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Narrating Artificial Intelligence (AI) in 2023: An Estonian Case Study on AI Lore

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Abstract: With the rapid emergence of new technologies in contemporary societies, new reflections of human experience arise. One of the recent technologies introducing massive changes in human life as well as in human reactions is artificial intelligence (AI). In the spring of 2023, about six months after the text-based AI ChatGPT was made available to the masses (Pistilli 2023), the public discussion about AI was most intense in Estonian society. The aim of this article is to analyse the narrative motifs and ways of narrating (including a proposed typology) AI-related topics in the Estonian mainstream and alternative online media chat groups in May and September 2023 respectively.

Six general types of narration on AI were detected. The collected material showed that Estonian AI lore is considerably polarised between strongly negative and positive stories. Especially during the first wave of AI discussion in May 2023 the majority of narratives had negative or doubtful tonality. One of the factors that triggers a negative or cautionary tone in AI lore seems to be the lack of transparency in AI development. In addition to AI story types, this article tries to map the archetypes of plot characters (actants) of AI lore based on Propp's classification of fairy tales which distinguishes between seven behavioural patterns.

In addition, this study revealed a specific fluidity beyond genre boundaries that has also been observed in urban legends.

Keywords: AI lore, technology folklore, digital folklore, ChatGPT folklore, AI narrating typology

Introduction

The application of technology is one of the basic features of human society, and the technologies that we use strongly influence our way of living (Volti 2006). With the emergence of new technologies in society, concurrent new reflections of human experience arise in the culture. One of the recent technologies that is introducing massive changes in the functioning of human life as well as in human reactions (for example, ways of perception, narration, belief) is AI. The science-fictional has become ubiquitous in many aspects of our everyday culture (Schmeink 2016).

In the spring of 2023, approximately 6 months after the most sophisticated text-based AI (ChatGPT) was made available to the masses (Pistilli 2023), the public discussion about AI was the most intense it has ever been in Estonian society. This observation applied to all platforms and social spheres: tabloids, quality journalism, private conversations and online groups and forum discussions. Finally, everybody had online access to ChatGPT, could try it out and express their opinion about it or narrate their experience. As an underlying and ongoing process related to AI, research and development had been underway since the middle of the 20th century. Many parallels can be seen between the recent high interest in AI and the 1960s' fascination with science and space discoveries. In the middle of the 20th century, humankind (at least in the industrialised parts of the world) found a new hope in the progress of natural science and technology (for example, with the invention of new antibiotics and transistor technology) (cf. Lintrop 2000) towards eradicating obstacles to mankind's 'giant leap' to the future. As in the middle of the 20th century, we can now observe similarly diverse and partly opposing attitudes and viewpoints on the subject matter. Comparing humans and intelligent machines was then and still is today one of the most debated aspects in discussions (including folklore) related to the development of AI. As an example of the fact that thinking about and discussing AI is not a new phenomenon per se, here is the argumentation from an Estonian journalist about an "electronic brain" from as long ago as 1967:

> *Every year in our country there have been approximately 2,000 different books published. Who is able to read them all? Probably only an electronic brain. But I want my books to be read by a Human Being! Should the Human Being say that it was a poor reading, then I know that I must try harder.* (Kool 1967)

Thus, there has been a decades-long debate on whether human creative activity is inherently more valuable than artificial, and in what ways, although this discussion has rapidly intensified since the spring of 2023.

Researchers have recognised technologically mediated folklore in the form of online discourse from the beginning of the 1990s (Howard 2008). The digital world as a space of vernacular expression has been the focus of several scholars (e.g. Blank 2009). Already in 1990 John Dorst speculated about potential changes in folklore production caused by emerging communication technologies ("…Telectronic Age", Donst 1990); there are studies focused on certain aspects of technology folklore (*Etymology of the Computer Bug: History and Folklore* by Shapiro, 1987); and analysis of problematics related to AI merging into society (for example *Ghost Stories from the Uncanny Valley*) by Thompson (2019). However, while studies of the role of technology in culture in general have quite a long history (for example *Folklore of the Oil Industry*, by Boatright (1963), *Doing Cultural Studies: The Story of the Sony Walkman*, by Du Gay et al. (1997), *Mobile Phone Stories or Mobile Lore* by Wienker-Piepho (2000)), there is a lack of folkloristic study that considers technology more specifically as a subject of vernacular storytelling.

This article focuses on the dynamics of folklore related to AI and ChatGPT. Some general background information related to AI and some prominent events in connection with the development of AI will be highlighted for better context on AI and ChatGPT folklore. In vernacular discussions and narrations, ChatGPT was the most mentioned application of AI, although in most cases people talk about AI as an abstract phenomenon. Because popular culture influences people´s understandings of complex phenomena to a great extent, I'll give a brief overview of how AI has been represented and positioned in research and popular culture in order to give a better idea of the interplay between these two spheres.

In 1947 transistor technology was demonstrated to the greater public for the first time (Ganapati 2009), while in 1956 The Nobel Prize in Physics was

awarded jointly to William Bradford Shockley, John Bardeen and Walter Houser Brattain for their research on transistor technology (The Nobel Prize in Physics, 1956), opening the door to a digital future (Ganapati 2009) (because transistors (semiconductors) are the basis of all digital devices, including AI).

Basically, there are two major schools of thought regarding the advancements of technology: the pro-technology and the no-technology factions. By and large, the majority of technology enthusiasts are futurist and high-tech entrepreneurs, while criticism of technology is characteristic rather of academic circles, philosophers, social scientists, etc. I agree with Carl Mitcham (1994), who has pointed out that the influence of technology combined with science (technoscience) on all aspects of life builds the distinctive character of the current historical period, while an important factor of technoscience is the dialectic between acceptance and criticism. The opposing views on the subject are rather predictable considering the omnipresent outputs of developments that promise unprecedented radical changes in society. Thus, technology can no longer be just taken for granted, rather its impact on and implications for the social, ethical, political, and cultural dimensions of our world must be considered and addressed (Ihde 1993). In contemporary society we can observe that affirmation of technology has become the norm when talking about technology. Over the course of time, a story of affirmation developed and ultimately established itself as the dominant narrative about technology, even as a master narrative or authoritative myth that unites and provides meaning to society (van der Laan 2016). Critical and sceptical views on AI can be seen as a counter-narrative (cf. van der Laan 2016). At the same time, the views and opinions depend a lot on which information field the individual is in. As American science fiction writer Stanley G. Weinbaum (1935) puts it in his short story "Pygmalion's Spectacles", depicting virtual reality: "You just get what information you can through the windows of your five senses, and then make your guesses. When they're wrong, you pay the penalty."

Mathematician Alan Turing (1950) was one of the pioneers in creating a scientific basis for the so-called thinking machines used in the real world. More than seventy years ago he was already arguing, in his article "Computing Machines and Intelligence", that when people use information and logical thinking to find solutions to problems and make decisions, then it should be possible to build intelligent machines as well. Today, intelligent machines are widespread, but several authors have expressed doubt that their development

has met initial expectation. According to some researchers, the promise that technology would improve the quality of life has turned out to be inherently limited (e.g. Rosa 2014; Borgmann 1984). Therefore, technology must be seen for what it really is and what it can offer, while distinguishing it from the "focal things and practices" that can provide the requirements necessary to achieve fulfilment in life (Borgmann 1984). Borgmann has pointed out that the problems that beset technological societies are thought to be extrinsic to technology, although on the contrary the technologies could also be a part of the problems.

The digital transformation, also called the 'fourth industrial revolution', has been regarded as a turning point in progress in which cloud computing, big data, the Internet of Things (IoT) and AI unite to create the foundation for exponential change in the world (Siebel 2019: 24). However, there are opposing views towards AI even among AI entrepreneurs, whose actions are reflected in the media and who are discussed in online forums, partly directing people's opinions. The Future for Life Institute, which represents AI researchers, technologists, entrepreneurs and concerned citizens, has published an open letter with more than 33,000 signatures calling for a pause in AI development due to the risk is presents to humanity (Future for Life Institute, 2023). Thus, it can be argued that the ideas of the historical Luddites are analogous to those of contemporary Neo-Luddite (Kaczynski, 2008)[1], with various views opposing AI having their strong advocates. Such sceptical ideas are sometimes even expressed by companies that develop digital solutions. For instance, while co-founder and CEO of Baidu, China`s largest web search engine, Robin Li has said that regardless of the general public tending to look at AI as having intelligence far beyond the human, it is still science fiction, and we have to be careful with future developments (Li 2020).

Before the current state of development, which has made AI capable of holding conversations with humans and performing independent complex creative work, essentially every computer program (algorithm) could be regarded as a kind of AI (although with limited capabilities). Such AI is, for example, any web engine that is programmed simply to scan the web (Volle 2023). In addition to written texts, much work has been done on speech recognition technologies based on AI (Härm and Alumäe 2022; Furui 2003). AI has been taught to create photographs (for example Midjourney), digitise manuscript material (for example Transcribus), complete a wide range of tasks, such as making medical diagnoses, driving cars, etc., (Copeland 2023; Kurtzweil 2005;

Siebel 2019) and perform cleaning tasks (Paul 2023). In connection with the spread of meme culture, there are also tools to recognise messages in creatively diverse pictorial material (for example Google Translate's image function). Yet people's awareness of AI`s ability to collect and process big amounts of data in favour of abstract institutions (for example gigantic corporations) could be something that initiates the negative and warning tone found in AI lore.

The aim of the article

The aim of this article is to analyse the narrative motifs and ways of narrating AI-related topics in Estonia. Although the degree of folklorisation of the collected material varies, the stories served as the basis for a preliminary classification of AI folklore. In addition to providing a typology of this folklore, I will analyse the possible triggers and reasons for recurring patterns in these narratives (hopes, beliefs, fears, etc.). Reet Hiiemäe (2004) has pointed out that regardless of the general rationalising of the human worldview it is possible to observe some universal features of folklore in handling collective fears. According to Jürgen Habermas, society represents certain interpretative patterns organised by linguistic resources (Habermas 1987) as a cultural reflection.

The value of this article lies in mapping Estonian vernacular lore about AI in 2023, i.e. immediately after one of the hitherto most ground-breaking outputs of AI, ChatGPT, reached the masses, bringing with it a wave of news/discussion/commentary about AI as a result of interactions between news discourses and vernacular reflections of these discourses in human minds. While offering analysis of the narrative material, the article will provide interpretations related to the aetiology of AI folklore in the current social and cultural environment. Thus, the current study is the first known attempt to provide an analysis of the dynamics of Estonian AI lore.

In addition, the article offers an innovative experiment, while trying to map the archetypes of the plot characters (actants) of AI lore based on Propp's classification that distinguishes between seven behavioural patterns (Propp 1975). Behavioural patterns are identified by functions defined as a plot element that is "an act of a character, defined from the point of view of its significance for the course of the action" (ibid.: 21). According to Greimas (1973), behavioural roles (actantial models) are an integral part of narratives. At the same time, each actant's contribution can be essential to the completion of the narrative plot. In

the future, a further comparison with narrative types in the Aarne–Thompson–Uther Index (ATU Index) (Uther, 2004) would be an interesting undertaking to draw conclusions about the universality of narrative types and motifs, although currently the collected dataset is too small for such a comprehensive analysis. Propp´s classification of wonder tale characters could be especially suitable because in many AI-related narratives AI is seen as a supernatural being (or has been depicted as having some supernatural characteristics). There are similarities between AI lore and modern urban legends. Both can be considered a reflection of aspects of the unfamiliar, the delinquent and the supernatural which are experienced in modern urban culture, with their plot still revolving around stress caused by modern attitudes and behaviours that have strange or scary content (Nounanaki and Kakampoura 2021).

Material and methodology

The data were collected in May 2023, and for comparison material from the same sources was collected in September 2023. The sources were Estonian online newspaper comments sections (from the Delfi.ee news portal, which hosts many mainstream daily and weekly newspapers such as *Ärileht*, *Eesti Päevaleht*, *Maaleht*, *Eesti Ekspress*); from a specific Facebook group dedicated to those interested in the AI developments ("ChatGPT ja teised loovad tehisintellektid eesti keeles"); from some alternative Telegram app groups and chats ("Eesti Vabaks - Estonian World Wide Demonstration", "Eesti Eest Uudised", "Globaalne Tohuvapohu"); and the technology forum Hinnavaatlus.ee.

Two approaches were used to find narratives. The first was a thematic approach using the keywords "artificial intelligence" (in Estonian, "tehisintellekt"), while the second approach use ChatGPT because both the press and people in Estonia generally use these terms when talking about AI (artificial intelligence was also discussed in articles the main topic of which was not directly related to artificial intelligence at all. In such cases, I found the narratives in the comment sections of the daily newspapers (and from other above-mentioned sources) as the spontaneous reflections of the commentators).

The result of data collection was 22 comment threads with stories on AI from May 2023. From September 2023, there were 15 comment threads that involved AI in the narratives. One comment thread could consist of one or many narratives. As an additional clarification, the number of comment threads

is different from the number of articles or posts on AI. In addition, some AI-related narratives were posted as reflections on topics or articles that initially didn't deal with AI at all, and not all verbal reactions (comments and posts) had a distinct narrative form (and were thus rejected as folkloristic material). The collected narratives were grouped according to plot and/or character type. As a result, a classification of AI narrative plots was formed. The classification is provided with signs and functions corresponding to Propp's classification.

The definition and conceptualisation of technology

There are many aspects to take into account when explaining the essence of a technology. From a folklorist's point of view, technology is not merely an artefact or physical item. A technology is a complex combination of physical, social, and cultural resources that humans use (cf. MacKenzie and Wajcman 1985). Hence, technology is "a system created by humans that uses knowledge and organization to produce objects and techniques for the attainment of specific goals" (Volti 2006: 6). Martin Heidegger has pointed out that "Everywhere we remain unfree and chained to technology, whether we passionately affirm or deny it. But we are delivered over to it in the worst possible way when we regard it as something neutral; for this conception of it, to which today we particularly like to do homage, makes us utterly blind to the essence of technology" (Heidegger 1977). Thus, there are some key variables that need to be considered when defining technology or investigating the ways in which it is perceived, experienced, and talked about: technology is not neutral. In other words, technology is closely connected to values, ideals, and even ideologies if we look at the matter from a broader perspective. The narrator's attitude might depend on how they identify themselves with regard to the "specific goals" of AI. On the one hand, it could depend on the degree of one`s social cohesion, defined as the strength of relationships and the sense of solidarity among members of a community or society, which reflects people's needs for both personal development and a sense of belonging (Manca 2014). Bourdieu's (1984) 'marks of distinction' notion can be applied here: new technologies are part of human (subjectively perceived social) status. Some social groups tend to idealise new technologies (perceiving that they belong to an elitist and advanced social segment and seeing in AI new solutions to some or all of humanity's problems), others are rather paranoid about AI because of their perceived social vulner-

ability, such as author and contemporary philosopher Nick Bostrom (2014), who has emphasized the existential risk of highly advanced AI, which he calls superintelligence.

Thus, several social-psychological factors can have a role in shaping the distinct shades of an individual`s understanding of technology. The following qualitative analysis enables us to delineate the current vernacular conceptualisation of AI technology. An individual´s identification with the AI proponents' way of thinking, i.e., having a sense of belonging to the group of 'winners', or with the 'losers' or 'rebels' side, i.e., people who are afraid of losing their habitual wellbeing or of the emergence of risks and dangers related to AI, seems to be the main reason for the highly polarised nature of AI lore. Some authors have found that biased depictions of AI in popular culture have shaped the public understanding of the technologies (Cave et al. 2018). In 2023, ChatGPT, as a powerful real-world AI phenomenon, (re)shaped public understanding of AI regardless of previous influence.

We can see topical storytelling functioning as a people´s psychological coping resource which helps to minimise their negative (for example, fearful) reactions and express any other reactions towards AI in a specific socio-cultural context.

The definition of artificial intelligence (AI): From self-definition to pluralistic conceptualisation

In this article, AI is defined computers or computer-controlled robots which are commonly thought of as intelligent beings (cf. HLEG 2019). The term is often used to refer to the development of technologies that are attributed with human-like intellectual abilities such as the ability to think, reason, generalise, and learn from the past (Copeland 2023).

ChatGPT's own definition of ChatGPT (at https://chatgptonline.ai/chat/), given to the author in May 2023, was the following:

Human: How do you define what chat AI is (ChatGPT)?

> *AI: Yes, I am an AI language model designed for conversational interactions. Chat AIs like myself use machine learning techniques to improve our language processing capabilities and become more effective at understanding and responding to human speech.*

From this, ChatGPT's own definition of the nature of ChatGPT, we can conclude that one of the important tasks of a chatbot is constantly to learn while talking to people. This has similarities with Heidegger's (1977) definition of technology – that technology is a means to accomplish something, to fulfil some goals or tasks. Going into the goals of the owner of this technology in the form of such an ever evolving and learning application is a topic that does not directly fit into the framework of this article. However, it is important to mention briefly this because of how, in pop-culture and in the media, both the negative aspects of AI (anti-human attitude, taking over the world, etc.), as well as the positive (helping humanity) are strongly highlighted. The co-founder of the largest Chinese web engine Baidu has outlined two clear scenarios for the development of AI, one good the other bad (Li 2020). Elon Musk, a modern industrialist and investor in innovative technologies, has also given warning messages, for example claiming that AI is becoming more dangerous than nuclear bombs (Siebel 2019). Musk is also a co-founder of the ChatGPT development company OpenAI (Kay 2023), and co-founder of Neuralink, which has reported that it is developing an interface between the human brain and machines to create a symbiosis between humans and computers) (Neuralink 2023). Musk has revived the public discussion on ethical issues related to AI, for example by accusing competing software company Microsoft of excessive use of Twitter data in the development of ChatGPT (Hamilton 2023). The fact that Big Data and AI offer significantly greater opportunities compared to previous technologies causes great optimism as well as anxiety in different social groups, peaking for example with the Cambridge Analytica scandal that related to the use of Facebook data to influence the 2016 US presidential elections (see more in Ingram 2018) and controversy around deepfake technology (Hao and Heaven 2020). This constant inflow of contradictory information can be viewed as one trigger of vernacular narrating about, and taking polarised sides in, the AI debate in general and the debate on ChatGPT in particular.

A definition of ChatGPT was given on their own website: "A kind of search engine capable of understanding your requests and fulfilling them, a modern

'Aladdin's lamp.'" As we can see, the ChatGPT homepage also presents a comparison of their chatbot with something that has magical powers, while creating associations with a classical Arabian miracle story. Such a religion-like approach can also be noted among the narratives collected for this article. All in all, the role of technology in society and culture is clearly incomparably different since the global computer network and the wide spread of AI.

AI technology in the current socio-cultural context

The term 'technology' has many facets, but in the given context – as part of background knowledge whne analysing the lore of AI – it is appropriate to focus on some of the main traits and the aetiology of the concept.

Bausinger (1961) has used the term "adoption" in relation to the emergence of new technologies. In this case, cultural acceptance in the context of the current article means that "AI is here", although not everyone might perceive it. Since AI is a much more abstract technology than, for example, the mobile phone, it can be difficult to assess how the nature and presence of AI as a technology impacts society.

'Paranoid' or 'demonising' stories can be, and indeed often are, classified as conspiracy theories; however, to automatically label critical views as conspiracy theories would be to dismiss many of the substantive reasons for critical views of AI. The forces that trigger conspiracy theories have been considered by other authors to be (1) epistemic (the individual's understanding of the surrounding environment), (2) existential (the individual's security and control of the surrounding environment), or (3) social reasons (maintaining a positive image of the individual and the social group) (Douglas et al. 2017: 538). However, one should avoid exaggerated classification of people's attitudes to conspiracy theories, as the psychological coping mechanisms of real conspiracies and events that are or appear to be threatening could be very similar. Hereby I would prefer to remain on the descriptive level by classifying the narrative types and refraining from making ideological judgments.

Obviously there are good reasons for people to have cautious attitudes. There are numerous examples of experimental manipulations carried out with large numbers of people (in online environments). These experiments have shown statistically relevant results. For example, an experiment carried out

on hundreds of thousands social media users (see Kramer et al. 2014) showns that it is possible to manipulate the emotional state of a bona fide web user by displaying specific emotional content in his or her news feed. Therefore, the ordinary user can have sufficient reason to be to a certain extent distrustful of similar technologies (assuming the person is unaware of how the information has been prepared with certain aims).

Another aspect of AI is its lack of human emotion, which can lead to feelings of alienation when interacting with AI. Already in the early 1990s, some sociologists studying the dynamics of human–AI relationships found that AI had a "problem with social adequacy" because it was predominantly unable to deal with a significant part of human behaviour and intellect (Collins 1990). Topics in line with this can also be observed in Estonian AI lore from 2023.

AI folklore can be also seen as an adaptive reaction to the generally fluid trends that intermittently bring the rapid change characteristic of modern social functioning (Bauman 2006) and create stress, anxiety, and feelings of vulnerability. AI stories with a negative tonality can be seen as grounding ignorance and fear, pouring uncontrolled and vague information into familiar explanations (in a logical form for the narrator) (Douglas et al. 2017), often containing elements or ways of narrating what is familiar from older folklore (Propp 1975). However, genre positioning is not easy when it comes to AI folklore as some of it can be viewed as rumour, urban myth, superstition, urban legend, even comedy, etc., whereas genre borders can be fuzzy (cf. a similar observation about the fluid borders of urban legends, Dégh and Vazsonyi 1971: 283). Sabine Wienker-Piepho (2000), who has studied stories related to the mobile phone, finds that such stories are most similar to legends. Several AI-related stories can be considered akin to fairy tales (especially miracle stories depicting the ability of AI generally, or ChatGPT specifically, to quickly do something that would take a human many times longer or even be impossible).

Individuals tend to compare themselves with others to improve their skills or abilities (i.e. self-improvement) and to protect or enhance their self-esteem (Festinger 1954; Dijkstra, Gibbons, Buunk 2010). The stress that social comparison puts the individual under could be an additional factor in shaping strong or even polarised opinions on AI-related issues. If an individual considers topics related to AI as something that belongs to advanced levels of society, but feels that he or she is not up to the expectations of the new trend, then doubts may arise that need verbal expression. However, when this technological innova-

tion follows the pattern of the Schumpeterian growth paradigm, which models growth as resulting from innovations involving creative destruction (Aghion et al. 2015), then some major disruptions in the cultural and social sphere, together with the rapid integration of AI into social structures, are indeed inevitable. Anthony Giddens (1996) has pointed out that modern society is inherently future-oriented. Belief in a brighter future assisted by technological achievement is in a way a cultural normative, and anticipation of the future has thus become part of the present (Giddens 1996: 177). Astrophysicist Stephen Hawking has predicted that economic inequality will skyrocket when more jobs become automated, and the rich owners of machines refuse to share their rapidly growing wealth (Kaufman 2015). Another prominent critic of rapid technological change has been social scientist Hartmut Rosa, who has introduced the concept of *social acceleration* (Rosa 2010, 2014) while pointing out that "new forms of technological acceleration will be called for to speed up the processes of productive and everyday life" (Rosa 2010: 33). Thus, individuals are deeply affected by surrounding (technological) culture with its own "world of values, meanings, socially significant ideas" (Paliy et al. 2018) irrespective of their positive or negative attitudes towards technology or the narratives expressing these attitudes. Some proponents of technology are even of the opinion that given the need for continuous human adaptation, technology itself can be a resource for human improvement (i.e. transhumanism) (Santos 2021).

AI in the pop-cultural and artistic imaginations

Topics related to AI have been discussed in pop culture, literature and the art since long before the widespread use of personal computers and computer networks. For example, Shelley's *Frankenstein*, first published in 1818 (Britannica 2023), and published in Estonian in 1984 (Shelley 1984) depicts the creation of an artificial intelligent being. Various imaginations related to AI can be found in the 1960s era of space conquest optimism (Lintrop 2000). If in earlier cultural creations the references to AI are rather technology-free, i.e., biological-supernatural (e.g., Frankenstein as a man-made biological being who acquired self-awareness), then as time goes on, AI in pop culture is depicted more and more in connection with technology.

For example, robotic life forms based on artificial intelligence (capable of learning but based on a program) are one of the main characters in the Terminator movie series, the first part of which reached screens in 1984. In the third movie, *Terminator 3: Rise of the Machines* (2003), an AI with bad intentions takes control of a web network and starts a nuclear war against humanity. In contrast, *Her* (2013) is an example of a romantic relationship between humans and an AI in which a lonely man falls in love with a virtual assistant with AI capabilities.

At the same time, AI has become one of the means of creating pop culture as well as 'reality'. In addition to direct artistic output, AI is used, for example, to generate web content (for example, in the WordPress blogging environment). In addition to text-based AI, image-generating AI is also in use (Dall-E 2, Midjourney) along with audio generating AIs (Jukebox (2023), MuseNet (2023), Google MusicML (2023)). In April 2019 MuseNet gave a live online concert of audio works it had created.

Analysis of collected material

During the analysis I grouped the AI-related stories by content (thematic analysis by major distinctive variables). Analysis of the data collected in May and September 2023 was conducted separately allowing for comparison between these two periods in order to detect changes in the dynamics of narrating and in the topics discussed. A few texts were from previous years (2018 and 2022). I added these texts to the collected data to represent the evolution of the public perception of AI. A general conclusion is that the older stories were much more sceptical of AI's abilities to replace human intellect than the stories from 2023. In general, most narratives took a side and expressed negative or positive opinions about AI. Only a few narrators presented arguments that considered both aspects. Researchers have also pointed out that technology-related folk narratives tend to be highly polarised. According to Kvideland (1996: 100), there are two main types of story related to technology: (1) horror stories, and (2) wonder stories in which technology is ascribed both divine and diabolical features. Additionally, allusions to religious narratives about Messiahs and Antichrists arise when looking at the polarised ways of narrating AI.

Based on the collected material, six main types of narrative can be distinguished, and will be analyzed below.

Because the texts mainly talked about ChatGPT, the term 'ChatGPT' has been used a lot in the analysis. In other cases, the subject was referred to in the texts as "AI" or described in more abstract ways. Examples are given for each narrative type.

Stories and narrations about AI: A typology

Types of AI story and narrative in the dataset collected in May 2023 (in addition some from 2018 and 2022) are described in more detail below.

Type 1: Stories that see AI as playing a positive role in tasks that would normally be tedious and/or time-consuming for humans

Stories of this type can be broadly classified under the classical category of miracle stories. Although there is usually no direct reference to belief in supernatural abilities, AI is often depicted in these stories as making it – as through a miracle – much easier for a person to complete certain practical everyday tasks. Non-religious by nature, Type I stories can be seen as depictions of the symbiotic integration of AI and humans, as examples of the fulfilment of tech proponents' dreams.

An example of Type 1 were narratives about the preparation of a team's monthly work schedules. A person told a story about their head of department, saying "why should a person bother drawing up a schedule when it can be left to AI". Another respondent talked about consulting ChatGPT for recipes, wanting to know how to do something better or in a new way (for example asking AI: "What dish to prepare from chicken fillet today?"), thus leaving the thinking to AI. That person indicated that they communicated with ChatGPT on a daily basis, and expressed confidence in such interaction. Thus, the narratives point out that AI acts as an aide that helps people gather and synthesise information that would otherwise be difficult to obtain from the narrator's subjective point of view.

The use of ChatGPT to gather comprehensive information was quite extensive in different variations among the narrators, for example, in the field of

e-commerce asking for advice about potential client interest in certain products, monitoring market trends, judging which product groups would be 'hot', etc.

The common denominator in these stories is the "why should I bother myself if ChatGPT can handle it much faster and easier" attitude.

On the Telegram social media platform, there was a story that talked about the potential of using ChatGPT on a much wider scale, saying that if politicians could not get along (for example if there was excessive political polarisation), why not hand over management of the Estonian state to AI, because it has no emotions, no nationality, no prejudices.

> *And with the help of a powerful computer, artificial intelligence could do all these complex calculations in a few seconds, even taking into account the small things that local politicians would never think of. This would identify the optimal way out for the majority of the population and the country's economy, weeding out speculation, assumption and emotion. (ID_09-2)2*

Compared to Propp's classification of wonder tale characters and functions (Propp 1975) we can recognise in Type I traits of some positive functions (the donor, the helper, and the hero.) However, the analogies with Propp´s characters are fluid, and there is no direct match for Type I, as the narratives in the current study's dataset were much shorter and less complex compared to the complex structure of fairy tales.

Type II: Sceptical, paranoid stories describing the diabolical nature of Chat GPT

This story type includes narratives explaining the irrational decisions and intentions of the government and the legislature about the involvement of AI. A comment to an article (on the news portal Delfi.ee) that describes a new law requiring people to give up traditional stove heating exclaims, "do we already have an AI that makes these laws, they are so strange and very alienated from real life?" There has been a lot of talk about the fact that electricity supply is not completely reliable in Estonia, and this comment shows bewilderment at the authorities' wish to destroy classic stoves, a time-tested means of heating, in favour of electric heating systems. Thus, such an irrational decision is attributed to AI, illustrating how it is viewed as not comprehending human life.

In the comments to an article about the CIA and FSB using the Internet to spy on people, one commenter argued as follows:

> *… Although AI technology existed 10 years ago, it is now self-aware and controls [what happens] instead of humans. In the war in Ukraine, real people probably won't decide anything anymore. AI manipulates humans to destroy humans with their own hands. AI escalates the situation until all of humanity dies in a nuclear conflict.* (ID_02-2)

There can be seen some resemblance between Type 2 stories and Propp's character 'the villain' (i.e. aggressor). Again, narratives from this type hint at some of the negative characters from traditional folklore, for example a "devil who wants to get three drops of your blood".

Type III: Humans have certain unique qualities that AI does not

Narratives that express belief that AI cannot replace certain humans do it rather neutrally, in not very emotionally loaded terms; no clear fear of AI is expressed.

A few years before ChatGPT came into widespread use, there were very sceptical views among people as to whether constructing AI would be possible at all. On the Delfi.ee subforum *Lolliklubi* ("The Club of Fools") in 2018 the possibility of implementing 'intelligent' AI was under discussion. By 2023 this kind of disbelief in 'intelligent' AI has almost disappeared. Users expressed the opinion that the use of big data alone was not enough for a functional AI.

> *User 1: AI, explain why you believe that it is possible.*
>
> *User 2: There is a lot of talk about artificial intelligence. All kinds of pop articles and promo. I'll be honest, it's not possible with today's technology. Washing machines and speakers think, but it's not artificial intelligence.*
>
> *User 3: … the human brain cannot find answers only according to the correct patterns… it is impossible to create such an algorithm [that has the same quality as the human mind]. (ID_03-1)*

The commentator believes that human consciousness has a certain special quality of information synthesis, a creativity that AI does not and cannot have.

This story type is reminiscent of Propp´s 'false hero' character function, because in these narrations the belief is manifested that AI is not as capable as it is often described or believed to be.

Type IV. AI has certain unique qualities that humans do not

There are rather neutral, slightly positive, statements that say AI is "not so tricky" but that it is more rational and straightforward in communication than expected. For example, some posts in the same chat thread (from 2018) compare humans and AI in favour of AI's higher intelligence after a number of previous commenters posted several unrelated messages and links. Chat participants express the opinion that creativity does not always mean creating something of value but can also have its darker side, for example people can sort out their psychological or other problems in creative ways, but not necessarily in ways that are beneficial to humanity:

> *are morons here?*
> *the washing machine may in that case be much more intelligent than many of the [nonsense] link-posters here (ID_03-1-1)*

Hereby we should keep in mind that AI bots rather than humans often post nonsense-like web content, although in the example above the forum user identifies AI as a rationally acting entity.

There were also discussion threads in which participants described how it is rather nice that ChatGPT is always very polite and correct in giving answers. "It tries to be polite and not hurt anybody's feelings." Other participants claimed that "it is programmed that way" but shared the opinion that such behaviour is positive, whereas people are often too emotional and even rude in online conversation threads. Interestingly, similar discussions also occurred in the 2023 material, conveying the belief that AI often acts more like a human than humans themselves. At the same time, commentators attempt to attribute to this 'more-than-human' AI features that make it more human, for example by asking about its name. As we know, names are part of an individual's identity, and are also of great importance in traditional folklore, where humans are depicted as obtaining power over certain demonic supernatural beings if they are able to find out their names.

With some exceptions, this story type is reminiscent of Propp´s positive functions, or his 'princess/prize', 'princess´s father' characters. AI functions in this kind of story as a friendly protective fairy who has plenty of time and who cares, but is rather an accompanying factor, thus being a less powerful or less active function and character than some other positive functions. AI, like the princess, is wooed by many and the stories indicate competition for who can build a better relationship with AI (i.e. the 'princess').

Type V. An idealising fascination with AI technology

Narratives from this type express belief and uncritical, religion-like, fascination in the huge positive potential of AI and in AI advancements.

A comment on a technology-related forum is as follows: "I wonder if such artificial intelligence could also be used elsewhere, for example, an employer could better determine who in the team is really active and who is just hanging around and pretending." (ID_07-1)Other comments expressed similar fascination with AI, arriving at the viewpoint that, "Well, someday the discrimination against robots has to end. This button ("Are you a human? CAPTCHA") will disappear and their rights will also be protected." (ID_05-5-1)

This comment could be classified as humour, although the tone of the comment thread was quite serious, claiming that "AI rights should be protected" and thus AI should have equal rights.

Explicit joy about the release of the ChatGPT app is often expressed:

> *A: Apple chat gpt app is out!*
> *B: What we gonna do with this knowledge now?!*
> *A: What are you doing in our group at all?* (ID_05-3-2)

Commenter B does not share the belief that the app is something big. According to Propp´s classification this type resembles the character functions of 'the helper' and 'the donor', who serve to provide the hero with a magical agent or solve difficult tasks.

At the same time, idealising views can alternate with demonising ones (Type II), for example in a thread about the nice 'human' characteristics of AI that mean it is a pleasure to communicate with ChatGPT. A commentator adds:

> *And that's how [by constantly using ChatGPT] you help them to build this cyborg for free. Later you already have to pay big money. Afterwards, this*

> *terminator will take over most of the humans' work. If someone will then still have children at all, what can these people do at all? Learn maths to be able to keep all this comprehensive machinery still running?* (ID_11-1)

Similar contrasts in discussion threads were quite common.

Type VI. AI humour and jokes

There were some humorous stories in the May 2023 data. These joke-like stories were about AI as an object of curiosity. However, in many discussions it became clear that people find ChatGPT answers funny because they sound artificial, draw conclusions that sound illogical to the human mind or are otherwise unexpected. Notably, parallels with funny situations from real life were repeatedly drawn. For example, when describing the ChatGPT's "habit" of always apologising, one Facebook discussion participant drew a parallel with the politician and former Estonian prime minister Jüri Ratas, who became the object of laughter for bringing cakes when apologising: "As soon as you point out that ChatGPT is wrong, it apologises like the cake-bringing Jüri". In one discussion in a Facebook group for people interested in AI when the question of ChatGPT's gender was raised a woman said jokingly, "ChatGPT seems to be female – it always wants to have the last word", a description that contains a hint of traditional folkloric gender stereotypes.

Compared to Propp's classification, this type is somewhat similar to the 'false/fake hero' function because AI acts in these narrations as an entertainer rather than a serious conversation partner.

Comparison with narratives from September 2023

In the material from September 2023, stories in which AI is presented in a more relaxed humorous tone, come to the fore. In the data from May 2023, stories of the humorous type tended to be rather limited to stories about absurd or curious events. The emergence of more relaxed jokes can be seen as a more mature and experienced reaction in the second data wave, compared to the May 2023 data. At the same time, in the September 2023 data there were

slightly fewer narrations instigated by fear. This can be seen as cultural adoption (cf. Bausinger 1961).

Regarding **Type I** (stories that see AI playing a positive role in tasks that would normally be tedious and/or time-consuming for humans), there was a lot of discussion about the everyday use of AI (ChatGPT). Although there were still divided opinions as to whether using the help of AI is appropriate or not, views on AI as an inseparable part of everyday life were quite common. In one narration one commentator compared the use of ChatGPT with the use of a hammer to drive nails.

Type II (sceptical, paranoid stories describing the diabolical nature of AI) narration is still widespread. The tonality of narrating is slightly more discussion-like but the plots still deal with the negative side of AI on society (for example future changes in labour market and universal basic income; alienation of people in virtual communication; AI enabling new, never-before-seen weaponry). There are narrations that describe AI as a tool for spying, and as something that is purely demonic: "AI, the grain thief, the gold thief, Kratt, also existed in old fairy tales. But there is one thing that is always forgotten – if the farmer didn't give Kratt the task of stealing, then it came and eliminated that farmer." (ID_15-6)

In many threads **Type III** (humans have certain unique qualities that AI does not) and **Type IV** (AI has certain unique qualities that humans do not) narration was mixed and there were ongoing discussions about whether humans or AI are "better" or "more unique". There was a stable number of **Type V** (an idealising fascination with AI technology) narration. This type was rather common among tech enthusiasts (for example on Facebook) but not so much on general mainstream media comments sections.

As for **Type VI** (AI humour and jokes), humour and jokes were clearly more distinguishable in the data from September 2023, mainly in the form of absurdist humour. A good example is a commentary on using AI as part of democratic governance in the form of online voting:

> *A: The algorithm should find the results of online voting, then we can call it true democracy…*
>
> *B: Democracy is something like a round cube, if you have a supernatural imagination, you can see it with your eyes closed. (ID_18-2)*

Reactions to an article about an AI-based chatbot that aims to help millions of young people are also characteristic:

> *A: (mockingly) Young people have become a social group with special needs for whom special websites and chatbots have to be made. Solutions for adults would drive them crazy in five seconds.*
>
> *B: This is not a modern invention. Japan was the initiator of this idea in the last century. The idea was that every single elderly person should have a robot to chat with at home. But only the very rich people could afford it. (ID_16-2)*

In the comment thread to a news article titled "Amazon mega investment", an ambiguous word play on chatbot is used: "People no longer interact with each other, instead they interact with a smart poo pot." (ID_13-3)

A comment on an items saying that the government supports the introduction of digital solutions in the tourism sector draws on the help of the virtual world in a twisted way (the background to these types of joke is apparently the discourse of Green New Deal politics, which calls for less pollution but suggests that we can still be happy): "So, what exactly is it? Soon flying to warm countries will not be allowed because of climate legislation? Watching palm trees and blue ocean in virtual reality at home?" (ID_19-2)

Criticism of methodology

As a limitation of the current study, we should consider that the data were collected online (which can be seen both as a strength and a weakness). The anonymity of the Internet environment can encourage free expression. On the other hand, the researcher has no closer contact with informants (for example, to ask additional questions, to observe commenters' socio-demographic characteristics, to observe the cultural setting, etc.). Nevertheless, from the viewpoint of getting an initial overview of the dynamics of respective narrating and narrative motifs and plots, these limitations don't seem overly relevant. It is more important is to evaluate AI lore in the contemporary socio-cultural context (providing a field of values and information) in which people form their opinions. And in some face-to-face discussions that I had about AI the same focus points generally came to the fore as with the online material.

Another criticism of fieldwork methodology is that the material should be collected more systematically. The current data were collected from online forums chosen by user base size (mainstream news portal) or by specific topi

(technology forums, AI news, chat groups). The author supposed that the collected data would reflect the most important tendencies of AI folklore in Estonia as of 2023 and stopped collecting when the level of saturation was reached (i.e., when topics and dynamics started repeating). Thus, the current data can be still called representative.

The third problem is that the proportion of AI-written comments (from AI bots) to human comments sometimes remains unclear, although these debates and comments in the observed threads in any case have implications on human thinking if we approach the phenomenon from a human-normative perspective.

There are also some positive aspects related to this type of data collection, for example good observability: (1) discussions in social media threads are between particular known individuals, (2) it is cheap and enables observation of spontaneous interaction, (3) it can give a quick overview of folklore patterns and narrative types. For more comprehensive data mining, the use of a questionnaire would be desirable (although with this, new problems of representativeness and spontaneity would arise).

Conclusions and discussion

In the observed period, there was a clearly distinct 'wave' of AI-related reflections, comments, and chat threads on the internet simultaneously with a wave of journalistic articles and news related to AI. It was a unique time to collect AI lore in the given sociohistorical context and to record the changes and reactions to it within the socio-cultural fabric in the form of folklore.

The collected material showed that Estonian AI lore is rather polarised between strongly negative and positive stories (previously Kvideland (1996) has pointed out that there are two main types of story related to technology: horror stories and wonder stories). The variety of the stories was much lower compared to Wienker-Piepho's mobile lore typology (Wienker-Piepho 2000) and lower still compared to *Folklore of the Oil Industry* (Boatright 1963). This could be explained by the nature of the subject of narration. Oil industry folklore formed over decades, leaving space for variety, with most of the stories being about the events in the real world. Thus, emotions are expressed less strongly (for example, there is less fear) in these narratives. Mobile phone folklore had a physical object as the central figure, but people still perceived that they did

not have full control of it as end-users, suspecting for example possible hidden functions in the devices; this was probably one of the reasons why more narrations were instigated by fear. In comparison, AI, as invisible algorithms on the computer, is the most non-transparent technology that at the same time completes certain tasks better than humans. This could be the reason for the high hopes and great fears for AI that were expressed in the polarised AI lore.

As contact with ChatGPT as a phenomenon was still new, stories from May 2023 were more negative in tone and more fearful. In September 2023, fear-related stories remained more in the background, although sceptical views were still common in narrations. Jokes related to AI appear more clearly in the September data. This can be explained by people's adjusting because they had had time to process information on AI-related topics for several months or they had first-hand experience. In general, a lack of understanding of AI development seems to be one factor that triggers a negative and cautionary tone in AI lore, as well as accounting for the mainly negative depiction of AI in popular culture.

Folk tales help people deal with their fears (Hiiemäe 2004), functioning as psychological support to a person's beliefs and values, and helping them fight uncertainty (Festinger 1954; Dijkstra et al. 2010) as well as offering entertainment (for example in the form of humour or experimenting with funny questions for ChatGPT). Despite the generally non-religious nature of these narratives, hints to powerful and sometimes also wicked supernatural beings from traditional folklore are often used, for example, mention of the Kratt, a never-tiring treasure-bringing artificial being depicted in Estonian folklore, or the smart talking hedgehog who is known to all Estonians from the national epic *Kalevipoeg*. There are some universals in the folk narratives and related beliefs, attitudes, fears in folk tales, such as 'miracle stories', 'diabolical stories', 'everyday reflections', as Wienker-Piepho (2000) also mentions in the context of mobile phone lore. These results support Bausinger`s statement that the basic nature of folklore is the same regardless of the historical period or type of society (Bausinger 1961), as well as Habermas' notion that societal interpretative patterns are organised by linguistic resources as an aim of cultural reflection (Habermas 1987).

Some parallels with wonder tales were observable in AI lore using the wonder tale function classification developed by Propp, yet the functions in AI-related stories varied much less (expressing themselves rather as analogies to a

positive–negative function respective of character scale). This can be explained by the highly non-neutral nature of the subject of AI, which is reflected in polarised opinions but also by the partly different aims of wonder tale narrating.

Various degrees of folklorisation were observed in the collected material (narration based on collective storytelling scripts and common beliefs and understandings partly derived from older folklore) mixed with individual contributions. Thus, the topic of AI folklore is worthy of and needs further in-depth research with improved methodology to learn more about the cultural impact of AI in contemporary society and the ways in which reactions are verbalised.

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Notes

[1] A parallel with the Luddites who protested against knitting machines in the beginning of the 19th century in Britain (Britannica, 2023)

[2] The dataset of sample texts belong to the author´s archive

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