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„Nauji fotografijos įrankiai: nuo Google'o iki algoritmo“ dalis

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PAUL PAPER

Nauji fotografijos įrankiai: nuo Google'o iki algoritmo
New Tools in Photography: From Google to the Algorithm

JAMES BRIDLE

INDRĖ ŠERPITYTĖ

ERIN O'KEEFE

MANTAS GRIGAITIS

ZACHARY DEAN NORMAN

ALISE TIFENTALE

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MACHINES, METHODS AND HUMANS:

ON THE PRODUCTION LINE OF CONTEMPORARY PHOTOGRAPHY

ALISE TIFENTALE

If I were to curate a show of contemporary photography in 2018, I would first consult the photographers' Instagram galleries instead of their artist's statements and biographies. All that matters in photography today exists on the cloud and on the Internet. At the same time, there is also something archaic about photography. I like to think of photography as a typical nineteenth-century invention, a relic from the era when people were obsessed with recording, reproducing and transmitting images and sound. The computer is a product of the same nineteenth century whose recurring theme was delegating all kinds of work to a machine. The relationship between humans and machines has always been at the core of comprehending photography. The advent of digital photography added yet another layer of mechanization, pairing camera with computer. It is tempting to highlight the profound changes that such a pairing has brought. But enough has been said about the "newness" of these changes. Metaphorically speaking, today's photography merges past and future. It combines the most advanced technologies and concepts with those that emerged long

ago. In this article, I am interested in connecting contemporary practices with concepts that predate the digital era and have the potential for subverting the mainstream critique of today's visual culture.

From Machine to Museum

In the last few years, several major museum exhibitions have extensively revisited the human-machine relationship in twentieth-century art. Most recently, for example, *Art in the Age of the Internet, 1989 to Today* at the Institute of Contemporary Art in Boston (February 7–May 20, 2018) took on the task of canonizing the pioneers of "net.art" as well as those of "post-internet art."¹ The exhibition prominently showcased *Suns from Sunsets from Flickr* (2006–ongoing), a canonical work by Penelope Umbrico. According to the description, "the title of each installation reflects the number of photographs that are tagged 'sunset' on Flickr" at the time of printing the images for each installation.² At the Boston show, this number was 33,930,694 photographs. In this magazine, we find another of Umbrico's works, also based on Flickr images. *Everyone's Photos Any License* (2015–2016) is a collection of images of the full moon. In her description, the artist points to the absurdity of the "all rights reserved" license that the photographers attach to the remarkably similar images. Umbrico's works emphasize the superficial "uniformity" of today's photography and, by implication, contemporary visual culture in general. But such criticism also raises questions about the nuances and small-scale differences that go unnoticed and perhaps characterize machine-based creativity even better than its alleged monotony.

The images of the moon are products of the networked camera—a hybrid tool that seamlessly merges the making, editing, sharing and viewing of images.³ It comprises hardware (such as digital cameras) and software, the availability of a wireless Internet connection and the existence of online image-sharing platforms such as Flickr. This produces not only images but also layers of metadata and establishes connections and relationships. Just as the networked camera is more than just a new type of camera, the images it produces are more than just images. Although the products of the networked camera can be reminiscent of traditional photographic images, their other essential attributes include metadata consisting of several layers: automatically generated data (like geo-tags and time stamps), data added by the user (such as captions and hashtags) and data added by other users (such as comments). Authorship in this context has less to do with the "originality" of each image and more with the invisible layers of metadata. By licensing their work, photographers on Flickr are claiming authorship and trying to make sure credit will be given when a particular image is used. In this case, what lies beyond the surface is crucial. However, it turns out that we art historians are not especially well equipped to address such problems. Often we do not see beyond the surface of the image.

Even if the art world finally admits that computer-based art exists (including art that depends on digital photography and other digital imaging processes), it lacks the theoretical tools to discuss such art. This is evident too in the field of digital and networked photography. If you were writing about photography in, let's say, the 1990s, you

had Walter Benjamin, Roland Barthes, Susan Sontag and Allan Sekula to rely on. If you are writing about photography in, let's say, the 2010s, you are lost. Quotes from Barthes and Benjamin won't take you far in the world of Instagram and Flickr. Of course, there is Vilém Flusser and his concept of technical images, but a lot has changed since 1985 when his *Into the Universe of Technical Images* was first published.⁴ One strong line of grappling with the conditions of image production and consumption in the metaphorical age of the Internet is being spearheaded by Hito Steyerl.⁵ Another critical approach is focused on the possibilities of a global visual culture thriving on platforms such as Instagram, as exemplified by the writings of Lev Manovich.⁶ But we still don't have a go-to toolbox of useful theories and methods. For this reason, I will go ahead and offer some ways of looking at today's computer-based art and photography.

From Easel to Machine

The revolutionary ideas of Productivism developed by Russian theorists and artists in the 1920s offer an interesting historical perspective for discussing human-machine relationships in contemporary photography. Many of the concepts that the Russian art historian and theorist Nikolai Tarabukin (1889–1956) mapped out in the Productivism manifesto *From the Easel to the Machine* (1923) are eerily echoed in present-day artistic practices and debates surrounding the production of art in the digital economy. The productivists argued for a new mode of artistic production, for the abandonment of the easel in favour of the machine. Of course, they couldn't have foreseen the exact ways in which people would be able to interact with the machine after 2000, i.e. the ways human input is analyzed, synthesized and otherwise processed by computer software and/or distributed via computer networks. But the general idea was there. Their manifesto was called "From the Easel to the Machine", which we are free to read as "From the Easel to the Camera" or "From the Easel to the Computer."

New York-based photographer and architect Erin O'Keefe's abstract works in this context can be viewed as speculative examples of a symbolic move from the easel to the machine. Her works hint at the aspirational idealism that led to the painterly abstraction of the early twentieth century avant-gardes—especially in Russia as exemplified by Kazimir Malevich. Some other images, meanwhile, seem to relate more to Cubism as it evolved in

and around the Parisian art scene. Despite the painterly references, O'Keefe's works appear machine-made: the colours are bright, the surfaces look smooth and the similarity of works within each series hints at a serial production. However, a substantial amount of human toil is behind these images as well. They are actual photographs of sculptural, spatial environments that the artist made out of hand-painted boards, pieces of glass, threads and other objects. This photographic Cubism—or "Bauhaus playhouse" as the *New Yorker* called it—produces a constant back-and-forth between the flatness of the image surface and the spatial depth created by the reflections, shadows and overlays.⁷

Among the basic principles of Productivism was the integration of artistic production into everyday life and the elimination of a separate field of art both in terms of its production and consumption. Computer-based media have virtually succeeded in such elimination at least in the sense that the same hardware and software tools are used to produce and consume what might be called art as well as non-art. The works in this special issue of the magazine are made using the same labour-leisure machines (i.e. networked computers, cameras and software) that are employed in other types of production, including but not limited to fields as varied as filmmaking, videogames, pop music videos, surveillance and security systems, health care, marketing, etc.

Some artistic practices in this magazine have more in common with scientific research, engineering, programming or communication studies than the studio art practice as we know it. One example is Zachary Norman's work. For example, for the research project *Light Field Imaging/Computational Photography* (2013–ongoing), he collaborates with the computer scientist Andrew Lumsdaine, the photographer Jeffrey Wolin, the sound artist Norbert Herber and the computer scientist Georgi Chunev. The project examines the means of production of photographic images, in particular the work of the light-field camera. Unlike a regular photographic camera, which records only the intensity of the light, the light-field camera captures also "the direction in which the light rays are traveling in space."⁸ Among the unique features of this type of camera is the fact "that images can be focused after the fact: a user can choose near, far or any focus in between," and they allow "to capture everything in a photo in sharp focus regardless of its distance from the lens."⁹ As Norman himself notes, he is "most excited about the

novel ways in which [he has] visualized information from light-field cameras to be displayed as 3D models, 3D prints and virtual reality headset experiences."¹⁰ This line of creativity is far removed from the easel and much closer to the machine. Norman's artistic career can also be viewed through the lens of the productivist concept of collective labour. *Everything Is Collective* is the name of a project established in 2013 and ongoing, where Norman collaborates with two other artists—Jason Lukas and Aaron Hegert, whose works are featured in this magazine and discussed later in this essay.¹¹

In some aspects, the project *General View* by Thomas Alldorf can serve as another example of artistic production in the spirit of Productivism. His project highlights the tools and processes that take part in the actual production of photographic images. For example, one image is a photograph of a cell-phone whose screen is cracked and broken in several places, its surface smudged and covered in fingerprints. These elements point to the materiality of digital and networked photography. This screen, furthermore, displays a photo taken against the sun, and the prominent lens flare again points to the actual mechanics of the cell-phone camera. Alldorf has used "digital post production processes" and has kept "their visible marks in the final work, revealing their source as well as bringing their conditions of production up for discussion."¹² In some other aspects, however, *General View* contradicts the ideals of Productivism. Most visibly, it is the choice of the presentation format. The project consists of a 128-page photo-book and a series of 30 pigment prints to be displayed on the walls of a traditional white-cube art gallery/museum space. For historical Productivism, there was no need for a designated "art" object such as a photo-book or exhibition print, just as there was no need for designated "art" spaces. Today's collectors and museums still expect artists to produce tangible objects, but it would be hard to find a place for an artist's photo-book in the carry-on luggage of today's creative class whose global nomadic lifestyle consists of travelling between residencies, temporary projects and collaborations.

Among other things, Tarabukin predicted in the productivist manifesto of 1923 that the format of the "installation" (*ustanovka* in Russian) would eventually replace the singular, unique art object. This format would function like "a system or network of interrelated components. The precise form the productivist 'installation' will take—whether apparatus,

device, mechanism or plant (and the Russian word *ustanovka* encompasses all of these)—will be less important than the relationality of its functioning,” observes art historian Maria Gough.¹³ As Gough puts it, *From the Easel to the Machine* was “a declaration of ‘the death of painting, the death of easel forms’ and the triumph, in their place, of ‘mechanized and collective forms of production and distribution.’”¹⁴ Some works in this magazine question or challenge the “triumph” of mechanized and collective forms of production. One example is the group of works by Mantas Grigaitis that examines the errors, flaws and failures of technology. I see this kind of work as algorithmic surrealism that explores the metaphorical unconscious of the machine.

Aaron Hegert’s works serve as another example of such algorithmic surrealism in this magazine. Hegert’s project *Shallow Learning* refers to “deep learning,” one of the many machine learning methods that are used for pattern recognition and behaviour prediction in many fields, including the most notorious case of Cambridge Analytica which mined data about Facebook users in order to influence the US presidential election of 2016. This project examines the ways in which computer vision algorithms work. In the old-fashioned photographic terminology, we would call Hegert’s works combination prints or photomontages. Hegert’s images combine recognizable pieces of depicted reality like a hand, tree or architectural structure with elements that look “almost like” reality but do not exist anywhere outside these images. This result is achieved using the “content aware fill” function in Photoshop to fill in the space between two images that the artist puts side by side. One image in these pairs is from Hegert’s archive, while the other is a visually similar image that came up in Google’s “search by image.”¹⁵ The algorithmic similarity between Hegert’s image and the one offered by Google search, however, most of the time produces rather uncanny diptychs. For example, one features a leafless tree on the left and a detail of rusty industrial truss structure on the right. They transition into each other awkwardly, disintegrating into pieces which then are multiplied and rearranged. The absurdity of such transition challenges the realism of photographic images and pushes them into the territory of surrealism.

The unfinished or flawed computer-generated images are also reminiscent of solarization, one of the photographic techniques favoured by surrealists such as Man Ray. Solarization (sometimes also called the Sabatier effect) is

the result of a failure to follow correctly the steps of the highly algorithmic photographic process. This effect takes place when a print (or a negative) is briefly exposed to light during its developing, resulting in partial or full reversal of tones and creating eerie, ghostly images. For this reason, surrealists adopted this technical flaw as one of their signature tools. Over the subsequent decades and well into the 1960s, however, photographers over-exploited it as a go-to technique for creating “art-photography” images for juried salon exhibitions. Like solarization in analogue photography, algorithmic surrealism points our attention to the actual mechanism of image production. As with solarization, there is a risk of over-exploiting one approach to the point where it stops producing new meanings or messages apart from constantly reaffirming itself. Then this approach inevitably slides into the category of mannerism just as the so-called glitch art has done.¹⁶

Human and Machine

The productivists focused on the factory as the major site of production in the industrial economy. They insisted that this was the location where artistic production should also take place. Contemporary artists focus on the “factory” of the digital economy—the machine that many of us carry with us at all times. This factory of the twenty-first century consists of a system of computer hardware, software and communication networks as well as a variety of tools for making and editing digital images and online image-sharing platforms. Such factories—taking the shape of laptops, cell phones and the like—are universal labour-leisure machines, objects of consumer desire and at the same time the ultimate instruments of exploitation, control and surveillance. Our relationship with our machines contributes to the current condition of the globalized and completely born-digital visual culture, described by Lev Manovich as “softwarization” and “the new global aesthetics” that “celebrates media hybridity and uses it to engineer emotional reactions, drive narratives and shape user experiences.”¹⁷ Some of today’s art has decisively turned away from the easel and embraced the machine. Does that mean that we are the actual productivists envisioned by the Russian avant-garde of the 1920s? Has human love for the machine elevated the alienated labour at the industrial production line?

¹ See exhibition catalogue: Eva Respini, ed., *Art in the Age of the Internet: 1989 to Today* (Boston, MA: The Institute of Contemporary Art, 2018).

² https://aiai.icaboston.org/works_list/33930694_suns_from_sunsets_from_flickr_partial_9517

³ I have introduced the concept of the networked camera and discussed it in greater detail in earlier publications such as: Alise Tifentale, “Art of the Masses: From Kodak Brownie to Instagram,” *Networking Knowledge* 8, no. 6 (2015): 1–16.

⁴ Vilém Flusser, *Into the Universe of Technical Images*. Translated by Nancy Ann Roth, with an introduction by Mark Poster (Minneapolis: University of Minnesota Press, 2011).

⁵ Steyerl characterizes today’s culture with phrases such as “crisis commodified as entertainment.” Hito Steyerl, “If You Don’t Have Bread, Eat Art!: Contemporary Art and Derivative Fascisms,” *E-Flux Journal* no. 76 (October 2016), available at: <http://www.e-flux.com/journal/76/69732/if-you-don-t-have-bread-eat-art-contemporary-art-and-derivative-fascisms/>

⁶ Manovich introduces the term Instagramism, which “is the style of global design class, (...) defined not by the economic relations to the ‘means of production’ or income, but by Adobe Creative Suite software it uses.” Furthermore, Manovich observes that this “design class” is “also defined by its visual voice, which is about subtle differences, the power of empty space, visual intelligence, and visual pleasure.” Lev Manovich, “Notes on Instagramism and Mechanisms of Contemporary Cultural Identity (and also Photography, Design, Kinfolk, K-pop, Hashtags, Mise-en-scène, and *состояние*)” (2016), available at: <http://manovich.net/index.php/projects/notes-on-instagramism-and-mechanisms-of-contemporary-cultural-identity> See also: Lev Manovich, *Instagram and Contemporary Image* (2017), available at: <http://manovich.net/index.php/projects/instagram-and-contemporary-image>

⁷ “Erin O’Keefe,” *New Yorker* (2015), available at: <https://www.newyorker.com/goings-on-about-town/art/erin-o-keefe>

⁸ “Light-Field Camera,” *Wikipedia*, https://en.wikipedia.org/wiki/Light-field_camera

⁹ Tom Simonite, “Light-Field Photography,” *MIT Technology Review*, April 25, 2012, <http://www2.technologyreview.com/news/427671/light-field-photography/>

¹⁰ Zachary Norman, “Light Field Photography, 2013-,” available at: <http://www.zacharydeannorman.com/projects/lightfield.html>

¹¹ <http://everythingiscollective.com/>

¹² Thomas Alldorf quoted in: Lucy Bourton, “Thomas Alldorf is ‘Shifting Perceptions’ of Contemporary Photography,” *It’s Nice That*, July 19, 2017, available at: <https://www.itsnicethat.com/articles/thomas-alldorf-general-view-photography-190717>

¹³ Maria Gough, “Tarabukin, Spengler, and the Art of Production,” October 93 (Summer 2000: 78–108), 105–106. See also note 49 on page 106: “The semantic value of the word *ustanovka* increased rapidly in the 1920s, transcending the overtly technical sense in which Tarabukin here deploys it to signify also within psychological and ideological discourses as ‘orientation or ‘positioning.’”

¹⁴ Gough, “Tarabukin, Spengler, and the Art of Production,” 78.

¹⁵ Aaron Hegert, “Shallow Learning,” 2017, <http://www.aaronhegert.com/shallow-learning>

¹⁶ The phrase glitch art has come to signify almost any kind of automated distortion of an image, sound or video. For the most up-to-date tools, search Google for “glitch art maker.”

¹⁷ Lev Manovich, *Software Takes Command* (New York, London: Bloomsbury, 2013), 179.

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