THE CONCEPT OF EMERGENCE IN NON-TEMPORAL PHOTOGRAPHY:
A NON-DUALISTIC APPROACH

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Abstract:
The problem of temporality in photography has invoked a continuous debate concerning the artistic nature of this medium. Previously taken as a different way of seeing, the time signature in a photograph became debatable along with the development of digital photography. Photography’s status as the undisputed evidence of the truth is then no longer relevant. This changes the flow of discourse to a more philosophical one. However, the debate does not provide adequate defence concerning the role of photography in the digital era. The Platonic dualistic approach, especially the Cartesian one, is responsible for this regress. Immanuel Kant introduces transcendental causality to re-examine the Cartesian legacy. This Kantian approach needs to be developed further. Stephen Hawking’s cosmological model of Quantum Field Theory (QFT) working in anti-de Sitter space (ADs) offers a better explanation on this Kantian transcendentalism. The research shows that the non-temporality of photographic images is irrelevant with the development of the medium because Hawking’s approach fits the transcendental interaction proposed by Kant. This article concludes that photography is independent from temporal demands, and that the advancement of photography lies in its potential to pursue non-duality interactions.

Keywords:
emergence • temporal photography • dualism • non-dualistic interaction • quantum field theory
Introduction

Photography may well be the most problematic artform in the history of art. The problem is different from the cyclic detour of philosophical aesthetics; ironically, photography defies any conceptual attempts to define it sufficiently. For Roger Scruton, photography is too transparent to be opaque. Transparency significantly decreases the authorship of a work of art, that is, the authority of the artist. For Nigel Warburton, the representation in photography is never more ambiguous. In Warburton’s defence, the reality represented in photography is always stunted.

Taking the objections further, Alan Goldman underlines the ambiguity of photography one step farther. To Goldman, the contingency of a photographic picture taking negates any possibility of attached meaning, that is, a photograph is always meaningless. A conceptual basis of an event represented by a photographic image necessitates the limitation of the medium. A photograph has always been too transient to be anchored to reality since it can be reproduced indefinitely. Paintings are limited to originals, and dances are absolutely unique since they are singular events.

This indefinite reproduction, according to Walter Benjamin, negates the nuclei of human creativity. In the light of Benjamin, artistic value is only possible when the uniqueness of an artwork is always singular. The plurality of identical art objects (photographs), or the existence of copies, significantly reduces their artistic values. Not only photographs become mundane, but Pierre Bourdieu also argues that the only benefit that photography brings is social comfort.

However, even defending photography as an established artform has always been ambiguous. Taking the Hegelian approach in Levinson, Noël Carroll’s proposition that a photograph is the next logical evolution of painting does not resolve this problem. Carroll’s claim degrades photography’s status to be an “instant painting”. Susan Sontag’s argument that photography is the token of absence further complicates this debate. Victor Burgin argues that nothing surpasses photography when it comes to sensual impacts. A photograph is more devastating than the most realistic painting. However, this blurs the line between photography and anything sensuous.
In short, photography has never been adequately defended, as every new line of argument obscures the scope of the debate in different directions. This is not difficult to imagine. Painting has been strikingly consistent before the dawn of agricultural society in human civilization. Photography is obsolete as soon as a camera shutter is closed. This seriously begs the question about the ontological status of photography.

The aim of this paper is to examine whether the right question is asked. The fact that photography is the Zeitgeist of the century is never to be taken lightly. It even changes the way something is perceived. Humans now never ‘see’ something directly; and between human beings and their immediate surroundings, the photographic nature of social media substitutes what perceptive reality really is. Photography now is fundamental to our existence: human beings even live in a photographic universe.

When it comes to our liberty of choices, photography resembles the internet: unlimitedly limited. In a limited world, our choices of words are unlimited. We construct our reality using words like nature builds itself using living cells and amino acids. Even our digital existence supported by the non-quantum-computing digital worlds are constructed by combining merely the presence or absence of electrical currents in integrated circuits, the ‘0’s and ‘1’s in the binary programming language.

Thus, this paper will elaborate the idea that the incorrect question has been asked as a yardstick to measure how photography works philosophically. I propose that this confusion stems from the dualist’s argument that originates in Plato’s *eidos* as the ultimate reality. This is then contrasted with the emergence principle from the non-dualist’s Quantum Field Theory (QFT) in anti-de Sitter space (ADs), proposed by Stephen Hawking through the work of his closest collaborator, Thomas Hertog.

**The Platonic March of Photography and Its Dualist Legacy**

In the light of Plato, the human mind is the first camera, and philosophy begins when humans depicted in Plato’s Parable of the Cave realise that reality is just a shadow – ‘photograph’. This dictum posits that *eides* are behind everything humans can perceive. The perceptive reality is based on
eidos, and every action that humans do is just to imitate (mimetike) worse than what reality can offer, or mimesis. As imitators, human beings in the Platonic sense degrade reality. The eidos of a bird is imitated by nature, the better copy maker. The bird in nature is imitated by humans in the form of painting – is the worst copy among all.

Aristotle then tries to do justice to artists and alleviate their status. In the light of Aristotle, the painting of a bird is not empeiria, experiencing, but of aisthesis, perceiving. Aristotle's aisthesis emancipates artistic actions as a way to reach the truth in tekhnê and episteme. If in Plato the mind is the first ‘photographer’, and if Plato thinks that “the photographer” is the worst imitator, Aristotle argues precisely the opposite. The human mind attains true knowledge through “the photographs” taken. If Plato takes the regressive path of aesthetics, Aristotle opts for the progressive one.

René Descartes then solidifies dualism’s grip on Western sciences. Descartes’ thought tries to reaffirm the significance of the absolute by proposing the doubting method as an epistemic rule of thumb, leaving res cogitans as the sole undoubted existence. In the light of Descartes, the existence of doubt is a sufficient cause for the non-spatio-temporal autonomy. Immanuel Kant, however, is not easily persuaded by this argument. The Kantian line of arguments holds that the cause is always anchored separately from its effect. Kant’s dualism is a break from Plato’s, suggesting that the cause is originated from the transcendental realm, as Kant put it, and the effect is the epiphenomenal reality perceived by human senses.

For Thomas Hertog, philosophers like Plato, Aristotle, and Descartes laid the groundwork for dualist’s approach to philosophy. In dualism, there is a non-spatio-temporal observer, or “a view from nowhere”. Hertog calls this method “bottom-up”: pointing a timeless and spaceless absolute framework and employing it to spatio-temporal universe or multiverse. Hertog’s (that also means Hawking’s) scepticism is not baseless. Forcing an absolute framework to work in an ever changing universe is highly debatable. David Sumpter questions the dimensionality of reality when he analyses how computer algorithms work without being governed by human beings to make critical decisions for humanity in political events like general elections.
In a similar vein, Marcus du Sautoy concerns humans ability to maintain creativity within their control, given the leap in artificial intelligence or ‘AI’. Du Sautoy argues that a computer’s algorithm is never to replace human ingenuity because the mutual relation is not parasitic, but symbiotic. In short, in Du Sautoy’s defence, humans and machines belong to “different worlds” lived complementarily. Phillip Goff takes this line of argument even further: the foundation of science inaugurated by Galileo is heavily misleading. For Goff, Galileo’s taking Johannes Kepler’s work in a dualistic framework has contributed to significant improvement to knowledge and technology; nevertheless, the blessing of progress comes along with the curse of unresolved crisis in physics.

Photographically speaking, Descartes’s res cogitans separates between the photographer, the camera, and the object. This problematic stance takes the photographer as the observer from nowhere, and science as the camera. Descartes’ line of thought treats the object in the same sense as a hunter’s game. Kant’s objection toward Descartes’ argument sees the camera and the object belong to different worlds. The object is of the noumenal, and the camera is of the phenomenal. The photographer has the autonomy and duty to bridge the two. However, Descartes legacy has proven to be very persuasive: the camera is authoritative, and the photographer is absolute.

In separate studies, I discovered that the most immediate response to Descartes epistemological standing is the camera as the ways of seeing. From my research collaboration with Rudi Setiawan, it is concluded that seeing is the first to be transformed by photography. My argument is based on the works of Patrick Maynard and of Kendall L. Walton. For Maynard, the camera transforms the human eye into ‘Eye’, where the uppercase denotes its strength. Walton, though not specifically limiting his argument to photography, emphasises artistic activities as an enactment of childhood game of make-believe. Walton’s line of thought epitomizes in photography, in which the most vivid and accurate representation is represented in a photograph.

I took a case study, an international photo exhibition entitled Bandung Photography Triennale 2022 (held from September 2022 to April 2023 in Bandung, Indonesia). The reports are divided in several publications in...
the media and academic reports. The works exhibited showed a strong disposition in the dualist’s understanding of image making. The underlying narrative of the event was a spiritual journey of enlightenment. Then the problem of identity became apparent, as well as the need for photography as a psychotherapy. I further discovered that exploitation could become a strong motive behind photojournalism. The challenges of the medium, ignorance of the artist to become relevant, and the return to light as photography’s reason of being were discussed in several post-event exhibitions. My first conclusion about the works in the exhibition was to revise seeing as the primary subject-matter in the photography discourse. I elaborate this conclusion by expanding photography as a way of seeing, temporal evidence, and a structured belief.

After “the Eye” argument, the claim that photography is the only means of temporal objectiveness is debatable. The studies concerning time as the natural character of photography was coined by Roland Barthes, echoing the indexicality studies by Benjamin. Time stops and moves at the same time, claimed Barthes. His line of arguments is further solidified by Stephen Bull. Bull challenges the movement of time in photography. Bull goes by citing Barthes, saying that “this-has-been” will always be “this-never-was”. The movement in a photograph is a move and a stop simultaneously. This is seriously challenged by Joan Fontcuberta. Fontcuberta goes in line with Sontag’s argument (the token of absence). Taking Walton’s proposition to a different direction, in the light of Fontcuberta the make-believe is based on something akin to Jean Baudrillard simulacra. In another word, Fontcuberta is challenging Barthes’ idea: the time itself is non-existent in photography (non-temporal).

The absence of time is a serious problem for the dualist’s disposition. In the Platonic line of logic, the observer from nowhere (the photographer) needs an absolute intermediary: the camera. Time is the sole guarantor of the observer’s authority. When the temporal element disappears, the whole ontological structure crumbles. Rosalind Krauss dismisses Bourdieu’s claim that no moment is justifiable as the trace of temporal truth. Time is not a social invention, Krauss objects – and Bourdieu’s “social indexicality” is merely based on his irrelevant argument based on the superiority of painting. Like Bourdieu’s, Krauss’ argument was conceived before the
dawn of digital photography; and therefore, Krauss’ proposition is very unlikely to refute Fontcuberta’s.

The urge to anchor the camera to another solid ground then leads a movement taking photography as an ideology. David Bate’s analysis is fundamental in this respect. For Bate, taking time in photography is secondary to taking the artform as reinforced criticism. The reinforcement is adhered to Foucault’s idea on the subtle and omnipresent power. A camera can instantly grant anyone this power, and what it takes is only a shutter away. From the Marxist point of view, Abigail Solomon-Godeau sees the embodiment of binary power structure is stronger in photography than in anything else. In Solomon-Godeau’s line of argument, the word ‘taking’ is overemphasised through photographic action; that is, even if time is not real, the act of forcefully getting something from the object is.

This Marxist approach is easily dismissed by simple logical analyses. I deliberately used quaternio terminorum examination on one of the Marxist arguments, for the sake of inquiry. Bate’s disposition, however, is still constructive. The best criticism photography can offer is its epistemic nature (or in Bate’s term “the photographic episteme”). Daniel Rubenstein takes this grounding to provide the new ontological reasoning for photography. To Rubenstein, both photography and philosophy share the same subject-matter, light. Thus, Rubenstein says philosophical photography is: “an image of thought that works in a specific way that is inseparable from the way technology produces, recycles and re-writes images”. Bate’s and also Rubenstein’s arguments are relevant with the fact that photography has never been more ubiquitous in the world of digital photography. Martin Lister argues why digital photography put the last nail on the coffin of time: the image (the photograph) has become algorithmic images, that is malleable and non-indexical.

The Platonic march and its dualist approach has become problematic in Descartes’ persuasion of the existence of the observer from nowhere. When Descartes’ line of thought is unable to offer satisfactory explanation, it is time to give the spotlight to Kant’s conditional ‘observership’. Kantian arguments, nevertheless, need scientific reinforcement to validate the idea of a transcendental existence.
The Non-Dualist Medium: Photographic Images as Emergences

Lister’s argument severely limits the appeal of Descartes’ dualist’s propositional anchoring. From the case study I mentioned in the previous paragraphs, I began to revise my argument by considering the criticism approach in Bate’s line of thought.\(^{52}\) I conclude by saying that apart from its progressive contribution to photography discourse, a new theoretical standing is needed.\(^{53}\) Therefore the theoretical milestone of photography starts from the Eye, to time signature, to ideology (Bate’s criticism and Rubenstein’s philosophical photography), and to emergence. The last of the four is non-temporal in the Kantian sense. As I commented before, the transcendental term introduced by Kant still needs to be articulated further. In Kant’s era, the only physics available was the classical Newtonian framework. Two centuries after Kant, new physics called Quantum Field Theory (QFT) can provide better answers.

The core argument of QFT is that reality is not what it is perceived to be. Platonic dualism is based on the belief that reality is perceived in the form of perception.\(^{54}\) In another word, to Plato’s line of thought, the world is ‘is’, whereas QFT holds that the world is “is being”. If this is applied to cosmogenesis, the world is ‘born’, whereas the latter holds that the world is “being born”. However, this is not the dichotomy between ‘is’ and ‘should’. Hawking and Hertog developed this idea from a physicist and a Catholic priest, Georges Lemaître. To Lemaître, the universe is ever changing.\(^{55}\) This position contradicts Albert Einstein’s Platonic framework. To Einstein, the world is deterministic: there is no yesterday because the past, the present, and the future happen simultaneously.

Hawking changes his belief because the idea of an unchanging universe leads to contradictions. One of the most famous in physics is the idea of anti-particle. Hawking made his name from his equation that states how long a blackhole can stay active. His theory suggests that because every particle in the universe has an antiparticle (more like identical twins that move to exactly opposite directions), the blackhole can only consume the particle, but not the anti-particle. From this Hawking says that all blackholes will eventually evaporate.\(^{56}\) There is only one big problem for Hawking: his equation requires a kind of universe that is ever changing. In short, even when Hawking built the foundation of his theory from
Einstein, Hawking must discard Einstein’s idea of a Platonic universe.

In a Platonic universe, the law of causality is directly observed. To give an example, every physical action must fulfil Newton’s Law of Motion. The third of this law states that for every action there has to be a reaction caused by the action. Therefore, for every flying ball there must be a person who kicked the ball. The underlying principle of this is gravity. Gravity is housed by and is housing space-time. The idea of space-time is Einstein’s greatest finding. The theory stipulates that for every movement in the universe, there should be gravitational force working on it. Nothing escapes gravity. This axiom governs the universe. Therefore, no single matter in the universe can ‘cheat’ this “gravitational price”. That means, according to this the sun will never suddenly disappear and appear in another corner of the Milky Way galaxy.

The problem is particles behave differently. For particles, especially subatomic particles (the very small ones), gravity means nothing. Any textbooks on quantum mechanics are based on this principle. The world of subatomic particles is governed by another force, the electromagnetic. This force defies gravity, and it works counter-intuitively. In this world, space and time are meaningless. In short, the universe is divided into two worlds with their own respective rules: the world of gravity where everything is ‘big’, and the world of electromagnetism, when everything is ‘small’. The human world is possible because these two worlds are interacting with each other, without one ruling or ruling out another. In another word, the two laws are the laws of relativity and the law of quantum mechanics. Historically, Einstein’s final and unfinished ambition is to unite the two. That leaves the subsequent generation of physicists to resolve this paradox.

There are two strong candidates, the QFT and String Theory. They represent a stark answer to the question of unifying the two worlds. In short, QFT says the answer is ‘no’, and String Theory claims otherwise. Consequently, the mathematics of the two differs significantly. QFT offers a view of a ‘single’ and active universe, whereas String Theory necessitates a passive multiverse with at least in ten dimensions. For Hawking, infinitely many universes are off the table. Hawking then opts for a ‘binary’ universe tangled into one where the quantum realm emerges as the gravitational world. Emergence then serves as the phenomena in
between the worlds. Emergence is holographic, and the model proposed by Hawking is holographic duality. In the light of Hawking and Hertog, holographic duality is not simply a projector connected to a computer projecting something to the screen. The problem is, there is no screen. The universe is not a gigantic computer in Hawking’s QFT.

Emergence, according to Max Tegmark, is surprisingly common to human beings. Human consciousness is an emergent one. In fact, the perceptive reality emerges from something very alien to human senses. The most common example of emergence is the cloud. The water vapour is a necessary element in the air. However, the vapour that has always been human beings’ daily life is not visible until it emerges as clouds in the sky. The quantum world is much smaller than the water vapour. It is governed by a law that is incompatible with the gravitational cosmological model (the Einsteinian theory of relativity). The water vapour and the cloud are not the best example, yet they offer a comprehensible picture of what emergence is.

The water vapour example also exhibits what Hawking called imaginary time. The only time the vapour is meaningful to human senses is when it takes the form of rain drops. Humans do not actually realise whether time really matters when the forms assumed are vapours and clouds. The perception of time does not necessarily mean that time exists. Here goes the logic: for the water vapour, time is not relevant. The same thing can be applied to matters. Sentient beings observe the emergence of time. That is, the time imagined matters for the observers. The space does exist as anti-de Sitter space (ADs). ADs is a non-temporal space that signifies the existence of the quantum world and its emergence.

The QFT-ADs cosmological model proposed by Hawking requires three fundamental agencies. They are questions, boundary conditions, and dynamics. In another word, the model requires laws (dynamics), assumptions (boundary conditions), and observers (questions). This is a revision on Einstein’s cosmological model that only requires laws irrespective of any assumptions and observers. For Einstein, the law of nature is universal, space-time bends, and the speed of light is absolute. For Hawking, the interaction of the three determines the emergent reality. Thus, the Platonic model is determinism, whereas the non-dualist model is interactionism.
The underlying principle of Hawking’s interactionism is the absence of subject and object. This is precisely Kant’s reason to introduce the concept of transcendentalism.\(^6\) If we use Hawking’s theory on Kant’s, then the *noumena* is the quantum world, and the *phenomena* is the emergence, bound by holographic duality. Implementing this principle to non-temporal photography: both the photographer and the object are observers, the camera is the laws, and the light is the assumptions. In non-temporal photography, therefore, light is not the prerequisite of a photograph. The photograph becomes – a Photograph, with the uppercase ‘P’ denotes the strength of the emergent reality. A Photograph is, consequently, never taken: a Photograph is made. Thus, any medium can be Photographic. Since a Photograph is never taken, it is always being made by anyone or anything before or beyond the lens, or even when the lens is absent.

A photograph after its temporal nature is dismissed, according to Fred Ritchin, is no longer genotypic. The digital era changes its ontological status into phenotypic.\(^6\) This means that “temporal genetics” is no longer necessary. Loucy Sutter proposes a similar tone with the non-duality principle between the image and the material. That is, for Sutter, an image has to be materialised and the material must assume its imagery status.\(^6\) A Photograph is in line with what Michelle Henning proposes. To Henning, the most irrelevant role in non-temporal photography is the subject (photographer): everything is the object.\(^7\) The themes in philosophical photography discourse are going toward the same direction: non-temporal and non-dualism.

**Conclusion**

The discourse on photography is never fruitful when the underlying principle is that of Plato’s dualism. Taking the photographer as the “view from nowhere”, the camera as the science, and the object to be objectified always leads to either degrading the status of photography to be mere tools without significance or offering mediocre status as a common means to explore reality. Photography becomes a better pen capable of producing images, better and faster than paintings. However, with the advent of digital photography, the human behind the camera becomes meaningless. The ubiquity of the photographic images questions the only remaining value of photography: time.
Dissuaded by the meaningless of time, the debate takes a criticism turn. Photography becomes ideological. Time is no longer considered as the most critical point in photography. Photography without time significance is no better than its status as a way of seeing and temporal evidence. This restrains the development of photography; ironically, no technological medium grows faster and better than photography. The best alternative to this irony is to employ photography as a primary philosophical tool. Nevertheless, along with the explosion of digital photographic images, the ideological treatment becomes unproductive.

When humans are no longer instrumental in taking a photograph, cross-sectioning principles between Hawking’s cosmological model and Kantian transcendental logic offers the fourth approach: non-temporal emergent images emerge in holographic duality. This non-dualistic view holds that the non-temporality of photography is irrelevant to its potential. This line of argument can be employed to understand the most advanced development in photography for numerous purposes, especially its artistic status. Photography as Photographs is now free to pursue its own agenda, independent from the determinism of external constraints.

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Endnotes:

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16 I emphasise the conjunction ‘or’ because in quantum computing, the presence of the binary existence assumes the super-positioned conjunctions of ‘and’, ‘or’, and both simultaneously. These conjunctions function as electronic logical bridges. I refer to Tegmark’s explanation in “What is Computation” sub-section in Max Tegmark, Life 3.0, Being Human in the Age of Artificial Intelligence (Alfred A. Knopf: New York, 2017) 61-71.

17 Some key arguments in this paper are based Hertog’s view. See Thomas Hertog, On the Origin of Time, Stephen Hawking’s Final Theory (New York, Bantam Books, 2023).


23 Hertog, op.cit., 198, 204-205.


26 Philip Goff, *Galileo's Error, Foundations for a New Science of Consciousness* (London: Rider, 2019) 3-23. However, Goff is never fond of what he called quantum duality, nor does he endorse material monism. Goff’s argument is one of the reasons I call Hawking-Hertog’s disposition as non-dualism.


54 Hertog, op.cit., 53, 57.

55 Ibid., 53.

56 Ibid., 213-217.

57 Ibid., 42.

58 See the debate between Einstein and Niels Bohr concerning quantum reality. Ibid., 175-175.
59 Ibid., xi-xxi, 147-155.
60 Ibid., 220-231.
61 Tegmark, Life 3.0…, op.cit., 287-290.
62 The water vapour-cloud example is categorised as physicalism. See Michael Tye, 
Consciousness Revisited, Materialism without Phenomenalism (Cambridge: The MIT Press, 
2009) 29.
63 Hertog, On the Origin…, op.cit., 55, 98.
64 Ibid., 224-226.
65 Ibid., 187.
66 Ibid., 189-201.
67 Sedwick, Kant's Groundwork…, op.cit.
70 Michelle Henning, “The Subject as Object: Photography and the Human Body” in 
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