

Philosophy of Photography

Volume 15 Numbers 1 & 2

© 2024 Intellect Ltd Editorial. English language. [https://doi.org/10.1386/pop\\_00088\\_2](https://doi.org/10.1386/pop_00088_2)

Published Online June 2024

---

## EDITORIAL

**THEOPISTI STYLIANOU-LAMBERT**

Cyprus University of Technology and CYENS Centre of Excellence

**KLEANTHIS NEOKLEOUS**

CYENS Centre of Excellence

**ANDREW FISHER**

FAMU, Prague

# Expanded visualities: Photography and emerging technologies

### Keywords

contemporary  
photography

### Abstract

*This editorial introduces the Special Double Issue of Philosophy of Photography (15.1&2), which focuses on the impact of novel technologies on photography and through this on our understanding of the*

Delivered by Intellect to:

Guest (guest)

IP: 62.228.54.232

On: Mon, 01 Jul 2024 13:43:12

*contemporary world. It sketches the contents of the featured articles and articulates some of the technical developments, concerns and questions that inform and link them.*

## Introduction

This Special Double Issue of *Philosophy of Photography* explores the wide range of visual and communication technologies that are generally referred to under the expansive concept of ‘emerging technologies’. The issue stems originally from the *International Conference of Photography and Theory – ‘Expanded visualities: Photography and emerging technologies’* – held in Nicosia, Cyprus, in November 2022 (ICPT2022), and hosted at the CYENS Centre of Excellence; a Cypriot research and innovation centre focusing on new technologies. The conference addressed issues arising from the ways in which emerging technologies, such as 360 photography and video, artificial intelligence, machine-made images, augmented reality, satellites and drones, have transformed photographic practices and have expanded contemporary visualities. It set out to explore the urgent sociopolitical, aesthetic, and ethical questions stemming from the uses of such technologies.

The conference organizers established a collaboration with *Philosophy of Photography* to expand upon the conference presentations and to further address the issues raised during the event. The resulting Special Double Issue presents the writing and artwork of a wide range of international authors, whose contributions investigate the possibilities of technologies such as photogrammetry and 360 photography and video (Altaratz, Bennett, Boshi, Kirwan and Pruciak), AI-generated images (Gortázar, Reinhuber and Sunde), NeFR algorithms (Burrell), facial recognition (Charvát), 3D/4D ultrasound technologies (Fahd) as well as the development of novel terminologies that emerge alongside and frame these developments (Reinhuber and Cullen).

## Expanding the photographic frame: Towards multi-perspective, cloud-like spaces

Among the most obvious and defining characteristics of photography are its framing operations. With technologies such as 360 photography and video, photogrammetry and Neural Radiance Field (NeRF) algorithms, the familiar two-dimensional photographic frame – with its single point of view, monocular perspective and temporal singularity – has expanded to incorporate multi-perspectival, three-dimensional spaces and more expansive temporalities. Increasingly, as the photographic frame is expanding, so audiences are asked to actively navigate the photographic spaces with which they are confronted. Artists have not only found novel tools with which to experiment, they are also faced with conceptual and critical problems that stem from these technologies and that need to be interrogated. In terms of both reception and production, conventions of creativity are, once again, thrown into disarray by technical imagery. Activities that might previously have been defined as

machine image  
computational image  
artificial intelligence (AI)  
virtual reality (VR)  
augmented reality (AR)  
facial recognition  
artistic practices

Delivered by Intellect to:

Guest (guest)

IP: 62.228.54.232

On: Mon, 01 Jul 2024 13:43:12

artistic labour may now be allocated to machines – as has often recently been remarked – but this shift demands the development of new critical skills and modes of practice that are able to interrogate what creativity means in a context that, once again, profoundly challenges intrinsic assumptions as to where exactly human value lies.

In this issue, Roi Boshi reflects on such challenges as they relate to photography's ontological and epistemological status. He analyses two projects from the research group Forensic Architecture that use photogrammetry and image-data clouds to contest Israeli state use of images, or their absence in justifying military violence. On these bases, Boshi argues for the need to retheorise the spatial dimension of photography as a 'cloud' instead of a flat and stably framed image. Similarly, Helen Kirwan and Simon Pruciak investigate the concept of framing through a discussion of two of their road trip art projects – one using traditional video and the other 360 video. Doron Altaratz approaches related issues from the point of view of museum institutions; examining specific uses of interactive virtual tours (360 views) and Structure from Motion imagery (photogrammetry). Altaratz argues that the technological affordances of these interactive modes of photography challenge conventionally accepted associations between photographer, viewer and image.

In her photowork, *'vegetal/digital: Photogrammetry point-clouds of Australian flowers'*, Alison Bennett presents a thoughtful response to the period of lockdown during the COVID-19 pandemic, which establishes a dialogue between ecological and technological forms. Specifically, Bennett uses photogrammetry and point-cloud models to capture images of flowers she encountered while allowed outside for a period each day. Taking advantage of the photographic frame's expansiveness and the multi-perspectival spaces enabled by data constructs, the work can take different forms and can be shown as a multichannel video, in augmented reality, web XR, as a gestural interactive work or in the form of still images as reproduced here. Drawing on similar possibilities, Andrew Burrell's article examines Neural Radiance Field (NeRF) generated images and their relationship to photography with a view to understand their potential for photographers. Paying attention to the limits and intrinsic failures of this image form, Burrell argues, grants novel insight into the phenomenology of vision. In her contribution, Cherine Fahd explores how 3D and 4D ultrasound imaging technologies expand the family album to include networked sharing of images of the foetus before its birth. This explodes the generic framing operations of domestic photography and provokes re-examination of its often discussed social and political dimensions.

### Reinventing the frame: AI-generated images

Recent years have seen an explosion in the field of photo-realistic AI productions. The technology behind AI has been around for a few decades. But the emergence of publicly available AI generative programmes in 2021 – such as Open-AI's Dall-E, Midjourney or Stable Diffusion – have made

Delivered by Intellect to:

Guest (guest)

IP: 62.228.54.232

On: Mon, 01 Jul 2024 13:43:12

it extremely easy for image creators to produce photorealistic images in a few seconds, without any need for photographic equipment or knowledge of coding. Though its technological bases are entirely novel, one finds echoes in this emergent photographic culture of previous photographic revolutions, such as that inaugurated by the Kodak camera at the end of the nineteenth century. Yet another transformation of the visual milieu, and yet another set of challenges to who can access the technologies of its visualization is well underway.

Emilie Sunde's article examines text-to-image models and their levels of (photo)realism. Complicating the often simplistic discourse on photorealism, Sunde introduces the terms 'photographic realism' and 'computational photorealism', and offers a perspective on the aesthetic evolution of astronomical photography, while critically examining their manifestation in AI-generated images. Paula Gortázar analyses key ethical, legal and creative questions arising from the way AI-generated images are produced and, on these bases, identifies alternative models for their production than those currently used by mainstream AI platforms. In his article, Martin Charvát develops a critical media archaeology of facial recognition technologies, arguing that computer vision software is the latest stage in a process of instrumentalization that has reshaped the concept of the human face, both as an individual identity marker and as a canvas for the construction of social types, entailing the eventual erasure of the values of the human face.

## Is it photography?

New technological tools have expanded photographic and artistic processes. They have also reoriented and intensified familiar theoretical debates regarding the ontological character of photography, the authorship of technologically aided images and the ethics of their making and use. Many of the articles in this Special Issue raise questions about what constitutes a photographic product. Is a point-cloud photographic? Can AI-generated images be considered photographic? And if yes, in what ways and under what conditions? The contributions to this issue present different points of view on these questions. But all would seem to agree that there is a need for new terminological distinctions to be made. The language of technological visualization needs to enable and not to hinder debate about the breaks and continuities between computational images and earlier forms of photography.

The issue includes two contributions to our regular encyclopaedia section which sets out specifically to address this need. Elke Reinhuber's entry suggests 'synthography' as a new term for today's photo-realistic images, whether made 'using computer algorithms and models, based on real photographs, in camera, through post-production or generated from datasets'. Interestingly, Reinhuber's analyses of synthography reaches back into the history of photography to complicate its relation to photography and thus to ward off any sense of historical determinism in the language used to describe technological change. Frances Cullen's encyclopaedia entry examines the term 'analog(ue)'

Delivered by Intellect to:

Guest (guest)

IP: 62.228.54.232

On: Mon, 01 Jul 2024 13:43:12

as used in the context of photography and, in a sense, performs a similar critical complication of historical reference. While analog(ue) is usually used to denote pre-digital photography, Cullen shows it to be a term of the digital age, charting the emergence of this usage at the end of the twentieth century to meet a need created by developments in computer science and the wider digital era.

As we write this editorial, we cannot help but be aware that the forms and practices discussed in this issue are continuing to develop rapidly. Ongoing technological innovations are making AI-generated images yet more realistic and easy to access. Software and specialized machines are improving the ease and quality of photogrammetry. Drones are becoming better and cheaper. Further widespread adoption of facial recognition technologies is increasingly used to identify individuals in more and different contexts. The list could go on. At the same time, regulators are trying desperately to catch up with the ethical and sociopolitical implications of new technologies and impose regulations and checks. Their efforts are, as yet, slower and less critically acute than many artistic and activist interventions. Within this evolving landscape of expanded photography, this Special Double Issue can only attempt to pinpoint a selection of what we take to be trenchant and timely reflections on the expanded visualities that are reshaping how we think of the relationships between photography and emerging technologies.

### Contributor details

Theopisti Stylianou-Lambert is an artist/researcher. Her artistic and research interests include museum studies and visual sociology with an emphasis on photography and new technologies. Theopisti has published widely on museums and photography, and is the recipient of several scholarships and awards including a Smithsonian Fellowship in Museum Practice (United States) and an Arts and Humanities Research Council Award (United Kingdom). She is a founding member of the 'International Association of Photography and Theory' and has exhibited her work in several art exhibitions in Cyprus and abroad. She is currently professor at the School of Fine and Applied Arts at the Cyprus University of Technology, and the group leader of Museum Lab at CYENS Centre of Excellence.

Contact: Department of Multimedia & Graphic Arts, School of Fine and Applied Arts, Cyprus University of Technology, Archiepiskopou Kyprianou 30, Limassol 3036, Cyprus.  
E-mail: theopisti.stylianou@cut.ac.cy

 <https://orcid.org/0000-0003-3494-8433>

Kleanthis Neokleous is a multidisciplinary research group leader (MRG) in CYENS. He has a Ph.D. in computer science from the University of Cyprus and has worked as a postdoctoral scientist at the

Delivered by Intellect to:

Guest (guest)

IP: 62.228.54.232

On: Mon, 01 Jul 2024 13:43:12

Department of Psychology of the University of Cyprus. He has previously obtained a BA and M.Sc. in mechanical engineering from the National Technical University of Athens (NTUA) as well as a double M.Sc. in space science and technology from the Lulea University of Technology, Sweden and an M.Sc. in space systems and automation from the Czech Technical University, Czech Republic. He has a multi-disciplinary background in various fields including virtual reality and 3D graphics, electronic health (eHealth), computational neuroscience and machine learning and intelligent profiling systems. Kleanthis has several years of experience in coordinating large EU and national funded projects that combine academia and industry.

Contact: CYENS Centre of Excellence, Dimarchou Lellou Demetriadi 23, Nicosia 1016, Cyprus.  
E-mail: k.neokleous@cyens.org.cy

 <https://orcid.org/0000-0003-4773-9665>

Andrew Fisher is a founding editor of *Philosophy of Photography* (2010–present). He is research fellow in the Department of Photography at FAMU (Academy of Performing Arts, Prague). His research is supported by the Institutional Endowment for the Long Term Conceptual Development of Research Institutes, as provided by the Ministry of Education, Youth and Sports of the Czech Republic.

Contact: FAMU, Lažanský palác, Smetanovo nábř 2, Praha 1, Czech Republic.  
E-mail: andrewthomas.fisher@famucz

 <https://orcid.org/0000-0002-8913-4165>

Theopisti Stylianou-Lambert, Kleanthis Neokleous and Andrew Fisher have asserted their right under the Copyright, Designs and Patents Act, 1988, to be identified as the authors of this work in the format that was submitted to Intellect Ltd.

---

Delivered by Intellect to:

Guest (guest)

IP: 62.228.54.232

On: Mon, 01 Jul 2024 13:43:12