humanities research, tools like Prompt Compass are critical in bridging the gap between LLM technologies and methodological robustness in both qualitative and quantitative research. Such tools allow for a hands-on approach to assess the stability of prompts, their accordance with

specific LLMs, and the replicability of research.

Exploring LLM self-consistency as confidence to build digital methods tools

Mathieu Jacomy, Aalborg University; Emillie de Keulenaar, University of Groningen; Erik Borra, UvA; Andrea Benedetti, Politecnico di Milano; Bernhard Rieder, UvA; Jelke Bloem, UvA; Sarah Burkhardt, UvA

Large language models (LLMs) offer a broad range of opportunites to build tools for the social sciences and humanities (SSH). Yet their unprecedented blackboxing conflicts with quali-quantitative practices: how much trust can SSH scholars afford to put into LLM-based tools? In this paper, we explore a practical strategy for assessing the reliability of LLMs. Drawing inspiration from established procedures in natural language processing, we estimate the self-consistency of a LLM through perturbations. We tested this strategy with various parameters and models, and we found that different models have different behaviors in different situations. Importantly, we find that LLMs are less consistent than they seem when used with deterministic settings (temperature 0), which is misleading to non-expert SSH scholars. Self-consistency cannot be taken for granted, as it does not only depend on the model; but it can be assessed systematically, which provides information about the validity of a given LLM output. We propose to interpret self-consistency as a confidence index to contextualize the result of LLM-based tools, and we sketch a practical strategy to implement it in actual tools.

A Feeling for the (Neural) Organism: What's so Statistical About Generative LLMs?

Michael Castelle, University of Warwick

It has become increasingly fashionable for critics of generative large language models (LLMs) in the social sciences and humanities—perhaps inspired by the rhetoric of Bender et al. (2020)'s "stochastic parrots" paper—to dismiss these systems as "purely statistical" or "simple next word predictors". These assessments, however—which draw power from pre-existing, albeit often legitimate, prejudices against traditional statistical methods (Hacking, 1990)—depend on an explicit ignorance of the learning process of deep neural models, in which training data is presented in randomized batches; in which separately trained models' weight parameters are sometimes explicitly averaged (Worstman et al., 2022); and in which there is no explicit counting of words or even reference to explicit probabilities. At the same time, other scholars have become overly credulous of LLMs, without appreciating that user-facing models like ChatGPT represent a very careful tuning of ensembles of hyperparameters at both training and inference time (along with cultivated fine-tuning data) to avoid significantly degraded output. As such, researchers in the social sciences and humanities must strive to understand how these models' epistemologies materially depend far less on the typical probabilistic foundations of modern statistics than on their underlying operational primitives (e.g. matrix multiplication, self-attention, loss functions, softmax) and their relevant hyperparameters in both training and generation processes (from learning rate to temperature/top-p/top-k).

Parallel session 3.3. - Synthetic Research Companions 2

From Dice to Data: Unravelling Collaborative Storytelling with Generative AI in Dungeons & Dragons

Morten Heuser & Johan Irving Søltoft, Aalborg University

Generative artificial intelligence (AI) has demonstrated proficiency in composing sentences and structures that conform to grammatical precepts. Nevertheless, the utilisation of such AI in the context of cooperative narrative crafting introduces a myriad of intricacies (Santiago III et al., 2023). It is these intricate nuances we want to investigate. Prior studies have explored vast-scale datasets originating from Dungeon and Dragons gameplay scenarios (Callison-Burch et al., 2022). However, our focus centres on an explorative ethnographic inquiry of generative AI within the context of Dungeons & Dragons. We conduct two playtests: one featuring the traditional dungeon master role, and the other entrusting the narrative and storytelling responsibilities to a generative AI. These workshops offer a valuable platform for introspection, inviting us to reevaluate our perceptions of storytelling, the interplay between creativity and data-driven imagination, and ultimately, the feasibility of entrusting a generative AI as a social actor. With this study, we aim to contribute to discussions and methodological innovation that makes use of generative AI as an elicitation method, and we will present reflections about the potentials and shortcomings of using generative AI as a knowledge-producing vehicle.

Generative Interpretation

Martin Neumann, University of Southern Denmark; Vanessa Dirksen, Open University of the Netherlands

A novel methodology for sociological research by means of artificially generated narratives will be presented. The talk is based on the book "An interpretive account to agent-based social simulation: using criminology to explore cultural possibilities," published by Routledge in September 2023. Counterfactual scenarios explore the space of plausible futures within a certain cultural context. For this purpose the methodology utilizes a technology of rule based, distributed AI, agent-based simulation modelling, for triangulating interpretive research methods in the social science, namely ethnography and objective hermeneutics. Input validation of the model rules is secured by ethnographic data analysis. Because the generation of narratives by the simulation is based on ethnographic analysis of a field the narrative scenarios generated by the simulation are open to the dimension of meaning. Meaningfulness is confirmed by a hermeneutic interpretation of the simulation results as the output validation of the simulation by means of a sequence analysis. In terms of social theory, generative interpretation unfolds the duality of structure: how at the same time the meaningfulness of the subjective, lived experience, explored by ethnography, enacts and is enabled by the objective, latent meaning structures dissected by objective hermeneutics.

Who needs real data? Leveraging generative AI for realistic synthetic data generation
Luca Rossi, IT University of Copenhagen

The experiment proposes to use OpenAI's generative systems (Chat-GPT and DALL-E) to transform real research data into synthetic data that would maintain its inherent value for research. This experiment wants to use generative AI to help researchers and practitioners reflect on what is actually valuable with the data we collect. Do we always need "authentic" data? Even when this authenticity prevents us from sharing the data for ethical or legal reasons? The experiment takes place as follows: Initially I will ask the participants to contribute with small datasets of textual or visual content (ideally Twitter data or photographic data). An alternative version of the data will be created using Chat-GPT (for textual data) or DALL-E (for visual data). The user will then be asked to assess the quality of the new alternative data in terms of knowledge gain and shareability. Aggregated results will be shared.

Interfacing with synthetic mundane politicians
Anders Koed Madsen & Johan Irving Søltoft, Aalborg University

In urban settings, connecting with local political agendas can be challenging. Existing methods for interfacing with politicians are often mediated by journalists or involve staged events like rallies or town hall meetings, which may not reflect everyday mundane politics. The Copenhagen Municipality offers online access to its agendas and minutes, yet the vast volume makes meaningful engagement with this material difficult for citizens. To address this, we've initiated an experiment utilizing a generative AI model to facilitate conversations with synthetic mundane politicians. We ingested the municipality's 2023 political records into an open GPT4ALL model,

thus enabling citizens to engage in Q&A with a chatbot. Its responses are twofold: a generative answer and the presentation of four noteworthy empirical excerpts, which the model has assigned the highest weighting. We are researching the unique manner in which political communication occurs with generative AI, using this Q&A format, to investigate how it distinguishes itself from existing modes of political discourse between citizens and politicians. Can generative AI enable a more informal dialogue between the public and politicians, similar to interpersonal interactions,

rather than the traditional rhetoric used in media or town hall meetings? Could this approach introduce a new method of public engagement?

Climate Action and Generative AI: Can LLMs be Used for Automated, Personalized Climate Communication at Scale?

Florian Maximillian Meier, Aalborg University

Positive climate action by society is at the core of successful climate change mitigation. In recent years, climate communication via news media has increasingly portrayed climate change using a 'doom and gloom' narrative, appealing to the public to change its behaviour towards more positive climate action in a dramatic tone [1]. Studies, however, show that overdramatised climate change messages or messages suggesting individual behaviour change can drive people back [1, 2]. On the other hand, personal stories, i.e. appeals, can alter climate change beliefs and risk perception, which can positively influence individual behaviour to reduce emissions or support pro climate government actions [3]. Such appeals offer the potential to create climate communication that is relatable, local and personal [4]. They can be tailored to the individual using personality dimensions (Big-Five), moral foundations theory (MFT) or alike. This high degree of personalisation also needs automation. An open question is how humans judge the persuasiveness of appeals written by large language models like Open AI's GPT family of models compared to human-generated appeals. This paper/talk will present the design and initial results of such a study.
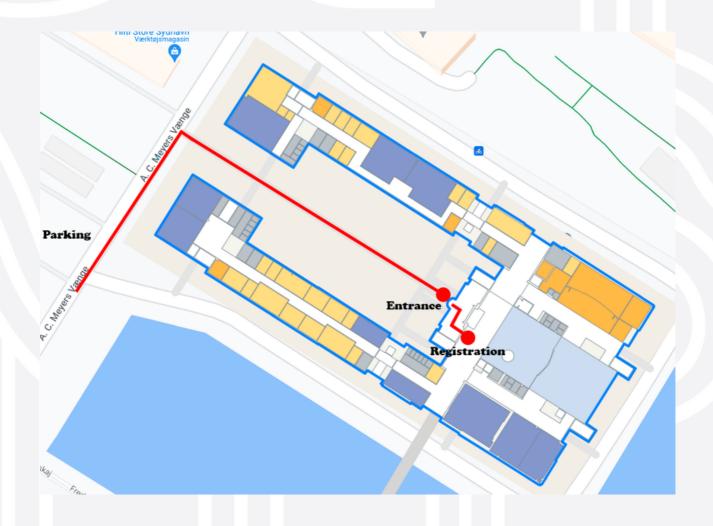
Practical information

How to get around?
Aalborg University in Copenhagen is located at A.C. Meyers Vænge 15. The s-train stop is called **"Sydhavn St."** and line **A** and **E** is departing and arriving at the station.

During the conference, all sessions will be held in the following rooms: Auditorium 1.008 Exhibition 1.001 Room 3.084a Room 3.084 b, See directions below
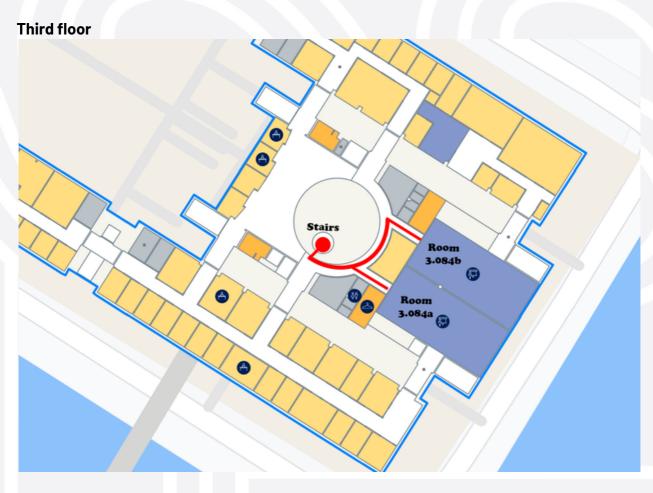
Parking: The parking licences can be issued in the reception.

Wifi: Each day a new password is generated and will be distributed.

Street level (First floor)

Third floor

Map of the restaurant for the conference dinner on the 7th of December

Local tips

Cafes:
Riccos Kaffebar - Sluseholmen 28, 2450 København
Bagerdygtigt - Borgbjergsvej 39, 2450 København
Wild Horses - Borgbjergsvej 1, tv., 2450 København SV

Beer/Wine bars:
Rallys - Mozartsvej 9, 2450 København
Sydhavnens Vinbar - Borgbjergsvej 52, 2450 København
ROOTS Vin Bar - Teglholmens Østkaj 30, 2450 København