

THEORETICAL MONOGRAPH



Zero-Horizon Photographic Art Theory

零式写真芸術論

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Prologue — The Zero-Horizon

A Theoretical Position for Asking What Precedes Photographic Formation

When photography is discussed, an image is usually already there. Zero-Horizon Photographic Art Theory traces the question further back, prior to the interpretations and evaluations opened by the formed image, toward the conditions through which that image comes to be formed.

The question posed here is how differences on the world side that participate in photographic formation can be described as a generative structure before the post-formation distinctions of image, author, object, meaning, and viewer are introduced.

The word *before* in this study does not indicate precedence in clock time. It indicates theoretical priority. The concern is not with measuring the seconds before exposure or the milliseconds before perceptual processing, but with the structural order in which photographic theory begins to presuppose the distinctions it uses in explanation.

This theoretical position is the **Zero-Horizon**.

Zero-Horizon Photographic Art Theory and the Japanese title *Reishiki Shashin Geijutsu-ron* (零式写真芸術論) designate the same theoretical system. *Zero-Horizon* corresponds to the theoretical base point named 零の地平 in Japanese. The Japanese abbreviation 零式 refers to the theoretical system developed from that base point; it is not a literal translation of *Zero-Horizon*.

At the Zero-Horizon, differences on the world side are first described as generation on the world side rather than being immediately reduced to object, meaning, representation, or emotion. The argument then proceeds to the world-side outer-layer structure, subject-side internal modulation, the one-time relational event of photographing that includes the camera, the formed photograph, and the viewing event.

Photographic formation is not reduced to a single cause. Deep-layer generation on the world side, the outer-layer structure, changes on the subject side, and the operation of the camera are treated as mutually distinguishable explanatory domains.

The first question of this study can therefore be stated as follows:

Before a photograph is formed, what kind of generative structure can describe difference on the world side?

The second question asks how that world-side structure participates in the event of photographing together with the subject, the camera, and a temporal cut.

The Zero-Horizon is the theoretical point of departure that connects these two questions.

Introduction — Toward the Conditions of Photographic Formation

Method, Comparative Coordinates, and Scope of Zero-Horizon Photographic Art Theory

Zero-Horizon Photographic Art Theory describes the formation of photographic art by tracing inquiry beyond the analysis of completed images and meanings toward the conditions of their formation.

Its formative history includes long-term photographic practice as well as comparative encounters with theories of photography, aesthetics, phenomenology, autopoiesis, quantum theory, and Marginal Art. A reference that contributes to conceptual formation, however, is not identical with an argument that supports a completed theoretical proposition.

References in the formative history help explain why particular questions emerged and why the theory moved toward particular conceptual distinctions. The theoretical body, by contrast, examines propositions through conceptual coherence, explanatory necessity, comparison with existing theories, range of application, and explicit limits. This study connects those two dimensions only after keeping them distinct.

I. Where the Question of Photographic Theory Is Placed

Photographic theory has many legitimate points of departure. Authorial intention, indexical relation to the object, the camera as apparatus, documentary character, reproducibility, social institutions, memory, and viewer experience all provide important coordinates for thinking about photography.

What Zero-Horizon distinguishes is not their relative value but the position from which the question is asked. When the relation between image and object is discussed, the photographic image has already been formed. When authorial expression is discussed, the distinctions among author, object, selection, and image are already in place. The same is true of viewer experience: a photograph already exists as an object of viewing.

Zero-Horizon adds to these post-formation inquiries a theory of formation that asks about the conditions through which the photograph comes to be formed. Its first object of description is **deep-layer generation on the world side**.

2. The Four Phases of Zero-Horizon as a Theoretical Model

Deep-layer generation on the world side is articulated through four phases: **Proto-zero, Zero-tremor, Zero-response, and Zero-return**. The four phases describe distinct functions of equilibrium, deviation, the formation of relations, and re-equilibration.

They are neither units of measurement in the natural sciences, psychological classifications of the photographer, nor categories for classifying formed works. They are an analytical model within a theory of photographic art for describing world-side generation prior to photographic formation through functional differences.

For the four-phase model to hold theoretically, each phase must perform a distinct explanatory function, the relations among them must be described coherently, and their responsibilities must remain differentiated from those of the outer-layer structure, subject-side internal modulation, and the theory of photographic formation that follow. Chapter One establishes these conditions through definitions of the four phases and their mutual relations.

3. External References in the Formative History

Shunsuke Tsurumi's theory of **Marginal Art** provides a comparative coordinate in the formative history of this study by returning inquiry toward the conditions under which art institutions become established.¹ Marginal Art, which addresses the margins and conditions of institutionalized art, and Zero-Horizon, which addresses world-side structure prior to photographic formation, concern different domains. Their relation is limited to a shared problem-setting gesture: tracing inquiry backward from an already established framework toward its conditions.

Autopoietic theory provides another important comparative coordinate for distinguishing external influence from internal change.² In this study, neither the photographing subject nor the act of seeing as a whole is identified with a biological system. Autopoiesis is referred to in a limited way in Chapter Four, where subject-side internal modulation is examined.

Quantum theory entered the formative history as a source of comparative thinking around possibility, relation, formation, and observation.³ No one-to-one correspondence between quantum phenomena and the four phases of Zero-Horizon constitutes a scientific foundation for the theory. The Comparative Supplement examines both the usefulness and the failure points of this analogy.

The common rule in these cases is to distinguish formative importance from logical foundation.

4. Phenomenology as a Comparative Coordinate

Because Zero-Horizon addresses what is theoretically prior to photographic formation, phenomenology provides an important comparative coordinate. Husserl's intentionality and constitution of phenomena, and Merleau-Ponty's embodied perception, offer precise theoretical resources for considering how experience is formed.⁴

The distinction drawn here is not a hierarchy of primordially. A pre-reflective experience that is nonetheless formed as experience for a subject and a model that distinguishes world-side generation from subject-side experience have different explanatory objects.

This comparison becomes specific in Chapter One's four phases, Chapter Three's Proto-Qualia, and Chapter Four's internal modulation. Phenomenology is not borrowed as the foundation of Zero-Horizon. It is used as a comparative coordinate for testing where the boundary between world side and subject side is to be drawn.

5. Comparative Coordinates in Theories of Photography

Peirce's *index*, Barthes's account of the relation between the photograph and past reality, Benjamin's theory of technological reproducibility, and Sontag's critique of photographic culture all provide important coordinates for considering how a formed photograph relates to object, institution, memory, and society.⁵

Zero-Horizon does not replace these questions. It adds another one: the question of formation. Prior to asking what an image indicates, the theory asks how a single event of photographic formation is constituted through world-side conditions, change on the subject side, the operation of the camera, and a temporal cut.

These comparisons are taken up point by point from Chapter Five onward. At this introductory stage, Zero-Horizon is not ranked as more "fundamental" than existing photographic theory. The task is only to show where different questions enter into relation.

6. Scope of the Theory

The primary domain of application of Zero-Horizon Photographic Art Theory is **photographic art**.

Chapter One describes deep-layer generation on the world side through four phases. Chapter Two treats the outer-layer structure through three descriptive dimensions. Chapter Three limits Proto-Qualia to a structural threshold that may be established within that outer-layer structure. Chapter Four examines subject-side internal modulation.

Chapter Five develops the one-time relational event of photographing formed by world, subject, camera, and temporal cut, and defines the photograph as a finite trace. Chapter Six addresses the relation between the formed photograph and the viewer through the viewing event. Chapter Seven re-examines the formative origin of photography in relation to the contemporary image environment, including generated images.

Questions may open from this structure toward other artistic domains, but the direct argumentative object of the present study remains photographic art.

After the seven principal chapters, the Relational Supplement examines the relation between Zero-Horizon and **Shadō**, which emerged from the same long-term photographic practice. Shadō is an independent practical system concerned with the practicing subject's disposition in photographic practice. Its function differs from the subject-side theory developed within Zero-Horizon. The two share a root in formative history while retaining different purposes and conceptual positions; their relation is therefore examined in terms of boundary and adjacency between two systems.

The Theoretical Supplement then refines the description of the outer-layer structure. The Comparative Supplement clarifies the boundaries of external references in the theory's formative history. The Verification Supplement addresses internal objections and conditions under which reconsideration would be required. The Operational Part moves to structural confirmation and authorial positioning of already-formed works.

Chapter One begins with Proto-zero, Zero-tremor, Zero-response, and Zero-return, examining their definitions, necessity, comparative coordinates, mutual relations, and theoretical limits.

Chapter One — The Four Phases of Zero-Horizon

A Model of Deep-Layer Generation on the World Side

The four phases of Zero-Horizon are described through the technical names **Proto-zero**, **Zero-tremor**, **Zero-response**, and **Zero-return**. Each phase performs a distinct explanatory function within deep-layer generation on the world side. They are not physical stages, psychological states, or categories of completed works.

The functional sequence may be summarized as follows:

Proto-zero → **Zero-tremor** → **Zero-response** → **Zero-return (re-equilibration)** →
renewed possibility of deviation

This ordering is logical and functional. It does not constitute a measured chronological series.

Methodological Position of the Four-Phase Model

1. Methodological Limitation of the Four-Phase Model

The four phases are an analytical model for describing deep-layer generation on the world side. Their object is world-side generation that may participate in photographic formation. The psychological state of the subject, the viewer's emotion, and the classification of formed works belong to different explanatory domains addressed later.

The model contains a logical order: Proto-zero to Zero-tremor, Zero-tremor to Zero-response, and Zero-response to Zero-return. The concern is to articulate differences of generative function. Clock-time measurement lies outside the responsibility of this model.

The four phases also differ in function from the outer-layer structure and from the operational vocabulary used for works. Chapter One deals only with phase differences within deep-layer generation on the world side. The distinctions from later concepts are defined again at the point where each of those concepts is introduced.

2. Epistemological Position of the Four Phases

The four phases are not a classificatory table of directly observed objects. Nor are they arbitrary names. They conceptually reconstruct explanatory differences required when photographic theory asks about conditions prior to photographic formation.

Each phase bears an independent explanatory function while remaining coherent with the others and differentiated from the later responsibilities of the outer-layer structure, subject-side internal modulation, and the theory of photographic formation. In this respect, the four-phase model is neither a direct-measurement model of empirical science nor an arbitrary symbolic system. It is an analytical model for describing conditions of formation within a theory of photographic art.

3. Meaning of the Term "Transition"

This chapter uses the term **transition** between phases. Transition does not mean that a physical object moves from one container into another. It indicates that the function required to describe one generative situation changes and another descriptive situation becomes necessary.

The boundaries among the four phases are therefore established by changes in explanatory function rather than by numerical thresholds. These boundaries are distinct from the structural threshold defined later and from classificatory terms used for formed works.

I. Proto-zero

Undifferentiated Equilibrium and Generative Possibility

1. Definition

Proto-zero is the equilibrium phase on the world side in which difference has not yet become dominant as a particular direction, object, or meaning.

Equilibrium here does not mean a complete absence of difference. It means a state in which the possibility remains that difference may later be organized into relations, while no particular direction has become dominant. In this sense Proto-zero provides the point of departure for generation.

2. Theoretical Necessity

To describe the deviation treated in the next phase, a reference phase is required. If that reference were a completed order or a fixed arrangement of objects, deviation could be understood only as disturbance of an already established state.

Proto-zero instead establishes a neutral equilibrium prior to completed order. This allows later deviation to be located within generation itself. Its theoretical function is therefore to provide the reference phase that makes both deviation and return describable.

3. Undifferentiation and Potentiality

Undifferentiation means that differences may exist while remaining undetermined as particular objects, meanings, or directions.

Such a state contains generative possibility. **Potentiality** is used analytically to indicate that difference can still be organized into relations. It is not an independent physical quantity, and Proto-zero does not presuppose direct correspondence with a quantum *potential state* or with physical *energy*.

The term serves to affirm generative possibility. If Proto-zero were defined as complete absence of difference, later deviation could be explained only as something suddenly added from outside. The possibility of deviation held within Proto-zero allows Zero-tremor to be positioned as a functional change within the same generative process.

Potentiality names the generative possibility of Proto-zero as an attribute of that phase, rather than as a fifth element.

4. Structural Neutrality

The word *quietness* may accompany Proto-zero as a sensory metaphor for structural neutrality. The positive definition, however, is equilibrium in which difference has not become dominant in a particular direction.

Here, quietness serves, at the level of language, as a supplement to structural neutrality. Emotional calm and the atmosphere of a work remain outside the scope of the term as used in this study.

5. Comparative Coordinates: Phenomenology, Ma, and Kū

The relevant axis of comparison between Proto-zero and phenomenology is the object of description, not the depth of origin. Phenomenology addresses with precision how the world appears for a subject, including pre-reflective experience. Proto-zero, by contrast, establishes as an analytical model world-side generation distinguished from the content of subject-side experience.

Proto-zero therefore need not be ranked as a universal reality “more prior” than phenomenology. The difference is methodological: a theory describing subject-side experience and a model describing world-side generation while distinguishing it from that experience have different explanatory objects.

The Japanese concepts *ma* (間) and *kū* (空) may also be lexically adjacent, but they are polysemous concepts already involving relationality or spatiality.

Proto-zero **does not derive its theoretical foundation from them**. Its limited function is equilibrium in which difference has not become dominant in a particular direction.

6. Relation to the Other Phases

Proto-zero provides the reference against which deviation can arise. In Zero-tremor, asymmetry appears within this equilibrium. In Zero-return, a structure that has passed through deviation and response moves again toward neutral equilibrium.

At the level of Proto-zero, its theoretical task is to provide the reference for deviation and return.

7. Position within Photographic Theory

Proto-zero is the reference phase from which world-side description is traced back toward conditions prior to photographic formation.

Photographic formation itself is treated later as a one-time relational event of photographing involving world-side conditions, subject-side internal modulation, the camera, and a temporal cut. Proto-zero provides the point of departure for the world-side description within that theory of formation.

II. Zero-tremor

Indeterminate-Direction Deviation within Equilibrium

1. Definition

Zero-tremor is an indeterminate-direction deviation arising within the equilibrium of Proto-zero.

When the phrase *minimal deviation* is used, *minimal* does not indicate a measurable quantity. It refers to the first difference distinguished within the deep-layer model. Proto-zero is characterized by the absence of directional predominance; in Zero-tremor that equilibrium begins to acquire asymmetry.

2. Position of Deviation

Zero-tremor is described as a difference in world-side structure distinguished from the subject's recognition or choice. Zero-Horizon separates world-side difference from the photographer's intention and does not reduce it to an effect of subject-side recognition.

At the same time, this theory does not attempt to provide a physical account of the ultimate cause of deviation. Zero-tremor is positioned as the description of a generative phase rather than as a theory of ultimate causation.

3. Deviation as Asymmetry

The deviation of Zero-tremor indicates that concrete asymmetry begins to appear within equilibrium. No value hierarchy of normal/abnormal is required between Proto-zero and Zero-tremor. Deviation is treated as the first functional situation in which generative possibility moves toward a change in relations.

4. Meaning and Direction

The positive definition of Zero-tremor does not include completed meaning or purpose. Meanings may later be formed by subjects or viewers, but those later meanings are not projected retrospectively into the world-side structure of Zero-tremor.

Indeterminate direction means that purposive direction has not yet been established within the model.

5. Comparative Coordinates: Pre-reflectivity and the Unactualized

When phenomenology treats pre-reflective experience or conditions of appearance, a correlation between subject and world is already involved. Zero-tremor describes not that experiential content but world-side deviation distinguished from subject-side recognition.

The distinction from pre-reflective experience is therefore one of explanatory object rather than a hierarchy of primordially. Comparison with phenomenology serves to prevent subject experience from being prematurely imported into deep-layer generation.

Words adjacent to Japanese thought and aesthetics—such as *yuragi*, the unactualized, or a sign of what is coming—may serve as comparative vocabulary for change before direction is fixed. Zero-tremor itself, however, is limited to indeterminate-direction deviation. Emotional fluctuation, aesthetic sensitivity, or genealogical identity with those traditional concepts lies outside its definition.

6. Numerical Non-Identity

A generative occurrence that has passed through Zero-tremor is numerically different from one that has not. This non-identity establishes a difference in generative history.

Even when Zero-return moves toward re-equilibration, that difference of history remains within the logic of the four phases. This does not require a substantialist claim that “the world remembers” the past. It requires only that a phase that has passed through deviation be theoretically distinguished from one that has not.

This distinction prepares for, but is not identical with, the numerical non-identity of photographing events examined in Chapter Five.

7. Distinction from Subject-Side Experience

A photographer’s sensing of “something” is treated in Chapter Four as subject-side internal modulation. Zero-tremor is deviation in deep-layer generation on the world side.

This distinction prevents experiential words such as *fluctuation*, *presence*, or *premonition* from being directly identified with world-side structure.

8. Relation to Zero-response

Zero-tremor describes the emergence of difference. Zero-response describes the phase in which that difference takes on structural responsiveness as a structural difference that enters into relation within deep-layer generation on the world side.

The difference is functional rather than quantitative. The transition from Zero-tremor to Zero-response is therefore logical, not an automatically operating mechanical causality.

9. Position within Photographic Theory

Zero-tremor is not a term for classifying blur, grain, tilt, chance, or other visible qualities in a formed work.

Its importance for photographic theory lies in making world-side difference describable prior to subject-side selection. How that difference participates in photographic formation is limited by the later discussions of the outer-layer structure, subject-side internal modulation, and the camera.

III. Zero-response

The Phase in Which Deviation Enters into Relation as Structural Difference

1. Definition

Zero-response is the phase in which a deviation arising as Zero-tremor takes on structural responsiveness as a structural difference that enters into relation within deep-layer generation on the world side.

Responsiveness here does not personify the world. It indicates that deviation becomes related to subsequent structure within the generative process.

Meaning-response and emotional response therefore lie outside the definition.

The word response condenses a function beyond mere deviation: the formation of relations. No responding subject is posited. Because response carries dialogical implications in ordinary language, the term is restricted throughout this study to structural responsiveness.

2. Why Zero-response Is Necessary

Zero-response is distinguished in the four-phase model because the emergence of deviation and the formation of relations perform different explanatory functions. Zero-tremor addresses the emergence of deviation; Zero-response addresses the situation in which deviation enters into relation within generation.

3. Functional Difference from Zero-tremor

The difference between Zero-tremor and Zero-response concerns function rather than magnitude. Zero-tremor is deviation in equilibrium. Zero-response is the phase in which deviation is established as structural difference bearing relation.

4. Comparative Coordinates: Appearance and Responsiveness

Phenomenological appearance and meaning formation are described within a relation between subject and world. Zero-response addresses neither something being given to a subject nor a pre-stage of phenomenological appearance. It addresses the world-side situation in which deviation has acquired relation within deep-layer generation.

The distinction is therefore not temporal priority but difference of explanatory object: world-side formation of relations and subject-side appearance.

Likewise, when responsive understandings of nature in Japanese thought or aesthetics are used as comparative coordinates, the *response* of Zero-response must not be expanded into mutual resonance between subject and personified nature. The phase describes only the organization of deviation as relation within generation.

5. Distinction from the Formation of Meaning

Zero-response may participate in conditions under which meaning can later be formed, but meaningful content belongs to subsequent subject-side processes. Meaning attributed by a subject or viewer is treated separately from the world-side structure described here.

World-side structure and subject-side experience are related while remaining different domains; they do not form a transfer relation of identical content.

6. Distinction from Subject-Side Response

Although the same ordinary word *response* may appear in both contexts, Zero-response and subject-side response concern different objects. Zero-response is a structural difference within deep-layer generation on the world side. Bodily and perceptual changes on the subject side are treated in Chapter Four as internal modulation.

7. Relation to the Outer-Layer Structure

The four phases of Chapter One describe deep-layer generation. The three outer-layer aspects of Chapter Two describe one outer-layer process from different directions.

The two are related, but no generative staircase maps the four deep phases one-to-one onto the three outer-layer aspects. Proto-*Qualia* is likewise not a direct product of Zero-response. Chapter Three defines it as a boundary concept concerning the outer-layer structure as a whole.

Zero-response is therefore limited to explaining the situation in which difference becomes relational within deep-layer generation. Concrete configurations and temporal density in the outer-layer structure, qualitative response on the subject side, and fixation by the camera belong to later explanatory domains.

8. Position within Photographic Theory

Zero-response is positioned as one phase of deep-layer generation on the world side that may participate in a one-time relational event of photographing.

Photographic formation also involves subject-side internal modulation, bodily position, judgment, the operation of the camera, and a temporal cut. Zero-response is one world-side phase that may participate in this relation, not the sole cause of photographic formation.

IV. Zero-return

Neutralization and the Possibility of Renewal

1. Definition

Zero-return is the phase in which difference formed through Zero-tremor and Zero-response moves toward re-equilibration accompanied by neutralization rather than remaining fixed in a single direction.

The object of return is not an identical past state but a neutral equilibrium in which deviation may arise again. Zero-return therefore functions not simply as an endpoint but as a phase that opens generation toward renewed possibility.

2. Neutralization

Neutralization in Zero-return describes a functional shift from directional occupation toward re-equilibration while preserving difference as part of generative history.

A state after Zero-return is not treated as numerically identical with Proto-zero before deviation and response. The four-phase model preserves non-identity of generative history while describing re-equilibration.

This is why Zero-return differs from a simple return to the same point. Its function is less to restore a past state than to release the structure from fixation in a particular direction and reopen the possibility of further deviation.

Zero-return therefore relates both to closure and to renewed beginning, but it is treated as a function in the generative model rather than as a single measurable moment.

3. Avoiding Teleology

The theoretical function of Zero-return is restricted to neutralization following deviation and response. A world-purpose of self-maintenance lies outside its scope, preventing the four phases from acquiring a cosmological teleology.

4. Return and Recurrence

The four phases form an open recurrent structure. After deviation and response, the ensuing situation is numerically non-identical with the one that preceded it, and renewed possibility opens from that changed generative position.

Proto-zero → **Zero-tremor** → **Zero-response** → **Zero-return (re-equilibration)** →
renewed possibility of deviation

This formulation describes recurrence as a structure containing both generative history and the possibility of restart.

5. Comparative Coordinates: Neutralization and Convergence

Phenomenological discussions of neutralization or suspension concern modes of subject-side experience or intention. Zero-return instead describes the function by which difference in deep-layer generation on the world side moves toward re-equilibration.

The vocabulary may be adjacent, but the explanatory objects differ. Zero-return is not a process in which the subject's intentionality grows calm.

Words such as convergence, settling, or after-resonance in Japanese aesthetics may serve as sensory comparative vocabulary for re-equilibration, but Zero-return is defined structurally: generation is reopened toward an equilibrium in which deviation can arise again.

6. Distinction from Emotional Stillness

Zero-return describes neutralization and re-equilibration within deep-layer generation on the world side. Emotional calming in the photographer or viewer, the after-resonance of a work, or the word *nagi* belong to other explanatory domains.

7. Position within Photographic Theory

Zero-return provides part of the world-side generative background that may participate in photographic formation. A photographing event is not fixed to a single point within the four phases. The model instead shows that world-side generation contains not only the emergence of difference but also neutralization and renewed possibility.

The one-time character of photography is treated in Chapter Five as the numerical non-identity of the one-time relational event of photographing.

V. The Relational Structure of the Four Phases

Generation, Difference, and Return

The four phases describe deep-layer generation on the world side through functional differences.

Proto-zero provides equilibrium without directional predominance. Zero-tremor describes indeterminate-direction deviation within that equilibrium. Zero-response describes the situation in which deviation takes on structural responsiveness as a structural difference that enters into relation within deep-layer generation on the world side. Zero-return describes movement toward re-equilibration accompanied by neutralization.

Together, the four phases articulate world-side generation prior to photographic formation as a transition through the emergence of difference, the formation of relations, and re-equilibration.

1. Continuity and Boundaries

The four phases articulate a single generative process through functional differences. Their boundaries are conceptual boundaries established according to the function under description. They therefore combine continuity with distinguishability.

2. Temporality

The four phases have a logical order, but that order is functional rather than a four-stage sequence of clock time.

Generation that has passed through Zero-tremor, Zero-response, or Zero-return is not numerically identical with a preceding situation. The phases therefore possess a temporality marked by generative history rather than a return to numerically identical states.

The one-time character of photography is not directly derived from this temporality. Chapter Five defines it independently through the numerical non-identity of one-time relational events of photographing formed through world, subject, camera, and temporal cut.

3. Causality

The model gives priority to functional differentiation over purposive causality. Proto-zero provides the reference for deviation; Zero-tremor describes deviation; Zero-response the formation of relations; and Zero-return re-equilibration.

Zero-return does not posit a purpose of the world. It describes neutralization following deviation and response. The theoretical function of the four phases is to make functional differences within generation analytically describable.

4. Relation to Photographic Formation

The four phases describe deep-layer generation on the world side that may participate in photographic formation. Subject-side internal modulation, the camera, bodily position, judgment, and temporal cut also participate in formation.

The four phases are therefore positioned as the base model of deep-layer generation on the world side within the theory of photographic formation.

5. Explanatory Scope and Limits

The four-phase model allows what is theoretically prior to photographic formation to be described as generation rather than as a blank. It distinguishes world-side difference from subject-side intention and articulates the emergence of difference, the formation of relations, and re-equilibration while keeping deep-layer generation distinct from subject experience.

Its responsibility is limited to describing deep-layer generation on the world side within a theory of photographic art. The origin of the universe as such, the neural mechanisms of perception, the value of works, and the emotional content of viewer experience belong to other fields of inquiry.

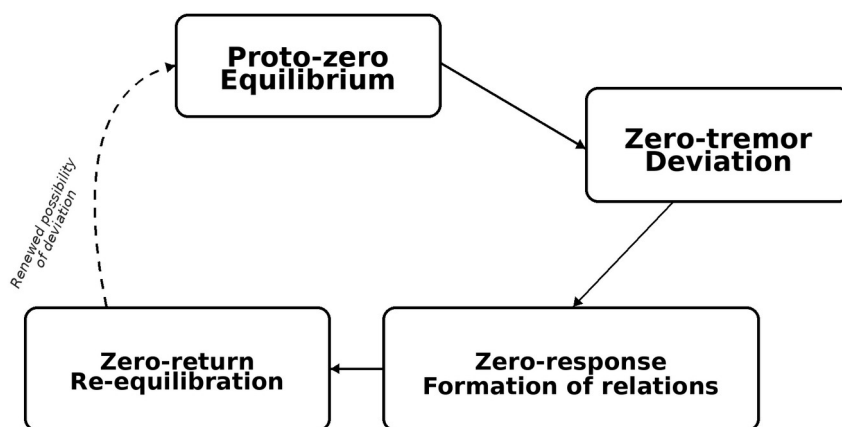
6. Conceptual Discrimination and Theoretical Coherence

The distinction among the four phases is justified by their non-interchangeable explanatory functions. Proto-zero describes equilibrium as reference; Zero-tremor deviation; Zero-response the formation of relations; Zero-return re-equilibration.

If these functions became interchangeable, the theoretical justification for distinguishing four phases would be lost.

At the same time, the deep four phases do not compete for explanatory responsibility with the outer-layer structure, subject-side internal modulation, photographic formation, or the operational vocabulary of works. The model does not attempt to complete photographic formation by means of the four phases alone. Its responsibility remains deep-layer generation on the world side.

Figure 1. The Four Phases of Zero-Horizon — Phase Transition in Deep-Layer Generation on the World Side



Functional arrangement; does not indicate measured time or mechanical causation.

VI. From the Deep Four Phases to the Outer-Layer Structure

Separating Generative Phases from Descriptive Dimensions

The four phases of Zero-Horizon describe generative phases in the world-side deep layer.

The **Primary Structural Aspects, Composite Structural Aspects, and Structural Time-Aspects** addressed in Chapter Two belong to the same world side but perform a different function. They describe one outer-layer process through local difference, configurational state, and temporal density.

Connecting the deep four phases and the outer three aspects into a single generative staircase would conflate phases of generation with dimensions of description.

A one-to-one correspondence between Zero-response and the Primary Structural Aspects, or between Zero-return and the Structural Time-Aspects, would likewise duplicate explanatory functions.

The following three distinctions are therefore maintained:

- **deep four phases** = functional phases of generation;
- **outer three Structural Aspects** = descriptive directions of the outer-layer process;
- **Primary / Secondary / Temporal Indicators** = operational vocabulary for confirming formed works.

Chapter Two proceeds from this separation to examine the world-side outer-layer structure through three descriptive dimensions.

Chapter Two — The Outer-Layer Structure of Zero-Horizon

From Deep-Layer Generation to Outer-Layer Description

Chapter One defined Proto-zero, Zero-tremor, Zero-response, and Zero-return as four functional phases of deep-layer generation on the world side. They describe generative differences of equilibrium, deviation, the formation of relations, and re-equilibration.

To describe world-side conditions participating in photographic formation more fully, another framework is required—one able to address local differences, the configurational states formed by multiple differences, and the temporal density borne by those configurations.

This framework is the **world-side outer-layer structure**.

Outer layer designates a theoretical framework that describes differences and relations established on the world side from a different level of abstraction than the deep four phases. It does not mean a physical surface or the surface of a photographic image.

The outer-layer structure is analyzed through three descriptive dimensions:

- **Primary Structural Aspects** — local structural differences;
- **Composite Structural Aspects** — configurational states formed among multiple structural differences;
- **Structural Time-Aspects** — the temporal density borne by the outer-layer structure.

These three aspects provide different analytical directions—local difference, configuration, and time—toward one and the same outer-layer process. Their relation is therefore one of multidimensional description rather than sequential generation.

I. The Theoretical Position of the Outer Layer

1. Deep Layer and Outer Layer

The four phases of Zero-Horizon describe functional differences within deep-layer generation on the world side. To consider world-side conditions that may participate in photographic formation, however, it is also necessary to describe locally established differences, configurations formed among multiple differences, and the temporal thickness they bear.

The outer layer is established for this descriptive purpose.

Deep layer and *outer layer* describe the same world-side process at different levels of abstraction. They are two theoretical frameworks, not substantial realms stacked one above another.

Epilogue — The Faint Contour of Zero-return

Even after a photograph has been formed, the world continues beyond its image.

The one-time character of photographing belongs to that one event. The photograph carries the trace of that event into a time different from that of photographing. The light and movement that have passed beyond the image, the position of the body, and the surrounding presence continue onward with the world.

In time, the work is placed before a new gaze. The experience that opens there gives rise, each time, to a new relation between the image that remains and the present.

As the work moves through time, the site of photographing recedes into the past. The place where it is exhibited, the viewers, and the context surrounding the image all change. The photograph's origin remains in that one event, while the trace that remains enters into successive relations with different presents.

The time of the photograph and the time of the world proceed in different directions. The image appears in the present bearing the one-time character of the past, while the world continues to change beyond it.

Even after one act of photographing has ended, change in the world continues. The photograph moves through a different time as a trace cut from that flow.

Zero-return, as a re-equilibration accompanied by neutralization, opens room for difference to arise again.

From there, inquiry returns to the Zero-Horizon whenever the question of photographic formation is raised.

Notes

These notes are provided not to establish external theories as the logical foundation of Zero-Horizon Photographic Art Theory, but to make traceable the formative references, comparative coordinates, conceptual boundaries, and contemporary contexts used in the text.

1. Shunsuke Tsurumi, *Genkai Geijutsu-ron* [Marginal Art Theory] (Tokyo: Keisō Shobō, 1967). In this study, Marginal Art is not treated as a theoretical foundation of Zero-Horizon Photographic Art Theory. It is referred to in a limited sense as a comparative coordinate in the formative history of the theory for tracing inquiry from established art institutions back toward their conditions.
2. Humberto R. Maturana and Francisco J. Varela, *Autopoiesis and Cognition: The Realization of the Living* (Dordrecht: D. Reidel Publishing Company, 1980). The distinction between external influence and internal change on the side affected is referred to here only as a comparative coordinate in the formative history of the theory for subject-side internal modulation. Autopoiesis is not applied isomorphically to photographic action itself.
3. Niels Bohr, *Atomic Theory and the Description of Nature* (Cambridge: Cambridge University Press, 1934), is included as a representative historical reference in the comparison with quantum theory. Neither the four phases nor the theory of photographic formation developed here is derived from Bohr's physics. The reference documents a formative stimulus and the limits of comparison.
4. Edmund Husserl, *Ideen zu einer reinen Phänomenologie und phänomenologischen Philosophie. Erstes Buch: Allgemeine Einführung in die reine Phänomenologie* (Halle: Max Niemeyer, 1913); Maurice Merleau-Ponty, *Phénoménologie de la perception* (Paris: Gallimard, 1945). Intentionality, the constitution of phenomena, and embodied perception are referred to as comparative coordinates for distinguishing the explanatory object of subject-side experience from generation on the world side.
5. In comparisons with theories of photography, C. S. Peirce's *index*, Roland Barthes's account of the temporal relation between the photograph and past reality, Walter Benjamin's theory of technological reproduction, and Susan Sontag's critique of photographic culture are used as principal comparative coordinates concerning already-formed photographs. See Notes 10–13 for the relevant references.
6. David J. Chalmers, "Panpsychism and Panprotopsyism," in Torin Alter and Yujin Nagasawa, eds., *Consciousness in the Physical World: Perspectives on Russellian Monism* (New York: Oxford University Press, 2015), 246–276. The comparison is made not to derive Proto-Qualia from panprotopsyism, but to clarify its boundary with metaphysical discussions concerning properties prior to *phenomenal experience*.
7. Torin Alter and Sam Coleman, "Russellian Physicalism and Protophenomenal Properties," *Analysis* 80, no. 3 (2020): 409–417, <https://doi.org/10.1093/analys/anaa006>. The treatment of *protophenomenal properties* as *non-structural properties* provides a comparative point for clarifying their difference from Proto-Qualia as defined here as a structural threshold.
8. Marcel Kvassay, "The Meta-Problem and the Transfer of Knowledge between Theories of Consciousness: A Software Engineer's Take," arXiv:1903.03418 (2019), <https://arxiv.org/abs/1903.03418>. This reference is included to document a prior occurrence of the string *proto-qualia*. It does not indicate conceptual identity or genealogical continuity with Proto-Qualia as defined in this study.

9. Francisco G. Varela, Humberto R. Maturana, and Ricardo B. Uribe, "Autopoiesis: The Organization of Living Systems, Its Characterization and a Model," *BioSystems* 5, no. 4 (1974): 187–196, [https://doi.org/10.1016/0303-2647\(74\)90031-8](https://doi.org/10.1016/0303-2647(74)90031-8); Humberto R. Maturana, "The Organization of the Living: A Theory of the Living Organization," *International Journal of Man-Machine Studies* 7, no. 3 (1975): 313–332, [https://doi.org/10.1016/S0020-7373\(75\)80015-0](https://doi.org/10.1016/S0020-7373(75)80015-0). Self-production and structural determinacy are not transferred into the theory of photographic practice. These works are used only as limited comparative references in the formative history for considering the relation between external influence and change on the subject side.
10. Charles Sanders Peirce, *Collected Papers of Charles Sanders Peirce*, vol. 2, *Elements of Logic*, ed. Charles Hartshorne and Paul Weiss (Cambridge, MA: Harvard University Press, 1932), CP 2.281. Peirce's discussion of the photograph as an example of an *index* having a real and physical connection with its object is referred to here. This study distinguishes indexicality from its definition of the photographic trace as originating in a one-time relational event of photographing.
11. Walter Benjamin, "The Work of Art in the Age of Mechanical Reproduction," in *Illuminations*, ed. Hannah Arendt, trans. Harry Zohn (New York: Schocken Books, 1968), 217–251. Benjamin's discussion of reproducibility and authenticity is used as a comparative coordinate for distinguishing the one-time character of the photographing event from reproducible forms of realization.
12. Roland Barthes, *Camera Lucida: Reflections on Photography*, trans. Richard Howard (New York: Hill and Wang, 1981). Chapter Five refers to the temporal asymmetry between the photograph and past reality; Chapter Six refers to *punctum* in a limited sense as a comparative coordinate concerning a viewer-specific point of effect.
13. Susan Sontag, *On Photography* (New York: Farrar, Straus and Giroux, 1977). Her discussion of photography's involvement in social and cultural practices such as knowledge, evidence, possession, experience, and consumption is referred to as a comparative coordinate concerning uses and interpretations that arise after photographic formation.
14. For the contemporary environment of photography and generated images, see *Aperture*, no. 257, *Image Worlds to Come: Photography & AI* (Winter 2025; published December 1, 2024); Rob Horning, "What Is Realism in the Age of AI?," *Aperture*, January 31, 2025; and *Foam Magazine*, no. 66, *MISSING MIRROR – Photography Through the Lens of AI* (2024). These materials establish the contemporary context addressed in Chapter Seven; they do not constitute theoretical foundations of Zero-Horizon Photographic Art Theory.

Bibliography

This Bibliography organizes the references that actually operate in the text by function: formative references, comparative and conceptual-boundary references, and contemporary contexts.

A. Theory Formation and Theoretical References

- Tsurumi, Shunsuke. *Genkai Geijutsu-ron* [Marginal Art Theory]. Tokyo: Keisō Shobō, 1967.
- Maturana, Humberto R., and Francisco J. Varela. *Autopoiesis and Cognition: The Realization of the Living*. Boston Studies in the Philosophy and History of Science, vol. 42. Dordrecht: D. Reidel Publishing Company, 1980.
- Varela, Francisco G., Humberto R. Maturana, and Ricardo B. Uribe. “Autopoiesis: The Organization of Living Systems, Its Characterization and a Model.” *BioSystems* 5, no. 4 (1974): 187–196. [https://doi.org/10.1016/0303-2647\(74\)90031-8](https://doi.org/10.1016/0303-2647(74)90031-8).
- Maturana, Humberto R. “The Organization of the Living: A Theory of the Living Organization.” *International Journal of Man-Machine Studies* 7, no. 3 (1975): 313–332. [https://doi.org/10.1016/S0020-7373\(75\)80015-0](https://doi.org/10.1016/S0020-7373(75)80015-0).

B. Comparative and Conceptual-Boundary References

- Husserl, Edmund. *Ideen zu einer reinen Phänomenologie und phänomenologischen Philosophie. Erstes Buch: Allgemeine Einführung in die reine Phänomenologie*. Halle: Max Niemeyer, 1913.
- Merleau-Ponty, Maurice. *Phénoménologie de la perception*. Paris: Gallimard, 1945.
- Bohr, Niels. *Atomic Theory and the Description of Nature*. Cambridge: Cambridge University Press, 1934.
- Chalmers, David J. “Panpsychism and Panprotopsychism.” In *Consciousness in the Physical World: Perspectives on Russellian Monism*, edited by Torin Alter and Yujin Nagasawa, 246–276. New York: Oxford University Press, 2015.
- Alter, Torin, and Sam Coleman. “Russellian Physicalism and Protophenomenal Properties.” *Analysis* 80, no. 3 (2020): 409–417. <https://doi.org/10.1093/analys/anaa006>.
- Kvassay, Marcel. “The Meta-Problem and the Transfer of Knowledge between Theories of Consciousness: A Software Engineer’s Take.” arXiv:1903.03418, 2019. <https://arxiv.org/abs/1903.03418>.
- Peirce, Charles Sanders. *Collected Papers of Charles Sanders Peirce*. Vol. 2, *Elements of Logic*. Edited by Charles Hartshorne and Paul Weiss. Cambridge, MA: Harvard University Press, 1932.
- Barthes, Roland. *Camera Lucida: Reflections on Photography*. Translated by Richard Howard. New York: Hill and Wang, 1981.
- Benjamin, Walter. “The Work of Art in the Age of Mechanical Reproduction.” In *Illuminations*, edited by Hannah Arendt, translated by Harry Zohn, 217–251. New York: Schocken Books, 1968.
- Sontag, Susan. *On Photography*. New York: Farrar, Straus and Giroux, 1977.

C. Contemporary Photography and Image-Environment References

- Aperture*. No. 257, *Image Worlds to Come: Photography & AI*. Winter 2025. New York: Aperture. Publication date: December 1, 2024. ISBN 9781597115698.

Horning, Rob. "What Is Realism in the Age of AI?" *Aperture*, January 31, 2025. <https://aperture.org/editorial/what-is-realism-in-the-age-of-ai/>.

Foam Magazine. No. 66, *MISSING MIRROR – Photography Through the Lens of AI*. Amsterdam: Foam, 2024. <https://www.foam.org/foam-magazine/archive/66-missing-mirror>.

Glossary

This Glossary is an auxiliary reference designed to make the definitions used in the text easier to consult. It introduces no theoretical propositions not already present in the main text.

A. Core Theoretical Terms

Zero-Horizon Photographic Art Theory

A theory of photographic art that articulates distinct explanatory domains from generation on the world side prior to photographic formation, through subject-side internal modulation and the one-time relational event of photographing that includes the camera, to the photographic trace, the form of realization, and the viewing event. Its official English name is *Zero-Horizon Photographic Art Theory*.

零式 — Japanese abbreviated form

An abbreviated form used in the Japanese text to refer contextually to 零式写真芸術論. It is not used as a literal translation of “Zero-Horizon.”

the Zero-Horizon

The theoretical base point from which inquiry is traced back toward the conditions prior to photographic formation and from which the scope of the theory is reassessed at its endpoint. It does not mean “before photographing” in measured time; it indicates structural priority concerning where photographic theory begins to presuppose its distinctions. Although lexically adjacent to phenomenological concepts of horizon, it does not inherit them here; it is limited to a descriptive position for generation on the world side, distinguished from subject-side experience.

Zero-Horizon Photographic Art

A descriptive expression for photographic art considered within Zero-Horizon Photographic Art Theory. It is not the name of a separate theoretical system.

deep-layer generation on the world side

The domain in which generation on the world side prior to photographic formation is described through functional differences before it is determined as object, meaning, or representation. It is articulated through the four phases of Zero-Horizon.

Four Phases of Zero-Horizon

An analytical model that describes deep-layer generation on the world side through four functional phases: Proto-zero, Zero-tremor, Zero-response, and Zero-return.

Proto-zero

The phase that describes equilibrium in which difference has not become dominant in any particular direction while the possibility remains that difference may later be organized into relations.

Zero-tremor

The phase that describes an indeterminate-direction deviation arising within equilibrium.

Zero-response

The phase in which a deviation takes on structural responsiveness as a structural difference that enters into relation within deep-layer generation on the world side.

Zero-return

The phase that describes movement toward re-equilibration accompanied by neutralization after deviation and response.

Outer-Layer Structure of Zero-Horizon

The outer-layer structure of the same world-side process described by the deep four phases. It is treated through three different descriptive dimensions: the Primary Structural Aspects, Composite Structural Aspects, and Structural Time-Aspects.

Primary Structural Aspects

The descriptive dimension that addresses local structural differences within the outer-layer structure.

Composite Structural Aspects

The descriptive dimension that addresses configurational relations formed among multiple local structural differences.

Structural Time-Aspects

The descriptive dimension that addresses the temporal density and temporal modes borne by the outer-layer structure, including concentration, persistence, residual presence, and attenuation.

Proto-Qualia

A structural threshold condition within the world-side outer-layer structure in relation to conditions under which qualitative experience may arise on the subject side. It is not posited as an independent entity or as a third term integrating world and subject.

subject-side internal modulation

A change arising on the subject side in relation to external structural conditions. It includes shifts in bodily orientation, attention, perceptual salience, memory activation, and possibilities of action, and is treated as an explanatory domain distinct from world-side structure.

one-time relational event of photographing

An event of photographing in which world-side conditions, subject-side involvement, the settings and operation of the camera, and a particular temporal cut enter into relation within one event. It is the formative origin of the photographic trace. Its one-time character refers to the numerical non-identity of events rather than to mystical or absolute non-repeatability.

camera

A subsystem with relative autonomy participating in a one-time relational event of photographing. Through optical, mechanical, or electronic settings and operation, it constrains, transforms, and fixes the conditions of photographing within a finite trace.

photographic trace

A finite trace formed through a one-time relational event of photographing and fixed as its result. It is described from its formative origin, distinct from meaning, truth, value, and social function.

form of realization

The manner in which a formed photographic trace is realized and presented as a work in a concrete form such as a print, exhibition, book, screen, or other form of presentation.

viewing event

An event in which an already-formed work and a viewer form a relation under a time and conditions different from those of photographing. The viewer's body, attention, memory, knowledge, cultural background, and conditions of presentation participate in that relation.

emotional response

An emotional or affective response that may arise on the author or viewer side in relation to a work. It is treated separately from the definition of world-side structure itself.

generative aesthetics

A research direction that asks not only about the properties of a completed work but also about its conditions of formation and the relations opened after formation. At the present stage, it is positioned as a research direction opened by Zero-Horizon Photographic Art Theory toward other artistic domains. It is not established as a universal theory of art and requires separate argument concerning the conditions of formation specific to each domain.

B. Operational and Artwork-System Terms

structural confirmation

An operational procedure for confirming local differences, configurational relations, and temporal appearances in an already-formed photograph through the Primary, Secondary, and Temporal Indicators. It is not a procedure for directly reconstructing the three outer-layer Structural Aspects prior to photographic formation from a formed work.

Primary Indicator

An operational term for confirming local structural differences discernible in an already-formed photograph.

Secondary Indicator

An operational term for confirming the configurational relations formed within a work by multiple Primary Indicators.

Temporal Indicator

An operational term for confirming the temporal appearance carried by an already-formed photograph. Four modes are used: **Instantaneous Mode**, **Durational Mode**, **Residual-Resonance Mode**, and **Attenuated Mode**.

authorial positioning

The author's judgment by which the results of structural confirmation are related back to production history, relations with existing groups of works, sensing during photographing and editing, and organization in exhibitions and books, in order to determine a position within the artwork system.

artwork-phase position

The official positioning by the author of where an already-formed work is placed within the Zero-Horizon artwork system.

core artwork-phase groups

The principal groupings within the artwork system that continuously organize multiple works. The current system includes **Fragments, Resonances, Interferences, and Remains**. These are artwork-system terms distinct from the four phases of deep-layer generation on the world side and from the three aspects of the outer-layer structure.

Threshold

An artwork-transversal axis that may appear across multiple core artwork phases. It indicates boundary-related, transitional, and critical characteristics along an axis distinct from core positioning and is not counted as a fifth artwork phase. It does not visualize Proto-Qualia or indicate its intensity within a work.

Return to ZERO

A return-and-restart function that returns the artwork system once to a zero point, closing an existing flow while opening another development. It is not counted as a fifth artwork phase and differs in domain and function from the deep theoretical phase Zero-return.

C. Relational and Comparative Terms

relation of shared root, independence, and non-conflation

The formulation defining the relation between Zero-Horizon Photographic Art Theory and Shadō. Although they share a formative root in the same long-term photographic practice, each remains independent in its purpose and conceptual system, and the two may enter into relation without conceptual conflation.

Shadō

An independent practical system that addresses seeing, waiting, judgment, bodily position, and the act of photographing in photographic practice from the standpoint of the practicing subject's disposition. Its relation to Zero-Horizon Photographic Art Theory is governed by the Relational Supplement.

Marginal Art

A concept derived from Shunsuke Tsurumi's theory of art, addressing forms of expression in everyday life and marginal creativity away from the center of institutionalized art. This study does not import that theory into Zero-Horizon; Marginal Art is referred to as a comparative coordinate in the formative history of the theory for tracing inquiry from established frameworks back toward their conditions.

autopoiesis

A theory of living organization developed by Maturana, Varela, and others. In this study it is used only as a comparative reference in the formative history for considering the relation between external influence and internal change on the side affected. Neither the photographing subject nor the act of seeing itself is treated as isomorphic with autopoiesis.

index

A sign type in Peirce's semiotics constituted through a real connection with its object. In this study it is referred to as a comparative coordinate for distinguishing photographic indexicality from the photographic trace defined as originating in a one-time relational event of photographing.

quantum imagination

A manuscript-specific expression, not a technical concept of quantum physics, referring in a limited sense to a direction of thought opened in the formative history of Zero-Horizon through contact with quantum theory: toward questions of possibility, relation, and conditions of formation. It neither makes quantum theory the scientific foundation of Zero-Horizon nor establishes fixed correspondences between the two.

generated image

A visual image that can be constituted through a generative model, input conditions, trained statistical structures, computational processes, and related operations without requiring a one-time relational event of photographing as its formative origin. In comparison with photography, formative origin is treated as a principal analytical coordinate.

hybrid image

An image in which a trace originating in photographing and content constituted through subsequent generative processing coexist. Its history of formation is described case by case by tracing the photographic origin and the history of generative processing separately, and then examining the relation between them.

COLOPHON

Zero-Horizon Photographic Art Theory

零式写真芸術論

Author

Naoki Kimura / 木村尚樹

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Form

Theoretical Monograph / A4

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