



CASE STUDY

What is a documentarian's duty of care with synthetic representation?



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KEY INSIGHTS

- Synthetic face generation – the use of machine learning to generate a novel human face capable of a full range of expression – often carries risks of misrepresentation and manipulation, as well as unwittingly creating the face of an actual person. At the same time, this technology offers certain benefits, including the ability to de- identify documentary participants without traditional blurring or shadowing techniques, thus preserving expression and emotion.
- The ability to generate human faces can be a time-consuming and expensive process, especially when working with faces of people from backgrounds underrepresented in data sets. Directors must work carefully with technologists to define the parameters of face generation.
- “Digital veiling” is enabling a new visual language that allows filmmakers to work with individuals and communities who put themselves at risk when telling their stories, while de-identifying them through synthetic face generation. Directors may consider involving documentary participants in the process, from working with them to design their own digital masks, to helping them understand that this is never a fully anonymized process.

BACK TO THE EDITING ROOM

After three years of filming and eight months of post production, documentarian Eloïse King was ready to lock picture on her debut film, *The Shadow Scholars*. The film profiles the titular “shadow scholars” of Kenya – highly educated, but underemployed, Kenyans who write academic essays for students worldwide – making up a multi-billion-dollar ghostwriting industry.

Given the sensitivity of her topic, King had taken great care during production to ensure active consent from all participants in the documentary. She was keen that they not tell their story in the shadows, but rather that their work be brought to light, and told through the scholars’ own words rather than through the lens of outside media, which often sensationalized this story.



“Africa is often described ‘in the shadow of’ the West,” King reflected. “As the filmmaker, I didn’t want to act as a mouthpiece for the stories [the participants are] telling. They could be their own best advocates for their skills and talents.”

But then, three days before filming ended, she found herself speaking with legal counsel in both Kenya and the UK. Growing pressure from countries like Australia and the UK was changing the legal landscape for these practices, including criminal and civil penalties.¹ King’s lawyers advised that she anonymize almost all her participants, to reduce the chance that they might suffer repercussions, including social stigmas that could affect their own livelihoods.



One of King’s financiers said she could simply blur out the faces, while keeping the story intact. Some of the scholars in the film were okay having their full identities shown, but King felt it was important to employ the same protections for all the scholars. Another financier suggested King film the writers in silhouette, in literal shadows, so only their outlines were visible.

None of these options seemed viable. “I was conscious of the camera language of shadows that suggests victimization or criminality,” King said.

¹ <https://www.theguardian.com/australia-news/article/2024/aug/01/lures-and-violent-threats-old-school-cheating-still-rampant-at-australian-universities-even-as-ai-rises>

She'd heard of the use of AI-generated faces in *Welcome to Chechnya*, a 2020 documentary by David France that features LGBT individuals in Russia.² France used digital veils, a visual technique that replaces a person's face with a machine-generated face that (1) stays true to their facial expressions and mouth movements and (2) is slightly blurred to indicate for the viewer that the image has been digitally generated. This process helps protect participants while allowing them to otherwise represent themselves and their experiences directly on film. This groundbreaking technique earned Ryan Laney, the film's VFX supervisor, an Award of Commendation for technical achievement in the 95th Academy Awards.

Artificial intelligence tools can be used for detecting faces, identifying faces, generating new faces and bringing those faces to life with different emotions, angles, and movements. However, the training data underlying these technologies has historically been rife with biases that reflect limited data sets for people with darker skin tones. This presented a unique problem for the filmmakers as the documentary participants were primarily of East African descent. As Dr. Joy Buolamwini, an AI scholar, has noted, "I would look into the data sets and I would go through and count: How many light-skinned people, how many dark-skinned people? How many women, how many men? And so forth. And these were some of the really important data sets in our field. They could be 70% men, over 80% lighter skinned individuals. And these sorts of data sets could be considered gold standards."³

² <https://www.documentary.org/column/digital-disguise-welcome-chechnyas-face-veil-game-changer-identity-protection>

³ <https://www.npr.org/2023/11/28/1215529902/unmasking-ai-facial-recognition-technology-joy-buolamwini>

In addition to the issues raised by technological biases, the filmmakers had other challenges to overcome. *Shadow Scholars* was shot almost entirely verité, meaning a wide variety of angles and lighting conditions were used that made digital veils complex to apply. Also, there was the question of cost: to use AI, one provider quoted King with €4,000 per person and €2,000 per minute of footage, far outside what she had allocated. This meant that it could cost as much as €28,000 to replace 10 minutes of footage for two people.

With her budget spent and options limited, King sat down and cried. Then she re-watched her 200 hours of footage, and rewrote the whole film. She was determined to find a solution.

THE ART OF DIRECTING AI

King's first course of action was to limit the amount of footage that would require AI-generated faces. Her original vision of the film was to create a multi-character story arc, allowing each individual's story to shine in equal measure. With her re-write, she focused on British Kenyan sociologist and Oxford professor Patricia Kingori, whose academic research formed the foundation of much of King's film. Because Prof. Kingori's face didn't need to be altered, she could serve as the anchor protagonist, guiding audiences through the world of shadow scholars.

At the same time, King saw she could rely on voiceovers and isolated and non-identifiable body parts, like hands and feet, or the backs of heads, including scenes where Kingori facilitated a group conversation with the writers. Already coming in with a considerable public profile and strong academic credentials, Professor Kingori is a charismatic presence. In combination with these conventional editing decisions, King was able to achieve a good amount of non-identification already—not quite anonymization, because friends, family or loved ones might be able to recognize them, but non-identified for the general public.



Then came the machine learning technology, which was one small part of a larger process that also used conventional visual effects techniques. King had reached out to Ryan Laney, the technologist who worked on the faces for *Welcome to Chechnya*. Laney describes his digital veiling technique as a combination of machine learning and traditional visual effects. He created it particularly for journalists to help them tell authentic stories with emotional resonance, ensuring a human connection with people who cannot be seen on camera.⁴ It's a particularly laborious process, and, because of the existing data sets, it has historically been better suited for lighter-skinned individuals, though, as Laney noted in an interview, the technology has improved significantly.

⁴ <https://ryanlaney.com/>

After their initial call, Laney reached back out to King. "Look," he said, "it bothers me that this is something that 'can't be done.' As a result, I want to find a way to make this possible."

In the film, the digital faces are noticeably different from the original photography, an intentional decision to visually communicate the modified area. Laney always starts each project with a conversation about the required scope of de-identification needed, and King and Laney decided on a subtle visual blur, a digital veil of sorts, over the faces they replaced. This created an effect that reminded the audience there was something between them and the protagonists.

"It took me some convincing to decide that the blur would be the right idea," King noted. "I had been so used to the footage as it was, with real faces. One of the biggest challenges where we went back and forth a lot was what it meant ethically to obscure their faces. These are people already hidden from view. But if you're honest early on with the audience, the human mind lets you settle into the story."

Laney spent time helping King and her team understand the process, but even then, it required a lot of trust. She'd export all the scenes to Laney, and the output would come months later. "There's a degree to which you abdicate power totally to the technologist," she explained.

"We're not letting the machine make any decisions," Laney noted in an interview for this case study. Instead, the machine learning helps them develop the faces, which they then apply manually to the footage.

Laney provided digital alternatives for faces, creating a deck that King could review and offer feedback for. “There’s this idea that any representation is good enough, but I didn’t want just any Black face,” King recalled. “I needed them to look specifically East African. These people will go on in the public imagination to represent real Kenyan people.”

“Whatever we’re working on, we want to make sure it’s properly representative to the region,” Laney explained. “And luckily now, there’s some data that will lead us in the right direction.” Machine learning libraries like Tensorflow and Pytorch are used to synchronize the movements between the synthetic data and the original faces, a process that captures subtle expressions and creates a filter that acts more like digital makeup than a motion capture re-creation. In a process he calls digital casting, he creates potential alternate IDs, paying attention to details like bone features from the region and making adjustments to ensure the person looks unique as a synthetic double.

At the same time, he had to ensure they were not easily identifiable. “The typical reveal of a person’s identity comes from known location clues, favorite clothes, jewelry, and tattoos. We’ve de-identified locations and clothing also, and have added and removed tattoos. It is a higher bar and requires more time and attention, but that level is possible when required.”

Even with a deck they agreed to, the process of refinement sometimes needed to be done frame by frame. Laney gave King a rubric for giving feedback, using a rating system of Excellent, Good, Good Enough, and Not Suitable.

“Kenya is a very ethnically diverse place,” King recalled, and she spent extra time with Laney to ensure the digital veils looked authentic to people’s features in the region. At one point, one individual looked South Asian because their hair appeared straight instead of curly. Rather than a limitation of the data set, Laney figured out that he had implemented the code incorrectly, and was able to make a correction.



These process images of a male individual's digital veil show lighter skin and straighter hair textures before improvements were made for Afro-textured hair and deeper skin tones.

Each time they ran the tool for revisions, the team chose to consider both the economic cost and the effects on the environment. According to one estimate, generating a 5-second video with AI can require as much energy as running a microwave for over an hour.⁵ To mitigate this cost, Laney actually runs his models locally, rather than on data centers, and he uses a small filter network to reduce inference costs and thus reduce their energy impact. Even then, it is a time-consuming process, with humans firmly in the loop, and Laney donated extra time to ensure success.

⁵ <https://www.technologyreview.com/2025/05/20/1116327/ai-energy-usage-climate-footprint-big-tech/>

PARTICIPANT INVOLVEMENT

While working on the visual language of the film, King also started working with her protagonists. “Kudos to the scholars,” she noted. “They gave me a huge amount of trust over the three years of filming.” She’d already developed a very consentful process, holding town halls with her participants to talk about issues that arose and address any concerns.



A participant with a digital veil applied.

With the new direction for the film, she went back to the participants to explain the process. The first step was explaining the technology’s capabilities. It could offer non-identification but not anonymity — people who knew them would be able to identify them based on other context cues present in the film, such as clothing, gait, and the larger setting.

She also showed them the deck of digital disguises so they could give feedback on how they were represented. While some found the process uninteresting, others found it funny and asked to change details to match their personal taste (one participant, for example, didn’t like the original set of glasses chosen for his digital face).

King also invited key participants to view the whole film first, so they could see the overall tone without the digital veils. This was followed by the version with faces altered. While she and her team opted not to use synthetic voices, they worked to alter the pitches of participants’ voices using conventional audio editing techniques, to provide some additional de-identification measures.

And throughout, she practiced a rolling consent process, ensuring they could sign release forms with major updates. “My feeling is that if you build trust and deliver on promises you make,” she said, “at each point they will re-sign and not feel like they’re being tricked at a later stage.”

King was also committed to transparency with the audience, and started the film with a simple card saying: “To protect the identities of the scholars and their families we have used aliases and AI-generated ‘digital disguises.’”

“My number one duty of care was to protect them and their truthful testimony,” King reflected. The rise of LLMs has further impacted the scholars, as students turn to these tools to generate entire essays or first drafts of essays that they then ask the scholars to revise.⁶ “These scholars’ lives were altered forever economically by LLMs, and I’m thinking regularly about how technology can be given back to people from whom it takes so much.”

⁶ <https://www.theguardian.com/education/2025/sep/14/kenya-shadow-scholars-paid-to-write-essays-for-uk-students>

APA EXPERTS RESPOND

How does King's use of AI reflect a human-centered approach to filmmaking?

At each step of the filmmaking process, King was exceptionally intentional in her approach, always centering care for her film's participants. Rather than considering this to be a duty that ends once the filming is complete, King understood that the impact of the documentary on her participants includes what takes place in the edit room, and beyond. She put this idea into practice by allowing her participants to offer their consent on a rolling basis, rather than as a one-time agreement which would sign away their right to reassess as the process and their portrayal evolved – as is standard. Rolling consent is fairly rare because it presents a risk to the filmmaker – since it could potentially extend the production process, add to the budget, etc. Her methodology underscores King's commitment to being transparent and collaborative, and centering the experience of her human participants.

King was also thorough in making sure that the creative aspects of the film mirrored the intentionality she was giving to the process. Once she realized she needed to anonymize her participants, she had to reconsider every aspect of the production. This required rearranging her edit, and rethinking the visual language of the film, in order to accommodate the new de-identification techniques. She also recognized the added layer of responsibility involved in using genAI – an imperfect tool – to represent people who have been historically marginalized. In order to not replicate the erasure of these scholars through her own process, King had to re-envision what that process needed to look like. As she said, "These people will go on in the public imagination to represent real Kenyan people."

All of these considerations required a significant commitment of additional time and resources. As with conventional post processes, using AI in these groundbreaking ways required King to remain closely involved in each step.