

“DADIFICIAL” INTELLIGENCE. FATHERHOOD FROM THE MIDJOURNEY PERSPECTIVE

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Abstract

As artificial intelligence takes an increasingly important place in professional and private life, its rapid development makes the study of the field a constant exploration. One of the most recent popular AI-driven platforms—Midjourney—offers millions of users a creative text-to-image perspective on any topic. It is used by artists, creative directors in advertising agencies and architects, among others. What about researchers and scientists? The aim of the article is to analyze the role of Midjourney as a social research tool. The paper uses an analysis of the AI’s image definition of the evolving social and communication topic of fatherhood to discuss the role of AI-generated images in digital ethnography and social science, especially when we consider AI not only as a research tool but as a content creator and a researched “individual.”

Keywords: artificial intelligence (AI), Midjourney, fatherhood, exploratory research

Introduction

The distinguished French soccer club Toulouse FC was relegated from Ligue 1 to Ligue 2 in 2019. Shortly afterwards, it was bought by an investment fund, which forced a new look at day-to-day operations, including the club’s severely limited budget. The club started to rely heavily on data and artificial intelligence when planning transfers, lineups or tactics for each game, and even the staffing of the coaching position (Britto, 2022). This was so successful that Toulouse FC is back in the top division in the 2022/2023 season.

This is just one of many examples of the power and real impact of data and artificial intelligence on business. And although the use of computer systems to conduct activities that previously required human involvement is decades old, recognizing speech, understanding natural language and making decisions are revolutionizing many other areas of our lives. One of them is science and related research (Falk, 2019). Early detection of skin cancer (Jones et al., 2022), the location of asteroids or finding of supernovas (Center for Astrophysics, N/A) and molecular property identification (Choudhary, Bharti & Sharma, 2022)—in these examples from the exact and natural sciences, AI is used primarily as a support research tool whose analytical and computational capabilities significantly accelerate the research process.

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But its possibilities do not end there. Alexey A. Melnikov (Melnikov et al., 2018, p. 1226) draws attention to another dimension of AI's role, indicating that AI methodologies will not only "contribute to research" but can also "contribute to the discovery of new physics", for example in automated laboratories. Therefore they have the ability to create reality. At the same time, this progressive approach may have some negative consequences, which can be seen better at the intersection of the exact sciences and the social sciences. As cultural anthropologist Giles Crouch says, "cultural aspects of a society are incredibly hard to program" (Crouch, 2022). This quote can be confirmed by the history of algorithms used in the U.S. healthcare system, which stereotypically reduced "the number of Black patients identified for extra care by more than half" (Obermayer et al., 2019, p. 447). This issue is also highlighted by Dashun Wang, who believes that artificial intelligence may even intensify prejudice (Crouch, 2022). One of the reasons for this emerges from his recent studies (Wang et al., 2019, p. 79) analyzing the "bibliometric evolution of AI research and its related fields from 1950 to today." A professor of management and organizations at Kellogg, he showed that social studies "do not reference AI research in proportion to its growing paper production" (Frank et al. 2019).

The full realization of the benefits of AI therefore requires greater involvement of social scientists² and greater awareness of AI ethics (Rességuier & Rodrigues, 2020), especially where understanding human development, effectiveness of diagnosis, and data management are concerned (Robila & Robila, 2019, p. 2957). Meeting these expectations, and at the same time taking into account the extraordinary popularity of text-to-text (chatGPT) or text-to-image AI generators (e.g. Fotor, Night Cafe, DALL-E, Midjourney, Deep AI) in 2022 and at the beginning of 2023,³ the analysis of one of them seems cognitively attractive for examining AI's role in the social sciences.

From images to Midjourney

"The image itself ... seems to be, or to have become, the prevalent sign of late-modern culture" (Hall, 1997). It conveys different concepts, reinforces textual information, and builds engagement and attention (Abu Bakar, Desa & Mustafa, 2015, p. 313). This is largely thanks to the Internet, where the TLDR culture is spreading. A quarter of all Google searches are for Google Images, images on Instagram influence many decisions about products or travel destinations (Yun, 2022, p. 1), memes have become a powerful form of meaning-making (Milosavljević, 2020; Wiggins, 2019), and tokenized art in recent years has resulted in spectacular events such as the sale of *Everydays: The First 5000 Days* by Christie's for USD 69 million (Christie's, N/A). Moreover, the growing popularity of visual narratives and the role of images in persuasion and advertising messages is observed in media and advertising (Waligorska, 2011). Considering the above facts and bearing in mind the partly questionable credibility of online images (Shen et al., 2019), Midjourney was chosen for the present analysis, as one of the most popular text-to-image generators.

Midjourney is an AI research lab that offers a platform run on Discord servers that uses artificial intelligence to generate images from text. Any user can ask the AI to imagine and present any topic. The more specific the keywords or description, the better the AI will be able to generate good results. As 1 million users use Midjourney to generate 2 million images per day, and, unlike ChatGPT, the platform does not have problems with server overload, it has gained huge popularity among creatives, graphic designers and architects (Jaruga-Rozdolska, 2022). At the same time, AI's ability to produce cre-

2 Wang says that "AI has to pay more attention to social science" whereas "social scientists have to pay more attention to AI." (See: Kwok 2023).

3 A co-founder of OpenAI even stated that "It's not like a human theory of mind. It's like an alien artifact that came out of this massive optimization." More: Thompson 2022.

ative and surreal images on the one hand (Borji, 2022) and copyright issues on the other (Cammer, 2023) have sparked a debate about whether such works can be called art. Especially since, as Mikalonyte and Kneer (2022, p. 1) say, “Art has traditionally been considered to be one of those domains exclusive to humans, as creativity—sometimes called ‘the final frontier’ of AI research—is highly valued by society, and is not that easily attributed to non-human entities.” So if AI is not only a research tool but also a “collective” content creator, it can add a new dimension to thinking about content analysis and digital ethnography.

To explore this topic, the image of fatherhood created by AI has been chosen. Fatherhood—the focus of the author’s doctoral dissertation—is a very current topic in science, media and advertising. The crisis of masculinity (Kohlhaas, 2022), the development of feminist movements, COVID-19 causing changes in labor law and family dynamics (Sheppard & Brough, 2022, p. 6), and stereotypes in media messages (Edwards & Marine, 2021)—all this forms the basis for modern fatherhood that is opposed to the traditional model (Bierca, 2019). As this is only partially visible in the media and marketing communication, it is worth checking whether/how AI relates to this.

Methodological analyses of images refer primarily to paintings, photographs and video materials, and are focused on the interpretation of the image rather than the discovery of its truth (Ferenc, 2007, p. 6). This is because “the image has a whole range of potential meanings” and “there is no escape from the fact that meaning is, in the end, interpretation” (Hall, pp. 16-18), especially when the author or the title of the image is known. Furthermore, content analysis is not “a simple conclusion of the researcher about the researched material” (Szczepaniak, 2012, p. 86), as the knowledge or intentions of the researcher or the social context are taken into account. In the case of AI-generated images, the observation that “visual research, due to the ambiguity of the social context, can be used for exploratory rather than verification purposes” (Penkowska, 2017), may be very true, the more so because although the technologies used in creating an image determine its form, meaning and effect (ROSE, 2011, p. 20), it is difficult nowadays to clearly define and determine the impact of AI on these elements.

Therefore AI’s perception of modern fatherhood, its differentiation by country, the relations between a father and his child/children, as well as the look and feel of images and the way fatherhood is presented in advertising, became the basis for the analysis. Moreover, as the evolution of fatherhood is closely related to the evolution of motherhood and the contemporary role of women, questions about the image of modern motherhood and differences in presenting modern fatherhood and modern motherhood in one given advertising format (on posters) were also analyzed.

Analysis

Five sets of images were generated on January 22, 2023. Midjourney was first asked to imagine what fatherhood looks like, and this was then contrasted with the image of modern fatherhood. In response, two sets of four images were generated (Fig. 1).

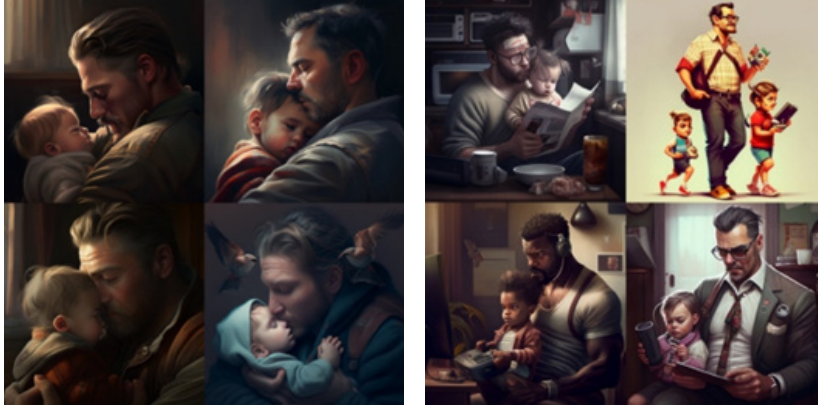


Figure 1. "Fatherhood" and "modern fatherhood" according to Midjourney.

"Fatherhood" according to Midjourney is all about a close, physical relationship between a father and his young child. The images are slightly blurred, the light entering the room even has a mystical dimension, father and child have eyes closed. "Modern fatherhood," on the other hand, is a relationship based on joint activity, on doing things together (reading, playing). There is a focus on an object (phone, newspaper, touchpad), but there is no eye contact between father and child. The main differences are shown in the Table 1.

Table 1. The differences between the images of fatherhood and motherhood according to Midjourney.

	Fatherhood	Modern fatherhood
Look and feel	blurred, mystical	sharp, pragmatic
Father-child relation	physical proximity	joint activity

Source: own work.

When we compare "modern fatherhood" with "modern motherhood" (Fig. 2), a mother's care of a child is combined with other responsibilities, there is more than one child with her, and her face emphasizes greater suffering than the images of fathers.



Figure 2. Modern motherhood according to Midjourney

The aim of the third analysis was to show potential differences between the image of "modern fatherhood" in different countries (Fig. 3).



Figure 3. Modern fatherhood in Poland and in the United States according to Midjourney

The images generated for Poland and the United States reflect stereotypical differences between the two nations. The Polish fathers are a bit old-fashioned compared to the U.S. dads. Their clothes are a mix of military uniforms and communist-era outfits, whereas the U.S. fathers wear more stylish T-shirts or dress shirts, have modern glasses or tattoos. The Polish fathers are concentrated on something (TV, window, meal), as if they were watching or looking for something. Their kids are next to them but not with them. The U.S. fathers are a bit more focused on the children, one image even shows a shopping experience while others are at home.

Table 2. The differences between the images of fatherhood in Poland and US according to Midjourney.

	Modern fatherhood in Poland	Modern fatherhood in the U.S.
Look and feel	old-fashioned	modern
Father-child relation	fathers focused on the situation	fathers focused on the child

Source: own work.

As more brands position their marketing communication so as to target fathers (Tas 2023; Qian 2023) and more researchers investigate the topic of fatherhood in the communication sphere (Humphreys, 2016), another layer has been added to the analysis: an advertisement and a poster about fatherhood (Figs. 4, 5).



Figure 4. The best advertisement presenting modern fatherhood in Poland and in the United States according to Midjourney

A different approach toward intimacy can be seen. Once again, the Polish fathers do not have eye contact with their child, wear more formal clothes as if they were about

to go to work or had just come home. Conversely, the U.S. fathers wear T-shirts, have eye contact with the child and play an active role in its life (feeding it, cleaning something together, talking). Interestingly, most of the images show FMCG products (cans, fast food, beer). What is more, most of the pictures show fatherhood in a domestic or even kitchen context (one shows a father and son sitting in an empty fridge).

Table 3. The differences between the images of fatherhood in Poland and US in advertisement according to Midjourney.

	Modern fatherhood in Poland	Modern fatherhood in the U.S.
Look and feel	official	informal
Father-child relation	fathers focused on the situation	fathers focused on the child

Source: own work.

Another perspective is offered when we ask Midjourney for posters presenting “modern fatherhood” and “modern motherhood” (Fig. 5).



Figure 5. Modern fatherhood vs. modern motherhood on posters according to Midjourney

What unites the perspectives of motherhood and fatherhood are different shades of green—a symbol of life, openness and fertility. What distinguishes these posters, however, is that motherhood has a specific face (pretty, well-groomed). Fatherhood has no face, as if it were in the making. Moreover, motherhood is about indoor apparel and interiors whereas fatherhood is about being outside, active, in uniform.

Table 4. The differences between the images of modern fatherhood and modern motherhood according to Midjourney.

	Modern fatherhood	Modern motherhood
Look and feel	artistic	realistic
Parent-child relation	active	discreet

Source: own work.

Discussion

In 2017 *Wired* magazine covered the story of James Vlahos, who created a chatbot enabling him to be “in contact” with his deceased dad (Wired 2017). Artificial immortality was ensured by a “text-based Siri that replied to queries with his father’s familiar cadence” (CBC Radio 2023). In 2020 Avatarminds released iPal, a “robot that they claimed could take over about 50% of parenting roles.” There are many more examples of AI tools that help fathers. However, Midjourney can do one more thing: help others understand

fathers better.

Platforms like Midjourney are still in their beta versions, so it is difficult to say whether we can already talk about in-depth insights and “dadificial” intelligence at the visual level. The analysis reveals insights that require deepening in further qualitative and quantitative research, e.g. “modern fatherhood” is more task-oriented and child-oriented than “fatherhood”; “modern fatherhood” is more about the home environment but still not as much as “motherhood”; Polish fathers are old-fashioned compared to U.S. fathers; if motherhood has a face, fatherhood does not yet have one. Moreover, the content layer emphasizes the stereotypical elements associated with fatherhood (uniforms, lack of focus on the child, outdoor context, beer), while the visual layer is often eclectic (the posters combine the colors of Bauhaus, the discipline of art deco, and some street art elements).

The analysis of the AI tool in terms of its usefulness in social science and digital ethnography also provides valuable information:

1. **State of AI:** Midjourney is a constantly learning solution based on *machine learning*. It uses not only millions of images from the Internet but also queries from the users of the platform itself. And this knowledge is enormous, since at least 2 million images are generated every day. For an identical query (“fatherhood”) a month earlier (December 25, 2022), the author received slightly different images. This shows that this is not a closed set of images but an open platform. Therefore it offers new perspectives for researchers on the “state of AI” over a longer period of time.

2. **Creativity:** The platform offers a lot of space for the creativity of the users themselves, who can use any set of keywords to ask Midjourney to imagine any image. The whole creative process can be done in less than a minute. This can take creativity to a whole new level⁴ and raise the bar not only for graphic designers or advertising agencies but also media (e.g. personalized images corresponding to the content of articles) or sociologists and psychologists (A-B tests or qualitative questionnaires with AI images), especially when “you do not always get exactly what you had in mind ... but you often get a really cool image that you were not expecting!”⁵ On the other hand, legal and ethical issues need to be considered, as there are already lawsuits being filed against Midjourney and other AI tools (Vincent 2023) and questions about “what is art,” “what is an artist” are being asked (Newton & Dhole, 2023; Mikalonyte & Kneer, 2022).

3. **Ethnography 2.0.:** Carol Grbich (2013, p. 201) notes that “ethnographic content analysis seeks to identify the signifiers/signs within visual images and to understand their accepted meanings within the culture in which they are located.” But how does one identify the culture of artificial intelligence, especially when the “author” is “the Internet”? Moreover, analyzing the queries that users of platforms such as Midjourney send to AI provides insights not into what their reality looks like, but what reality they are looking for, especially if a lot of users use “variations” and remix the images in their search for the best one.

4. **Methodology:** Many questions arise, for example:

- a. Can theories concerning the analysis of traditional images—such as Roman Ingarden’s theory concerning the reception of art—be useful when analyzing images

4 Jonas Oppenlaender states that “The human creativity of text-to-image art lies in the interaction with text-to-image generation systems and in online communities. Increasingly, online communities act as a catalyst for learning the craft of ‘prompt engineering.’” More: Oppenlaender, 2022.

5 *Midjourney* [online: 2023-01-23], <https://expertphotography.com/midjourney/> Mohesh Radhakrishnan notes that it is “essential to consider emerging technologies’ challenges and ensure that creativity is protected. It remains to be seen if this democratization of creativity supports humanity.” More: M. Radhakrishnan. (2022). Is Midjourney-AI a new anti-hero of architectural imagery and creativity? An atypical era of AI-based representation & its effect on creativity in the architectural design process. GSJ: Volume 11, Issue 1. Online: ISSN 2320-9186.

generated by artificial intelligence?

- b. Given the technological sophistication of AI and the nature of the algorithms analyzing millions of data, can an image generated by Midjourney still be regarded as qualitative content, or is it already quantitative?

The above project paves the way for further analysis of content created by the AI (e.g. how different text-to-image platforms visualize the same question), as well as a study of the people who use the tool (their motivations, how they search, their reaction to the results).

Conclusions

From autonomous cars to detection of fraudulent transactions, AI's passive role is to allow people to focus on complex and more rewarding tasks. However, more and more examples also show the "smart" (Melnikov et al., p. 1226) and active role of AI, which refers to the creation of reality. Therefore "just as AI needs to pay more attention to social science, social scientists need to pay more attention to AI technology" (Sadiku, Fagbohunge & Musa, 2021, p. 50). AI-driven platforms like Midjourney offer a fresh and insightful perspective on any visual topic. On the other hand, their limitations (content without context, perpetuation of stereotypes, AI as a tool or as an "author") need to be taken into account. Therefore it is still worth thinking about AI-driven solutions more as "a blurry JPEG of all the text on the Web," where you receive "an approximation" rather than "an exact sequence of bits" (Chiang 2023).

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