



Democratization and generative AI image creation: aesthetics, citizenship, and practices

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Received: 11 April 2024 / Accepted: 3 October 2024
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Abstract

The article critically analyzes how contemporary image practices involving generative artificial intelligence are entangled with processes of democratization. We demonstrate and discuss how generative artificial intelligence images raise questions of democratization and citizenship in terms of access, skills, validation, truths, and diversity. First, the article establishes a theoretical framework, which includes theory on democratization and aesthetics and lays the foundations for the analytical concepts of ‘formative’ and ‘generative’ visual citizenship. Next, we argue for the use of explorative and collaborative methods to investigate contemporary image practice, before analyzing the central part of our investigation, which takes the form of four collaborative workshops conducted in 2023 with external partners in different domains (the art scene, art therapy, education, and the news media). After analyzing insights from these workshops, the article significantly nuances how visual citizenship is at work in different manners depending on the different concrete image practices using generative artificial intelligence. Finally, we conclude that an aesthetic perspective offers valuable insights into foundational aspects of belonging to contemporary visual communities.

Keywords Generative artificial intelligence · Image practices · Democratization · Visual citizenship · Explorative workshops

1 Introduction

This article elaborates a concept-work on democracy and citizenship through four domain-specific workshops focussed on image creation with generative artificial intelligence (GAI). We present an aesthetic framework to discuss democratization with popular AI image models like *DALL-E*, *Midjourney*, and *Stable Diffusion*. Our study peels back the layers of democratic imaginaries inherent in, and resulting from, these models, revealing their roots in online imagery

and their facilitation of individual and collective creative expression.

Debates around AI and democracy spans various forums, from summits and parliaments to news media columns and social science conferences. While discussions in these arenas are mainly focussed on text, they sometimes touch upon images, but they often overlook images’ aesthetic dimension. For instance, the EU Parliament’s brief on “Artificial intelligence, democracy and elections” (Adam 2023) considers GAI text’s dual role in enhancing democratic communication and posing threats through synthetic misinformation. However, it predominantly views GAI images and videos negatively, focussing on their alleged harm such as deep-fakes of politicians. The drive behind our workshops was to create a new discussion on GAI images and democracy, aiming to uncover perspectives absent in current mainstream.

Accordingly, our research question explores *how GAI image practices are entangled with democratic imaginaries when perceived from the perspective of aesthetics*, which take into account the messiness of real life entangled with protocols, feelings, and domain specific cultural traditions? Motivated by the rapid development of GAI image models

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and associated practices, we aimed to delve into democratic questions, possibilities, and challenges arising from GAI images in everyday domains.

AI image models are trained on vast datasets comprising images scraped from the internet and social media (Pasquinelli and Joler 2021). This implies that our collective visual online presence becomes intricately woven into the fabric of these models, operating at a concealed level. On a more explicit front, these models—when presented as concrete tools—also enable users, regardless of artistic skill, to generate detailed images wielding aspects of artistic democratization on, at least, two distinct levels: individuals actively contribute to the foundational structures of the tools, and, simultaneously, they unlock new modalities of expression. This two-tiered engagement, constitutive and operative, positions the user as both a passive contributor to and an active participant within an AI-driven visual culture.

As aesthetic researchers affiliated with AIIM—Centre for Aesthetics of AI Images, we conducted a series of explorative workshops in 2023. Supported by seed funding from SHAPE at Aarhus University, the project comprised four workshops with external collaborators, spanning initial

planning, execution, and comprehensive analysis of acquired data and insights (see Fig. 1).

Each explorative workshop, spanning a 4-h timeframe, was uniquely tailored with distinct domains, collaborators, and venues. Workshop 1 delved into the professional art scene, collaborating with an artist and Art Hub Copenhagen. Workshop 2 explored art therapy in collaboration with DokkX, Aarhus municipality’s centre for welfare technology. The education domain took centre stage in Workshop 3, where collaboration extended to Systime, a private publishing company specializing in educational materials. Lastly, Workshop 4 focussed on the news media domain, collaborating with Denmark’s largest image agency, Ritzau Scanpix.

Apart from this first introductory section, the following consists of four overall Sects. 2–5: In Sect. 2, we provide an account of the conceptual and theoretical foundations for our concepts of citizenship and democracy. Our methodological approaches are elaborated in Sect. 3, while in Sect. 4 we consecutively account for and analyze each of the four collaborative workshops. In Sect. 5, we engage in a transversal discussion of workshop insights, before concluding with the overarching findings.

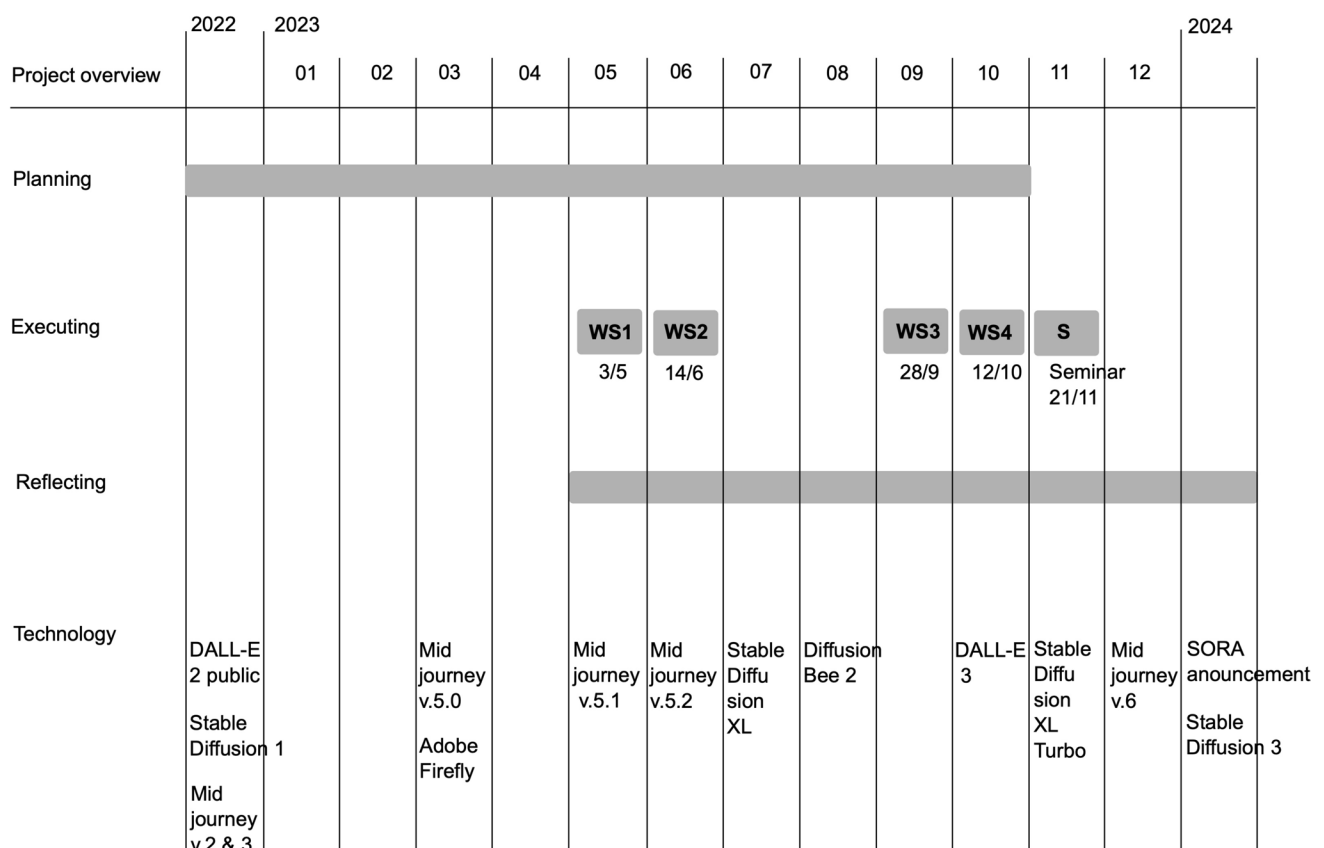


Fig. 1 Overview of the project process from late 2022 to early 2024 with phases of planning four workshops, executing workshop (WS1–4), and subsequent reflection. Numbers 01–12 indicate the months of 2023. Technological developments during the timespan are indicated at the bottom

2 Conceptual premises

2.1 Democracy, agonism, the aesthetic state, and visual citizenship

Rather than engaging in philosophical reflection about AI's inherent nature as democratic or authoritarian, or making political judgments about its societal impact, our conceptual understanding of the intersection between GAI images, citizenship and democracy challenges modern boundaries between social and technological criticism. We do so by stressing how GAI image practices and democratic imaginaries intermingle and reshape one another. Our aesthetic critique maintains that any democratic implication of GAI images—including their use for propaganda, spread of disinformation, perpetuation of discriminatory stereotypes, and challenges to authorship, authenticity, originality, etc.—should be understood through the context of how the modern democratization of art as a means of cultural production situates the aestheticization of politics within democracy itself (Benjamin 2007; Park 2024).

This approach diverges from preservationist theories that depict democracy as a static backdrop, assessing AI's impact as either positive or negative. We do not subscribe to notions of democracy as a pre-given entity onto which AI is imposed (Coeckelbergh 2023, 2024), as well as binary views that either herald an epoch of “eternal digital dictatorships” (Harari 2018) or usher in “an age of algorithmic politics” (Diwakar 2022). In this vein, we build upon Calvo and García-Marzá's (2024) recent proposition that “the existing concept of democracy, currently faced by the rise of algorithmic democracy, must be extended until it can once again be successfully re-embedded into the contexts of the world we live in.” This perspective urges an approach to actively reconstruct the worlds within which democracy and GAI are discussed and deployed, rather than adhering to any singular narrative currently promulgated by the top tiers of political democracy.

To contextualize the lack of a democratic worldview for AI, art, and images in general, we have turned to review the historical relations of visual culture and technology that presage the interplay between GAI images and democratic imaginaries. We particularly recognize the role that GAI image practices play in decoupling “democracy” from traditional manifestations of “citizenship” and take inspiration in a point made three decades ago by philosopher Jacques Derrida in a conversation with Bernard Stiegler: Derrida posited that an emergent image culture, facilitated by film, television, and computers, challenged the historical link between citizenship and access to writing (Derrida and Stigler 2002: 56–57). Derrida contended that this is so because the conventional understanding of citizenship as

a political subjectivity, grounded in the (textually) literate citizen of a nation-state, neglects the role of visuality. This neglect still persists, as demonstrated in the “democratization” initiatives of AI companies like *Anthropic*, *Meta* and *OpenAI*, focussing on textual deliberation processes with large language models (Wetherall-Grujić and Giesen 2023).

Already in the post-modern landscape, digital images and tele-technologies reconfigured the boundaries of political and territorial identity; presenting democracy as a dispersed and dislocated phenomenon yet to be fully realized. Derrida, therefore, suggested democracy as an ongoing promise encapsulated in the idea of a “democracy-to-come” (Derrida and Stiegler 2002: 21, 57). By identifying democracy in the fragments of a future that is never to be realized in any present moment, our analytical aim is to catch a glimpse of “visual citizenship” within an AI-driven image culture.

Building on Jacques Rancière's conception of an aesthetic regime of art and his interpretations of Friedrich Schiller and the Romantic Revolution, we can entertain this seemingly oxymoronic concept of “visual citizenship” as a potential representation of belonging independent of any sovereign community, other than the aesthetic state as such. Rancière describes how “suspending the opposition between active understanding and passive sensibility, aims at breaking down—with an idea of art—an idea of society based on the opposition between those who think and decide and those who are doomed to material tasks” (Rancière 2004: 39–40). For Rancière, bridging the divide between active cognition and passive sensation through art challenges a societal structure premised on a division between thinkers and doers. Hence, speaking (with images as well as words) constitutes a foundational aspect of citizenship, insofar as ‘the point where man meets citizen, where the individual working out his[sic] own life by calculation becomes a member of the community, is located in the fact that man is first of all a creature who speaks’ (Rancière 2007: 51). In the expanded imagination of an aesthetic state, where boundaries between passive observers and active participants blur, we identify the potential of “visual citizenship” as a pathway to non-sovereign political subjectivity.

The conflictual potential between “visuality”, “citizenship”, and “democracy” becomes further interpretable within the framework of agonist or radical democracy, as articulated by Laclau and Mouffe (2001). In radical, plural democracy, all material practices are considered discursive, and social formations are in constant struggle against one another. Therefore, democratic struggle is intrinsic from the outset, challenging the notion that speaking competence is a prerequisite for engaging in democratic processes. The ability to speak, or the lack thereof, shapes the distribution of the sensible from the beginning (Rancière 2004; Janicka 2020). Viewing “visual citizenship” through an agonistic lens, it

emerges as a concept where individuals implicitly engage in ongoing struggles over visual dominance and its articulation with social formations through their involvement in image production, distribution, exposure, and consumption.

Aligning with the notion of democracy as an ongoing, contested phenomenon akin to the ideals of an “aesthetic state,” we aim to reconceptualize “visual citizenship” within the realm of AI image practices. Therefore, we understand “visual citizenship” not as a fixed or real concept, but as a methodological construct influenced by image practices, including those involving AI models.

2.2 Formative and generative “Visual Citizenship”

The concept of “visual citizenship” is not unique to our analysis, and it is frequently used to describe everyday instances of civic engagement, as observed by Catherine Bouko (2024). Everyday activities, often undertaken without much thought, can be seen as expressions of visual citizenship. One could argue that commonplace activities like displaying children’s drawings on the kitchen fridge, watching TV commercials, curating family photo albums, encountering strategic visual communication, engaging with selfies through likes and shares all constitute forms of visual engagement. However, it is important to distinguish between visual consumerism, particularism/tribalism, self-presentation, and citizenship insofar as the latter plays the leading part when investigating processes of democratization. We hypothesize that visual citizenship is pertinent when analyzing GAI image practices, because these evoke processes of image agency (Hoel 2018, 2020) on two distinct levels: a *formative* level and a *generative* level.

The formative aspect involves the development of image-generating AI models. This process includes curating large sets of labelled images, requiring various degrees of human labour, ranging from data labelling to more nuanced tasks such as aesthetic evaluation or object delineation within images. Each contribution, regardless of how trivial it may seem, contributes to a latent space that shapes the AI’s output, thereby exerting individual influence on the eventual visual culture. However, there exists an implicit social stratification within this formative process. The level of input and control varies dramatically across contributors, from gig workers to specialized engineers, amateur snapshot takers to professional artists. Consequently, the training sets become a datafied representation of a multifaceted and unequal social structure—an example of what could be termed a collective “optical unconscious” (Benjamin 2007; Krauss 1994; Wasielewski 2023).

The efficacy of this entire training process relies on the abundance of images and the affective labour contributed during their creation (Crawford and Paglen 2021; Malev 2021; Morreale et al 2023). In this context, the individual

human traces in the training set—“my” unique view of my sister’s birthday or the picture of “my” hometown that evening—influence the algorithm’s behaviour in aggregate. Each individual image contributes to defining statistical vectors alongside myriad others, wherein unique characteristics become general features within broader cultural contexts. In this indirect and often unknowing manner, individuals contribute to shaping the general visual culture embedded in the training sets, forming the bedrock for powerful image tools that will generate future visual cultures.

In addition to this formative facet of visual citizenship, the generative facet involves the affirmative use of AI to craft and disseminate new images. Models such as DALL·E, Stable Diffusion, and Midjourney offer the capability to produce diverse imagery that somehow captures the creator’s intent, without the need for prior artistic training. Whereas people’s participation in formative visual citizenship happens automatically on a large mass-scale without their knowledge or consent, participating in generative visual citizenship is a deliberate activity. Individuals engaging in generative visual citizenship intentionally create and distribute images, consciously contributing to public discourse. Consequently, generative visual citizenship consists of two activities: utilizing AI tools to create images and, subsequently, sharing these images in (quasi)public forums. In this article, we define generative visual citizenship as a combination of individuals creating their own point of view *and* sharing that with others in a communal space. Moving to identify a sort of participative sensibility, our prisms of formative and generative agency, AI image practices frame visual citizenship as an arena where passive observation and active creation converge towards the ideal of an aesthetic democracy that is yet to be fully realized.

3 Explorative approaches

While theoretically our research is founded in aesthetic theory, *methodologically*, it follows a qualitative explorative approach that has been elaborated in the social sciences by Stebbins (2001), because it enabled us to genuinely *explore* the democratic questions of AI image practices without narrowly looking to confirm a predetermined hypothesis. To achieve this, we ventured beyond the confines of academia into domains where real and messy AI image practices are part of everyday life and where we could explore democratic imaginaries alongside actors who confront the practical potentials, threats, and dilemmas of AI images in their daily experiences. We soon realized that our research greatly benefited from this explorative approach, particularly given the rapid technical developments in the field of GAI images during 2023 (see Fig. 1). The possibilities, challenges, and everyday practices related to AI images changed dramatically

over a few months and the participants' evolving familiarity with GAI influenced their reactions to workshop exercises. The flexibility and open-minded approach characteristic of qualitative, explorative research (Stebbins 2001: 9–12) allowed us to adjust our design of the workshops along the course of the research. More concretely, our research was guided by certain approaches towards diversity, expectations, roles, data collection and analysis, as outlined below.

3.1 Diversity

From the outset, our plan was to conduct four workshops in collaboration with partners in four different domains. This approach of 'concatenated exploration', according to Stebbins, has the advantage over a single, focussed exploration because '[a]s data accumulate across the chain of the exploratory studies, the grounded theory emerging from them grows in detail, breadth, and validity.' (2001: 14). Identifying relevant domains and reaching out to potential collaborators became a crucial aspect of the project, involving numerous email conversations, coordination meetings, and communication efforts to clarify our intentions, objectives, and purpose. This process was ongoing and extended well into the project timeline, leading to the situation where we had not yet identified domain partners for the last two workshops when we held the first one in May (see Fig. 1).

We identified domains of relevance and contacted collaborators as the project unfolded, but despite the evolving nature of our approach, the overarching goal of exploring democratic questions in different non-academic domains remained a constant throughout the project. While we are familiar with the phenomenon of images on a technical as well as a critical humanistic level, we sought to explore a "phenomenon"—the democratic imaginaries of real, everyday AI image practices—about which we had limited knowledge. By conducting four consecutive workshops with four *different* domains, we aimed to maintain an exploratory mode, avoiding the transition into a predictive or confirmative mode (Stebbins 2001: 7). The diversity of the workshop participants, in terms of race, gender, age, etc., was only partly influenced by us. Only in the first workshop (in the art domain) were we in charge of an open invitation, whereas in the three other workshops the different domain collaborators invited relevant domain participants themselves. However, in our pre-workshop meetings with domain collaborators, we took care in emphasizing the importance of inviting a broad range of practitioners with different roles and experiences from the domain, which in practice automatically prompted diversity on other parameters.

3.2 Expectations and roles

A key aspect of our collaboration with external partners involved clarifying the nature of the workshop formats. We emphasized that our workshops were not intended as technical tutorials on how to use GAI image tools, nor were they academic lectures delivered by us. Instead, we sought active, exploratory engagement from the workshop participants to collectively investigate issues and questions related to AI images within their specific domains. To ensure this collaborative approach, we started each workshop by clearly communicating that the purpose was to reflect on pertinent issues and questions related to AI image practices in their domain. The goal was to generate insights *collectively* with the participants and the emphasis was on *exploration* rather than providing definitive solutions or answers. We underscored that the workshops were not designed to collect information but to foster a collaborative, reflective environment.

Essentially, our aim was to have the participants "stay in the trouble" with us, adopting a practice that, according to Donna Haraway, 'requires making oddkin; that is, we require each other in unexpected collaborations and combinations, in hot compost piles' (2016: 4). To concretely facilitate Haraway's approach in the everyday professional setting of the workshops—forging unlikely yet rewarding relations—participants were organized into groups of 3–5 individuals, which were pre-designed by us to ensure a diverse mix across different backgrounds, expertise, and social and professional roles within the specific domain.

In our workshops, we had dual roles as both facilitators and participants. This approach translated into some of us shouldering the main facilitating responsibilities for each workshop, while others actively engaged in group work alongside the participants. The workshop format incorporated a mix of short presentations by us, practical exercises, and discussions. Some of the exercises had a speculative touch, but we deliberately refrained from introducing prompt battles or similar formats to avoid gamification of the workshops, which might have neglected the role of participants as domain experts.

3.3 Qualitative data collection and analysis

Our data collection and analysis were guided by a qualitative approach and to maintain the exploratory character of the workshops, we did not view participants as informants to be studied by us "from the outside." Instead, they were active co-workers with us in the workshops. Striking a delicate balance during data collection, we aimed to create a safe space for open exploration without participants fearing that their contributions would be exposed in other contexts. Simultaneously, we wanted to reflect on workshop insights for use in our research, as demonstrated in this article.

To maintain this balance, we refrained from filming or recording the workshops. Moreover, we did not collect quantitative or personal data but instead focussed on gathering discussion points from the groups and images created by the participants anonymously. At the beginning of each workshop, we obtained signed consent from all participants, emphasizing our intention to use the images they generated and refer to general points raised in discussions while ensuring the anonymity of personal opinions during data processing.

After each workshop, we met to identify and informally analyze the insights gained. Finally, we organized a day seminar (see Fig. 1) with 14 invited participants, including representatives from the workshops and other researchers in the fields of AI and theory of democracy. In this seminar, we presented brief overviews of the workshops and shared our insights, leading to critical discussions, in which participants helped identify relevant issues across the workshops and provided suggestions for next steps.

4 Domain-specific workshops

In this section, we describe the concrete setup and specific organizational and professional context of the four workshops.

4.1 The professional art scene

In this workshop, held May 3rd, 2023, at Bikubenfonden/Arthub Copenhagen, we explored how the commercialization of AI-generated images impacts the professional artist and the evolving landscape of artistic practice. The workshop included 28 participants consisting of artists, curators, art students, and academics in the humanities as well as the technical science.

During the workshop, participants engaged in three hands-on exercises. First, they used the tools Midjourney and Prompteur on Discord to recreate a well-known artwork by adjusting prompts for image refinement. Second, they employed DALL-E or Hugging Face to hybridize an existing image, incorporating new elements using inpainting techniques. Lastly, they explored image models generating asemic or “gibberish” text by tasking Prompteur to describe an academic book, which was then interpreted by Midjourney for a new book cover theme. The workshop also included a performance-lecture by an artist, who works with AI in his own practice.

The workshop revealed substantial disparities between, on the one hand, the ideal of art democratization, as grandly asserted by the software industry, and, on the other

hand, the reality of using tools such as Midjourney and DALL-E. Despite the proclaimed logic of democratization through equal access, the actual use of these tools highlights that they offer new artistic possibilities, but not all users can equally harness their potentials. Especially the fact that the GAI tools mandated participants to create accounts on proprietary platforms, and that image generation was either restricted in quantity or involved financial contributions were obstacles. Hence, we quickly observed a concrete limitation to the notion of art democratization as the question of access became prevalent in the workshop. On these platforms, users are primarily positioned as consumers rather than citizens expressing their rights to an open artistic practice. The unequal distribution of access to the tools was supplemented by significant differences in the participants’ familiarity with navigating the interface of Discord (which at the time was necessary to use Midjourney), causing considerable frustration among some participants.

The participants in the workshop highlighted the realization that while generative AI can enhance the concrete mechanics of image creation, it falls short in addressing broader imaginaries of artistic or cultural relevance in visual production. The diverse age groups represented in the workshop contributed to a nuanced perspective on the purported democratization of generative AI. Some participants expressed the sentiment that art democratization had already occurred with photography, diminishing the novelty of generative AI. For pioneers in computer art, AI art seemed like an incidental addition to a longstanding tradition. Meanwhile, individuals working with contemporary digital art voiced concerns about the embedded aesthetics in these tools. The reliance on the preset aesthetics at the technology’s formative level rendered the tools inaccessible to users, limiting their engagement as crucial aesthetic decisions were predetermined, leaving users with no means to intervene.

Finally, the workshop also delved into the power dynamics between established art institutions, acting as gatekeepers determining which images and practices are deemed “art” and allowed into exhibitions, galleries, and museums, versus the semi-subcultural, semi-popular online communities where GAI image practices thrive. Many participants perceived the gap between the two different discourses as insurmountable. Public art institutions in Denmark, as in many other countries, are built on an ideology of democratic education (*Bildung*), aiming to provide citizens-visitors with more nuanced perspectives and worldviews through encounters with aesthetic practices by professional artists. The workshop revealed how GAI image practices challenge established institutional distinctions between public and private, professionals and amateurs, and “high” and “low” art.

4.2 Art therapy

On June 14th, 2023, at DokkX in Aarhus, the second workshop convened with 11 practitioners, including administrators, therapists, recovery workers, and social care professionals from the local municipality. The workshop aimed to highlight the contrast between traditional art therapy facilitated by artists and AI-assisted art therapy, addressing ethical considerations surrounding the use of synthetic images in a public domain.

The primary focus was on integrating AI-generated images in therapy to address loneliness and psychological vulnerability in youth. Key discussions revolved around Midjourney founder David Holz's statement, that 20% of their usage is dedicated to "art therapy" (Claburn 2022) rather than other purposes, like exploration, fun, or work, as typically associated with AI applications. This observation is noteworthy, considering the prevailing debate on AI and therapy, which often centres around chatbots.

The workshop's practical core was formed by hands-on GAI image exercises facilitated by an artist with insights into the official mental healthcare system. The exercises were inspired by the Freudian primal mechanisms of condensation, displacement, and symbolization (Freud 1916). Participants engaged in activities harnessing ChatGPT and Midjourney to blend disparate visual elements, symbolizing the condensation process. They then navigated to the displacement exercise by embodying negative emotions in specific objects, using both proprietary and open-source AI image generators to generate visual accompaniments to complex sentiments. The closing exercise, based on symbolization, tasked participants with translating the symbolic meaning of certain objects into visual prompts and images.

Participants were intrigued by what produced the therapeutic effect: is it the formulation of the prompt, or the resultant image that holds therapeutic potential? It was suggested that the iterative character of prompting might enable psychologically vulnerable subjects not only to articulate but also to transiently process their feelings within the mirror of cultural reflection, with each iterative prompt leading to a new attempt at emotional distillation. The experienced result of the exercise was that the goal shifted from a mere emotive discharge to assessing the technology's role in sustained reflection.

The critical discussions probed further into the psyche of art therapy amidst AI, pondering whether the AI's convenience and "wow" factor usurp its ability to facilitate critical distance and self-reflection. The discussion extended to examining the societal and psychiatric realms' inclination toward AI due to cost-saving prospects, paralleling these motivations with a broader historical reliance on technological mediations in healthcare. The construct of art as a means for societal betterment and its role in nurturing capable

citizens was a recurrent theme, resonating with the workshop taking place at a centre for welfare technologies. The workshop participants critically addressed larger questions within the public healthcare domain, such as the possible adoption of AI in art therapy due to its potential to alleviate costs. However, no concrete propositions were laid forth on the public integration of AI imagery, due to the uncertainty of legal and ethical intricacies that such entails.

It was discussed that a therapeutic potential was not only related to the creation of images that are personally significant—allowing for therapeutic self-expression—but also to the possibility of eliciting recognition within a wider visual discourse, e.g. in online fora like Midjourney on Discord. This creativity resonates within our conceptual framework of generative visual citizenship. In addition, however, formative aspects of visual citizenship are at work in this interplay of personal and collective realms, since any engagement with Midjourney intricately informs the platform's visual culture, where each user contributes to the model's ongoing fine-tuning when choosing between the four different images generated by each prompt.

Herein lies a formative repercussion: as individuals create on Midjourney, they implicitly navigate and contribute to the design of the model's visual culture. While images born of traditional therapeutic context typically remain private, this AI-assisted process—shaped by Midjourney's receptive and adaptive algorithm—carries the weight of a formative agency in visual citizenship. This formative facet of visual citizenship, manifesting through personalized creation with Midjourney, suggests a broader aspect of cultural recognition within AI-assisted art therapy.

4.3 Education

In our third workshop, held at Systime in Aarhus, September 28th, 2023, we explored the multifaceted approaches of a private publishing house, specialized in textbooks and educational material for upper primary and high school level, in navigating the diverse possibilities and challenges presented by AI-generated content. Present at the workshop were representatives from three different departments in the organization—the editorial, legal, and graphic—and this resulted in a particularly agonistic setup of perspectives and practices. While our initial, overarching goal of the workshop was to foster critical discussions on the application of GAI images in educational materials, discussing their relevance for and introduction into learning, we soon realized that a broader discussion of the introduction of AI tools was already at play across the organization. While some participants, the editors in particular, focussed on educational aspects of introducing students to GAI tools, the lawyers were more critical and hesitant towards introducing practical GAI exercises in textbooks due to General Data Protection

Regulation (GDPR) questions related students' private data. Finally, and a third group, the graphic designers, had already, apparently without a lot of debate, integrated GAI tools into their daily work and expressed the wish to get even more space for manoeuvring.

First, participants were asked to draw an image by hand. We provided paper and coloured pencils and asked them to sketch up a suggestion for a book cover published by Systime based on small text snippets from concrete book projects in the company's pipeline (different text snippet for each group). Second, the drawings were circulated between the groups, who were to recreate another groups' hand-drawn image using Midjourney on Discord, and after that, to create a new cover illustration of a future Systime book, using (and discussing) precise keywords in the prompting. Finally, the participants used open-source bots (OpenJourney and Stable Horde) on Discord, recycling prompts from the previous exercises, employing DiffusionBee, a tool used to create AI images locally on individual computers.

During the workshop, we made several observations, most notably a paradoxical opposition between a discursive and a practical level of engagement with AI image-generation. While participants were enthusiastic when discussing the promises and risks related to AI tools, it was at the same time surprisingly difficult for them to engage with techniques on a practical level. Particularly, participants were challenged and frustrated when trying to employ AI as a "companion" or a kind of "partner" in the creative process. This became particularly evident for people accustomed to more "fixed" or predictable tools that yield outcomes aligning closely with their expectations. When using different GAI tools, some participants highlighted the difficulty in obtaining the results they "were looking for," which underscores the importance of openness in navigating a creative process with AI and the complexities of a process of "operative ekphrasis" (Bajohr 2024).

While this experience seemed frustrating to a large part of the participants, it was also productive in terms of opening a discussion about practice-based literacy of AI tools. Several participants considered it as a significant limitation in their daily work that they are not allowed to encourage students to download and use programs from the internet due to data protection regulations. In order for students to attain the necessary literacy in the field, these participants held that students must have access to specific tools and have an opportunity to safely and responsibly experiment with them in practice.

The workshop showcased issues of visual citizenship on several levels: on an overall level, educating young people to become citizens capable of participating in democracy is the very *raison d'être* of developing educational material that teaches students to navigate in and critically reflect contemporary visual culture. The discussions around protecting

students from gaining access to GAI image tool at the cost of giving away private data (e.g. tracking which images the student clicks, generates, or shares) relates to the level of formative visual citizenship. We encountered a parallel to this awareness on data exchange on a more technical level in our preparations for the workshop, where it proved very difficult to plan the concrete exercises because Systime's IT-department had strict rules about which programs were allowed on their employees' computers.

These formative issues tapped directly into the level of generative visual citizenship where the workshop itself ended up illustrating the 'wild west' situation of GAI images in classrooms in the educational sector: all Systime employees had an institution subscription with Midjourney (sanctioned by the IT-department), but not all were familiar with practical use of the tool; the open-source bots we introduced (to demonstrate the possibility of overcoming the pay-with-your-data problem) were not allowed on the employees' computers, so for those exercises, the groups used our computers. In essence, the workshop highlighted that while it can be tempting to only examine and discuss AI tools at a discursive level—debating its limitations in terms of aesthetics, pedagogics, politics, and security, i.e. mainly its formative aspects—it is necessary to also familiarize with its practical confines, i.e. issues related to generative aspects of AI images.

4.4 News media

The fourth workshop took place at Ritzau Scanpix in Copenhagen on October 12th, 2023. Ritzau Scanpix is Denmark's largest news images agency, and the workshop aimed to explore how GAI image practices impact news media. A total of 28 participants, including photographers, image managers, and photo editors from the news industry, as well as two persons from NGOs, participated. Scanpix, being a private company, sells news photography and stock images to various news media outlets and they collaborate with numerous photographers and other image agencies in Denmark and abroad. From the outset of our engagement with Scanpix, they expressed eagerness to collaborate on the workshop, recognizing GAI images as a major challenge to the news media industry. Scanpix provided a relatively neutral space for representatives from competing Danish news media to come together and reflect on the implications of GAI images. The workshop featured a combination of short presentations by us, covering topics such as CLIP,¹ AI "photography" and truth, and press photography's credibility in the context of AI. Additionally, participants engaged

¹ CLIP is a neural network learning visual concepts from natural language supervision. See <https://openai.com/research/clip>.

in group exercises that included individuals from various professions and media houses.

In the first exercise, groups were given prints of two different images—a photograph and a graphical illustration sourced from news media—without any textual context. Using a GAI tool of their choosing, participants recreated these images. This exercise yielded two significant observations: First, stock images were easier to recreate compared to press photographs tied to recent events, hinting at the influence of stock image aesthetics on GAI tools as observed by Meyer (2023: 105). Second, professional photographers demonstrated a high proficiency in prompting for images that closely resembled traditional photography (e.g. “Photo realistic image taken with a Canon R5...”), underscoring the importance of visual domain expertise, particularly in photography for generative visual citizenship.

We also presented the participants with various speculative GAI image cases and asked them under what circumstances they might consider using the specific images. Overall, participants expressed high scepticism about any use of GAI images. This scepticism was evident, as, after more than three hours, only one person admitted to, hypothetically, being willing to consider the possibility of publishing a GAI image prompted from “Danish politician drinking beer in Folketinget” [Folketinget is the Danish parliament], *if* a specific bill had been put forward that drinking beer in the parliament should be allowed, and *if* the image caption clearly stated that this was a GAI image made to illustrate what it might look like in Folketinget in the future, if such a bill was passed.

Despite attempts to provoke alternative reflections on GAI, the participants remained sceptical about the prospect of using GAI. The workshop shed light on an interesting paradox. Press photography traditionally plays a powerful role in shaping collective visual memory, portraying common world and history, and the participants in the workshop perceived their role as crucial gatekeepers, protecting democracy, to be irreconcilable with the use of GAI images based on the general public’s formative visual citizenship.

Interestingly, the only participants who expressed a positive inclination towards using GAI images were the two individuals from an NGO. Their perspective was influenced by anonymity concerns, particularly the potential for generating faces of victims without revealing the identity of real individuals. While credibility of images held utmost importance for news media participants, it played a surprisingly minor role for NGO participants.

The fear of news images losing credibility if created by GAI tools emerged as a central concern for the news media participants. Delving into this fear revealed that the participants considered GAI images to be unreliable, not necessarily due to their visual appearance, but because they lacked a human photographer “on the ground.” As one group stated:

“the value of the ‘real’ photography lies in the human/photographer, who took the photo on the site and can communicate sound, smell, atmosphere, etc., as a witness to what the photo depicts.” Scanpix employees also rejected the idea of using their vast image archive for training their own GAI model, as the resulting GAI images would also lack credibility according to the same logic, emphasizing the all-important role of the photographer as a witness. This implies that Danish press photography will not be incorporated into future training sets, leading it to be excluded from the formative part of our collective visual culture that might be AI generated in the future.

Due to the participants’ strong belief in a clear distinction between credible press photography and unreliable GAI images, various alternatives were suggested to address the perceived problem. These suggestions ranged from developing software to distinguish GAI images from photographs, implementing mandatory watermarks or declarations of “AI,” to industry certification of image agencies guaranteeing “human-made” photography.

To introduce alternatives into the discussion, we proposed that the inclusion of GAI images in the press would not be a revolution but rather part of an evolution—drawing parallels with historical shifts, such as painters being employed as documentarists in war zones in the eighteenth century, the present strong role of (para)texts in establishing the credibility of news photography, the extensive use of photographs as generic stock images, and the integration of AI co-pilot features into cameras and editing tools. However, the discussions reinforced the participants’ inherent logic that only professionals (photographers and journalists) possess credibility and, therefore, can disseminate trustworthy images to the general public, who are perceived as incapable of producing reliable images themselves. Even when news media use photos or videos taken by amateur citizens, the credibility of such images were to be sanctioned by the media, who gathers confirmations, metadata, witness statements, etc.

5 Transversal discussions

The workshops revealed deep disruptions caused by GAI tools in power dynamics, accessibility, and means of production. This provokes reconsiderations of the imagined scale between individual citizens and the global community. Beyond personal interaction, GAI entails engagement with a complex network of actors posing critical questions: what grounds can we use to contemplate this entanglement? And how can we frame its aesthetic dimension? This part of the article extracts and discusses key questions around GAI images, democratization, and visual citizenship that emerged across the workshops and were raised in discussions with

project partners and invited experts during the final seminar at Aarhus University, November 2023 (see Fig. 1).

Our discussions paralleled intense questioning in the fields of media theory—photography theory among others—that has been made to grasp the uniqueness of machine vision and its radical otherness to human perception (Offert and Bell 2021; Mackenzie and Munster 2019; Somaini 2022). However, the dialogue that developed through the workshops and after raised questions that echo more directly with studies that investigate the use and experience of these technologies by an integrative conception on the role of sensibility and perception in techno-social practices. The critical issues emerging from our specific research were access, skills, validation, truth, and diversity and democracy-to-come, all to be further elaborated in the following.

5.1 Access

As stated in the introduction, GAI tools are often touted as instruments for the democratization of artistic production and facilitating participation in an increasingly visually oriented public discourse (visual citizenship). In general, the tech industry often uses the notions of ‘access’ and ‘democratization’ interchangeably (Rao 2020), and, following Rancière, the ability to speak is indeed an important aesthetic feature for democratic (re-)configurations. Throughout the workshops, however, we consistently encountered the contradictions inherent in situating access to GAI image tools within the realm of citizenship, prompting us to continually question how an AI-driven visual culture relates to an open promise of democracy. A significant observation from the workshops is that access to these tools is not universally granted, since they necessitate an understanding of the operational context (e.g. the relationship between Midjourney and Discord in 2023) and often involves payment to access a full/premium version with enhanced capabilities. As such, ‘access,’ in this understanding, involves more than mere *affordability*; it is also about whom these products are designed for, highlighting the inherent biases at play, which has been extensively discussed (see Crawford 2024).

5.2 Skills

The successive waves of automatization and digitization of image production have increased accessibility, but user skills remain a determining factor in creating hierarchies among users. In our workshops, specific skills recurrently proved to be important: individual users proficient in Discord navigation can effectively use GAI for therapeutic purposes, and professional graphic designers effortlessly create book covers with GAI assistance due to their familiarity with visual terminology and digital tools. Similarly, achieving a compelling press “photograph” with GAI hinges on a thorough

understanding of photography. GAI facilitates image production for more people, but rather than levelling out skill differences, it displaces them. Not all prompters are equal. In convergence with Palmer and Sluis (2024) analysis of the photorealistic image generation, the discussions made clear that good prompting requires not only domain specific skills but also skills in writing text. Hence, becoming a skilled prompter requires time, talent and attention. Consequently, the relationship between automation, use, and technical culture is open.

5.3 Validation

Once created, GAI images are validated in different manners which involves different institutional gatekeepers. In our collaboration with the art scene and Scanpix during workshops 1 and 4, participants frequently referred to the history of photography and its promise of democratization. While photography became increasingly available as an instrument of mechanical reproduction with a distribution that reached larger and larger audiences, it transformed into what Ariella Azoulay calls a civil form of apparatus (2014). This contributed to the production of critical representations challenging the dominant power formations (Hariman et al. 2007, 2016). However, artists held ambiguous attitudes in this context. While desiring to harness the democratizing potential of this new medium to challenge power, they also sought to elevate photography into an art form, thereby “de-democratized it” through the celebration of authorship and mastery.” (Sekula 1975; Tagg 1988; Watney 1982).

Similar ambiguities surround the democratic imaginaries on GAI-generated images and the workshops disclosed multiple instances of validation mechanisms. Legal regulations act as gate keeper against using GAI for educational purposes. Established art institutions determine the recognition of images or artefacts as “art” eligible for gallery display. Applications validate user input, ensuring required data or amounts are provided during sign-in. News media editors validate if images accurately depict their intended content. IT departments sanction approved applications for employer use. Fellow users validate GAI images through actions like thumbs up, liking, or reposting. Certification debates surround both AI and non-AI images.

This raises a broader consideration regarding the attribution of image creation to the prompter. As extensively discussed in our sessions, generated images would not exist without a complex network of contributors, including those who, often unknowingly and without consent, formed the training dataset, as well as the actors engaged in the validation process. Consequently, the (re)distribution of authority for validation and approval becomes a crucial aspect to keep in mind when reflecting on the relationship between GAI-generated images and democracy.

5.4 “Truths”

Connected closely to the validation issue, the recurring theme of “truth” emerged prominently throughout our workshops. With GAI-generated images resembling photography, what was left of photography’s indexical relation to the real is vanishing (Magnus 2023). As highlighted by numerous participants, this has consequences for the public trust in information, a pre-requisite for the politically democratic process. Questioning the trustworthiness of information and images is crucial. However, when the very foundation of verification is eroded, there is a risk that individuals opt to believe what immediately aligns with their interests. Existing pillars of the democratic structure, like legacy media, are anticipating difficulties in maintaining their role of arbiter due to the risk of being fooled by GAI based disinformation (see workshop 4). Conversely, GAI image tools provide means for much easier visualizing of other kinds of truths that, to a large extent, have been invisible, e.g. a vulnerable person’s true feelings, or the real aesthetic preferences of amateur artists in online communities. In this regard, basic questions about “whose truth?” and “what truths?” necessitate an understanding of GAI images that goes beyond a “religious” ontology, one that naively dichotomizes images into real and fake categories.

5.5 Diversity and democracy-to-come

GAI image practices cannot be considered in isolation from the platforms hosting and deploying them. While platform capitalism runs on feudal infrastructures (Wark 2019) that erode the very concept of public, the relentless pursuit of innovation, however, creates space for more agile versions of AI generators. This calls for discussions about centralization versus dispersion of GAI image tools. Stable Diffusion, for instance, does not offer the kind of seamlessly integrated experience that one finds in mainstream industry products like OpenAI or Adobe’s Firefly. Instead, it relies on distributed, loosely coupled networks of components and communities, producing decentralized infrastructures that allow for many entry points for communities with various grades of technical knowledge.

Over the project period, the GAI image landscape diversified significantly and different structures of ownership emerged. While the general trend may lean towards extraction and profit (Steyerl 2023), the room for experimenting with alternative alliances expands. This introduces a perspective where the prevailing scale of AI, which traditionally has been centralized, might undergo a shift towards more localized configurations. Speculating on the democratic implications of such platform (re)distributions, we find it important to distinguish between *dispersion*—the fact that more people have access and/or are able to use GAI image

tools—and *diversity* of tools. The latter is relevant because it allows for different ways of viewing, depicting, and conceptualising the world. Concretely, for GAI diversity to enable different views, it is not a matter of just embedding the same models in different platforms and interfaces (for instance, the DALL-E 3 image model has been embedded into Bing and ChatGPT) but of encouraging the development of different models that express diversity in how they were trained and are used. Rather than aiming for the ‘perfect’ general purpose foundation model, a radical democratic approach would promote different models, with different biases, unfolding on different platforms (on unique webpages, in social forums, off-line on user’s PC, embedded in applications like Photoshop, built into hardware chips, etc.), and support agonistic differences.

This opens a research perspective that encourages contemplation of numerous AI image models with cross-sector applications. As we potentially move away from foundational models, education and experimentation with GAI may shift towards producing domain-specific models, which would result in greater technical diversity—for example, Getty Images has trained a model exclusively on their own images. Such development of more diverse domain specific models might prove to have a democratizing effect on access to the technology. However, in this case, democratization would not revolve around access in the sense of offering different interfaces to a few dominating foundation models, but rather around the ability to access training and produce models. Notably, as the means of production are shared to a larger degree, communities of users become able to specialize and partially retrain models.

Here, generative visual citizenship expands beyond image creation to encompass the governance and organization of the infrastructure enabling image generation. In this case, the distinction between formative and generative visual citizenship—which proved analytically useful during our workshop run in 2023—would become less significant, since the two concepts’ value lie in explicitly localizing and situating the training and production of GAI image models. Speculative examples could include news agencies embracing image generation based on their own image archives; people training their own artificial image therapist; or graphic designers creating training sets for their own tools. At that time, the democracy-to-come with AI might seem more perceptible than it does today.

6 Conclusion

With this article, we have aimed to expand the conceptual framework around democracy and visual citizenship through analysis and discussion of four workshops dedicated to exploring the effect of GAI image creation

in specific domains. For this purpose, we have addressed visual citizenship within GAI image practices at two levels: the formative and the generative. On the formative level, the article has elucidated the complex social structure involved in shaping image-generating AI models. This process, from data curation to aesthetic evaluation, reflects an implicit social layer within the development of these models. Meanwhile, on the generative level, intentional creation and distribution of images contribute to public discourse, showcasing the deliberate engagement in visual citizenship. As individuals contribute to the foundational structures of GAI tools, we argue, they simultaneously act as both passive contributors to and active participants, as both constitutive and operative parts of the AI-driven visual culture, in which they exponentially take part. Our transversal discussion of the four workshops underscores this attempt at expanding the imagination of democracy through GAI. As such, the workshop participants, representing worlds of various domains and professional specializations, emphasized the need to recognize the complexities of validation, accessibility, and skillsets entangled in this introduction. To both account for and delimit the entangled nature of the subject, the article positions itself within an aesthetic framework, discussing democratization and AI models from the vantage point of GAI image practices and “visual citizenship.”

In conclusion, the aesthetic critique of this article has not only been helpful in expanding the conceptual framework surrounding AI, democracy and (visual) citizenship, but has also prompted an examination of specific worlds in which democracy is grounded at this juncture. Rather than proposing new policy frameworks or governance guidelines, our explorative workshops have delved into aesthetic and affective aspects of “belonging” to, in part by simultaneously taking part in, a distinct sense of visual “community” that allows for contesting visions of what democracy with AI is and could become.

Acknowledgements The workshops have been planned and conducted with invaluable contribution by: Janet Rafner, Mette-Marie Zacher Sørensen, Lea Laura Michelsen, Benjamin Asger Krog Møller, Fafaya Katrine Mogensen, Kristian Djurhuus, Kirsten Skadhede, Mikkel Svindt Frangård, Kristoffer Ørum, and Simon Obirek. We express our deepest thanks to all participants in the four workshops and to our workshop collaborators: Art Hub Copenhagen, DokkX, Systime, and Ritzau Scanpix. We wish to extend our gratitude to the following persons, who have engaged in extremely helpful discussions: Tobias Dias, Henrik Kaare Nielsen, Mia Vermehren Ladefoged, Cristina Maria Flesher Fominaya, Panos Panayoto, Mads Rosendahl Thomsen, Johan Kjær Christensen, Lise Mark, Klara Johanna Jonsson, and Manuela Navarro. We thank SHAPE – Shaping Digital Citizenship at Aarhus University for crucial seed funding.

Author contributions All authors have contributed collectively and equally to this article. The order of authors is alphabetical according to surname and does not reflect any hierarchical rationale.

Funding Open access funding provided by Aarhus Universitet. Open access funding provided by Aarhus Universitet. The article analyses results from the project ‘Digital Citizenship and AI Image Practices’ which was supported by seed funding from SHAPE—Shaping Digital Citizenship at Aarhus University, Denmark (100,000 DKK). From Aarhus University Research Foundation we received accommodation for our day seminar.

Data availability The data collected in the workshops which supports the findings of this study are not publicly available due to signed data protection agreements with all workshop participants. The data are, however, available from the authors upon reasonable request.

Declarations

Conflict of interest The authors have no financial or proprietary interests in any material discussed in this article, and they have no financial or non-financial affiliations with the workshop collaborators or any other organization or entity with interest in the subject matter or materials discussed in this manuscript.

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