

Photography Without Images: A Proposal to Think About the Medium as Practice, Apparatus, and Form of Social Interaction

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Abstract

In this article I propose to think about photography without images, i.e., focusing on the medium as practice, apparatus, and form of social interaction. Based on concepts created by Pierre Bourdieu, Vilém Flusser, and Lev Manovich, among others, this article attempts to depart from the image-centered, art-historical approach to photography that has dominated this field so far. Instead of repeating the romanticized narrative of “great” or “important” images and their “talented” makers, this article proposes to look beyond the images’ surface and examine unpublished or deleted photographs in archives and on social media, the significance of darkroom work and collective or shared authorship, photography on the NFT art marketplace, and the role of AI and automation in photographic production. The article discusses the work of photographers, artists, digital creators, and social media content producers such as Sultan Gustaf Al Ghazali, Caroline Calloway, Henri Cartier-Bresson, Zenta Dzividzinska, Alan Govenar, Ivars Grāvēls, Lucia Moholy, Emma Agnes Sheffer, Alnis Stakle, Sophie Thun, and others.

Practice Without Production

“...no distinction can be made between the pressing of a shutter release of the photographic camera and the start button of a washing machine. Both movements receive and send to the same extent,” wrote Vilém Flusser in 1985.¹ This is one of my favorite Flusser’s quotes because at the first sight it appears shocking—how dare he compare the highly skilled, complex, inspired, and artistic manipulation of a photo camera with the most trivial act of starting a washing machine. But Flusser is simply pointing our attention away from the surface—the seemingly endless variety and interestingness of existing photographic images—and more toward the mechanic uniformity of the apparatus that produces these images. Flusser deromanticizes the medium by emphasizing that “The apparatus does as the photographer desires, but the photographer can only desire what the apparatus can do. Any image produced by a photographer must be within the program of the apparatus and will be (...) a predictable, uninformative image. (...) not only the gesture but

also the intention of the photographer is a function of the apparatus.”ⁱⁱ Nevertheless, Flusser admits that “fully automatic photography can be clearly distinguished from the photography of someone who visualizes an image because in the second case, a human intention works against the autonomy of the apparatus from the inside, from the automatic function itself.”ⁱⁱⁱ Acknowledging a possible balance between techno-determinism and acknowledgment of human agency implied in Flusser’s text, this article examines the relationships selected individuals have built with the photographic apparatus and its surrounding practices.

I came to think of photography without images and invisible photography while researching the development of photojournalism at midcentury. It was eye-opening to learn that, for example, Henri Cartier-Bresson (1908-2004) in the late 1940s, working as a photojournalist in China, used to send exposed film back to New York where other people, from anonymous darkroom technicians to influential editors at the *Life* magazine, did the work to complete the remaining steps of the photographic process, including developing film, printing contact sheets and enlargements, selecting images and cropping them, and so on.^{iv} Cartier-Bresson himself was responsible for the camera work on the location, while his “great” images were actually “made” by others at the Magnum Photos and the editorial office of the *Life* magazine. Even the elaborate captions that accompanied his film were written by others such as his wife Ratna Mohini or friends like Jim Burke in Beijing and Sam Tata in Shanghai.^v The realization that Cartier-Bresson did not see his own images before they appeared in the pages of *Life* leads to acknowledging that images are just one, and oftentimes not even the most important, part of much longer sequence of events. To expose those events means to deconstruct, deny, reject, or at least challenge the mainstream understanding of fine art photography, glorifying an honorable craft and practice whose purpose is to produce “great”—most of the time it means pleasant, likeable, and beautiful—images in the form of pristine, archival quality prints that, ideally, are signed and come in neatly documented limited editions. This modernist myth is a deeply embedded precondition of photography’s acceptance in the art market and gallery and museum system.

Some works by the Latvian artist and photographer Ivars Grāvējs (b. 1979) act as agents that expose the social connections and networks that underlie the photographic image production and consumption. For example, in an inspired moment of life-art conflation, Grāvējs wrote a master’s thesis on Latvian photography history referencing a vast bibliography of made-up sources, and successfully defended it at a school in Czech Republic where nobody knows of that history. In another such moment, he collected my husband’s and several other unsuspecting attendees’ cell phones, left the building, and remained unreachable for a worryingly long time. This gesture marked the end of his talk about his urban intervention *Live and Learn* at the opening of the first edition of Riga Photography Biennial in 2016. The point he wanted to make with this intervention was to “draw attention to our current-day obsession with photography and social media, as a result of which everyone is too preoccupied with this visual pollution—the smog of visual information, and appear to no longer have time for objective reflection.”^{vi} Almost ten years earlier, Grāvējs approached well-known artists and art lovers at gallery and museum exhibition openings, invited them to

look at his latest work on his phone that turned out to be a fragment of a pornographic video, and filmed their reaction (*Mobile*, 2007). “I tried to convince exhibition visitors that watching porn is much more interesting than wasting time of looking at boring and inexpressive exhibition,” Grāvlejs comments.^{vii} No doubt, Grāvlejs’ work belongs to a different cultural field than Cartier-Bresson’s, but what brings them together in this article is a photographic practice that at one point revolves around something else than *only* producing tangible images.

Rejection of image production is also at the center of a recent exhibition by another Latvian photographer, Alnis Stakle (b. 1975). Entitled “Mellow Apocalypse” (DongGang Museum of Photography, South Korea, July 16 – September 19, 2021; Latvian Museum of Photography, Riga, Latvia, February 11 – May 1, 2022), the exhibition featured digital collages of historical archival images from public domain collections such as photographs and photographic reproductions. In this exhibition, the photographer not only rejected production of new images but also partially stepped back from assembling the found images, leaving “the technical execution of the collages” to “image post-processing software algorithms.”^{viii} One of the works in Riga exhibition is especially symbolic of the anti-production trend: a large printout on a fabric-like material, draped on a wall so the images appeared distorted. This work, reminiscent of a theatrical curtain, signifies total defeat of any urge to create new and meaningful images as well as loss of respect for the musealized masterpieces of the past. The massive but unintelligible collage on the soft, pliable, and drapey material can be read as the antithesis of André Malraux’s “museum without walls” (1953). For Malraux, photography served as a useful tool for looking at art and narrating its history which had become “the history of that which can be photographed.”^{ix} Meanwhile, “Mellow Apocalypse” suggests that such history has collapsed onto itself, and the curtain has fallen. Instead of clarity and narrative, the curtain collage presents amorphous and overwhelming mass of fragments stripped of their historical context and meaning.

Invisible Photography

As another case of photography without images, let us consider @carolinealloway, the Instagram account of Caroline Calloway (b. 1991), an art historian, writer, and Instagram celebrity. Since 2012, Calloway has used Instagram, primarily a photo-sharing app, to share posts whose focus typically is not the image itself but rather the diary-like captions. Those captions narrate a life of her protagonist, a somewhat privileged and educated white woman in her late twenties who, among many other things, lives in a small studio apartment in Manhattan’s West Village, goes to Pilates and therapy, likes to wear real flowers in her hair, reminisces about her college years’ Adderall addiction, sells her paintings, used clothing, and bottles of self-made Snake Oil for your face, body, and hair, allegedly earns thousands of dollars on OnlyFans to support her mother’s cancer therapy expenses, mourns her father’s death by suicide, since 2016 pre-sells a book titled *And We Were Like* which is not written yet, and so on.^x By late 2021, the account @carolinealloway had attracted more than 600,000 followers, and the clout from Instagram spilled also into real life, as Calloway appeared in literary and social events in New York and her creative and

entrepreneurial activities received coverage in mainstream media such as *New York Magazine*, *The Guardian*, *Teen Vogue* and so on. In October 2021, for example, *The Wall Street Journal* reported on how part of the society eagerly anticipated Calloway's Instagram updates to see how she is painting her rented apartment's hardwood floors white.^{xi} In November 2021, however, all images from her Instagram account disappeared, and remain deleted at the time of writing, in February 2022. Depending on when you read this, the account may or may not be active again. Exactly for this reason, the Instagram account @carolinecalloway cannot be a more suitable example of photography without images. Certainly, the sheer number of images produced and circulated in the social media environment is astonishing. Yet, perhaps paradoxically, the role of images themselves may be diminishing, while the acts of image sharing, consuming, and commenting becomes more relevant.

As another case study of invisible photography and a photographic practice without images I would like to mention the exhibition "I Don't Remember a Thing: Entering the Elusive Estate of ZDZ" at the Kim? Contemporary Art Center in Riga, Latvia (July 15 – September 12, 2021).^{xii} For this exhibition, curator Zane Onckule envisioned a new model of collaboration between the estate of a deceased artist, the practice of a contemporary artist, and the labor of an archivist. This vision materialized as a solo show of Austrian contemporary artist and photographer Sophie Thun (b. 1985) featuring the archive of Latvian artist and photographer Zenta Dzividzinska (1944-2011) and the work of archivist Līga Goldberga. Onckule invited Thun to exhibit her own work as well as to study Dzividzinska's archive. During the exhibition, Thun discovered Dzividzinska's negatives and printed new images from them in her darkroom, installed in the gallery for the duration of the exhibition. Meanwhile, archivist Līga Goldberga opened the boxes where the family had kept Dzividzinska's archive, described their contents, and helped Thun with the selection of negatives. By facilitating this collaboration, Onckule brought to light Dzividzinska's oeuvre which so far had remained invisible, a photographic practice without images, as most of her work exists in the format of 6x6 cm or 35 mm negatives. Dzividzinska was active as a photographer locally and internationally in the 1960s when she was the same age as Calloway. But around 1972 she abandoned her creative experiments with photography and subsequently was completely forgotten. At the center of her legacy is a vast collection of negatives.^{xiii}

On the last day of the exhibition, new prints made by Thun from Dzividzinska's negatives completely covered two large panels. The selection of self-portraits, snapshots, staged setups with nude female models alongside test prints leave an impression of work in progress, although Thun's work here is finished and the next day the gallery will begin deinstalling the exhibition. This feeling characterizes also Dzividzinska's career in photography which she abandoned at such an early stage without a proper chance to fully develop her own practice. Treating the photographic negative as a musical score that gets interpreted by each musician who performs it, Thun opened a whole new avenue for thinking about photography in terms of authenticity and authorship.^{xiv} Moreover, images printed from Dzividzinska's negatives have woven into

Thun's practice and continue reappearing in her other projects such as Thun's solo exhibition, "Merge Layers" in the Sophie Tappeiner Gallery, Vienna (January 14 – March 5, 2022).

Centering the project around darkroom work, usually the most invisible part of photographer's labor, the exhibition challenged the cultural status of that labor, encouraged a broader re-evaluation of Dzidzinska's oeuvre, and provided a platform for further discussion of forgotten women artists' and photographers' legacy and archives. Another resource for such a discussion is Jordan Troeller's examination of the legacy of photographer Lucia Moholy (1894-1989). This photographer so far has been usually mentioned only as the spouse of the widely celebrated avant-garde artist László Moholy-Nagy (1895–1946) and an informal documenter of Bauhaus. Troeller, meanwhile, highlights Lucia Moholy's own creative work, part of which circulates uncredited to her, while another part exists in the form of hundreds of negatives and unrealized photobooks.^{xv}

NFTs, LOL

"Uploading my photo into NFT lol," tweeted Sultan Gustaf Al Ghozali on January 10, 2022, putting up a collection of his photographic self-portraits or selfies for sale for approximately 3 USD merely as a joke.^{xvi} Thanks to several beneficial circumstances, people with lots of cryptocurrency suddenly desired to own these selfies, and their price skyrocketed. For example, by February 12 when the sale of his selfie #932 officially ended, its price went up to more than 12,000 USD.^{xvii} Al Ghozali is a 22-year-old Indonesian computer science student whose selfies brought him more than a million dollars on the NFT art marketplace within a few days in January 2022.^{xviii} "I took photos of myself for 5 years since I was 18 to 22 years old. It's really a picture of me standing in front of the computer day by day," writes Al Ghozali about his selfies collection titled *Ghozali Everyday*.^{xix}

This case tells a lot about the NFT universe. Al Ghozali's selfies sold not because they are "great" images, stunning examples of skillful photography, Indonesian art, or art in general, but rather because of their LOL value. Unpacking this value, however, we may be surprised to find qualities that are not too far from what characterizes some late-twentieth-century art. Think of On Kawara's (1932-2014) *Date Paintings*, known also as the series *Today* (1966–2013), where each painting features only the date of its making. Or Adrian Piper's (b. 1948) series of photographic self-portraits *Food for the Spirit* (1971) that she took while self-isolating, fasting, and reading Immanuel Kant. Or Tehching Hsieh's (b. 1950) *One Year Performances*, such as the *Time Clock Piece* (1980-81) where the artist punched a time clock in his studio every hour for a year and documented each punch on film. We would not want to read into Al Ghozali's photos more than there is, but they tell us about the "everyday," reflect on the passage of time, and document a form of self-performance or self-realization. Liking and purchasing work like Al Ghozali's signals an appreciation of long-term commitment and dedication, artlessness and naivete, and an unpolished and uneducated authenticity. It signals respect for understandability and relatability—there is no manifesto, you do not have to read even

a single paragraph before understanding the work, do not have to learn complicated concepts, etc. We might call this kind of work simplistic but also anti-elitist.

Moreover, in the NFT art market, the images oftentimes are not nearly as important as the cultural, social, and economic capital that they help to accumulate. Highly visible transactions attract attention and earn credibility and legitimacy both to the “art” and the cryptocurrency that is used to pay for it. Even if it is paid by seller’s business partners, as it was with Beeple’s (b. 1981) digital collage *Everydays: The First 5000 Days*, a jpg, that sold for the equivalent of 69 million USD in cryptocurrency via the Christie’s auction house on March 11, 2021.^{xx} Already in 1965, in sociologist Pierre Bourdieu in his unusual book *Un art moyen* (which was only in 1990 translated from French into English as *Photography: A Middle-Brow Art*) established that photography is predominantly a social practice where networks and relationships are more significant than the images themselves. “The admiration of one’s peers constitutes a partial legitimacy which is at least enough to establish the photographer as an artist,” wrote Bourdieu’s collaborator Jean-Claude Chamboredon about photography in the 1960s.^{xxi} Moreover, “It is only through the group that the precedence and uniqueness of the work can be established: the merit of the work thus always seems to be recognized for reasons which lie outside the work itself.”^{xxii}

We can say something similar about the NFT art and photography. It is so bad (from an art historian’s perspective) because it cannot help but reflect the aesthetic sensibilities of the community that produces and circulates it, and these sensibilities have taken shape under the influence of sources other than curriculum of any arts or humanities school. The producers and collectors of most of the “art” in the NFT universe have background in computer science or business and finance. Beeple has a degree in computer science, Al Ghazali, studies computer science, and Colborn Bell, a NFT art collector and co-founder and director of the Museum of Crypto Art (<https://museumofcryptoart.com>), has a BA in economics and psychology from Columbia University and his previous employment includes positions such as Research Analyst, Trader and Portfolio Analyst, and Private Wealth Manager.^{xxiii} Jennifer Wong and Peter Hamilton, founders of the Seattle NFT Museum, a brick-and-mortar venue where “digital collectibles” are “displayed on a series of custom-designed screens,” are introduced to the public as “married tech executives with little experience in the world of art.”^{xxiv}

In sum, currently the NFT art and photography market is primarily a forum for a narrow elite of computer tech and finance professionals who do not have enough other opportunities to spend their cryptocurrency while it still is not widely accepted as a form of payment for the usual luxury goods and signifiers of wealth in the real world. Partly for that reason, concept of “art” appeals to them as it signals a degree of cultural legitimacy and prestige even among people who have little or no knowledge about professional art and its institutions. Nevertheless, the amount of currency invested in the NFT art does not automatically signify the art’s value. But it gradually legitimizes it. Even if the whole NFT art hype is a just art-washing of what has

been called hyper- or anarcho-capitalism,^{xxv} professional art establishment cannot ignore it or dismiss it as completely irrelevant.^{xxvi}

AI, Automation, Softwarization

Flusser offers one way of thinking about photography by introducing his concept of technical images that include all kinds of photography (including both analog and digital), film, video, animation, and CGIs. The concept is based on a clear distinction between all traditional (handmade) images that are “observations of objects” and all technical (machine-made) images that are “computations of concepts.”^{xxvii} Unlike traditional images, “technical images don’t depict anything; they project something” and “they don’t signify anything; they indicate a direction.”^{xxviii} Because technical images differ so profoundly from traditional images, we should be able to develop a designated analytical approach for understanding them. Flusser offers one such approach to technical images: “Criticism of technical images requires an analysis of their trajectory and an analysis of the intention behind it.”^{xxix} Moreover, “To decode a technical image is not to decode what it shows but to read how it is programmed.”^{xxx} The decoding can lead to an infinite number of various other outlooks, from dystopian gloom to the brightest vision of personal liberation.

Thinking about technical images is key to understanding (decoding) our contemporary culture. Our relationship with the photographic apparatus is part of the condition of the globalized, born-digital culture, described by Lev Manovich as “softwarization” and “the new global aesthetics” that, among else, “celebrates media hybridity and uses it to engineer emotional reactions, drive narratives, and shape user experiences.”^{xxxi} Moreover, most of this visual culture is at least half-automated. At some point people were worried that deepfakes will create havoc, and perhaps they still can, but the possibilities of AI that once seemed so scary now are more like a cheap thrill now. Once scary, algorithms now work to provide us with a casual entertainment to liven up our daily Instagram and TikTok scroll. For example, AI works for our entertainment in the ReFace app that quite convincingly replaces the faces of celebrities or historical figures with my own face in all kinds of still and moving images. Apps like ReFace can also raise numerous issues as they let a person “try out” genders, historical periods, makeup and hair styles, body shapes, and even races, all in a careless, playful manner which may easily become problematic.

But it is even more fascinating to think of the invisible automation. “Did you notice that over a period of a few years - approximately 2013-2018 - the quality of images captured by cameras in mobile phones improved dramatically?” asks media theorist Lev Manovich and offers his version of the reason for that: “Partly it was due to the increase of sensor resolution, hardware improvements, and the addition of multiple lenses to phone cameras. But it was also partly *due to the addition of AI* to these the cameras. Looking at my photos from the early 2010s, I find that most of them are unusable. But by approximately 2020, *it became actively difficult to take an unusable photo*. In practically any situation, the photo has perfect exposure (i.e., enough details in the dark, medium, and light parts), and the main subject is in focus.”^{xxxii} The concept of

“good” (or “usable”) photography that the cellphone camera and software developers are constructing, however, is not neutral or obvious, but that would be a subject of another study.

What makes the invisible automation particularly thought-provoking is that we do not perceive it as such. While we can continue fantasizing about a sci-fi future with some sort of humanoid robots walking amongst us, the “robots” have taken the shape of invisible algorithms. They already are here, quietly toiling away in our phones and computers. They not only help us produce new images but also streamline their distribution and circulation on platforms such as Instagram.

Among the implications of such automation is a certain degree of visual uniformity. The algorithms are programmed to improve our images in the same way as well as they are programmed to promote similar types of images, based on data of which images turn out to be more likeable than others. Thus, the role of individuality or originality radically diminishes while the image-sharing platforms reward the continuous production of images that look like already existing, successful images. Based on this visual uniformity, American artist and filmmaker Emma Agnes Sheffer (b. 1991) has built a highly successful Instagram account, @insta_repeat, with more than 395,000 followers. Describing the account as an “examination of an internet copy machine,” Sheffer collects visually similar Instagram photographs and presents them in compelling montages of twelve squares, captioning them with hashtags like #copyofthecopy, #simulacra, and #dejavuvibes.^{xxxiii} Of course, there is much more than the optical resemblance at stake here. Nevertheless, it is tempting to return to Flusser’s comparison between the two acts of pressing a button on a machine, namely taking a photograph and starting a washing machine. In both cases the outcome is already pre-programmed. Viewed from this perspective, the images on Instagram matter only as far as they repeat certain formulas and avoid any form of originality.

And Even More Ways to Think About Photography Without Images

So far, we have touched upon photographic practices that subvert, bypass or reject image production, practices that produce invisible or inaccessible images, practices where images function as mere packaging for cultural, social, and economic capital, and practices where image-making is partially or fully automated. None of these practices, however, have been completely *without* images. I would like to conclude with an example of a more literal interpretation of photography without images: *Words Without Photos* (undated), a multi-speaker immersive sound installation by American writer, folklorist, photographer, and filmmaker Alan Govenar (b. 1952). The sound work was included in the exhibition “A Trillion Sunsets. A Century of Image Overload” at the International Center of Photography, New York (January 28 – May 2, 2022). Installed in a narrow and steep stairwell, *Words Without Photos* features ambient music and the voices of several photographers speaking about their practice (the photographers are Nakeya Brown, Kija Lucas, Tanya Marcuse, and Pacifico Silano). Being part of a photography exhibition, Govenar’s sound installation

introduces photographers' self-reflection in a format that usually remains private, behind the scenes. It is a different question whether they have anything interesting to say, but the installation succeeds in hinting at the vastness and complexity of the field which we casually call photography. It also points to a certain fatigue of *viewing* and offers escape in *listening*. Moreover, it opens doors to abstraction, uncertainty, and ambiguity: hearing a random part of the audio, we may not necessarily recognize who is speaking, and we may be unfamiliar with their work. The dissociated voices lead us into imagining what their photographs could look like – a process which we might as well call yet another type of photography without images.

Illustrations



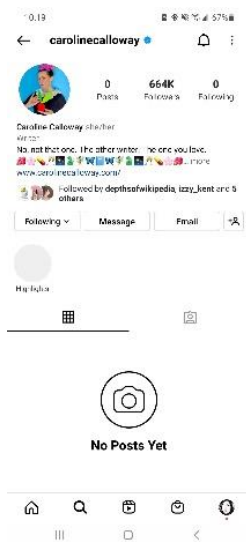
Henri Cartier-Bresson's photograph on the cover of *Life* magazine, January 17, 1955. Screenshot from the magazine's archive on Google Books.



Ivars Grāvlejs, *Mobile*, 2007. Screenshot of a page from Ivars Grāvlejs' portfolio: https://www.ivalsrgravelejs.com/ivalsr_gravlejs_2021.pdf



Alnis Stakle, exhibition view of “Mellow Apocalypse,” Latvian Museum of Photography, Riga, Latvia, February 11 – May 1, 2022. Photo: Alise Tifentale.



Screenshot of Caroline Calloway's Instagram account, February 11, 2022.



Closeup of the archivist Līga Goldberga's workplace with a box of negatives from Zenta Dzvidzinska's archive in the exhibition “I Don't Remember a Thing: Entering the Elusive Estate of ZDZ,” Kim? Contemporary Art Center, Riga, July 15 - September 12, 2021. Photo: Alise Tifentale.



Detail of Sophie Thun's darkroom in the exhibition "I Don't Remember a Thing: Entering the Elusive Estate of ZDZ," Kim? Contemporary Art Center, Riga, July 15 - September 12, 2021. Photo: Alise Tifentale.



An empty metallic panel at the opening of the exhibition "I Don't Remember a Thing: Entering the Elusive Estate of ZDZ," Kim? Contemporary Art Center, Riga, July 15, 2021. Photo: Alise Tifentale.



The metallic panel with Sophie Thun's prints from Zenta Dzividzinska's negatives. The closing of the exhibition "I Don't Remember a Thing: Entering the Elusive Estate of ZDZ," Kim? Contemporary Art Center, Riga, August 22, 2021. Photo: Alise Tifentale.

A screenshot of an OpenSea NFT listing. The listing is for a digital artwork titled "Ghozali Everyday" by the artist "Ghozali_Everyday". The artwork is a portrait of a man with dark hair and a beard, wearing a red shirt. The listing shows the current price as 4 ETH (\$12,377.84) and the sale ends on February 12, 2022, at 5:50am EST. There are buttons for "Buy now", "Buy with card", and "Make offer". The listing also shows the creator's name, "Ghozali Everyday", and the date it was created, "Created by Ghozali_Everyday".

Sultan Gustaf Al Ghozali, selfie #932. Screenshot of the sales page of OpenSpace platform, February 11, 2022.



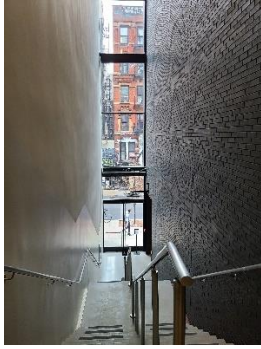
Screenshot of ReFace app.



A historical photograph (see the original in the screenshot) modified with the article author's face by ReFace app.



Screenshot of the Instagram account @insta_repeat.



Alan Govenar, *Words Without Photos*, undated. A multi-speaker immersive sound installation in the exhibition “A Trillion Sunsets. A Century of Image Overload” at the International Center of Photography, New York, January 28 – May 2, 2022. Photo: Alise Tifentale.

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- ^{xv} I heard Jordan Troeller speak of Lucia Moholy's unrealized photobooks in her paper during the session "A Radical Lens" at the symposium "Global Perspectives on The New Woman Behind the Camera" organized by the National Gallery of Art in Washington, DC, on January 19, 2022 (information available at <https://www.nga.gov/calendar/lectures/global-perspectives-on-the-new-woman-behind-the-camera.html>, accessed February 11, 2022). See also: Jordan Troeller, "Lucia Moholy's Idle Hands." *October* 172 (Spring 2020): 68–108.

xvi Anthony Cuthbertson, "Student Accidentally Becomes a Millionaire After Turning Selfies into NFT as a Joke." *Independent*, January 19, 2022. <https://www.independent.co.uk/life-style/gadgets-and-tech/nft-cryptocurrency-selfie-crypto-b1996276.html>

xvii Ghozali_Ghozalu #932 on OpenSea, <https://opensea.io/assets/matic/0x2953399124f0cbb46d2cbacd8a89cf0599974963/87692806388564331063099796863830173935852038010531001038640445990336582385665/>, accessed February 12, 2022.

xviii Heather Chen, "This Guy is Living Your Wildest NFT Dreams, Making \$1 Million in Selfie Sales," January 17, 2022. <https://www.vice.com/en/article/4awn3m/indonesia-nft-crypto-bitcoin-ghozali>, accessed February 11, 2022.

xix See his Twitter account, @Ghozali_Ghozalu, or watch a montage of the self-portraits on YouTube: <https://youtu.be/AGq4gPphgJw>.

xx Christie's, "Beeple's Opus." N.d. <https://www.christies.com/features/Monumental-collage-by-Beeple-is-first-purely-digital-artwork-NFT-to-come-to-auction-11510-7.aspx>, accessed January 21, 2022. For the context, see also: Edward Ongweso Jr, "The NFT Ecosystem Is a Complete Disaster." *Vice*, February 1, 2022. Available at <https://www.vice.com/en/article/xgdvnd/the-nft-ecosystem-is-a-complete-disaster>, accessed February 12, 2022. See more about the the buyers of *Everydays*, MetaKovan (Vignesh Sundaresan) and Twobadour (Anand Venkateswaran): "The Artnet NFT 30 Report," *Artnet*, December 14, 2021, p.7. Available at <https://news.artnet.com/art-world/the-artnet-nft-30-report-part-one-2047800>, accessed January 21, 2022.

xxi Jean-Claude Chamboredon, "Mechanical Art, Natural Art: Photographic Artists," in Pierre Bourdieu, with Luc Boltanski, Robert Castel, Jean-Claude Chamboredon, and Dominique Schnapper, *Photography: A Middle-Brow Art*, p. 146-147. Translated by Shaun Whiteside (Stanford, CA: Stanford University Press, 1990): 129-149.

xxii Chamboredon, p. 148.

xxiii <https://www.linkedin.com/in/colbornbell/>, accessed January 27, 2022.

xxiv Taylor Dafoe, "Two Tech Executives Are Opening an NFT Museum in Seattle to Give Decentralized Art a Centralized Home." *ArtNet*, January 14, 2022. <https://news.artnet.com/market/permanent-nft-museum-set-open-seattle-2060360>, accessed January 31, 2022.

xxv See, for example, Dan Olson's documentary *Line Goes Up—The Problem With NFTs*. Available at https://youtu.be/YQ_xWvX1n9g, accessed January 31, 2022.

xxvi For example, Latvian art collector Jānis Zuzāns has purchased the NFT versions of street artist Kiwie's two works in April 2021. At the time of writing in February 2022, I have no knowledge of any Latvian collectors or art institutions that would have purchased any photo based NFT art works.

xxvii Flusser, p. 10.

xxviii Flusser, p. 48, 50.

xxix Flusser, p. 49.

xxx Flusser, p. 48.

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

xxxii Lev Manovich, "Who is an "Artist" in Software Era?" in Lev Manovich and Emanuele Arielli, *Artificial Aesthetics: A Critical Guide to AI, Media and Design* (2021-2022), p. 20. Available at <http://manovich.net/index.php/projects/artificial-aesthetics>, accessed January 28, 2022. Emphases in original.

xxxiii Emma Agnes Sheffer, "@insta_repeat," undated. Available at <https://emmasheffer.com/index.php/curations/curations/>, accessed March 28, 2022.