

The Digital Face and Deepfakes on Screen

Lisa Bode 

University of Queensland, Australia

Dominic Lees 

University of Western England, UK

Dan Golding 

Swinburne University of Technology, Australia

Convergence: The International
Journal of Research into
New Media Technologies
2021, Vol. 27(4) 849–854
© The Author(s) 2021
Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/13548565211034044
journals.sagepub.com/home/con



Keywords

Deepfakes, media manipulation, YouTube, bilibili, digital de-aging, post-racial, face swap, visual effects

Though long fundamental to portraiture, cinema, television, and surveillance, the human face is emerging as a central object of critical ambivalence in the digital era. Tensions across the face's many functions as biological fact and image, as social identity marker, as interface between private self and public space, as site of self-revelation, as mask, and as commodity, are increasingly troubled. On the one hand, the face's biometric coordinates act as passwords for devices, and identity markers to track our activities and movements through security checkpoints and shopping malls. On the other, the face as image and its intimate, inviolable connection to the human subject is becoming more and more fluid and unstable, due to the rise of digital imaging and manipulation technologies. The transformative and transfiguring powers of makeup and masks have long been with us, but on our screens, both large and intimate, the face can now be filtered, copied, iterated, de-aged, deepfaked, and swapped, with or without our permission. The digital face is now a central figure and a key question for everything from big budget Hollywood blockbusters and the porn industry to mundane face apps for the idly curious. De-aged actors with million-dollar digital faces populate our cinema screens, legal battles are waged over non-consensual face replacement, while video calls are disrupted by pranksters with novelty face filters.

Since journalist Samantha Cole (2017) drew our attention to the ease and speed with which digital likenesses could be created, and revealed nonconsensual celebrity face swap porn in the grubbier corners of the internet, deepfakes have accrued much public concern. Jordan Peele's deepfake Barack Obama PSA (2018) spawned a multitude of opinion pieces about how the specter of political deepfakes threaten democracy and further undermine already shaky notions of truth and

Corresponding author:

Lisa Bode, Department of Communication and Arts, University of Queensland, Chancellor Place, St Lucia 4072, Australia.
Email: l.bode@uq.edu.au

authenticity in an era of fake news (see [Yadlin-Segal and Oppenheim, 2020](#) for an overview of this discourse). The latest “most convincing yet” deepfakes make headlines, inviting both wonder and nervousness. At the same time, friends and relatives are downloading Reface to their phones, and with one selfie, recasting themselves as Wonder Woman or Neo in *The Matrix*, then posting the results on Facebook for a laugh. The development of deepfakes represents a democratisation of access to sophisticated techniques of digital image manipulation – techniques previously the exclusive domain of high-end visual effects postproduction houses working for Hollywood studios.

There has, rightly, been an explosion of deepfake research across disciplines. Scholars across law, journalism, and performance studies have been quick to examine deepfakes within larger contexts of ‘truth decay’ ([Chesney and Citron, 2019](#)); ‘fake news’ and the erosion of trust ([Vaccari and Chadwick, 2020](#)); and ‘post-fact’ performance ([Fletcher, 2018](#)). In porn studies, deepfakes are considered in relation to ‘designer porn’ ([Kikerpill, 2020](#)), misogynist online communities ([Brown and Fleming, 2020](#); [Newton and Stanfill, 2020](#)) and gendered abuse ([Maddocks, 2020](#)). AI researchers focus on developing better deep learning software for the detection and flagging of deepfakes ([Rössler et al., 2019](#); [Tolosana et al., 2020](#)). Philosophers debate our ethical responses to exploitative deepfake images ([Öhman, 2020](#)), while legal and media policy scholars think through pathways to regulation and the development of platform policies that may minimise harm ([Kirkengast, 2020](#); [Meskys et al., 2020](#); [Perrot and Mostert, 2020](#); [Van der Nagel, 2020](#)). Not all scholarship focuses on the negative, as we see a few wider discussions considering potential benefits for public institutions and society ([Silby and Hartzog, 2019](#)). In business studies ([Westerlund, 2019](#)) and advertising ([Kietzmann et al., 2020](#)) there is interest in exploring opportunities the technology presents for entertainment media, e-commerce and branding.

This special issue contributes to this growing body of scholarship with a selection of essays that explore deepfakes and digital faces as culturally, technologically, institutionally, and historically situated phenomena. As a number of film, media, communication, and legal scholars point out, the social, intermedial, and institutional contexts of deepfakes and digital faces are vital to understanding their deeper and broader implications, their meanings and possibilities ([Burkell and Gosse, 2019](#); [Paris and Donovan, 2019](#)). So too, our understanding of deepfakes will deepen as we explore their historical continuities and points of rupture with older practices of media manipulation, technological mediation, fragmentation, and commodification of human images.

It is worth remembering, for example, that in 1994 the first International Artists Rights Symposium was convened in response to the then emerging possibilities and threats of digital image manipulation and media content distribution. The ambivalent response of Hollywood to the digital potential was voiced by Tom Cruise, who declared that “It is important not to restrict the creative aspect of what digital can do and keep that going,” but “I do not want anybody else playing the roles I play, and I do not want to play anybody else’s roles” ([Parisi, 1994](#)). At the heart of his anxiety was a concern with the creative integrity of his screen performances, and the right to maintain control over his own likeness. In one sense it might seem now that Cruise’s disquiet with the implications of this technology was prescient. In another it raises questions about the very nature of the star body, performance, film meaning, and what would it look like to digitally recast those roles – just one of the many questions that deepfakes invite us to explore.

The articles in this special issue, then, bring together perspectives on the digital face and deepfakes, which, while from a range of interconnected disciplines, are all in some way concerned with what digital faces and/or deepfakes as objects and practices do to the relationship between public personae and their image. How are these images and practices used in different contexts and for what purposes; how are they engaged with by viewers and online communities; what problems or opportunities do they suggest; and what meanings or cultural fault-lines do they amplify or set in motion?

Dan Golding, Allan Cameron, and Mihaela Mihailova examine the digital face within longer standing institutional contexts and practices. Golding's essay 'The Memory of Perfection,' focuses on the digitally de-aged and uncannily youthful digital star faces of blockbuster franchise cinema. He mines the functions of these faces in the seriality of what he calls the 'legacy film,' tracing how they spectacularise nostalgia and act as stylistic lynchpins that authenticate links between contemporary cinema and its forebears. In 'Dimensions of the digital face,' Cameron examines the oscillation between surface recognition and material depth of digital faces, connecting this to earlier theoretical writings about the face in cinema. With a particular focus on Steven Spielberg's *Ready Player One* (2018) he unpacks the tensions in the ways that the characters' VR avatar faces act as both interfaces and appearances in the film's futuristic game world – a world which recycles pop culture imagery in ways that also evoke dimensionality, surface, and depth. In 'To Dally with Dali' meanwhile, Mihailova examines recent deepfakes within gallery and art museum contexts – institutions which have long innovated with emerging media technologies for display, immersion, and interactivity to engage audiences in wider media ecologies, while also bestowing cultural legitimacy on new media forms.

Moving towards the more vernacular end of the digital face spectrum, Christopher Holliday, Lisa Bode, and Gabriele de Seta focus on different online deepfake and face swap video practices, circulation, and reception contexts. In 'Rewriting the Stars,' Holliday draws connections from established industry practices and attendant anxieties to deepfakes, and surveys a cross-section of deepfake videos in which stars' faces and bodies are recombined, composited, and tweaked. He attends to the online context of deepfakes, the political and cinephilic contours of their moment, and their implications for the coherence and meaning of star images and the cultural politics of identity. For Bode in 'Deepfaking Keanu,' the contexts of audience reception of deepfakes are central to understanding how viewers make sense of these manipulated digital images. With a case study focusing on a deepfake video on YouTube channel Corridor, the interactions of its audience, and the video's subsequent cross-platform circulation, Bode's detailed qualitative analysis of online comments illuminates the importance of context in ongoing debates about fakery and authenticity, as well as the pedagogical intentions of participants in what she calls 'platform VFX'. Also recognising the importance of attending to the specificities of cultural and online contexts, and drilling down into subsets of deepfakes, de Seta's 'Huanlian, or Changing Faces' provides some welcome insights into synthetic media on Chinese apps like ZAO and social media platforms like Bilibili. De Seta takes us through some of the cultural and regulatory responses to such content, and the features of the platforms on which 'huanlian' such as animated celebrity portraits and face swap videos circulate. This article provides us with a fascinating view of uses, reception and 'cabbagification' (or domesticisation) of synthetic and manipulated faces in the Chinese context.

Dominic Lees, Tom Bashford-Rogers and Marcus Keppel-Palmer reflect upon the dilemmas (legal and ethical, technological, and creative) of using deep fake technologies in period drama production, through a discussion of their interdisciplinary practice-research *Virtual Maggie* project which produced a deepfake of the late UK prime minister, Margaret Thatcher. As they point out, this technology promises to democratise the creative possibilities of face replacement, once the domain only of elite high-budget filmmaking. However, even once the technology issues are solved, this access brings creative, legal, and ethical dilemmas around manipulation of performance and likeness which practitioners need to consider. Further on the legal questions around deepfake production, Mathilde Pavis takes us through the technological foundations of deepfakes, and the image sources they draw from, and delineates the interests of the different stakeholders for synthesised performances. She builds a nuanced and original case for the reform of performers' rights as a solution for a more balanced regulatory mechanism for deepfakes.

Finally, on the crucial topic of what digital faces and deepfake face swaps do more broadly, and what they make visible or reveal by their invisibility, Tanine Allison and Drew Ayers focus on questions of race and whiteness. Allison provides a deep and rich analysis of the racialized dimensions of Will Smith's digital face created for Ang Lee's *Gemini Man* (2019). She contextualises Will Smith's digital melanin within a longer history of racial representation and bias in film, animation, and filmmaking technologies, as well as within the broader context of algorithmic faciality and deepfakes. Along the way Allison examines tensions between Smith's "post-racial" persona, and the ways that blackness has often been deployed as a "humanizing" element for new screen technologies. In 'The Limits of Transactional identity', Ayers examines the burgeoning practice of playful face swap videos on YouTube among a loose community of creators who span VFX industry workers and hobbyists. Asking whose faces are most present and whose are most absent in these videos and to what ends, Ayers notes the dominance of videos swapping the faces and bodies of white hard body male action stars, demonstrating their interchangeability. While gender face swaps are fairly common, he argues that face swaps seem to be markedly less prevalent across racial lines, suggesting the persistence of certain limits and boundaries of some identity categories over others.

With this issue we seek to deepen the growing body of work on the digital face and deepfakes in the humanities and social sciences. We aim to thicken the connections among different approaches to this important area of research, and to provide bases for future thinking about the challenges, possibilities, and implications of digital faces. It is already apparent that these technologies can be used to widen the reach and variety of cultural participation. Deepfakes can provide a mask of expressive protection for persecuted minorities, as we have seen with the composite faces created for interview subjects in recent HBO documentary about persecuted LGBTQ folk in *Welcome to Chechnya*. Deepface and Faceswap apps can be used by activists to reimagine representational and screen labour norms, as William Yu has shown in his video campaigns for increased opportunities for Asian American actors in lead roles. By "re-casting" films like *Captain America* and *The Martian* with John Cho, Steven Yuen and Constance Wu, he hopes to make the commercial viability of Asian star faces more widely apparent and normative.

We are just 4 years into the era of deepfakes, but it is nevertheless important to speculate broadly on the future of this widespread form of digital manipulation. This is a moving target, as is much of the material this special issue confronts. Ironically, given his misgivings all the way back in 1994 about digital image manipulation, Tom Cruise has recently become the target of a series of high-profile creative deepfake videos that have proliferated on TikTok and YouTube. Created by Chris Ume, in collaboration with Tom Cruise impersonator Miles Fisher, these videos are slick and convincing, but also take considerable labour, time, and skill, and highlight the way that the discourse surrounding deepfakes has not yet caught up to the reality of their creation (Vincent, 2021). Indeed, even the nomenclature is not yet quite settled: is *deepfake* one word or two? (For this issue, we have opted for one.) Deepfakes have had a creative trajectory that began with misogynistic face replacement in pornography, but then cascaded into a public realm of playful experimentation, where its uses have proliferated. They are made possible by the dramatic developments in the coding for machine learning, and the enthusiastic sharing of software on open source platforms. There are strong democratic principles behind the free circulation of this technology, but unlike the development of the worldwide web, we have not seen idealistic preachers broadly emerging to argue for the common good of freely-available image manipulation processing.

If the dominant responses to deepfakes have been motivated by fear, with research focused on means of detection and regulation, are we witnessing a brief period of open access and usage, which will be closed down – if this is feasible – by political authorities? Or will this reactionary instinct be

tempered by business interests seeking to exploit the many commercial opportunities arising from deepfakes? This special issue seeks to widen exactly these points of discussion into creative, political, media and cultural perspectives ahead of the regulatory responses that are already gathering pace.

ORCID iDs

Lisa Bode  <https://orcid.org/0000-0003-4972-5750>

Dominic Lees  <https://orcid.org/0000-0002-3787-3740>

Dan Golding  <https://orcid.org/0000-0003-3687-5485>

References

- Brown W and Fleming DH (2020) Celebrity headjobs: or oozing squid sex with a framed-up leaky {Schar-JØ}. *Porn Studies* 7: 357–366.4
- Burkell J and Gosse C (2019) Nothing new here: emphasising the social and cultural context of deepfakes. *First Monday* 24(12). doi: [10.5210/fm.v24i12.10287](https://doi.org/10.5210/fm.v24i12.10287).
- Chesney B and Citron D (2019) Deep Fakes: A Looming Challenge for Privacy, Democracy, and National Security. *107 California Law Review* 1753. doi: [10.2139/ssrn.3213954](https://doi.org/10.2139/ssrn.3213954).
- Cole S (2017) AI-assisted fake porn is here and we're all fucked. *Motherboard* (tech by Vice) December 12 <https://www.vice.com/en/article/gydydm/gal-gadot-fake-ai-porn>
- Fletcher J (2018) Deepfakes, artificial intelligence, and some kind of dystopia: the new faces of online post-fact performance. *Theatre Journal* 70: 4.
- Kietzmann J, Mills AJ, and Plangger K (2020) Deepfakes: perspectives on the future 'reality' of advertising and branding. *International Journal of Advertising* 40(3): 473–485. DOI: [10.1080/02650487.2020.1834211](https://doi.org/10.1080/02650487.2020.1834211).
- Kikerpill K (2020) Choose your stars and studs: the rise of deepfake designer porn. *Porn Studies* 7(4): 352–356.
- Kirchengast T (2020) Deepfakes and image manipulation: criminalisation and control. *Information & Communications Technology Law* 29(3): 308–323.
- Maddocks S (2020) 'A deepfake porn plot intended to silence me': exploring continuities between pornographic and political deep fakes. *Porn Studies* 7(4): 415–423.
- Meskys E, Liaudanskas A, Kalpokiene J, et al. (2020) Regulating deep fakes: legal and ethical considerations. *Journal of Intellectual Property Law & Practice* 15(1): 24–31.
- Newton OB and Stanfill M (2020) My NSFW video has partial occlusion: Deepfakes and the technological production of non-consensual pornography. *Porn Studies* 7(4): 398–414.
- Öhman C (2020) Introducing the pervert's dilemma: a contribution to the critique of Deepfake Pornography. *Ethics and Information Technology* 22: 133–140. DOI: [10.1007/s10676-019-09522-1](https://doi.org/10.1007/s10676-019-09522-1).
- Paris B and Donovan J (2019) Deepfakes and cheap fakes: the manipulation of audio and visual evidence. *Data & Society*. September 18. <https://datasociety.net/library/deepfakes-and-cheap-fakes/>
- Parisi P (1994) Digital cruise control. *Wired*. September 1 1994. <https://www.wired.com/1994/09/digital-cruise-control/>
- Perrot E and Mostert F (2020) Fake it till you make it: an examination of the US and English approaches to persona protection as applied to Deepfakes on social media. *Journal of Intellectual Property Law & Practice* 15(1): 32–39.
- Rössler A, Cozzolino D, Verdoliva L, et al. (2019) *FaceForensics++: Learning to Detect Manipulated Facial Images* *arXiv:1901.08971v3*.
- Silbey J and Hartzog W (2019) The upside of Deepfakes. *Maryland Law Review* 78(4): 960–966.
- Tolosana R, Vera-Rodriguez R, Fierrez J, et al. (2020) Deepfakes and beyond: a survey of face manipulation and fake detection. *Information Fusion* 64: 131–148.

- Westerlund M (2019) The emergence of deepfake technology: a review. *Technology Information Management Review* 9: 11.
- Vaccari C and Chadwick A (2020) Deepfakes and disinformation: exploring the impact of synthetic political video on deception, uncertainty, and trust in news. *Social Media + Society* 6(1): 1–19.
- van der nagel E (2020) Verifying images: deepfakes, control, and consent. *Porn Studies* 7: 424–429.4
- Vincent J (2021) Tom Cruise deepfake creator says public shouldn't be worried about 'one-click fakes'. *The Verge*. March 5 2021 <https://www.theverge.com/2021/3/5/22314980/tom-cruise-deepfake-tiktok-videos-ai-impersonator-chris-ume-miles-fisher>
- Yadlin-Segal A and Oppenheim Y (2020) Whose dystopia is it anyway? Deepfakes and social media regulation. *Convergence: The International Journal of Research Into New Media Technologies* 27(1): 1–16. DOI: [10.1177/1354856520923963](https://doi.org/10.1177/1354856520923963).