speculative photography

an attempt (essay) of making visible (manifesto)

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[Abstract]

This essay and manifesto define speculative photography from a historical perspective and through practical poetics, as photography that integrates fantastic and experimental elements in both its subjects and processes. Such photography is even more urgent at a time when generative artificial intelligence (AI) and computational photography are driving photography to an impasse of fabricated yet all-pervasive realism. The text defines speculative photography in its semiotic and information-theory aspects, outlines a taxonomy of speculative qualities in photography alongside examples of photographers and photographic communities practicing them, and pays particular attention to contemporary subcultures of early-2000s digital camera (digicam) reuse and internet pop-cultural redefinitions of "aesthetics". While theories and definitions of speculative photography have existed since the 1970s, they are scattered and cover only select aspects of the broader concept proposed here. This paper argues that speculative photography rejects empiricism and notions of truth while practicing an art of the "medium" in its most literal - physical, artistic and spiritual - meanings.

[Keywords]

photography; speculative; experimental photography; computational photography; hauntology; aesthetics; artificial intelligence; digicam

1. [manifesto] demands

Speculative photography is non-empirical photography. It is photography that exposes its non-empirical nature rather than concealing it.

However, speculative photography can still be experimental. Experimental photography becomes speculative and speculative photography becomes experimental when its process becomes speculative. This can also be unintentional or humorous.

Speculative photography can also be speculative in the sense of West German Catholic film criticism of the 1970s, which called gore and sexploitation B-movies "speculative".

Speculative photography questions definitions and hierarchies of what is "signal" versus "noise".

Speculative photography disregards distinctions between "amateur", "professional", "skilled", "unskilled", "outsider", "artistic" and "commercial" photography.

When speculative photography makes the invisible visible, the invisible is often imaginary or at least dubious.

The evidence collected in speculative photography is questionable. It is ghost photography in the broadest sense, where photography itself is often the ghost.

Speculative photography often is a collective-anonymous endeavor.

2. photography point zero

As a result of techno-aesthetic developments culminating in computational photography[1] and photorealistic image generation with generative AI software, photography seems to have reached its *degree zero*. Roland Barthes used this term to characterize of realistic prose novelism, as writing that has "passed through all the stages of progressive solidification" to settle in "neutral modes" characterized by "the absence of all signs" (Barthes 1990, 5); in other words, writing whose polished storytelling makes readers forget that it's writing.

Photography's corresponding degree zero is photorealism, which makes the spectator forget the apparatus and texture of the medium photography. The conceit of computational photography and generative AI is that their depictions are technically no longer photorealistic in any empirical sense, but algorithmic simulacra: "Photorealism is dead. We should just bury it, and it's all hallucination", to quote MIT AI researcher Ramesh Raskar (Chokkattu 2022), referring to smartphone computational photography. Nevertheless, the simulacrum and hallucination serve the purpose of producing photorealism, with deviations considered errors and glitches; such as six fingers on the hand of an AI-generated, otherwise photorealistic, image of Donald Trump bidding in a church, which Trump himself shared on his social media, freeing him - so-to-speak - from any obligation to actually go to church, and involuntarily executing the "Six Finger Plan" of the DIY subculture of Neoism in the 1980s.[2]

[1] I.e., algorithmic synthesis of a photographic image from a series of high-speed digital camera images taken at different exposures and from different camera modules of a mobile phone, with the consequence that smartphone cameras are no longer taking shots of a particular moment, but fuse image elements taken at different moments and partly from different angles, based on aesthetic norms of what constitutes a good image that are coded into the camera's software. This is now the standard mode of operation of mobile phone photography and, thus, of the majority of today's photography.

[2] In the 1980s subculture of Neoism, several members performed with an artificial sixth finger. (cONVENIENCE 2002) explains it as follows: "So what I have on my back is a wagging tail, or an image of a wagging tail, with a hand on the end of it with an eyeball in the middle, with the hand opening and the eyeball winking at you. An archibras. But, as you may

As algorithms continue to be optimized, this remaining fantastic-speculative quality of AI machine learning-based computational photography and generative imaging can be - arguably - expected to disappear. The version advancement of AI image generators such as Stable Diffusion and Midjourney shows that it already has diminished greatly from 2022 to 2024. Furthermore, AI researchers and developers expect computational photography and generative AI to eventually merge,[3] which would mean that a camera's sensor image would end up being only prompt input data for a synthetically generated image; this way, a webcam image could be rendered not only in the style but also in the resolution of a medium format camera photograph.

While the resulting photorealist images of computer photography remain technically a "hallucination," they aesthetically suppress and deny this fact. The same was true of the social realist novelism that Barthes criticized in the 1950s: it consisted of writers' hallucinations that pretended not to be hallucinations, through a language that made its own variantology, apparatus and texture (in Barthes' words: *écriture*) invisible; a sign that pretended to be only signified, not signifier, only mimetic representation, not poesis.

From the camera obscura to computational photography, photography has thus - in semiotic terms - shifted from being indexical, as a textbook example of indexicality, to becoming symbolic, but by way of (photorealistic) iconicity. In arguably the first comprehensive photography book, Athanasius Kircher's 1646 *Great Art of Light and Shadow* (*Ars Magna Lucis Et Umbrae*), the camera obscura projects the outside world as an image that uses light as an index (that is, neither as an iconic depiction nor as an abstract-symbolic representation), like smoke as an index of fire. This indexicality has been the very principle of photography and persists wherever light strikes a medium (the wall of a camera obscura, the silver-plated copper of a daguerreotype, chemical film emulsion, the sensels of an electronic camera sensor). The *trompe l'oeil* of photography was based on human perception registering this indexicality as photorealist iconicity, similar to how human reading is persuaded into reading the abstract-alphabetical symbols of a (realist) novel as a mimetic depiction of social reality. In this sense, photography has always been illusion and hallucination, just like novels, and long before computational photography. As photographic practice teaches, photorealism itself is a construction, if not a myth. It is created by lensing (focal length and lens characteristics), spatial framing, choice of the moment, aperture, shutter speed, exposure, processing, reproduction and publishing. Since the arrival of computing and the internet, photography also involves semantic tagging and databasing. Once images became data and objects of algorithmic

or may not have noticed, in my case it's a six-fingered hand rather than a five-fingered hand and the reason why it's a six-fingered hand is because I once told a reporter that 'Normality is what cuts off your sixth finger and your tail', by which I meant that everyone is born with abilities and characteristics that are unique to them, and then society tends to exert pressure to reduce people to the lowest common denominator which often involves eradicating their unique characteristics. I use the example of a six-fingered hand and a tail as obvious examples".

[3]Such as Ramesh Raskar in (Chokkattu 2022).

"analytics," they also became the datasets for AI machine learning, from which AI photography conversely emerged.

Computational photography and generative AI imaging are, therefore, zombie-cannibalistic photography that feeds on itself. While cannibalism, since Oswald de Andrade, and zombies have their own speculative qualities, the results so far resemble more the zombie formalist painting of the 2010s, i.e., the kind of zombie cannibalism also found in stock photography and related genres. AI-computational photography effectively turns photography into digital painting and compositing, into pocket-sized and automated Chuck Closes and Jeff Walls or, more likely, Zack Doehlers and Erin Babniks, while other AI bots will generate endless serializations of Garaudy, Camus, Sartre, and their contemporary equivalents, sold as zombie publisher books on Amazon.com.

Both, AI computational photography and text bots, effectively amount to a post-histoire of photography, respectively of writing. To escape this dead end, photography needs a time machine that travels in all directions at once, fusing the ars magna lucis et umbrae with imagined futures.

3. interlude: practices

(The following is a preliminary, sketchy, and itself speculative proposal for a set of attributes or identifiers of speculative photography that help to distinguish it from related photographic genres and practices such as experimental and subcultural documentary photography. The attributes are derived from the various meanings of the words *speculative* and *speculation* covered in the previous sections. Conversely, these attributes are defined in a negative way by today's AI-hardened degree zero of photography. The examples of speculative photographic practice are meant to make these attributes less abstract, but do not claim to represent the full scope of speculative photography).

If speculative photography is indexical [i], capturing traces of light, but not depictive in a conventional realistic sense, because it produces its own other reality [r];

If its indexicality is not experimental in the sense, or according to the standards, of empirical science, but practices speculative and improper science [s] and technology [t], and gathers invented or dubious evidence [e] - i.e., is experimental at best in the sense of non-scientific experimental arts (including experimental photography);

If its indexicality nevertheless exposes photographic textures and apparatuses [a], it does so without any diegesis or didactic (Brechtian-situationist) mission,[4] but by rethinking noise [n] vs. signal;

[4]That also characterizes conceptualist photography such as Thomas' (1978), although his formalist experiments have, through their very formalism, a (likely unintentional) fantastic-speculative quality.

If speculative photography is marginalized [m] photography, both in terms of its professional recognition and its social position and acceptance;

If speculative photography acts as a time machine [x];

exposes photographic textures and apparatuses	[a]
made-up or dubious evidence	[e]
indexical	[i]
marginalized/fringe	[m]
rethinking noise vs. signal	[n]
produces its own (alternative) reality	[r]
speculative and improper science	[s]
speculative and improper technology	[t]
time machine	[x]

… then, examples of existing speculative photography practices include, in no particular order:

- 19th-21st century spirit photography, as begun by William H. Mumler and other, amateur and commercial photographers, showing ghosts of the dead; often by double exposures, later by image artifacts, in direct parallel to the technique of retrieving ghost voices from radio ether and tape recordings; [e] [n] [r] [s] [x];
- Miroslav Tichy's sexually voyeuristic stealth photography with self-made cameras that his fellow villagers mistook for nonfunctional cargo-cult devices [a] [m] [t];
- the Japanese magazine *PROVOKE* in 1968/69 and its stark black-and-white "are-bure-bokeh" ("grainy, blurred, out of focus") street photography whose texture often overpowered the depicted subject; [a] [i] [n]
- Nan Goldin's immersed photography in which the photographic medium is as precarious as the lives it indexically captures and keeps alive beyond sickness and death; as well as the immersed, on-the-spot, often improvised work of other queer scene witness-photographers such as Annette Frick; [i] [m] [n] [r] [x]
- Khadija Saye's multi-layered wet plate photography that fuses Gambian spirituality with spirit photography; [a] [i] [m] [n] [r] [t] [x]
- the exposure, destruction, and reimagination of film materiality and the optical apparatuses in the early filmmaking of Wilhelm & Birgit Hein (*Rohfilm & Materialfilme*, 1968-76), Guy Sherwin (*Man with Mirror*, 1978), and in the contemporary self-made emulsion filmmaking of Esther Urlus and Robert Schaller, preceded by Stan Brakhage's Mothlight, a film composed of wings of dead insects and plants glued to the filmstrip (1963); [a] [i] [n] [t]

- AiRich's afrofuturist photography that puts its speculative entanglements of the past and imagined futures into today's communities, transgressing categories of photography, fashion, visual and performing arts. [r] [s] [t] [x]
- the conceptual magazine *VOLKSFOTO* (People's Photo), edited by Dieter Hacker and Andreas Seltzer in the 1970s, whose collection of amateur photography began as a social documentary project but ended up as an archive of speculative intimacies. [i] [m] [n] [r]
- Lee Godie's overpainted photobooth self-portraits, created in the 1970s and sold on the street while she lived as a homeless person in Chicago. [a] [i] [m] [n]
- The experimental - noisy, glitchy and semi-abstract - photography with discarded consumer digicams from the early 2000s in various internet user communities, for example on the media-archeological online community digicam.love.[5] [a] [i] [n] [t]

4. Theories of speculative photography

Since the late 1970s, the term *speculative photography* has been used in rather scattered ways by various critics and scholars. Trachtenberg (1978, 857) evokes the kinship of the Latin word *speculatio* (*mirroring*) with the Greek *theori* (*way of seeing*) and refers to Heidegger and the early André Glucksmann in hopes of a "truly speculative photography" by "photographers who are also critics (skeptics)". His definition suggests that speculative photography is simply synonymous with a photography that involves critical philosophical self-reflection. The contemporary artist Buzzo (2018), on the other hand, employs the term to refer to his own photographic digital media experiments with augmented reality.

Much closer to the concept of speculative photography proposed here are the uses of the term by the scholars John L. Greenway and Anca Cristofovici. In an essay on late 19th-century Scandinavian art, Greenway (1993, 146) equates "speculative photography" with ghost/spirit photography ([e] [s] [t]), writing that Edvard "Munch's experience with speculative photography and the occult was mediated through his friend August Strindberg." For Cristofovici (2009, 3), "[s]peculative photography concerns the visualization of internal and fictional worlds, or the perception of certain realities." In her view, speculative photography can "ensure the connection between the physical and the psychic self, one that eludes the rationalizations of discourse or the hierarchies of narrative. In a single vision, it brings together imaginary age-selves, not with the constancy of the phantasm but as fleeting images, like photographs themselves." (Cristofovici 2009, 52). Written as an investigation of the relationship between photographic

[5](Digicam.love) defines itself on its website as a "worldwide community of modern users of forgotten point-and-shoot digital cameras" and is active on the social media platforms Instagram and Discord.

portraiture, gender and aging, her theory primarily concerns speculative photography as a time machine [x] and the production of imaginary realities [r].

What remains outside these existing definitions is the photographic apparatus and (physical) media themselves as speculative devices and their variantology. It is the same omission as in the definitions - and mainstream ways of writing - of fantastic and speculative literature which, with a few exceptions such as Lachmann (2002) refer only to the signified, not to the signifier of a text - i.e., to what is being told, not how it is told. This echoes what Barthes found in social realist novels and their quasi-journalistic lack of ambition in their "*ecriture*".

5. Fotonight Web

If contemporary photography's degree zero lies in its regime of realist depiction simulated by AI algorithms (both in computational smartphone photography and generative AI images), then photographic practices that simultaneously break with realism and explore alternative imaging technologies become speculative. This happens not only in institutionally recognized experimental photography but also in visual and photographic subcultures.

The following quote is from the *Aesthetics Wiki* (Anonymous, Fotonight Web, 2024), which grew out of popular, collective-anonymously created visual pop culture trends on the Internet, in close proximity to meme subcultures:

> "The Dream (January 2, 2023)
>
> On January 2, 2023, a Reddit user named u/williamsaguaro2002 had a dream related to Walt Disney Studios and Frutiger Aero. In that dream, the user got a voice acting job at Disney for a 'big purple fish' character, but the studio was located on a [sic] underground secret base, which had aliens and nuclear weapons. Later, he stumbled across an old Asian man talking about 'Fotonight Web', alongside a [sic] image associated to it above, although he doesn't remember what the senior said.
>
> Reddit Post (January 3, 2023)
>
> On January 3, 2023, he made a post on Reddit (see here) illustrating what he saw in his dream and later detailing what happened in it. This led to the creation of the subreddit r/FotonightWeb, housing a community surrounding the premise of this aesthetic.
>
> Stylistic Origins (2000s, 2010s)
>
> Although this is the origin how 'Fotonight Web' got its name and its associations from, their visuals can be traced back to the 2000s and 2010s, when it was commonly used in Chinese websites and knockoffs.

> Visuals
>
> The visuals of Fotonight Web consist of similar ones seen in Frutiger Aero such as Skeuomorphism, glossy textures, 'humanism', use of nature, bokeh, bubbles, glass, and auroras. These are combined with faucets of chinese [sic] internet culture such as Xpiritualism and Shanzhai. Shanzhai, in particular, emphasizes the counterfeit, imitation, or parody products aspect of Fotonight Web."

Based on the overlap of subculture-specific subjects and terminology, the Reddit user williamsaguaro2002 is most likely the same person as the DIY electronic musician William Saguaro, who released the album (Japanese for "self-published album") on various internet streaming services (Saguaro 2022), and whose track list includes titles such as "Aesthetic Shit," "Samsung," and "im So Edgy and Cool". Typical elements of internet meme culture can be found here: a pop-cultural imaginary that encompasses visuals, text and music; techno-orientalism; a fusion of popular visual culture and computer user interface design. *Fotonight Web* is thus a smaller competitor to larger visual and musical pop culture trends such as the 2010s Vaporwave.

According to the *Aesthetics Wiki* (Anonymous, FAQ, 2024), "aesthetic" needs to be understood in terms of a "Millennials and Generation Z" use of the word "as an adjective that describes what they personally consider beautiful." The noun *aesthetic* refers to a "collection of visual schema that creates a 'mood' ", being factually synonymous with what is conventionally called a style.

The reference to photography in *Fotonight Web* is symbolic but part of a fantastical imaginary. The article also evokes typography with its reference to the "aesthetic" *Frutiger Aero*, a reference to Adrian Frutiger's 1950s sans-serif typeface and its popularity in mid-2000s advertising. The "Frutiger Aero" article in the *Aesthetics Wiki* is conversely derived from the website of the *Consumer Aesthetics Research Institute* (CARI 2024), an "online community dedicated to developing a visual lexicon of consumer ephemera from the 1970s until now."

In its "Index of Aesthetics", CARI lists and documents 89 "aesthetic categories", from "Acidgrafix" and "Airbrush Surrealism" and "Austurbane" to "Whimsigothic","Y2K Aesthetic" and "Zen-X." *The Aesthetics Wiki* has even 993 different entries in its "List of Aesthetics" (Anonymous, List of Aesthetics 2024), where those overlapping with CARI's list are mostly derivative of CARI's website.

"Frutiger Aero" was coined in 2017 by CARI's co-initiator Sofia Lee as a retro take on the user interface aesthetic of Microsoft Windows Vista (originally released in 2006).[6] Lee is a visual artist and photographer, early experimenter with low-tech older "digicams" and digicam photographer community organizer. While "Frutiger Aero" and her digicam photography exist in two separate work domains, they partly overlap in their evocation of mid-2000s visual aesthetics

[6]"Frutiger Aero." Aesthetics Wiki, 30 Jan. 2024, https://aesthetics.fandom.com/wiki/Frutiger_Aero.

and hauntology.

The "digicam" photographic practice and subculture embraces the technical shortcomings of cheap consumer digital cameras of the early 2000s, often focusing on their visual artifacts rather than photographic depiction, in a way that - as experimental 16 mm filmmaker Esther Urlus observed when first seeing Sofia Lee's photography[7] - closely resembles the ways with which structural experimental filmmakers of the 1960s/1970s made the material texture of chemical film visible.

In digicam communities, digital image making and processing takes on speculative, hauntological and spirit-photographic qualities. This includes the operations of debayering (i.e., the reconstruction of full color from monochrome red/green/blue sensor raster pixels through interpolation algorithms) as well as special properties believed to exist in obsoleted imaging technology such as CCD camera sensors. Together, these aspects of the technology create image artifacts that lie outside of pictorial representation. They are embedded in larger, often fantastical, pop cultural imaginaries, such as the dream of the Disney animation studio's secret underground base.

6. speculative textures

While speculative and experimental photography overlap, their difference lies not only in speculative photography's inclusion of outsider, amateur and subcultural photography, as well as dubious photographic practices. Another difference is that when speculative photography incorporates the apparatus, its grain, texture, ghosting and flares (i.e., noise, in Claude Shannon's broad sense), it does so without technical mastery or romanticism of the medium. It involves the apparatus as subjectivity, but not as the photographic subject.

Speculative photography disputes the concept of truth in photography. Unlike most experimental photography, it also rejects the idea that the truth lies in the apparatus. It rejects both the idea that there can be truth of depiction and or that truth lies in the texture of the image.

Truth, in this perspective, never existed, even without ghost photographs; for even the camera obscura was not an instrument of truth, but of illusion. Parmigianino's *Self-Portrait in a Convex Mirror* (1524), as well as Hans Holbein's *Ambassadors* (1533), are prototypes of specula_tive photography in their use of the fisheye lens and anamorphic optical projection. It is the birth of photography through the Mannerist lens, where the *maniera* itself is the optically elongated hand. The "aesthetic" of *Fotonight Web* (next to *2K1, 2K7, Abstract Tech, Anime New Moon, Bright Tertiaries, Captchacore, Cheiron Crush, Chromecore, Cleancore, Corporate Memphis, Cybercore, Cyber Glacier, Cyberparadism, Cyberprep, Dark Aero, Dollar Store Vernacular, DORFic, Dreamcore,*

[7] In an encounter between Urlus and Lee witnessed by the author on 1st October 2022.

ElectroPop 08, Frutiger Aero, Frutiger Aurora, Frutiger Eco, Frutiger Metro, Funky Seasons, Gamercore, Gen X Soft Club, Glassmorphism, Helvetica Aqua Aero, Hexatron, Holo, Holosexual, Home 2K, Hyperpop, Icepunk, Imaginarium, Indie Sleaze, Liminal Space, McBling, Memphis Design, Minivan Rock, Musica Metro, Neumorphism, Nintencore, Nostalgiacore, Rainbowcore, Renewable Corporate Futurism, Robotcore, Seapunk, Shibuya Punk, , Solarpunk, Superflat Pop, Surf Crush, Technoneko2000, Technozen, Trillwave, Tropical, UrBling, Vaporwave, Vectorbloom, Vectorflourish, Vectorgarden, Weirdcore, Xpiritualism, Zen Tranquility)[8] boils down to a *maniera*, and so it is a poetics at the same time.

While photography as such has become a symbolic form rather than a specific medium or information technology, given that a camera obscura and an AI image generator have technically and semiotically nothing in common, speculative photography is a medium in the most literal sense of the word, more so than what is conventionally referred to as "media". Combining structural investigation with the fantastic - making structures fantastic and the fantastic structural - speculative photography is a medium in the sense of:

- the physical medium, in the most literal sense of a physical carrier substance;
- the artistic medium, in the sense of "mediums" such as painting, sculpture and, here, photography;
- the spiritual medium, as in ghost superstition.

Speculative photography is photography that becomes fantastic by taking itself too literally; photography as speculative fiction, as mutant epistemology.[9]

Conclusion

This essay-manifesto has argued that speculative photography is both a retroactive attribution of existing - past and present - photographic practices and a future horizon of photography at a time when the foundations of photography, including its literal meaning of "inscribing [or: recording] light," are being shaken and rewritten by computational photography and generative AI.

The intuitive conclusion would be that the latter should no longer be called photography, but rather synthetic simulations of photography. The reality, however, is that already at the time of this writing, these simulations constitute the mainstream of photography and thereby define photography. Photography, then, turns out to be defined not by a particular technology or semiotic register, but by cultural conventions and perceptive expectations of what a photograph looks like. Computational photography and generative AI thus solidify photography's degree zero - of representational smoothness and slickness - in the same

[8] List taken from: Anonymous, Frutiger Aero.

[9] Riffing on the definition of *speculative software* in (Fuller 2003, 30): "software as science fiction, as mutant epistemology".

way that social realism established the degree zero of the novel. While photography's degree zero is being championed by AI imaging technology, it does not depend on it. Any photography that strives to erase its textures and ruptures fits the definition of photography's degree zero.

If this degree zero defines present and future mainstream photography - aesthetically, socially and technologically -, then other photography is doomed to become speculative.

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