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Analog Photography in the Digital Age: Examining Transformation, Alienation and Authenticity in Modern Photographic Practice

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ABSTRACT

This research explores the phenomenon of analog photography in the digital era. The objective of this study is to define the structure of meaning of analog photography through a phenomenological-hermeneutic approach. Technological advancements and socio-cultural contexts influence the practice and perception of analog photography. The findings yield an understanding that despite the dominance of digital technology, analog photography holds a distinctive, rich, different, and relevant essential meaning in contemporary cultural practices. The automation of digital cameras has taken over many technical capabilities of photographers, leading to self-alienation and the loss of authentic skills in the photographic creative process. Analog photography emphasizes a slower and more manual process, which intensively involves cognitive and motor abilities while offering reflectiveness amidst the speed of the digital era. This study makes a significant contribution to the understanding of the phenomena of analog photography and its implications in the digital era.

INTRODUCTION

The analog photography industry decline in the 2000s due to the digital revolution. However, around 2017, Kodak announced a resurgence in analog photography, expressing optimism about a bright future for the industry (Dowling, 2020; Kodak, 2017). This resurgence has been termed a "great revival" that will influence the discourse on technology and

aesthetics (Cubitt, 2006). In the context of digitalization, analog photography is perceived to have lost its "integrity" as an "indexical" form of photography by adhering to digital rules (Silverman, 2015). Digitalization creates "pataphysical" objects that are imaginary and ideal, unbound by natural laws (Baudrillard, 1983, 1994). Bull explains

the material change in photography as "dematerialization," shifting the focus from "quality" to "quantity" (Bull, 2010; Rantoul, 2016). This transition alters the visual discourse from analog to digital, moving towards virtual entities unbound by space and time (Piliang, 2018). The shift from analog to digital has also occurred in the art world due to technological disruption.

In photography, technical aspects and the involvement of the photographer are as important as the content of the photo (Dominici, 2021). As Benjamin noted, the creation of art must encompass an "aura," a concept of distance and total presence between subject and object, and between artist and artwork (Benjamin, 1936). This presence and totality are intrinsically linked to the materiality of photography. However, in the context of dematerialization, the material totality that is lost in digital photography is simulated through digital editing and filters via software or computer applications. The visual simulation of analog photos evokes nostalgia or a longing for the slow, precious, and rare process of analog photography amidst the perception of digital photography as fast, cheap, and abundant, resulting in a sense of "overflow" (Jurgensen, 2019).

The importance of materiality is closely related to perception and the physical properties of photos (such as smell, weight, and print), which are crucial in the creation of photographic works. This phenomenon reaffirms the values of "physical" photography and the multi-sensory human experience, which Benjamin refers to as "auratic." Alternative photographic processes are still favored to enrich artistic creativity in photography and as a form of resistance against the speed, professionalization, standardization, and technological

advancement of photography. Photographic artists engage with the physical materials and processes to revive metaphorical appreciation, technical insights, and visual inspiration (Bilici, 2013).

There is a need for analog practices that are still upheld by contemporary photographers. Mastery of technical skills in darkroom practices, despite technological progress and industrialization of photographic processes, is a notable achievement for many photographers (Dominici, 2021). Flusser argues that the meaning of a photo cannot be achieved through automation and "apparatus" alone, but through human intention and intervention (Bilici, 2013). Flusser's critique indicates that digitalization does not entirely overshadow analog photographic practices. Analog photography continues to be practiced by some, emphasizing that materiality or "the physical" remains essential as a fundamental skill in the art of photography.

This research questions how analog photography is understood in the digital era. The goal is to redefine the phenomenon of analog photography within the context of the digital world by exploring the relationship between the photographic process and the experience of creating art, the discourse on the materiality of photos, industrialization, and digitalization.

This study utilizes several interrelated theoretical foundations to analyze the research object. First, phenomenology theory is employed to understand how human experience and consciousness are shaped through interactions with tools and technology, specifically in the context of photography. Second, the essence of technology from the perspectives of Heidegger and Ihde is

crucial to elucidate the function of technology and its impact on human life, emphasizing that technology is not merely a tool but also influences how we perceive and interact with the world. Third, the aesthetic dimension from Benjamin's concept of aura provides insights into the artistic experience in photography, highlighting the uniqueness and artistic value inherent in each photographic work.

Furthermore, Jurgensen's social perspective explains the changes in social experience brought about by using of photography, including the impact of digitization and the distribution of photos in the digital era, which transforms how we interact with images. Finally, Bull's discourse on dematerialization is discussed to comprehend the impact of visual cultural changes caused by technological advancements, particularly in the context of digital photography, which blurs the lines between the physical and digital realms and affects the perception and consumption of visuals in society.

Concept of Experience, Body, and Techne

Phenomenology is closely related to perception, experience, and consciousness. Aristotle referred to intention as the "orientation of the mind toward a specific object," indicating the directedness of the mind toward an object (Moustakas, 2011). In his theory of the phenomenology of perception, Merleau-Ponty emphasizes that perception is the foundation of the awareness of being-in-the-world. Sensation, as "pure impression" or "sensory experience," shapes perception in the mind. Perception requires phenomena sensed through the senses, which are then processed into objects of consciousness. The body plays

a crucial role in perception, with interconnected organs forming perceptual awareness of the world. Consciousness is self-awareness and body awareness, shaped by experience. All experiences (Erfahrung) reveal themselves to the living subject (Taipale, 2014).

Heidegger defines technology as a "tool for action." Modern technology is understood as the creation and utilization of tools, machines, and production goods to meet human needs (Riis, 2013). Ancient technology, referred to as "techne," is understood as human works and achievements in art, which also contain truth as knowledge through revelation. Modern technology is often reduced to merely a tool (instrumentum) to help humans meet their needs (Heidegger, 1977b). Heidegger explains the relationship between humans and tools in a complex manner. Tools have the characteristics of usability and function, open the world while revealing themselves. Tools become part of human daily life, but sometimes this relationship becomes unoriginal and unconscious, referred to as the concept of "transparency of tools" (Ihde, 1979).

Today, modern technology is understood as a tool for doing something. Humans strive to control technology to achieve instrumental goals, which entraps them in the exploitation of nature (Riis, 2013). In Aristotle's concept, technology is not just a tool, but also an art of creation or craft, related to causality: material (matter, material), formal (form, function), final (ultimate purpose/telos), and efficient (maker/craftsman). The craftsman, as *causa efficiens*, is responsible for the presence of the created object, which reveals truth by the artist.

Heidegger explains the shift in meaning between the essence of ancient technology as *techne* and the essence of

modern technology. The essence of modern technology is framing (Enframing). Heidegger illustrates this with the hydroelectric plant on the Rhine River, viewing nature (the river) as an object of exploitation, termed "Ge-stell" or Enframing. Enframing universalizes, calculates, standardizes, and quantifies the world, making humans subservient to the goals of technology. Meanwhile, in the Greek tradition, through the concept of technology as *techne*, which means all forms of creation, the measure of the holy, the bringer of power, and something noble. Humans as creators of art are representatives of God tasked with caring for the world by depicting His holiness.

Heidegger sees art as offering a solution to the over-mechanistic instrumentalization of technology. Art encourages humans to think, reflect on their lives, and create through contemplation. The creation of artworks in the concept of *techne* values skill as practical knowledge, forming a circle of understanding between work, creator, and the world of art. The experience of art is crucial as a standard of civilization's health (Williams, 1960). Art is overshadowed by industrialism, with its distinctive beauty reflecting a reality bound to nature and God. Artists view beauty as a holistic process, expressing the sublimity of natural beauty. The goodness of an artist lies in their integrity, and the goodness of society lies in creating conditions for human integrity as part of nature.

Concept of Aura in the Artistic Process

In the era of the Industrial Revolution, Walter Benjamin discusses the discourse of art with mechanical reproduction. The mechanical reproduction of artworks accelerated with the industrial revolution, starting with lithographic printing

machines and later replaced by high-precision photography. According to Benjamin, photography provides an artistic distance like hand-painted pictures and asserts the connection between the artwork and its creator. The camera functions as a creation tool, speeding up the reproduction process of images that matches the speed of speech (Benjamin, 1936). Capturing images through the camera supports the reproduction of images and pictures without limits.

The reproduction of artworks has a drawback because it cannot replicate the original presence of the work in space, time, and the uniqueness of its creation. The presence of a work in a specific space and time affects its authority. Benjamin states that every manual work has a uniqueness that cannot be imitated by mechanical reproduction, referring to the concept of the "aura in art" that cannot be replicated. Reproduced works lack uniqueness, reducing the significance of the creator with their work, and they lack an "aura" (Benjamin, 1936).

Benjamin's concept of aura relates to the distance created when artists create artworks. The lost perceptual experience through mechanical reproduction diminishes the aura of artworks. Art is always closely related to the relationship between the artist and their work. According to Benjamin, the aura of art is detached by reproductive technology, separating the artist from the context of the space and time of their creation. The elements of artistic creation that reflect humanity are replaced by machine reproduction, leading to the loss of human experience.

Benjamin refers to "photo" as a "small history," a history that is cut and stored within the image (Benjamin, 2008). A photograph possesses a power akin to

'magic' that reveals specific events captured within it. Benjamin introduces the concept of 'optical unconscious' and the 'historical value of photographs' as specific aura of a photo. The optical unconscious is the camera's ability to capture detailed moments that the naked eye cannot perceive, such as split-second movements. According to Benjamin, photography is a technology that reveals deeper realities and triggers contemplation.

In photography, there are two main aspects: technical aspects and the photographic subject. At its inception, photography was considered a technology of high status, requiring expertise in optics and chemistry. Bernard von Brentano stated that "photographers in 1850 were on par with their instruments," indicating that photographers' competence matched the sophistication of camera technology. The aura of photography lies in the process aimed at "immortality," with qualities, techniques, and materials of photographs possessing high durability. The aura of photography also encompasses the involvement and closeness between the photographer and their subject, involving artistic and technical skills in the photographic process. This is the concept of the aura of art as appreciation, interpretation, perceptual experience, distancing, the authority of the work, and uniqueness.

Materiality and Dematerialization of Photography

In the era of mechanical reproduction, photographs were considered the most precise, objective, and powerful tools for documenting reality. Analog photographs could depict reality that was suitable, logical, and representational. However, problems began to arise with digital photography. The digital nature, detached

from the laws of nature and physics, replaced the physicality of photographs with a "simulated" world according to Baudrillard. The digital photography era is called the post-photography era, marking the death of traditional photography (Bull, 2010). Digital technology brought about a major revolution that changed human lifestyles.

Digital photography stores images in the form of computer files displayed on electronic screens. Digital files are virtual, creating a new foreign realm (hyperreality) (Baudrillard, 1994). The substance of digital images consists of a collection of bits, binary codes that form photographic images. Digital photography can now be viewed and appreciated through computers, camera screens, megatrons, and smartphones. Digitality accelerates the culture of reproduction and consumption, shaping human lifestyles influenced by digital images and screens.

Digital photography and related equipment, such as digital cameras, computers, and the internet, create a digital ecosystem. Photos can be easily created and deleted, reflecting dematerialization. Unlike the era of materialization of photographs, where photos were not easily destroyed or discarded, easy digital deletion reduces respect for photographs. This has led to habits of taking many pictures only to delete them later. Szarkowski, through Bull, defines the characteristics of digital photography as: (1) easily manipulated, (2) easily transmitted, mobile, and viewed through screens, and (3) easily deleted and removed with little physical effort.

Social Photography

According to Jurgensen, the condition of photography in the era of social media has given rise to the trend of "social

photography" (Jurgensen, 2019). The term social photography encompasses portrait, personal, domestic, and vernacular photography, emphasizing the social distribution aspects of photos. Cameras today have transformed how humans perceive the world, especially with the ease of photo distribution via social media. Photos uploaded on social media receive various responses from others, indicating a shift from photography as a documentation practice to a culture of communication through photo sharing.

Jurgensen views digital photography to memorialize moments in a durable medium that does not age or deteriorate unless deleted. A new trend shows the aesthetics of vintage photography, simulating the appearance of analog photos in digital photography through app filters or photo editing software. For example, Instagram filters provide a digital photo look reminiscent of analog photos by mimicking paper surfaces, textures, and grain.

Photography apps have evolved alongside the emergence of smartphones, facilitating various activities, including photography. Smartphones with cameras enable humans to take photos at any time, integrating photography with social media, filters, and internet connectivity. Jurgensen observes that this ease has diminished the prestige of a photo. Mobile photography makes it easy to take and delete photos, unlike the era of more complex digital SLR cameras.

The ease of taking and sharing photos via social media has led to less meaningful photography activities. The presence of cameras on smartphones goes unnoticed because smartphones are fundamentally communication devices (Borda, 2018). Digital photography has shifted from the use of SLR cameras to

more practical smartphones. New terms like selfie, instant, posting, and feed emerge from fast and common photography practices. Snapshot photography, which tends to take photos reactively without mature concepts, dominates human life today.

Jurgensen argues that photos on social media often serve hidden purposes, such as boosting the social status of the photographer. Uploaded documentary photos often serve social status interests. Today, the primary goal of photography is to capture experiences and share them through social media, where people can comment and evaluate each other. Photography has become an act of consuming experiences, ensuring that the reality experienced is confirmed by others. Photos now pervade human life through social media, compelling us to constantly view them.

The Essence of Photography

During the early discovery and publication of the medium of photography between 1839-1845, the essence of photography was not explicitly defined. To this day, several definitions such as "photo/picture", "chemical image", and "photoelectronic print" remain relevant. Arago offered definitions of photography as "sun picture", "nature's pencil", "mirror with memory", and other terms describing common experiences through encounters with photographs (Brett & Lusty, 2019). These metaphors refer to the essence of photography involving interactions between "photographer" and "subject", as well as "camera" and "viewer" (Azoulay, 2010). Talbot referred to early experimental images of photography as "shadowgraphs" and "shadows", describing the metaphor of captured shadows. Andre Bazin developed the

concept of photographic Indexicality emphasizing the photograph as a trace of the object, free from the constraints of space and time (Bazin & Gray, 1960).

Photography aims to create images of reality that resemble reality itself. Barthes stated that photographs are considered indexical and analog without code, objectively representing truth and presence in a specific space and time (Barthes, 1977; Rubinstein, 2023). However, photographs are surfaces, framings of images reflected by objects through light. The complexity of these photographic resemblances triggers various emotional reactions within consciousness (Barthes, 1977).

In general, the meaning structure of photography can be explained through the experience of its subjects. Photography is the capture of shadows through optical mechanisms, which are then reduced and framed as objects through a selection process. Photography is also a form of memory that freezes the image of events into a medium, and it is a process of forming ambiguous meanings (Bazin & Gray, 1960). Furthermore, photography also stores indexical traces of material objects, preserving and displaying the past as an image, time, and event.

Transformation from Analog to Digital Photography

Analog photography involves capturing images through chemical processes, using compounds such as silver iodide, silver halides, silver nitrate, mercury, and ammonium ferric citrate that process latent images through chemical development (Najdowski, 2016). In contrast, digital photography originates from NASA's project for space imaging and is influenced by advancements in electronic circuits and computers since 1945 (Rosenblum,

1997). Essentially, digital cameras convert light into electronic signals interpreted into color signals on sensors, then processed through computers.

Rosenblum explains that digital images can be produced in two ways: first, by recording information of reality by light sensors stored in memory, and second, by pixel arrangement with software programmed in computer language. The most notable change in photography is the shift from chemical recording media to digital media, significantly impacting the development of the photography industry. For instance, Kodak struggled in transitioning to digital photography despite initially innovating with the first digital camera system in 1975 (Shih, n.d.; Vitton et al., 2014).

Domestication and Democratization of Photography

Humans play a crucial role in the mechanism of creating photos, even though photos are created automatically through chemical reactions and camera mechanics. Photographers, as camera operators, control the choice of photographic moments, linking the role of photographers to the operation of equipment (Flusser, 2011). Domestic photography evolved with the emergence of Kodak cameras and its easy-to-use film system, making photography more associated with private domains, including family photo albums (Holland, 2015; Johnson et al., 2012).

The history of photography cannot be separated from Kodak's role, marking an era where photography became more accessible to everyone. The emergence of digital photography and the internet in the 2000s led to individual expression freedom in photography, with photos becoming part of personal experiences and meanings (Holland, 2015). Digital

photography culture creates fluidity of images, blurring the lines between family, private, public, and professional photos on the internet, overlapping private and public photos. As a result, photos became easier to copy and distribute, with everyday photography shifting from capturing personal moments to a broad communication process.

METHODS

This research explores the phenomenon of analog photography as a cultural practice that continues to be used amidst technological digitalization. We situate the phenomenon of analog photography within the context of the digital space and time. Photography is a cultural object intersecting with the discourse on technology and art in general. Therefore, understanding analog photography requires an ontological foundation that discusses technology, the transformation of photography in specific space-time contexts, and the concept of art as a human expression practice. This philosophical research aims to uncover the structure of meaning, using theoretical studies related to the object of research. The objective of this study is to understand the essence and redefine the meaning of analog photography in the digital era.

Data analysis follows a phenomenological-hermeneutic framework involving repeated text readings to achieve the essence of meaning (Alsaigh & Coyne, 2021). Through the brief description above, we use a hermeneutic phenomenological approach to dissect the structure of meaning in the phenomenon of analog photography. Phenomenology focuses on 'phenomena' as 'appearances' (Van Manen, 2016) and is the study of the "lifeworld" (Merleau-Ponty, 1969).

According to Husserl, the goal of phenomenology is to describe phenomena to return to the things themselves, that is, the "world of immediate experience" that has not yet been reflected upon (Van Manen, 2016). Manen emphasizes the need to suspend the justification of lived experience through phenomenological reflection by distancing oneself from the reality of experience.

Heidegger emphasizes that the phenomenology of Dasein ('human being') cannot be separated from hermeneutics, as human understanding of the world is only possible through language (Heidegger, 1977a). Hermeneutics is the way to approach, access, interrogate, and explain the facticity or character of Dasein's existence (Heidegger, 1988). Understanding is the basic human ability to comprehend oneself through distancing from the experienced reality. Phenomenological research is descriptive, focusing on the structure of experience, and seeks to reflect on the essential themes of lived experiences (Creswell, 2013). Polkinghorne emphasizes accountable principles rather than strict rules, making hermeneutic phenomenology more accurately described as a "methodology" (Laverty, 2003). Gadamer refers to hermeneutics as a "method without method," relying on the researcher to organize their procedures reflectively and be open to experience (Gadamer, 1977; Van Manen, 2014).

Hermeneutics is a method of interpreting in a circular manner between understanding and explaining to reach the essence of a phenomenon. Essence is the core of an object, identical to Plato's concept of 'idea,' which appears as 'eidos' or appearance. Essence can be recognized through its appearance and existence,

understood in the context of time (Merleau-Ponty, 1964). According to Van Manen, the essence of a phenomenon is the structure of the meaning of lived experience. Merleau-Ponty (1964) sees the role of humans as central in phenomenology. Experience begins with the body "as an anchor in the world" that perceives objects and other people. The perceptual environment influences perception as an arrangement of objects and the space between them, differentiating each experience.

In hermeneutics, experience is considered as a text, understood as a human cultural activity (Ricoeur, 1976), which is traced and woven to form new, essential meanings. From the above description, the procedure for hermeneutic phenomenological research on analog photography in the digital era can be briefly summarized as follows: (1) Distanciation: Creating distance from the general definition of analog photography by applying prejudice, suspicion, or pre-understanding. Distanciation is an effort to distance oneself from the definitive meaning at present by suspecting that there may be other meanings that can be revealed. (2) Describing the phenomenon: Providing a descriptive explanation of the phenomenon. (3) Understanding the essence: Identifying and comprehending the core meaning of the phenomenon. (4) Appropriation: Interpreting and actualizing the meaning of the text for the contemporary reader (Ricoeur, 1985).

This research procedure, which focuses on the experience of photography, places humans in it as subjects who experience the event of photographing through a camera, photo objects, and photo images. In the context of technological experience, photographic experience extends to other aspects outside of photography, such as photo distribution

technology and photographer motives. This entire experience exists in the context of today's digital world.

This research addresses the phenomenon of analog photography. Therefore, the description of this analog photography experience encompasses at least (1) photography as a technological product, (2) its relation to humans as users of photography, (3) the purpose of using photography, and (4) the level of the photo creation experience.

Heidegger's perspective on technology is crucial for understanding the essence of technology. The concept of technology can also be related to the essence of art, emphasizing perception and experience up to the cultural level. Discussions about technology form the fundamental basis of this research because technology occupies the context of the discovery of photography, analog photography technology, the discourse on materiality in photography, and dematerialization in digitality. Thus, this study focuses on the phenomenon of analog photography as an object that exists within and is constrained by the digital space-time framework.

RESULTS AND DISCUSSION

The transformation of photographic technology has impacted both the practice and essence of photography. During the era of analog photography, the process relied on materials such as cameras, roll film, paper, and chemicals, involving manual human activities like loading the film, taking pictures, cocking the camera, aiming, developing, and printing the film, as well as archiving photos in physical albums. In the digital era, the essence of photography has shifted from mechanical, material-based shooting to processes that depend on electrical power, batteries, sensors, memory, camera screens, digital

archiving, computer software, and social media.

In this age of instant access, photos can be quickly and massively simulated by robots and artificial intelligence. This raises questions about the role of photographers: are they still crucial in the photographic process? How the meaning of photographic artifacts like cameras and the process of creating photo works to achieve an auratic condition? How has the transformation of photographic technology changed human life in the modern era? These questions are relevant to the concept of *techne* as discussed by Heidegger, Don Ihde, and Benjamin regarding the process of creation and aura in art.

To describe the context of analog photography in the digital era, we need to understand the term "digital." Digital is a technical term referring to data in the form of discrete elements (Gere 2008). The physical universe can be modeled by integers and discrete values, which are deterministic (Floridi 2009). Digital also refers to numerical systems, including both linguistic systems and broader phenomena. Digital technology is characterized by the invention of computers that store binary data (zeros and ones). Computers enable the development of digital systems, influencing human attitudes and behavior.

Digitality is the abstraction of reality into numbers, relying on binary numerical codes (bits). A bit is a code representing states such as alive or dead, true or false. Bits have no color, size, or weight and can move at the speed of light (Negroponte 1995). Bits, unlike atoms, are non-material, making material categories irrelevant in the world of bits. When bits replace atoms, values change based on bit categories rather than the categories of the material world.

Digital is discrete, rigid, and without gradation, in contrast to the physical world which is material-based. Negroponte states that the world as we experience it is analog, with smooth gradients and continuous transitions. Nothing suddenly comes to life or dies, drastically changes from black to white, or shifts from one state to another without transition. The world of life is a series of continuous events.

According to Aicher, "digital" is an abstract conceptuality that demands logical precision, contrary to practical experience and sensual perception which have a significant impact on human life (Aicher 2015). Aicher believes that the abstract (digital) and the concrete (analog) cannot be separated. Analog and digital are inseparable unity. He gives the example of coordination between hand and mind; when the hand grasps, the mind also thinks of grasping. However, in modern tradition, thought is prioritized over practical-perceptual abilities, such as counting and systematizing are considered more important than seeing and grasping.

Aicher observes that in the computer age, humans emphasize digitality, calculation, and the replacement of quality with quantity. Humans who once learned through experience, creativity, and pragmatism now become analytical and thinking beings. Tools are a technical extension of humans. Heidegger mentions that "handiness" has been marginalized in the digital era. Everything has been framed within the essence of digitality, technology, and automation, ignoring the importance of the hand. According to Aquinas, the hand is crucial in human development because it plays a role in the formation of the mind and human intelligence (Fischer 2010). In the digital world, practical skills and creativity are

marginalized, replaced by the capabilities of the mind.

The Digital Era is the era of images as pure signifiers (Andrew Darley 2000). In visual culture, images are viewed as surfaces and mere signifiers. The "digital image," produced by digital machines, is no longer considered to have depth of meaning. The ability to reproduce digital images allows their formation as copies (Baudrillard 2000). Baudrillard calls this phenomenon "Pataphysic," the science of imaginary solutions, simulation or hyper-simulation, where objectivity is hard to verify (Baudrillard 1983). Digital media create spectacles that absorb attention, causing reality to disappear because it is replaced by abundant simulacra. Excessive information floods humans, eliminating the substance of the information itself (Baudrillard 1994). Information appears only as an image, like an apparition that briefly appears and then vanishes.

Photography exists in the realms of technology, art, design, and culture. Besides being practically useful, photography can also threaten humans' ability to view the world. Photography as technology and tool is a double-edged sword, depending on how it is used. In the digital era, analog photography is appealing because it offers the experience of "seeing and recording events" that can foster awareness. Analog photography shapes a process-oriented mindset, in contrast to digitalization which focuses on speed.

Analog photography trains humans to think gradually and evaluatively, viewing failure as equally valuable as success. It fosters a slower, more continuous photographic experience, involving both cognitive and motor skills. The skills of understanding space, distance, light, and manually processing film are examples of

abilities honed through analog photography (Aicher 2015). However, these skills can be replaced by electronic devices, sensors, and machines in digital technology. Aicher states that perceptual abilities, proportion, connection, spatiality, analogy, and motor coordination are increasingly declining, while analytical skills are more prioritized. This leads to the marginalization of practical experience and creativity, though both skills need to be mastered in balance.

In the Industrial Revolution Era, production machines were developed to pursue efficiency, minimizing workers with manual skills (Ihde 1979). Machines replaced humans for mass production, sacrificing human creativity. Work should consider the impact that threatens basic abilities, namely the "ability to create with hands" or "handiness" according to Heidegger. *Techne* no longer reveals truth when modern technology separates it from creativity or art, causing a separation between the creator and their work.

Heidegger emphasizes that contemplation through the creation of art is an escape from technology, allowing a dialogic process and observation from a distance to give birth to new truth (*aletheia*) beyond science. Technology, through its framing mechanism, traps humans in the transparency of tools. An example of the effect of tool transparency is in the case of smartphone photography, where the camera is no longer consciously noticed because it merges with phone technology. Shooting happens impulsively and quickly, erasing the meaning from the resulting photos. As Benjamin (1936) said, artworks in the Mechanical Reproduction Era lose their aura. The relationship between the photographer and their work is separated

due to the transparency of technology, causing the loss of the photographic experience. Smartphone photography makes us unaware of what we are doing, so taking photos is no longer a meaningful act. This is the true effect of tool transparency, which is one of the impacts of technological enframing. Humans submit to technology, which suppresses awareness of meaningful actions.

Analog photography in the digital era is "poesis," bringing forth sublime meaning amid technological advancements. Analog photography reveals the world as a gradual and continuous process of creation, as well as a way of viewing the world and life. Analog photography, as a product of modern technology, approaches the concept of technology as 'techne,' closely related to the event of artistic creation. Ihde argues that if a tool can foster awareness and open new perspectives, then it fulfills the function of 'poesis' (revealing truth). Analog photographic technology can awaken and open new horizons towards the world through the experiences it builds.

Heidegger believes that art can save humans from instrumentalization and mechanistic processes. However, art can also become an instrument (tool) when created not for the function of "poesis," for example, when art becomes an 'economic tool.' Art that functions to gather money separates the creator from their work. Industrialization and commodification threaten the function of art, as discussed by Simmel in the theory of "The Philosophy of Money." When art becomes practically economical, it loses its consciousness-raising function and approaches the concept of an industrial product. The loss of the subjective aura of a product when it is in the hands of the

consumer as a commodity produced independently from its creator (Simmel 2004). The creation of artwork becomes merely a process to earn money.

Capitalist industrialization has significantly influenced the course of modern life. Art in the early industrial era underwent a change in meaning, from a joyful and sincere work process to something corrupted by the production system's perspective (Williams 1960). Initially, art involved a noble attitude between one's mind and character, leading to self-formation; "bildung" (Gadamer 1975). Simmel (2004) said that humans lose their wholeness and potential when they become part of a division of labor system. Specialization in fields of expertise makes individuals focus on their specific job areas. The "Genius" has now become the "Specialist," differentiated in their roles. Artists and artisans are qualitatively distinguished, with artists as conceptual experts and artisans as practical experts.

In the Digital Era, specialization also occurs in increasingly sophisticated photographic technology. Photographers must share their expertise with machines. The photographer's position, once equal to their instrument (Benjamin 1936), has now declined to that of a mere camera operator. Since the domestication of photography, photographers have only functioned as camera movers, not as true photographers who understand the entire process of photo creation (Altaratz and Frosh 2021). This results in the final photo product losing its aura. The expertise in creating photos has become segmented into camera experts, digital processing experts, lighting experts, makeup experts, photo copywriting experts, and so on. This contradicts the concept of the 'genius' who should be able to handle the entire creation process,

aligned with the concept of "techne." The genius is someone who can think, create, and understand the entire creation process, creating an auratic situation as expected by Benjamin.

The reduction of the photographic work process began with the introduction of Kodak technology, which introduced the concept of photography with "pressing one button." The subsequent processes were handed over to Kodak's photographic laboratory operated by darkroom employees. This is the division of labor in the history of photography, where the analog photographic process was split into separate parts. Photographers of that era still studied the entire photographic process to produce auratic photo works. With the convenience introduced by Kodak, the photographer's role changed to that of a camera operator who did not need to think about developing and printing photos. Similarly, Edwin H. Land, who introduced "Instant Photography" with his Polaroid camera, moved photography into a realm of pleasure with the culture of sharing photos.

Democratized and domesticated photography has altered the photographer's skills, which initially involved (1) shooting, (2) developing negatives, and (3) printing photos, to now only being able to shoot in the digital world. The craftsmanship skills of photographers in developing and printing photos have been reduced. In the digital photography era, the skills of developing negatives and printing photos are eliminated due to dematerialization, which allows photos to be displayed on electronic screens without the need for darkroom development. This reduction affects the photographer's experience, who no longer has the material experience of photography, understanding

of the tools, intuitive control, temporality of the moment, and situational measurement (Cummins 2007), as everything is handed over to the "expert machine" that is the "digital camera."

The advanced automation of digital cameras has taken over most of the photographer's abilities in shooting, developing, and printing photos. This situation creates alienation for photographers and positions the camera machine as the authority in the entire photographic process. All digital photography processes, from shooting to printing, are now handled by the camera, even by handheld devices. The totality of photography in the Digital Era is a technological totality that alienates humans as operators. The concept of photographic expertise has now shifted to merely being an operator. Operators do not need deep expertise; they only need to understand how the tool works. Taking photos is now as easy as pressing a button, a result of the democratized photography concept. Sensor technology further exacerbates the decline of these skills, as anyone can become a camera operator simply by understanding the machine's mechanism without delving into photography.

As previously discussed regarding the concept of alienation produced by advanced machines, alienation also occurs in photography. The event of photography serves as a means for self-awareness, both spiritually and recreationally, as a form of expression and technical mastery (Bourdieu 1990). However, in the case of digital cameras, the technical skills of photography are increasingly declining. When individuals feel less involved in the work process because it has been taken over by machines, alienation arises. Alienation occurs when individuals feel inauthentic

in all their activities (Schacht 1970). The division of labor in the photographic laboratory has now been taken over by advanced digital camera systems, so photographers no longer experience the totality in photography as they did with analog photography. Photographers now question their identity, whether they are truly photographers or merely camera operators.

The ontology of analog photography in the Digital Era undergoes a dissolution, existing in both the physical (material) and digital worlds. This refers to the term hybrid or the concept of transient photography by Bull (2010), which is the idea of photos constantly moving between the material and digital worlds through endless copies. Analog photography, which provides a slow process in the Digital Era, places itself as a medium closer to the art world compared to industrial or mass media photography. The orientation of analog photography in the Digital Era is about how the experience of shooting can be appreciated through the mechanical process with a demonstrative 'photographic play' mode, involving hands, perception, and intuition.

Understanding the experience of analog photography opens various ways and forms of photographic processes. Analog photography in the Digital Era is also understood as a mechanism of self-understanding closely related to art, and as an antithesis to digital photography, which represents industrialization and speed. In the fast-paced, instant, blurred, and overlapping culture of digital reality and virtuality, analog photography re-emerges with a focus on the process. The inauthenticity of digital photography, which is close to simulation and replication, is countered by presenting the authenticity of analog photography. This

authenticity is not only about the physical image but also about the aura in art, which remains irreplaceable in the digital era. Aura is an essential aspect pursued in every artistic process, allowing the presence of subjectivity to be fully expressed in each work, including photographs.

CONCLUSION

The development of digital technology in photography has drastically changed the way photographers work and interact with the photographic medium. The automation of digital cameras has taken over many of the technical skills previously held by photographers, transforming them from experts into operators who only need to understand how to use the equipment. This has resulted in alienation, where photographers feel a loss of control and authentic expertise in their creative process.

Broadly speaking, photography can be placed into two main domains: as a medium of artistic expression and as a practical, industrial, and economic necessity. Analog photography in the digital era tends to occupy the first function as a medium of expression, while digital photography dominates the second function with an emphasis on information speed and economic value. Digital photography, with its speed and ease of reproduction, also leads to a decline in the depth of meaning and authenticity in photographic works. This contrasts with analog photography, which emphasizes a slower, more manual process involving intensive cognitive and motor skills. Analog photography, with its process-oriented and experiential characteristics, offers a deeper and more reflective alternative compared to the

fast-paced and instant nature of digital photography.

In a digital era dominated by simulation and mass reproduction, analog photography brings back the value of authenticity and “aura” in art. Aura is an essential element in every work of art that is difficult to replace with digital technology. Therefore, analog photography in the digital era is not just a matter of nostalgia but also a form of resistance against the dehumanization and alienation brought about by technological automation. It emphasizes the importance of balancing analytical skills with practical creativity in both photographic art and life in general.

Photography today has become an integral part of daily life. Photos on social media affirm the constant sharing of photographic reality. Both analog and digital photography have their respective functions according to their context of use. Digital photography plays a significant role in social communication and industries that emphasize high resolution, low cost, timeliness, speed of information, and visual perfection. Meanwhile, analog photography in the digital era plays a role in fostering awareness and art, focusing more on the process of aesthetic experience.

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