“Zum ersten Mal sah ich ein *Bild*:”

Goethe’s Cognitive Viewing Subject as Scientist and Artist

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This article investigates the significance of Goethean natural science for the development of abstract modes of painting that would emerge with Wassily Kandinsky in the early 20th century. While early abstractionists like Kandinsky unveiled their artworks with publications providing intellectual justification for an objectless art, a theoretical framework for a mode of viewing necessary for engaging with abstract art was already in existence, having been conceived by Goethe in his 1792 essay “Versuch als Vermittler von Objekt und Subjekt.” Close reading of this text reveals a primary model for a cognitive viewing subject who draws upon sensory experience and cognitive faculties to assume a critically significant degree of subjectivity in aesthetic encounters. To demonstrate how the mode of viewing theorized by Goethe might operate in praxis, this article analyzes an exemplary moment of spectatorship credited for bringing about abstract art: Kandinsky’s storied first encounter with Monet’s *Haystacks*.

Key Words: Goethe, Kandinsky, abstract art, visual perception, science and aesthetics, Monet, cognition, morphology

Modern subjectivity and the importance of Goethe for its formation has long been acknowledged object of scholarly investigation. Emerging from the shifting paradigms transforming late eighteenth-century European culture, Goethe’s literary portrayals of how a newly interiorized self with greater sense of freedom and autonomy struggles to relate to society have prompted Michel Foucault, Friedrich Kittler, and Marshall Berman to single out the author as an early voice of modernity (see also Brown; Beiser; Seigel; Taylor; Wahrman). Others have pointed to Goethe’s work in the natural sciences, which, though underappreciated by his contemporaries, seems to anticipate discourses of the twentieth century.¹ Depending on disciplinary perspective, Goethe’s subject heralds or embodies the idea of modernity and the modern subject in, as Jane K. Brown phrases, a “variety of mutually complementary forms,” be they sociological, philosophical, or scientific (Brown 7). Of these, my main interest lies with the final form and how it might compliment another such form, that of modern aesthetics.

The following contributes to this investigation by exploring the significance of Goethe's approach to science and the subject as scientist for the development of the mode of painting generally known as abstract art. Given that paintings abstract from reality in a variety of manners and thus constitute abstract art in different ways to different audiences, I use the terms "abstract" and "abstract art" here to describe artworks whose content does not originate with or appear to reference objects of the material world. Instead, abstract artworks rely on shapes, colors, and gestural forms to create aesthetic effects, as the Western art world discovered in 1911 when Russian-born artist Wassily Kandinsky (1866–1944) unveiled *Komposition V* at the inaugural exhibition of Munich's Blauer Reiter group.² Since its public initiation, abstract art has established itself as a—if not the—dominant strain of twentieth-century modern art.

Although the long nineteenth century separates the advent of abstraction from Goethe's writings on science, I contend that a specific mode of viewing crucial for the existence of abstract art not only connects the two, but that Kandinsky uses this mode of viewing when first encountering Monet's *Haystacks* in 1896—a formative moment for his path to abstraction. As I will argue, the theoretical underpinnings of this mode of viewing is explicated by Goethe as early as 1792 in the essay "Versuch als Vermittler von Objekt und Subjekt" to articulate a scientific methodology contingent upon the human body and cognition. This article will demonstrate that Goethe's conception of the scientist as an embodied observer who actively engages sensory organs and cognitive faculties to understand the natural world also marks the birth of a subject capable of assuming a critically significant degree of responsibility and subjectivity in aesthetic encounters. This in turn, would provide a theoretical basis for the abstract art that becomes historical reality in the early twentieth century.

Before venturing any further, I will take a moment to delineate the stakes of my argument by explaining what this article does *not* do. First, I do not assert that Goethe himself promoted abstract art or would have even been a fan of it. Goethe's writings on aesthetics, own creative production, and personal tastes indicate his consistent, deep-seated faith in the principles of *Nachahmung* and *Naturgemäßheit*, as the title "Einfache Nachahmung der Natur, Manier, Stil" (1789) suggests (see Hermand; Pirholt; Schulze and Apel). Though Goethe's affirmative response to Lessing in *Über Laokoön* (1798) circumscribes the disciplinary boundaries separating art from science, the ideal artist still acts *like* a scientist by reproducing Nature's forms and lawfulness through careful observation and direct experience (see Allert, "Ekphrasis"; Mülder-Bach, "Sichtbarkeit und Lesbarkeit"; Richter; Wellbery). Indeed, from within their analogous albeit autonomous domains, both artist and scientist are expected to preserve interconnectedness with nature, for becoming disconnected with the natural world constituted an unforgiveable sin for Goethe. Besides his objections to the ideological programs of the "neudeutsche religiös-patriotische Kunst," Goethe disliked the excesses of subjective vision displayed by more Romantically inclined contemporaries (see Apel; Hermand; Osterkamp).³ Instead of carefully observing and emulating the outer world to create harmonious, beautiful art, the Romantic artist turned away, looking into the "geistigkrank" recesses of the mind "wo sich kein Gegenstand abspiegelt" and the "Undinge" with "weder Gestalt noch Begrenzung" lurked (HA 12: 373). Focused too narrowly on itself, the artist's eye produces an unnatural and distorted reflection of a world discolored by subjectivity and out of balance with objective reality. If the misshapen forms of the Romantic inward turn injured Goethe's Classicist principles, an abstract art without clear reference to the natural world would consummately violate it. In this light,

Kandinsky's ambition to free art from material reality and his conception of the artist as spiritual prophet of abstraction appears especially offensive.

This brings me to my second point, namely that I do not claim that Goethe's writings on art or science led Kandinsky to abstract art. Scholarship relating the two gravitates toward the former's *Farbenlehre* (1810) and its intersections with the latter's treatise *Über das Geistige in der Kunst* (1911), yet while Kandinsky's interest in contrast and psychological effects of color echoes core components of Goethe's color theory, the linkage is not causative (see Bownes; Gage; Hentschel; Torbruegge; Wünsche and Gronemeyer). Only twice does the artist's treatise directly name Goethe, and neither refers to the *Farbenlehre* or colors; rather, it cites Goethe's lament that painting lacks a theoretical system ("Generalbaß") such as exists in music (Barasch 332). Clear from the original context is that Goethe's analogy to music does not for either man extend to the ideas involving synesthesia or musical correspondences, which did guide Kandinsky toward artistic accounts of the abstract and immaterial (see Long; Ringbom; Tuchman; Vergo; Wünsche). In the end, Kandinsky's level of familiarity or engagement with *Farbenlehre* does not pertain here, as the artist only serves as an exemplary case study for a larger investigation into the nature of a subjectivity capable of recognizing abstract art as art.

Here I come to the final and most important point: this is not an article about the *Farbenlehre* or the act of making abstract art. It is an article about the act of beholding it. Hence, my focus lies not on the artwork (the object), but on the artwork's observer (the subject) and its role in facilitating the existence of abstract art. Even though the stakes of my argument center on the subject, I cannot and do not ignore the object whose presence in the subject-object relationship is nothing less than vital. After all, articulating how the subject's gaze operates necessarily entails defining the terms of the relationship between the beholder and that which it

beholds. Yet my interest in this relationship is one-sided: the subject not only stands in the spotlight, but even plays the more crucial role for the emergence of abstract art as object. Truly, the constitution of the subject, the terms of its subjectivity, cognition, and gaze are key, for this subject would perceive the world in such a way that it could find value in an abstract image and acknowledge it as art—and not, to use Kandinsky’s example, a decorative pattern befitting a tie or carpet (Kandinsky, *Über das Geistige* 119). In other words, this subject would possess the capacity of producing an aesthetic experience with a physical object of art that needs not depict a physical object.

I believe that Goethe provides us with the theoretical model for such a subject and does so in the body of the scientific observer conceptualized by the author to conduct his ideal methodology for researching the natural sciences. To explain how, this article first presents an overview of the philosophical landscape in which Goethe locates his scientific subject by discussing the philosophical forces influencing its formation. After establishing the outer orientation of the body in question, I turn in the next section to its inner mechanics as imagined by Goethe in “Versuch als Vermittler von Objekt und Subjekt.” There we find the first formal appearance of a primary model for an observer recurrent throughout Goethe’s scientific oeuvre, including the *Farbenlehre* (see Allert, “Hidden Aspects”; Bothe and Suter; Mülder-Bach and Neumann; Naumann; Schimma and Vogl; Schimma; Vogl). Close reading of the essay distinguishes the singular importance of perception in Goethe’s methodology and reveals the role played by a non-discursive cognitive faculty akin to imagination or intuition in this process. For this cognitive mode of viewing, I map out a primary model illustrating its core components and their interaction and situate it vis-à-vis Goethe’s morphological studies. The final section then dispatches the Goethean subject as scientist into the aesthetic sphere to demonstrate how its

existence creates the theoretical possibility of abstract art. We shall ultimately discover that although Goethe writes no explicit roadmap for abstract art, crucial for its emergence is the creative cognitive process of the viewing subject such as he describes.

The Great Divide: Linnaeus, Spinoza, and Kant

Goethe's scientist would not fully develop into a cognitive viewer with a defined methodology until 1792, yet we find the seeds of this subject beginning to take root in earlier scientific essays written during the 1780s and the *Versuch die Metamorphose der Pflanzen zu erklären* (1790). As evident in the latter text, Goethe relied mostly on what Eckart Förster calls "less the conscious application of a method than instinct [...] and 'intuition' in the more ordinary sense of the term" (25 Years 98). Förster uses "ordinary" to differentiate Goethe's yet-to-be-defined approach from Spinoza's *scientia intuitiva*, which had interested the author from the onset of his scientific endeavors. It appeared to offer a corrective to the failures of the reigning standard of scientific investigation such that the Linnaean classificatory system represented for Goethe (see Larson). Though inspired by Linnaeus's work, he found its presumption of a static, inflexible order unable to account for the variability of Nature's ever-evolving forms. In boxing natural forms into separate categories through binomial nomenclature, Linnaean taxonomy left little openness for change, new discoveries, or newly generated forms. Moreover, it classified forms on a superficial level, asking the scientist to consider only external differences, but not to observe intensely enough to glean underlying unities. For Goethe, himself resistant to Cartesian duality and affirmative of human interconnectedness with the natural world, Linnaeus was out of touch with the objects he studied and imposed onto them a transcendental order not adequately grounded in the act of perceiving the actual phenomena.

With Linnaeus's oversights in mind, Goethe proceeded from an observation-centered approach for *Metamorphose der Pflanzen*, believing to intuit the totality of the plant by watching it metamorphize through successive stages. Spinoza's ideas complemented the importance that Goethe placed on perception (*Anschauung*) for cultivating a higher form of knowledge, because it provided a means of overcoming the transcendental barriers separating subject from object (see Amrine, "Intuitions" 37; Förster, *25 Years* 94). In arguing for the unity of God and Nature, Spinoza unified mind with matter, and put within sensible grasp a mode of knowledge capable of comprehending this totality: the *scientia intuitiva*. Frederick Amrine's characterization of this faculty as a "non-discursive, synoptic perception of Nature in its entirety, a thinking of wholeness in its immediacy" helps us appreciate how the Spinozian emphasis on unity as well as the ability to intuit it appealed to Goethe's efforts to bridge the subject-object divide (Amrine, "Intuitions" 40). At the same time, Spinoza sparked controversy by relocating God in Nature and endowing humankind with a mode of knowledge otherwise reserved for a divine or transcendent being. Thus, in Goethe preferring a Spinozian approach, we already discern the traces of a more authoritative subject, one privileging perception and possessing a non-discursive faculty such as intuition. Still troubling Goethe though were two prominent issues: how to translate intuition as a mode of knowledge into a systematic scientific methodology and how to negotiate the parameters of his authoritative subject. As Goethe's irritations with Romanticism indicate, the author may have empowered his subject, but this subjectivity should not come at the expense of the objective world or faithful representation of its forms and laws. Even if intuition forms a basis for said methodology, the viewing scientist must control for overly subjective conclusions and develop a system to maintain integrity between subject and object.

Enter Kant, whose *Kritik der Urteilskraft* (1790) provided the intellectual impetus necessary for Goethe to crystallize his ideas about subjecthood, objecthood, and their interrelationship (see Förster, “Die Bedeutung”). Contrary to Spinoza and Goethe, Kant set limits to human knowledge and did not place within human ability the power of comprehending the totality, reserving instead a non-discursive mode of intellectual intuition like Spinoza’s *scientiva intuitiva* for a transcendental being. Man could posit the existence of such a faculty (for Kant, the *intellectus archetypus*) but never realize it himself, thus begetting the Kantian split between *Vernunft* and *Verstand*, reason and understanding. Ronald H. Brady provides a lucid summary:

Verstand works in ‘concepts,’ is analytic, and duplicates the separations forced upon us by sensible conditions. *Vernunft* deals in ‘ideas,’ which are synthetic and capable of unifying elements that must be separate for *Verstand*. Kant supposed that ‘ideas of reason’ provide a framework for investigation, they could never constitute scientific knowledge, for unlike the ‘concepts of understanding,’ they cannot be ‘filled-in’ by perception. (“Form and Cause”, 284)

As Brady explicates, Kant doomed man to *Verstand*. Contingent on sensory perception, this mode of intellect could only “represent the organic in a manner that we would never fully comprehend, since it was *by intention* beyond analysis” (284). Goethe flatly rejected not only the decisive severance of these intellectual modes and the crevasse it created to distance the viewing subject from the objects around it, but also the teleological judgement that Kant assumed for the natural world. For Goethe, life was not purposive without purpose; life’s singular purpose is life itself. Presuming otherwise was, as Brady phrases, “to force the phenomena into a pre-conceived mold,” language that recalls Goethe’s reproach of Linnaeus (289). While not conflating his

critiques of Kant and Linnaeus, I do wish to accentuate the common condemnation of imposing transcendental paradigms onto the organic world, a theoretical maneuvering that reinforced the very subject-object duality disdained by Goethe. In delivering a superficial understanding of natural form, such overly determinate and undesirably abstract frameworks could misrepresent the essence of life.

I must be clear here, for as previously noted, the word “abstract” has a squirrely definition. With respecting to art, it designates artworks whose content does not originate with or appear to reference objects of the material world. Goethe’s antipathy toward the Romantic flight inward led to my postulating his likely distaste for abstract art. In the arena of science, Goethe’s aversion to “abstract” methodologies exhibits the inherent similarity of too much distance between the subject and its direct sensory experience of the natural world. This, as Goethe instructs, should be the basis of knowledge: “Man suche nur nichts hinter den Phänomenen: Sie selbst sind die Lehre” (HA 12: 372). The oft-cited maxim expresses a sentiment which served Goethe well throughout his scientific endeavors, including his initial botany studies and critique of Linnaeus. Yet it is with particular stridency that this dictum drives the author’s infamous disparagement of Isaac Newton, whom Goethe names in the “Vorwort” to the *Farbenlehre* as a chief perpetrator of the “Abstraktion, vor der wir uns fürchten” (HA 13: 317). Although his color theory was not published until 1810, Goethe began his investigations into optics around that critical year of 1790, when his Spinozian intuitive approach in *Metamorphose der Pflanzen* dovetailed with encountering Kant’s *Kritik der Urteilskraft*. Optics gave Goethe impetus and occasion to articulate a methodology which, as Förster phrases, “mediates between Spinoza and Kant and seeks to make discursive and intuitive thinking compatible” (25 Years 254). To bridge

the subject-object divide, Goethe worked out a means of scientific investigation that hinged upon a scientific observer with a non-discursive mode of thought and greater degree of subjectivity.

The Gaze of Goethe: The Goethean Subject as Scientist

Newton and his *Opticks* (1704) ended up in Goethe's crosshairs after the author returned to Weimar from his Italian journey in 1788. Hoping to derive a systematic understanding of color phenomena as could aid painters, Goethe set about recreating Newton's prism experiments, albeit under less objective conditions than the originals. When he failed to reap the same results, Goethe readily believed he had proven Newton false along with his experimental philosophy based on the demonstrative power of the *experimentum crucis*, or single "weighty" experiment (see Burwick; Marcum; Seppert; Steinle). For Goethe, circumventing direct sensory perception in favor of abstract mathematics and theoretical projection had led Newton to formulate a quantifiable yet reductive theory positing color as a purely physical phenomenon independent of human perception. Goethe instead asserted the importance of physiological processes and devised his own methodology around the principles of direct observation and experimental series informed by his readings of Spinoza and Kant. In 1792, he put this methodology to paper in what would be known as "Versuch als Vermittler von Objekt und Subjekt," a title expressing the pith of the essay.⁴ When confronted with the divide between inherently subjective ideas about the phenomenon ("Subjekt") and the phenomenon itself ("Objekt"), the scientist turns to the experiment, or rather, a series of experiments ("Versuch"), to serve as mediator and facilitator ("Vermittler") of the dynamic interaction between the two poles.

Although optics preoccupied Goethe when originally writing the essay, that it would later appear with the collected morphological writings indicates the consistency with which Goethe advocated for a scientific approach remedying the rigidity and abstractness of the Newtonian or Linnaean framework. In a way, the model presented in "Versuch als Vermittler" composes the

backbone of Goethe's morphology, for it constructs both the ideal methodology for gathering knowledge of the natural world and the ideal scientist to construct it. As the "science of forms" as well as a science of science, morphology for Goethe comprises a method of describing and appreciating the various dynamic forms of nature as well as a model for understanding how we physiologically and cognitively perceive them (see Brad; Breidbach; von Mücke). Seeking to uncover the inner relations guiding Nature's metamorphoses through meticulous observation, it analyzes how humans process knowledge of a phenomenal object while also accounting for the subject's sensible experience. Close reading of the essay augmented by supporting morphological texts reveals this viewing subject as an embodied observer who actively engages discursive and non-discursive cognitive faculties along with sensory perception to elicit the inner essence of the objects around him (see Böhme 51–96; Engelhardt; Geulen; Hennigfeld; Schimma, *Blickbildungen* 51–96).

Goethe begins the essay thusly: "Sobald der Mensch die Gegenstände um sich her gewahr wird, betrachtet er sie in Bezug auf sich selbst, und mit Recht" (HA 13: 10). In one sentence, the author introduces the two sides of the divide, establishes which holds the greater authority, and informs the reader of its Spinozian slant. While subject ("Mensch") and object ("Gegenstände") face each other, Goethe places greater weight upon the subjectivity of the "Mensch" who "mit Recht" regards the objects of the world as relative to his body. Nonetheless, the opening paragraph closes with an acknowledgement of the subject's fallibility ("und doch ist der Mensch dabei tausend Irrtümern ausgesetzt") and the fundamental need to institute checks on subjectivity (HA 13: 10). If subject inhabits a human body limited to what is directly observable by its sensory perception, how does the scientist who seeks knowledge of "die Gegenstände der Natur an sich" (i.e. their essence or idea) ensure that he sees objects as they really are (HA 13:

10)? For that matter, how does he repel “seine inneren Feinde” (e.g. “Einbildungskraft, Ungeduld, Vorschnelligkeit, Selbstzufriedenheit, Steifheit, vorgefaßte Meinung”) and avoid overly abstract conclusions (HA 13: 14)?

Enter Kant once again. On the one hand, Goethe keeps with the Kantian turn in the belief that understanding the natural world starts from within the human body, what resultantly places “die Gegenstände der Natur an sich” at arm’s length and not immediately knowable (HA 13: 10). Striving for the utmost objectivity, scientists “sollen als gleichgültige und gleichsam göttliche Wesen suchen und untersuchen, was ist, und nicht, was behagt” (HA 13: 10). Both Goethe and Kant recognize the value of disinterested judgment, but Kant, as we saw, does not endow us with the capacities described by Goethe. Acting with such god-like detachment or the ability to intuit a totality would be for Kant a mode of the non-discursive *Vernunft* synthesizing elements that must remain separate for *Verstand*. Only the latter, analytic and sensory bound, can form the basis of scientific knowledge. Yet in a departure from Kant, Goethe not only places within human power the god-like faculty to grasp the totality of an object, but he suggests that we can even refine our innate “Beobachtungsgabe” through exercise and experience (HA 13: 11).

In brief, his process reconciles subject and object, mediates subjectivity and objectivity, and employs both discursive and non-discursive modes of thought by requiring the scientist as subject to gather empirical data about the object through *Verstand* before activating *Vernunft* to process it as a totality and intuit its inner essence. Goethe provides his own summary in the later essay “Erfahrung und Wissenschaft” from 1798: “Das reine Phänomen steht nun zuletzt als Resultat aller Erfahrungen und Versuche da. Es kann niemals isoliert sein, sondern es zeigt sich in einer stetigen Folge der Erscheinungen” (HA 13: 25). Important to note are the terms that structure the core of “Versuch als Vermittler”: experience (“Erfahrung”), experiment

(“Versuch”), and series (here, “Folge”). To appreciate how experiential knowledge harmonizes with experimental protocol to facilitate the scientific intuition of an object’s essence (“reine Phänomen”), I now unpack these concepts as they appear in “Versuch als Vermittler.”

Starting with *Erfahrung*, the word first appears a few paragraphs into the essay:

Daß die Erfahrung, wie in allem, was der Mensch unternimmt, so
auch in der Naturlehre, von der ich gegenwärtig vorzüglich
spreche, den größten Einfluß habe und haben solle, wird niemand
leugnen, so wenig als man den Seelenkräften, in welchen diese
Erfahrungen aufgefaßt, zusammengenommen, geordnet und
ausgebildet werden, ihre hohe und gleichsam schöpferisch
unabhängige Kraft absprechen wird. (HA 13: 12)

Goethe speaks here not of *Erfahrung* as general experience, rather as one discreet instance. As singular sensory impressions belonging to a unique individual, these experiences can be collected, ordered, and developed further through activating a non-discursive mode of thought. Before reaching this stage however, we must call upon our faculty for discursive thought to gather enough singular sensory experiences (“Erfahrungen”) from which to glean a sense of overarching order or draw conclusions.

Reading on, we notice that Goethe’s usage of *Erfahrungen* in its plural form expands its semantic reach beyond the individual sensory impression to assume a formal character of empirical data: “Wenn wir die Erfahrungen, welche vor uns gemacht worden, die wir selbst oder andere zu gleicher Zeit mit uns machen, vorsätzlich wiederholen und die Phänomene [...] wieder darstellen, so nennen wir dieses einen Versuch” (HA 13: 14). Goethe’s methodology hinges upon the connectedness of experience and experiment: in contradistinction to the singular event

of Newton's *experimentum crucis*, the *Versuch* represents the accumulation of many isolated *Erfahrungen*. Indeed, individual experiments should not exist in isolation, as the scientist's interest lies in the relationship *between* them: "So schätzbar aber auch ein jeder Versuch einzeln betrachtet sein mag, so erhält er doch nur seinen Wert durch Vereinigung und Verbindung mit andern" (HA 13: 14). As a consequence, the scientist must repeat ("öftere Wiederholung") his individual experience of the phenomenon through an extended process of data collection, a repetitive activity which functions as a restraint against undesirable abstraction and his precarious subjectivity (HA 13: 15). Rather than work from hypotheses and projections, the scientist remains focused on the object and acts as "sein eigener strengster Beobachter" as a viewing subject with inherent weaknesses and biases (HA 13: 11). This process of continual observation and self-observation encourages the scientist to rely on sensory perception while still being attentive to its limitations.

At the same time, Goethe does not simply advocate repetition as redundancy and instead strives to explore "alle Seiten und Modifikationen [...] eines einzigen Versuches" (HA 13: 17). Through observing repetition plus modification—that is to say, through observing difference—can the scientist begin to organize the similarities into a sequence illustrating gradations of change. Indeed, "das Nächste ans Nächste zu reihen oder vielmehr das Nächste aus dem Nächsten zu folgern" allows the interconnectivity and underlying unity of the object's modulations to be intuited by the subject (HA 13: 18). I use the word "intuit" here, because Goethe clearly signals that we are ready to transition from a discursive mode of thought and activate another faculty: "Aber eben zwei Versuche, die miteinander einige Ähnlichkeit haben, zu vereinigen und zu verbinden, gehört mehr Strenge und Aufmerksamkeit, als selbst scharfe Beobachter oft von sich gefordert haben" (HA 13: 14). While the scientist discursively constructs

a series of adjacent experimental protocols and observes their results, organizing them into a seriality so that the sought-after totality progressively discloses itself demands a (higher) mode of non-discursive thought, or intuition.

Here's how Goethe gets us there. In checking and rechecking the object to observe its modulations, the viewing subject initiates an oscillatory motion sustained throughout the “öftere Wiederholung” comprising the *Versuch* (see Geulen 65–76). This oscillation is important for several reasons: first, the movement itself forms a unity between disparities by connecting the polarities of subject and object. Second, that Goethe conceives of this unity as a movement posits the *Versuch* as an animate entity capable of responding to the object's potentiality for change. Third, because the experiment equals the mediating back-and-forth motion between subject and object, this oscillation introduces a temporal dimension to the model. Goethe clarifies from first-hand experience how the process unfolds both sequentially and con-sequentially over time:

Ich habe in den zwei ersten Stücken meiner optischen Beiträge
eine solche Reihe von Versuchen aufzustellen gemacht, die
zunächst aneinander grenzen und sich unmittelbar berühren, ja,
wenn man sie alle genau kennt und übersieht, gleichsam nur einen
Versuch ausmachen, *nur eine Erfahrung* unter den
mannigfaltigsten Ansichten darstellen. (HA 13: 18, emphasis
added)

Out of a series of experiments emerges one unified experiment, and out of con-sequential *Erfahrungen* emerges the collective *Erfahrung*.

We need to take a moment to unpack this crucial passage to clarify the importance of seriality in Goethe's methodology. For brevity's sake, I will henceforth adopt Eva Geulen's

preferred term “Reihenbildung” to characterize the “Reihe von Versuchen [...] die zunächst aneinander grenzen und sich unmittelbar berühren” described above (compare to Geulen, 109–22). In conducting a series of experiments that border on and immediately connect with each other, the scientist effectively resolves two seemingly insurmountable, yet all-too-human hindrances at once. The first appears in “Bedenken und Ergebung” from the morphological writings where Goethe identifies the constraints of space and time as proving particularly obstructive for scientific research. Whereas sensory experiences of the human observer are inevitably beholden to spatial and temporal limitations, the inner essence of the natural phenomenon exists independently of both (HA 13: 32-33). Seriality provides Goethe the key to unlocking this inner essence; individual experiments when conducted serially—even though separately—merge into a collective experience, which unites successive and simultaneous time.

That the scientist can discover simultaneity in serial experiences also presents the opportunity for non-discursive thought to intuit aspects of the phenomenon that otherwise lie beyond sensory perception. Though the subject collects and constructs a chain of experiences, this chain is incomplete because it offers only discrete glimpses of the object at various moments in time and space. Missing are the developments occurring in the space between. In other words, the scientist witnesses the forms assumed by the phenomenon after it has changed and before it changes again, but the actual change during the transitional phases does not readily reveal itself to human apperception. However, with the transcendence of space and time conditioned by Goethe’s methodology, these dynamic, in-between forms begin to emerge as the scientist constantly compares each new experience of the phenomenon with the one that came before. Scrutinizing gradations of difference allows the scientist to “fill in the gaps” and ultimately build an unbroken chain of similarities and difference, of forms and movement of forms. Demanding

that the unbroken chain arise from the observation of the series, Goethe's methodology works to ensure that no gradation or transitional stage is omitted or overlooked.⁵ In this way, the scientist reproduces an uninterrupted and interdependent progression of forms and their movements with each necessarily reliant on its predecessor and successor. Recalling the above-cited words from "Erfahrung und Wissenschaft," the "reine Phänomen," as "Resultat aller Erfahrungen und Versuche," can "niemals isoliert sein, sondern es zeigt sich in einer stetigen Folge der Erscheinungen" (HA 13: 25). This unbroken chain constitutes the underlying unity or totality of the phenomenon, emergent out of the experimental series as the collective experience.

Thus, from the two polarities of object and subject, a new construction is born: a synthesis of a higher order generated from the upward progression into *Erfahrung*. If there is any doubt as to the directionality, we need only look at the language of the essay: "Eine solche Erfahrung die aus mehreren andern besteht ist offenbar von einer *höheren* Art [...] Auf solche Erfahrungen der *höheren* Art loszuarbeiten, halt ich für *höchste* Pflicht des Naturforschers" (HA 13: 18, emphasis added). The recurrent use of "höher" to describe the methodology, the task of the scientist, and the synthesis itself indicates the upward movement to a higher order, non-discursive faculty needed to shape the *Reihenbildung* from the discrete experiences collected through the discursive mode of thought. Arranging the terms of this formula into a visual model results in the following diagram:

Figure 1. The experiment/experience arises from the interaction between cognitive viewing subject and phenomenal object.

Illustrated is a tripartite scheme consisting of thesis (cognitive subject), antithesis (phenomenal object), and the higher order synthesis generated from their fruitful interaction, what here amounts to the experiment/experience. Accounting for the unstable processes of change, the experiment/experience exists in the liminal space between the polarities of subject and object to mediate the distance separating objective reality from subjective experience of it. In contrast to the circles demarcating the stable boundaries around the subject and object, a cloud icon symbolizes the disembodied character of the experiment/experience.

Neither wholly subjective nor objective at this stage, their synthesis effectively inhabits no body and so reflects the linguistic distinction Goethe makes between *Gestalt* and *Bildung* in “Die Absicht eingeleitet.” The closed contours of the circle are redolent of the type of form signified by the word *Gestalt* (“ein Zusammengehöriges festgestellt, abgeschlossen und in seinem Charakter fixiert”), whereas the sort of animate formulations implied by *Bildung* (“alles

in einer steten Bewegung schwanke”) are unbound to time and place (HA 13: 55). The cloud icon subsequently suggests the dynamism of the *Bildung* that the scientist experiences when conducting, collecting, and organizing the experimental series: the formless movement occurring in the transitional phases between phenomenal forms not immediately present to the senses. In this regard, Geulen’s characterization of a *Reihenbildung* truly encapsulates the Goethean sense. Through the synthesis into a “höhere Art der Erfahrung,” the viewing subject is at once unified with the object yet distinct, capable of intuiting the object’s potentiality for change while also receptive to the same transformative processes (compare to Breithaupt, *Jenseits* 73–80). Appreciative of all past, present, and potential future forms, the scientist can gain full insight into the “reine Phänomen.”⁶

Visualized in this manner, the methodological model proscribed by the essay distinguishes itself as a modified configuration of *Polarität und Steigerung*, what Goethe called the “Triebräder aller Natur” in the commentary to “Die Natur” (1783) (HA 13: 48). More than a methodology, this model illustrates the mode of cognitive viewing vital for conducting the experimental protocol. It is the subject who initiates these particular “Triebräder” through observation and then intuites the essence of the object placed beyond the bounds of human knowledge by Kant when he granted humankind analytical *Verstand*, but not synthetic *Vernunft*. Our reading of Goethe’s “Versuch als Vermittler” reconstructs a scientist subject capable of activating a non-discursive faculty to unify a *Reihenbildung* of individual experiences collected through a discursive one to ultimately uncover the underlying essence of the object. While not every subject has yet to exercise or refine this non-discursive faculty, all individuals nonetheless innately possess one and thus could. That Goethe establishes a scientific method on a form of intuition and reconciles both modes of thought is highly significant, for it creates an authoritative

subject with the power to shape what is perceived and intuit that which is not. As illustrated by the oscillation in Figure 1, this subject actively participates in the process through cognitive *and* sensory means. The word *Beobachtungsgabe* indicates how absolutely Goethe associates the functioning of intellectual intuition with the sense of sight, although the essay only vaguely suggests how the two work together. Moreover, whereas I have been using the phrase “cognitive mode of viewing” due to its outstanding features, Goethe adheres to no single designation for the sort of non-discursive cognition represented by Kant’s *Vernunft* and Spinoza’s *scientia intuitiva*.

Broadening our purview to consider how he describes this faculty in other morphological writings yields the following possibilities: “exakte sinnliche Phantasie,” “anschauende Urteilskraft,” and “lebendiges Anschauen.”⁷ The first option occurs in the essay on Stiedenroth’s psychology to express “alle Manifestationen des menschlichen Wesens, Sinnlichkeit und Vernunft, Einbildungskraft und Verstand” (HA 13: 42). Here we find the requisite fusion of discursive and non-discursive modes, but no specific evocation of visual perception. Regarding the role of cognition, Goethe seems to invite confusion by associating it closely with imagination (“Phantasie,” “Einbildungskraft”). Although imagination must be active for the scientist to intuit the unity of the *Reihenbildung*, it is still specifically identified as a “Feind” to keep in check (HA 13: 14). Perhaps for this reason, scholarly efforts to pin down a working terminology for this faculty generally tend to favor the term intuition over imagination.⁸ The second possibility dispatches with fantasy and twists Kantian phrasing in an eponymous essay that finds Goethe responding to “unser Meister” limiting our “Denkenden auf eine reflektierende diskursive Urteilskraft,” with the concept of “anschauende Urteilskraft” (HA 13: 30). Now we have vision plus cognition, but the title does not reflect Goethe’s important argument “daß wir uns, durch das Anschauen einer immer schaffenden Natur zur geistigen Teilnahme an ihren Produktionen

würdig machen” (HA 13: 30). Through observing and cognitively participating in Nature’s metamorphoses, we are both actors in and creators of the forms around us.⁹

Therefore, I prefer the third term “lebendiges Anschauen” and will employ this term to designate the mode of non-discursive thought theorized by Goethe. It best characterizes how this faculty is inherently one of perception, and how, as a mode of cognitive viewing, it powers Goethe’s methodology and empowers his scientific subject. Returning the term to its original context in “Die Absicht eingeleitet” recalls the essential schematic for natural development as a continual *Polarität und Steigerung*, a process Goethe believed should be studied with a mode of perception as fluid and flexible as nature itself: “Das Gebildete wird sogleich wieder umgebildet, und wir haben uns, wenn wir einigermaßen zum lebendigen Anschauen der Natur gelangen wollen, selbst so beweglich und bildsam zu erhalten, nach dem Beispiele, mit dem sie uns vorgeht” (HA 13: 55). As it duplicates the same primary processes generating natural form, *lebendiges Anschauen* lives and breathes along with the organic forms it studies. Likewise generative, it keeps alive the potential for change, formulates a relationship with the world subject to constant negotiation and renegotiation, and presents an alternative to Newton’s *experimentum crucis* or Linnaeus’s static transcendental order (see Amrine, “Metamorphosis”; Breidbach; Lichtenstern; von Mücke; Pfau; Stephenson; Wellmon).

Yet more than “living,” the *lebendiges Anschauen* is also “life-giving,” for it is through this mode of cognitive viewing that a series of *Erfahrungen* connect the varied phenomena of the world to produce what we experience of the world around it. As Goethe writes in *Der Sammler und die Seinigen* (1798/99):

Ich: Zu jeder Erfahrung gehört ein Organ.

Gast: Wohl ein besonderes?

Ich: Kein besonderes, aber eine gewisse Eigenschaft muß es haben.

Gast: Und die wäre?

Ich: Es muß produzieren können.

Gast: Was produzieren?

Ich: Die Erfahrung! Es gibt keine Erfahrung, die nicht produziert,
hervorgebracht, erschaffen wird (HA 12: 85).

Contrary to the *a priori* principles erected through Kant's transcendental reason, Goethe's understanding of *Erfahrung* is created by us, as "produziert," "hervorgebracht," and "erschaffen" from an "Organ" in our possession. That this organ exercises a *lebendiges Anschauen* is emphasized in the maxim: "Der Mensch ist als wirklich in der Mitte einer wirklichen Welt gesetzt und mit solchen Organen begabt, daß er das Wirkliche und nebenbei das Mögliche erkennen und hervorbringen kann" (HA 12: 373). The "Mensch" presented here could be an avatar of Goethe's scientist subject, who, in his interrelatedness with nature, makes sense of the world as infinitely variable and constantly changing. Experiencing the natural objects around him "mit solchen Organen" as his eyes and cognition, the subject animates their potentiality ("das Mögliche") through active observation, thereby constructing both his reality ("das Wirkliche") and their reality for him. Without the cognitive viewing subject to lift the natural object out of stasis, reanimate it, and make it "lebendig," we are not really seeing the world around us for all it is and could be. That he observes and participates in the potentiality of all natural forms endows this "Mensch" with an authority and autonomy exemplary of a new prototype for subjecthood.¹⁰

From the idea of a series of mediating *Versuche* whose practical execution constructs *Erfahrung* as unified totality, Goethe leads us to formulate a cognitive viewing subject with the

authority to create his own lived experience. By this theoretical grounding, understanding the objects of the natural world starts from within the individual's body and emerges from a continual dialogue between viewing subject and viewed object to animate otherwise lifeless forms and makes them "wirklich." In short, objects attain their objecthood because we see them, and by extension, the oscillation into objecthood produced by and contingent upon the beholder's cognition constructs the human experience of reality. Constantly in flux, what our cognitive faculties call forth with our senses to experience as reality hovers like a cloud just beyond solid objecthood, incessantly modulating through an infinite series of forms whose appearances vary in accordance with the body of the viewer. Yet the constant dialogue between subject and object also ensures that its forms do not fluctuate so greatly as to ascend into unconstrained or arbitrary subjectivity. In this way, Goethe advances a concept of a more autonomous subjecthood whose engagement with the world successfully navigates the Scylla and Charybdis of natural philosophy, avoiding a Newtonian objectivism and a Romantic subjectivism run rampant. Thus, we see how the theoretical model for *lebendiges Anschauen* presented in "Versuch als Vermittler" heralds a newly empowered subject possessing an authoritative way of seeing.

So far, the oscillations of the *lebendiges Anschauen* as first formulated for the scientist have been restricted to its particular disciplinary domain. If they could now be deployed in the aesthetic sphere for the artist or art spectator, it stands to reason that its oscillations could also construct an aesthetic reality as we know it. A supposition with significant implications, it would exemplify one possible new way of seeing and engaging with art whereby the cognitive viewing subject participates in the construction of a radically subjective aesthetic experience. This I believe presents the potential for an alternative approach to art that makes abstraction theoretically possible, even if this possibility was not made into obvious reality for another

hundred years. I now conclude by contemplating how the scientist's *lebendiges Anschauen* might operate when employed in art and for abstraction as discernible in an actual painting. For that, I turn in the next section to Kandinsky, who describes what his own eyes and imagination perceive when beholding for the first time an apparently objectless work of art.

The Case of Kandinsky: The Goethean Subject as Artist and Art Spectator

In "Rückblicke" (1913), the artist identifies a mind-altering moment at an 1896 exhibition of Impressionist painting in Moscow as formatively influencing his invention of abstract art. At first, it might seem unnecessary to consider Kandinsky's experience of an Impressionist painting as opposed to Impressionism itself, the aesthetic technique and modality. Considering that Impressionism thematizes the act of perception and revolutionized nineteenth-century regimes of viewing as experienced in art and in modern life, it would appear to present an ideal case study to exemplify the *lebendiges Anschauen* outlined above. Yet a closer look at the Impressionist modality and Claude Monet, its leading practitioner, reveals that even its most compelling correspondences ultimately do not reproduce the sort of cognitive viewing experience enjoyed by Goethe's subject. To be sure, Impressionism's interest in sight, science, and seriality strongly resonates with Goethe's methodology, as it signaled a new way of looking that asserted the legitimacy of subjective impressions, be they sensations of the world impressed upon the viewer or the viewer-as-artist's communication of them through the idiosyncratic script of brushstroke impressed upon the canvas (see Schapiro, *Impressionism*). Embracing the *plein-air* practice of the Barbizon school, painters headed outdoors to study and record the ephemeral and less tangible qualities conditioning their physiological perception of the object: light, shadow, wind, speed. Like Goethe, they were keenly aware that temporal and spatial contingencies of subjective vision affected how they perceived the world.

From their attentiveness to transience and change developed a renewed fascination with serial imagery and a new approach toward seriality in painting (see Heinrich). Though by no means unknown to the art world, its pre-nineteenth-century varieties differed considerably. Series depicting seasonal change (Four Seasons or Times of Day) had allegorical import, while *plein-air* serial sketches of weather effects served as preparatory work for idealized or imaginary landscapes later executed indoors (see Coplans, *Serial Imagery*; Scheede, *Monets Vermächtnis*). Not until Monet's series from the 1890s do we encounter a conception of seriality whose purpose and process seems to align with the mode of cognitive viewing in "Versuch als Vermittler." Like Goethe's scientist, Monet started from repeated observation of a singular object in its natural environment. In isolating a singular, stationary object and recording his perception of it bound to a particular distance and moment in time, the artist shifted the content of the artwork away from objective representation to subjective sensory experience. We might imagine Monet accumulating his series of studies through a discursive mode of thought by constantly returning to the natural object—as poplar, cathedral, or in Kandinsky's case, haystack—and recording his impressions of it at a different moment in time. Organized into a totality through Goethe's non-discursive *lebendiges Anschauen*, the series could amount to the perceived reality of one object as experienced over time, or the haystack as "reine Phänomen." This is not, however, how the comparison really plays out.

Let us consider two scenarios. Consulting Figure 1, we first position the artist as subject and the haystack as object so that Monet's process of painting functions as the *Versuch*. As Monet advanced through his serial themes, the desire to capture ever finer nuances of changing relationships becomes increasingly manifest in his work, finally culminating in his *Waterlilies* series (Seiberling 262). Highly sensitive to light and atmosphere, this otherwise mundane motif

best demonstrates Monet's attempts to paint the perpetual dynamism of objects rather than objects themselves. Since he worked on this series from the late 1890s until his death in 1926, his deteriorating vision likely influenced the looser composition, ambiguous forms, and move to larger canvases (see Seiberling 216–58; Sykora 48–50). Even so, we could imagine the artist activating a *lebendiges Anschauen* to unify subject and object to experience the waterlily pond not as a stable *Gestalt* but constantly metamorphosing *Bildung*. Unfortunately, any dynamism is suspended when Monet tries to transpose this “höhere Art der Erfahrung”; committing any form to canvas objectifies its *Bildung* into a fixed, painted *Gestalt*. While these *Gestalten* might reap a series of artworks, they do not necessarily lead to abstract art. For example, in a later *Waterlilies*, the image might not appear to refer to any natural objects when differentiations of color, space, and shape melt together, but would a spectator perceiving the now frozen world as generated by Monet's *lebendiges Anschauen* be appreciative of an artwork filled with the potential of *Bildung* or dismissive of a canvas of unrecognizable *Gestalten*? Needed is another subject also possessing a *lebendiges Anschauen* refined enough to reanimate Monet's *Gestalten*.

A second scenario: If we reposition the artist to serve a mediating function between art spectator as subject and the object in nature, the series of images conceivably equals a collection of individual experiences from which the spectator's *lebendiges Anschauen* can organize a *Reihenbildung*. As we saw, *Reihenbildung* asks the subject not only to construct a chain of experiences connected through difference, but also to fill in the gradations of change not immediately given to human perception. Intuiting or imagining these dynamic missing links unifies simultaneous and successive time and ensures a series whose progression of forms, while not teleological, are nevertheless interdependent. Yet what the series creates and the spectator observes does not constitute a *Reihenbildung* resulting in a higher experience of a “reine

Phänomen,” for it violates Goethe’s stipulation that the totality “zeigt sich in einer stetigen Folge der Erscheinungen” (HA 13: 25). Even if we proceed from the assumption that a spectator can, for example, view all twenty-five *Haystack* paintings simultaneously and sequentially, Monet’s images have no sequential interdependence where each necessarily relies on its predecessor and successor (see Seiberling 84–110; Sykora 38–40). Every painting can stand alone autonomously, larger ensembles interconnect according to any number of narratives, and no underlying unity links the series to a macrostructure guided by lawful interrelationships such that Goethe’s “reine Phänomen” represents. As this malleability reflects the artist’s own ambivalence about whether the spectator should experience them separately or together, we find ourselves facing a familiar problem of mediation (Brettel 7; Seiberling 262). It is still *Monet’s* haystack: his creation of experiential reality as he lived and saw it in that moment. Whether the artist intends to include or address a cognitive viewing subject or any subject in the composition of a given artwork does not determinatively condition the theoretical possibility of abstraction, because neither artistic intent nor the painting itself is at issue; the subject’s engagement with it is. This we discover via a third scenario that removes the artist from the equation and focuses on the interaction between one spectator and one painting.

For that, I defer to Kandinsky, who details his subjective response during an encounter that would inspire his invention of abstract art. Kandinsky never refers to Goethe, yet his model for a cognitive mode of viewing would seem to provide the theoretical framework for and shape the artist’s vision of a painting without objects. The moment occurs when Kandinsky beholds a painting from Monet’s *Haystacks* but does not immediately recognize the haystack:

Und plötzlich zum ersten Mal sah ich ein *Bild*. Daß das ein

Heuhafen war, belehrte mich der Katalog. Erkennen konnte ich ihn

nicht. Dieses Nichterkennen war mir peinlich. Ich fand auch, daß der Maler kein Recht hat, so undeutlich zu malen. Ich empfand dumpf, daß der Gegenstand in diesem Bild fehlt. [...] Das alles war mir unklar, und ich konnte die einfachen Konsequenzen dieses Erlebnisses nicht ziehen. Was mir aber vollkommen klar war – das war die ungeahnte, früher mir verborgene Kraft der Palette, die über alle meine Träume hinausging. Die Malerei bekam eine märchenhafte Kraft und Pracht. Unbewusst war aber auch der Gegenstand als unvermeidliches Element des Bildes diskreditiert.

(32, author's italics)

While likely not spontaneous themselves, his words describe an event that happens abruptly and unexpectedly. The rhetorical gesture of “plötzlich” directly followed by “zum ersten Mal” certainly emphasizes the immediacy or present-ness of the moment, but we still must ask ourselves what Kandinsky means. Does seeing a picture “zum ersten Mal” imply for the first time that day? Ever? Before we begin to suppose how he, a student of art, can possibly claim to see a “Bild” for the first time, we should first consider the spectrum of interpretive possibilities communicated by those four letters. Although he beholds a “Bild,” the great revelation is that the “Bild” has no object (“der Gegenstand in diesem Bild fehlt”). We and he know this to be false; the catalogue has told him it is a haystack, only he cannot see it. Yet if Kandinsky is not seeing a haystack, what exactly does he see?

I propose that the “Bild” Kandinsky perceives could be interpreted as an “höhere Art der Erfahrung” such that the cloud icon in Figure 1 symbolizes. The colorful modulation taking shape before the artist’s eyes assumes neither substance nor form—not a recognizable one at

least. Kandinsky's "Nichterkennen" is crucial, because this verbal noun marks the difference between *Bild* and *Gegenstand* and thereby distinguishes the moment when *Bild* detaches from *Gegenstand*. Kandinsky sees some undefined and undefinable image, a *Bild*, but cannot quite reconcile it with his experience of its purported objective identity, the *Gegenstand*. In Goethean terminology, the viewed object of Monet's haystack is a *Gestalt*, as is the viewing subject of the artist. What Kandinsky sees during this "Nichterkennen" is something in between akin to *Bildung*: a *Bild* lacking a *Gegenstand*, or an image without objecthood. That *Bild* could recall Goethe's *Bildung* would imply that Kandinsky engaged in the sort of higher cognitive activity necessary for *Reihenbildung* to reanimate the *Gestalt*. For one, the objectless object that is the *Bild* lacks substance ("der Gegenstand in diesem Bild fehlt"). Secondly, the passage works to engender the requisite concurrence of simultaneity and succession when the immediacy of the moment elongated through narration recreates the experience of collapsed time sequenced into a chain of events. The dynamic character of the experience and the unstable existence of the *Bild* stems from the artist's description and his own use of verbal noun "Nichterkennen." Unfolding in the interaction between viewing subject and viewed object, the process of seeing or of not recognizing is actively ongoing and therefore subject to volatility and variability.

Moreover, the presence of an action presupposes the presence of an agent, a realization to which Kandinsky shortly comes. Initially "peinlich," his "Nichterkennen" prompts Kandinsky to direct indignance at Monet for painting so "undeutlich," but then he turns to himself as viewing subject. Perhaps he is "plötzlich" aware that the perceived lack of object stems not from incompetent painting or the absence of a haystack, rather it occurs within his own body. Even if we were to attribute the *Bild* to a cataract or ocular degeneration, Kandinsky's words do not suggest as much. Instead, they demonstrate to me the presence of a higher cognitive faculty,

when his aesthetic pleasure extends beyond the visual to involve the imagination. His imagery of “Träume” and “märchenhafte Kraft und Pracht” evokes the splendor and imaginative power of dreams and fairy tales, both of which require cognitive activity and promise fictional narratives of magic, mystery, and childlike wonder. Certainly, in the moments of perception when the “Gegenstand fehlt,” the *Bild* suddenly has the potential to assume any shape and be any object. Kandinsky’s reaction suggests that the potential for perceiving these animate, abstract clouds of color in lieu of an object is present from a painting’s inception. “Ungeahnt,” “unbewusst,” and “verborgen,” it is a secret hidden from view and waiting to be discovered, not because it was absent from the painting as viewed object, but because he, the viewing subject, did not see it.

Kandinsky’s final words emphasize that the power to perceive abstracted images lies within an imaginative viewership and not with the object. The *Gegenstand* is only discredited as “*unvermeidliches Element des Bildes*”; a *Bild* can indeed have a *Gegenstand*, it just no longer must. Put differently, an artwork does not need a recognizable or indeed any object from the material world to engage or entertain its audience. It needs a spectator with *lebendiges Anschauen* willing and able not only to see the potential for aesthetic enjoyment, but to actively create it through use of cognitive faculties. Whereas “intuition” serves the sciences, “imagination” offers a more suitable descriptor for the type of non-discursive cognition in the aesthetic realm that could elicit enjoyment from abstract art. Like the “Beobachtungsgabe” honed by Goethe’s scientist to intuit the potentiality of natural form, so too does each art spectator have an ability beyond physiological sight to imagine the potentiality of aesthetic form. One need only activate and develop it, as Kandinsky presumably did on this occasion.

While the moments of *lebendiges Anschauen* that he possibly experienced were brief, they were enough to broaden the frontiers of aesthetic possibility. Convinced of the potential for

an objectless art, the artist went on to create compositions that too might have inspired viewers not in spite but because of this “living” and “life-giving” mode of perception. Kandinsky’s words may not intentionally articulate it, but I believe they do demonstrate the following: at stake for the emergence of abstract art is not what one sees but how one sees, and how one sees need not require a recognizable or pre-formulated image to be aesthetically engaging. As a cognitive viewing subject who actively employs the imagination and has the potential to make of the experience what he will, Kandinsky can look to Monet’s haystacks or any painting and see colored paint with every conceivable modulation. At the same time, another art spectator might immediately perceive a haystack and entertain no possibility for anything else. The potentiality occurs in the oscillation between subject and object, but as we remember from the scientist in “Versuch als Vermittler,” it is always the subject who must initially reach out to the object to set the process in motion and produce an *Erfahrung* of a higher order.

Aware that the potential for abstract art arises from the imagination of the spectator, Kandinsky and other early abstractionists recognized the importance of audience receptivity for the success and survival of their aesthetic endeavors. To cultivate public acceptance, they coordinated the unveiling of their abstract artworks with publications such as *Über das Geistige in der Kunst*, which teach audiences how to look at and think about their abstractions while also laying out the motivation, process, and theoretical justification for an objectless art. As I argued here however, a theoretical framework for a mode of cognitive viewing necessary for a subject to appreciate and engage with abstract art was already in existence, one which could be actively and consciously employed by a certain type of spectator as imagined by Goethe as early as 1792. The turn to the observer as an active and embodied participant is a key feature of Goethean scientific methodology and essential for the emergence of abstract art, even if Goethe himself is not

writing an instruction manual on how to paint it. In the end, whether the artist painted a haystack or cloud of nonobjective color is less important than how the spectator sees it. The affect and effectiveness of this aesthetic demand more from the viewing subject than of the viewed object, for neither painter nor painting can perform the crucial cognitive task of the spectator. Like the reality posited by Goethe, the potential for abstraction and abstract art ultimately exists in the eye of the beholder.

¹ By no means exhaustive, this list includes optics and regimes of vision (Allert, “Hidden Aspects”; Alliez, *The Brain-Eye*; Cray, *Techniques of the Observer*; Köhnen, *Das optische Wissen*; Moore and Simpson, *The Enlightened Eye*); psychoanalysis (Breithaupt, “Goethe and the Ego”; Ellenberger, *The Discovery of the Unconscious*; Hamlin, “Myth and Psychology”), and language (Breithaupt et al. *Goethe and Wittgenstein*; Steuer, *Die stillen Grenzen der Theorie*).

² Shortly thereafter, artists on both sides of the Atlantic began publicly exhibiting abstract images as art: Robert Delaunay’s *Window* series, *Fenêtres* (Ausstellung des Modernen Bundes, Kunsthaus Zurich, July 1912); Arthur Dove’s first one-person show (Stieglitz Gallery, New York, February 1912); the Czech artist František Kupka’s *Amorpha* paintings, Francis Picabia’s *La Source*, and Fernand Léger’s *La Femme en Bleu* (Salon d’Automne, Paris, October 1912); the work of American Synchronists Morgan Russel and Stanton MacDonald-Wright (Neue Kunstsalon, Munich, June 1913). Two other landmark exhibitions of the time were the 1912 *Sonderbund* exhibition in Cologne and the 1913 Armory Show in New York (Dickerman, “Inventing Abstraction” 12–37).

³ So titled Goethe an essay composed with Heinrich Meyer for *Über Kunst und Altertum* (1816–23), a six-volume periodical defending the Classical ideals, especially against Romanticism (see Forssman, *Goethezeit*).

⁴ The essay likely received this title shortly before its 1823 publication in the journal *Zur Naturwissenschaft überhaupt, besonders zur Morphologie*, in print from 1817–24. Goethe first called the essay *Kautelen des Beobachters*, a title still conveying his concern with defining a viewing subject beholden to scientific objectivity. As Schimma relays, Riemer probably penned the new title (*Blickbildungen* 89).

⁵ Here, Goethe’s comparison to the mathematical method of sequence building proves helpful: “Denn eigentlich ist es die mathematische Methode, welche wegen ihrer Bedächtlichkeit und Reinheit gleich jeden Sprung in der Assertion offenbart, und ihre Beweise sind eigentlich nur umständliche Ausführungen, daß dasjenige, was in Verbindung vorgebracht wird, schon in seinen einfachen Teilen und in seiner ganzen Folge da gewesen, in seinem ganzen Umfange übersehen und unter allen Bedingungen richtig und unumstößlich erfunden worden” (HA 13: 18–19).

⁶ *Erfahrung* as described here offers a point of comparison with the *Urpflanze*. Goethe shows how all plant components are variants of the same basic schemata and variations of one archetype. Like *Erfahrung*, the *Urpflanze* consists of “das Allgemeine im Einzelnen”; neither one pole nor the other, it is an overarching embodiment of both that expresses *Einheit* while preserving *Mannigfaltigkeit*. While the comparative method by which the scientist arrives at the archetype has affinity with how *Erfahrung* arises as a third element from the fruitful interaction of two polarities, the concept of the *Urpflanze* differs structurally. The *Urgestalt* represent a higher unity from which diversity (and polarities) arises (see Breithaupt 69–73).

⁷ To this we could add the “zarte Empirie” in *Wilhelm Meisters Wanderjahre* and a maxim: “Es gibt eine zarte Empirie, die sich mit dem Gegenstand innigst identisch macht und dadurch zur eigentlichen Theorie wird. Diese Steigerung des geistigen Vermögens aber gehört einer hochgebildeten Zeit an” (HA XII: 435). The reciprocal interaction and interlinking of subject and object along with the implications of “Steigerung” strongly suggests that the “zarte Empirie” refers to the methodology in “Versuch als Vermittler.” It is not included above, because it lacks both cognitive or visual connotations of the other terms.

⁸ I, too, use “intuition” within the portions of this article addressing the cognitive viewing scientist. In the next section on aesthetics, I will switch to “imagination” for reasons that will become clear. Indeed, we

find many comparisons, descriptions, and translations in the attempts to characterize this faculty. Though not exhaustive, compare to: Amrine (“synchronic seeing,” “intuition,” “Vernunft”), Gernot Böhme, (“Phantasie”), Günther Böhme (“gegenständliches Denken”), Brady (“thinking as organ of perception,” “Vernunft” as new type of cognition), Breithaupt (“Einbildungskraft”), Förster (“Auge des Geistes,” adaptation of “scientiva intuitiva”), Hennigfeld (“exakte sinnliche Phantasie,” “intuition”), Pfau (“anschauende Urteilskraft,” “zarte Empirie”), Schieren (“das Denken”), Schimma (“anschauende Urteilskraft,” “zarte Empirie”), Stephenson (“imagination”). Amid this diversity, we find as salient features: perception, rational cognition, and a form of irrational cognition (imagination or intuition).

⁹ Also reflecting the idea of bringing objects into being, the term “gegenständliches Denken” appears in the essay “Bedeutende Fördernis durch ein einziges geistreiches Wort.” Goethe describes this type of thought as when “mein Denken sich von den Gegenständen nicht sondere, daß die Elemente der Gegenstände, die Anschauungen in dasselbe eingehen und von ihm auf das innigste durchdrungen werden, daß mein Anschauen selbst ein Denken, mein Denken ein Anschauen sei” (HA 13: 37). Like the first option, this title lacks pointed reference to the critical role vision explicated in the essay.

¹⁰ Due to the essential role of a cognitive viewing subject for calling forth the presentness of an object, Goethe’s account of phenomenal experience is often said to foreground the perspective that would become known in the twentieth century as phenomenology. Hennigfeld provides an excellent account of Goethe’s phenomenological thinking as compared to Husserl and Heidegger. See too: Allert, “Hidden Aspects”; Gernot Böhme; Brady, “Goethe’s Natural Science”; Pörksen, “Goethes phänomenologische Naturwissenschaft”; Simms, “Goethe und die Phänomenologie”; and Vogl.

Works Cited

- Amrine, Frederick. "Goethean Intuitions." *Goethe Yearbook* XVIII (2011): 35-50. Print.
- Brady, Ronald H. "Form and Cause in Goethe's Morphology." *Goethe and the Sciences: A Reappraisal*. Eds. Frederick Amrine, Francis J. Zucker, and Harvey Wheeler. Dordrecht, Holland: D. Reidel Publishing Company, 1987. 257-300. Print.
- Brown, Jane K. *Goethe's Allegories of Identity*. University of Pennsylvania Press: 2014. Print.
- Förster, Eckhart. *The Twenty-Five Years of Philosophy: A Systematic Reconstruction*. Translated by Brady Bowman. Cambridge: Harvard University Press, 2012. Print.
- Geulen, Eva. *Aus dem Leben der Form. Goethes Morphologie und die Nager*. Berlin: August Verlag, 2016. Print.
- Goethe, Johann Wolfgang von. *Goethes Werke*, Hamburger Ausgabe. 14 vols. Ed. Erich Trunz. Munich: C. H. Beck, 1981. Print.
- Kandinsky, Wassily. "Rückblicke, 1913." *Kandinsky: Die Gesammelten Schriften*. Bd I. Ed. Hans K. Roethel und Jelena Hahl-Koch. Bern: Benteli Verlag, 1980. 27-50. Print.

Bibliography

- Allert, Beate. "Ekphrasis und die Kunst des Verstehens: Möglichkeiten und Grenzen im Kontext Lessings." *Lessing und die Sinne*. Eds. Alexander Košenina and Stefanie Stockhorst. Hannover: Wehrhahn, 2016. 161-181. Print.
- . "Hidden Aspects of Goethe's Writings on Color, Seeing, and Motion and Their Significance for a Feminist Visual Theory." *Bodies of Resistance: Phenomenologies of Politics, Agency, and Culture*. Ed. Laura Doyle. Evanston, Illinois: Northwestern University Press, 2002. 144-191. Print.

Alliez, Éric. *The Brain-Eye: New Histories of Modern Painting*. Trans. Robin Mackay. New York: Rowman and Littlefield, 2016. Print.

Amrine, Frederick, Francis J. Zucker, and Harvey Wheeler, editors. *Goethe and the Sciences: A Reappraisal*. Dordrecht, Holland: D. Reidel Publishing Company, 1987. Print.

---. "The Metamorphosis of the Scientist." *Goethe Yearbook X* (1990): 187-212. Print.

Apel, Friedmar "Der lebendige Blick: Goethes Kunstanschauung." *Goethe und die Kunst*. Ed. Sabine Schulze and Friedmar Apel. Stuttgart: Hatje, 1994. 571-578. Print.

Barasch, Moshe. *Modern Theories of Art: From impressionism to Kandinsky*, Vol. 2. New York: NYU Press, 1998. Print.

Baxmann, Inge, Michael Frank and Wolfgang Schäffner. *Das Laokoon-Paradigma Zeichenregime im 18. Jahrhundert*. Berlin: Akademie Verlag, 2000. Print.

Beiser, Frederick C. *German Idealism: The Struggle Against Subjectivism, 1781-1801*. Cambridge: Harvard University Press, 2008. Print.

Böhme, Gernot. "Goethes Farbenlehre als Paradigma einer Phänomenologie der Natur." *Durchgeistete Natur: Ihre Präsenz in Goethes Dichtung, Wissenschaft und Philosophie*. Eds. Alfred Schmidt and Klaus-Jürgen Grün. Frankfurt am Main: Peter Lang, 2000. 31-40. Print.

Böhme, Günther. *Goethe: Naturwissenschaft, Humanismus, Bildung: ein Versuch über die Gegenwart klassischer Bildung*. Frankfurt am Main: Lang, 1991. Print.

Boyle, Nicholas. *Goethe: The Poet and the Age*. Oxford: Clarendon Press, 1991-2000. Print.

Brady, Ronald H. "Goethe's Natural Science: Some Non-Cartesian Meditations." *Toward a Man-Centered Science*. Eds. Karl E. Schaefer, Herbert Hensel and Ronald Brady. Mt. Kisco NY: Futura Publishing Company, 1977. 137-65. Print.

- Breidbach, Olaf. *Goethes Metamorphosen Lehre*. München: Wilhelm Fink Verlag, 2006. Print.
- Breithaupt, Fritz, Richard Raatzsch, and Bettina Kremberg, editors. *Goethe and Wittgenstein: Seeing the World's Unity in its Variety*. Frankfurt am Main: Peter Lang, 2003. Print.
- Breithaupt, Fritz. "Goethe and the Ego." *Goethe Yearbook XI* (2002): 77–278. Print.
- . *Jenseits der Bilder: Goethes Politik der Wahrnehmung*. Freiburg im Breisgau: Rombach Druck- und Verlagshaus GmbH & Co. KG, 2000. Print.
- Brettel, Richard R. "Monet's Haystacks Reconsidered." *Art Institute of Chicago Museum Studies* 11.1 (Autumn 1984): 4-21. Print.
- Brown, Jane K. *Goethe's Allegories of Identity*. University of Pennsylvania Press: 2014. Print.
- Burwick, Frederick. *The Damnation of Newton: Goethe's Color Theory and Romantic Perception*. Berlin: Walter de Gruyter & Co., 1986. Print.
- Crary, Jonathan. *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century*. Cambridge, MA: MIT, 1990. Print.
- Coplans, John. *Serial Imagery*. Alhambra, California: Pasadena Art Museum 1968, New York Graphic Society, 1968. Print.
- Daston, Lorraine. "Fear & Loathing of the Imagination in Science." *Daedalus* 134.4 (Fall 2005): 16-30. Print.
- . "Objectivity and the Escape from Perspective." *Social Studies of Science* 22. 4 (November 1992): 597-618. Print.
- Dickerman, Leah. "Inventing Abstraction." *Inventing Abstraction, 1910-1925: How a Radical Idea Changed Modern Art*. Ed. Leah Dickerman and Matthew Affron. New York: Museum of Modern Art, 2012. 12-37. Print.

Doyle, Laura, editor. *Bodies of Resistance: New Phenomenologies of Politics, Agency, and Culture*. Evanston, Illinois: Northwestern University Press, 2001. Print.

Ellenberger, Henri F. *The Discovery of the Unconscious: The History and Evolution of Dynamic Psychiatry*. New York: Basic Books, 1970. Print.

Engelhardt, Wolf von Engelhardt. "Der Versuch als Vermittler von Objekt und Subjekt":

Goethes Aufsatz im Licht von Kants Vernunftkritik." *Athenäum* 10 (2000): 9-28. Print.

Förster, Eckhart. "Die Bedeutung von §§ 76, 77 der "Kritik der Urteilskraft" für die Entwicklung der nachkantischen Philosophie [Teil 1]." *Zeitschrift für philosophische Forschung* 56.2 (2002): 169-190. Print.

---. "Goethe and the 'Auge des Geistes.'" *Deutsche Vierteljahrsschrift für Literaturwissenschaft und Geistesgeschichte* 75 (2001): 87-101. Print.

Forssman, Erik. *Goethezeit: über die Entstehung des bürgerlichen Kunstverständnisses*. München: Deutscher Kunstverlag, 1999. Print.

Foucault, Michel. *The Hermeneutics of the Subject*. Trans. Graham Burchell. New York: Picador, 2005. Print.

Gage, John. *Color and Culture: Practice and Meaning from Antiquity to Abstraction*. Berkeley: University of California Press, 1999. Print.

---. *Color and Meaning: Art, Science, and Symbolism*. Berkeley: University of California Press, 1999. Print.

---. "The Psychological Background to Early Modern Color: Kandinsky, Delaunay, and Mondrian." *Towards a New Art: Essays on the Background to Abstract Art 1910-20*. Ed. Alan Bownes. London: The Tate Gallery, 1980. 22-40. Print.

Hamlin, Cyrus. “‘Myth and Psychology’: The Curing of Orest in Goethe’s Iphigenie auf Tauris.”

Goethe Yearbook XII (2004): 59–80. Print.

Henningfeld, Iris. “Goethe’s Phenomenological Way of Thinking and the Urphänomen.” *Goethe*

Yearbook XXII (2015): 143-167. Print.

Heinrich, Christoph. “Serie – Ordnung und Obsession.” *Monets Vermächtnis - Serie - Ordnung*

und Obsession. Ed. Uwe M. Schneede. Hamburg: Hamburger Kunsthalle, Hatje Cantz

Verlag, 2001. 7-12. Print.

--. “Une serie deffets different: Monets Getreideschober als Hülle für das Licht die Zeit das

Universum und ‘die märchenhafte Kraft und Pracht der Malerei.’” *Monets Vermächtnis -*

Serie - Ordnung und Obsession. Ed. Uwe M. Schneede. Hamburg: Hamburger

Kunsthalle, Hatje Cantz Verlag, 2001. 13-22. Print.

Hentschel, Barbara. *Kandinsky und Goethe: über das Geistige in der Kunst in der Tradition*

Goethescher Naturwissenschaft. Berlin: Wiss.Verl. Berlin, 2000. Print.

Hermant, Jost. *Grüne Klassik: Goethes Naturverständnis in Kunst und Wissenschaft*. Köln:

Böhlau Verlag, 2016. Print.

Kandinsky, Wassily. *Über Das Geistige in Der Kunst: Insbesondere in Der Malerei*. Bern:

Benteli, 2009. Print.

Kant, Immanuel. *Kritik der Urteilskraft*. Berlin: Walter de Gruyter, 1908/13. Print.

Kittler, Friedrich. “Goethes Gabe.” *Wechselwirkungen. Kunst und Wissenschaft in Berlin und*

Weimar in Zeichen Goethes. Bern: Peter Lang AG, 2002. 155-166. Print.

Köhnen, Ralph. *Das optische Wissen. Mediologische Studien zu einer Geschichte des Sehens*.

Munich: Fink, 2009. Print.

Larson, James L. "Goethe and Linnæus." *Journal of the History of Ideas*. 28.4 (1967): 590-596.

Print.

Lichtenstern, Christa. *Die Wirkungsgeschichte der Metamorphosenlehre Goethes: von Philipp*

Otto Runge bis Joseph Beuys. Weinheim: VCH, 1990. Print.

Long, Rose-Carol Washton. *Kandinsky: The Development of an Abstract Style*. Oxford: Oxford

University Press, 1980. Print.

Marcum, James A. "The Nature of Light and Color: Goethe's 'Der Versuch als Vermittler'

versus Newton's *Experimentum Crucis*." *Perspectives on Science* 17.4 (2009): 457-481.

Print.

Marmor, Michael F. and James G. Ravin. *The Artist's Eyes: Vision and the History of Art*. New

York: Abrams, 2009. Print.

Morgan, David. "The Enchantment of Art: Abstraction and Empathy from German Romanticism

to Expressionism." *Journal of the History of Ideas* 57.2 (April 1996): 317-341. Print.

Moore, Evelyn K. and Patricia Anne Simpson, editors. *The Enlightened Eye: Goethe and Visual*

Culture. New York: Rodopi, 2007. Print.

Mücke, Dorothea von. "Goethe's Metamorphosis: Changing Forms in Nature, the Life Sciences,

and Authorship." *Representations* 95.1 (Summer 2006): 27-53. Print.

Mülder-Bach, Inka. "Sichtbarkeit und Lesbarkeit. Goethes Aufsatz Über Laokoon." *Das*

Laokoon-Paradigma Zeichenregime im 18. Jahrhundert. Eds. Inge Baxmann, Michael

Frank and Wolfgang Schäffner. Berlin: Akademie Verlag, 2000. 465-479. Print.

--. "Tiefe: Zur Dimension der Romantik." *Räume der Romantik: Stiftung für Romantikforschung*.

Eds. Inka Mülder-Bach and Gerhard Neumann. Würzburg: Königshausen & Neumann,

2007. 83-103. Print.

- Naumann, Barbara. *Ein Unendliches in Bewegung: Künste und Wissenschaften im medialen Wechselspiel bei Goethe*. Bielefeld: Aisthesis Verlag, 2012. Print.
- Noé-Rumberg, Dorothea-Michaela. *Naturgesetze als Dichtungsprinzipien: Goethes verborgene Poetik im Spiegel seiner Dichtung*. Freiburg: Rombach Verlag, 1993. Print.
- Osterkamp, Ernst. "Manieristische Kunst in Goethes Sammlung." *Zeitschrift für Kunstgeschichte* 66.4 (2003): 502-523. Print.
- . *Wechselwirkungen. Kunst und Wissenschaft in Berlin und Weimar in Zeichen Goethes*. Bern: Peter Lang AG, 2002. Print.
- Pirholt, Mattias. "Nachahmung und Symbolik: Zu den geschichtsphilosophischen Grundlagen der Ästhetik Goethes." *Studia Neophilologica* 83.2 (2011): 220-227. Print.
- Pfau, Thomas. "'All is Leaf': Difference, Metamorphosis, and Goethe's Phenomenology of Knowledge." *Studies in Romanticism* 49.1 (Spring 2010): 3-41. Print.
- Pörksen, Uwe. "Goethes phänomenologische Naturwissenschaft. Sprache und Darstellung als Erkenntnisinstrument." *Naturwissenschaft heute im Ansatz Goethes: Symposion an der Karlsuniversität in Prag, 24. - 26. September 2004: Goethes phänomenologische Naturwissenschaft. Sprache und Darstellung als Erkenntnisinstrument*. Ed. Dušan Pleštil. Stuttgart: Verlag Johannes M. Mayer, 2008. 89-103. Print.
- Richter, Simon. *Laocoon's Body and the Aesthetics of Pain: Winckelmann, Lessing, Herder, Mortiz, Goethe*. Detroit: Wayne State University Press, 1992. Print.
- Ringbom, Sixten. *The Sounding Cosmos: A Study in the Spiritualism of Kandinsky and the Genesis of Abstract Painting*. Finland: Åbo Akademi, 1970. Print.
- Schapiro, Meyer. *Impressionism: Reflections and Perceptions*. New York: George Braziller, 1997. Print.

Schneede, Uwe M., editor. *Monets Vermächtnis - Serie - Ordnung und Obsession*. Hamburg: Hamburger Kunsthalle, Hatje Cantz Verlag, 2001. Print.

Schimma, Sabine and Joseph Vogl, editors. *Versuchsanordnungen 1800*. Zürich-Berlin: diaphanes, 2009. Print.

Schimma, Sabine. *Blickbildungen. Ästhetik und Experiment in Goethes Farbstudien*. Köln: Böhlau Verlag, 2014. Print.

--. “‘So sehr ich die Unvollkommenheit jenes ersten Versuches fühlte und fühle’: Die Medien und ihr Eigenleben in Goethes Farbstudien.” *Goethe-Jahrbuch 2012*. Band 129. Ed. Jochen Golz. Göttingen: Wallstein Verlag, 2013. 21-39. Print.

Schindler, Viktoria. “Producing a Grammar of Painting: Color and Form in the Manuscripts of Ivan Kliun.” *Practices of Abstract Art: Between Anarchism and Appropriation*. Eds. Isabel Wünsche and Wiebke Gronemeyer. Cambridge: Cambridge Scholars Publishing, 2016. 69-94. Print.

Schulze, Sabine, Friedmar Apel, and Johann Wolfgang Von Goethe. *Goethe Und Die Kunst*. Stuttgart: Hatje, 1994. Print.

Seiberling, Grace. *Monet's Series*. New York: Garland Publishing, 1981. Print.

Sepper, Dennis L. *Goethe contra Newton: Polemics and the Project of a New Science of Color*. Cambridge: Cambridge University Press, 1988. Print.

Simms, Eva-Maria. “Goethe und die Phänomenologie: Weltanschauung, Methode und Naturphilosophie.” *Morphologie Und Moderne: Goethes ‘Anschauliches Denken’ in den Geistes- Und Kulturwissenschaften Seit 1800*. Ed. Jonas Maatsch. Berlin: De Gruyter, 2014. 177-194. Print.

Steinle, Friedrich. “‘Das Nächste ans Nächste reihen’: Goethe, Newton und das Experiment.”

Philosophia Naturalis 39.1 (2002): 141-172. Print.

Stephenson, Roger H. *Goethe's Conception of Knowledge and Science*. Edinburgh: Edinburgh University Press, 1995. Print.

Steiner, Rudolf. *Goethe the Scientist*. Trans. Olin D. Wannamaker. New York: Anthroposophic Press, Inc., 1950. Print.

Steuer, Daniel. *Die stillen Grenzen der Theorie. Übergänge zwischen Sprache und Erfahrung bei Goethe und Wittgenstein*. Köln: Böhlau Verlag, 1999. Print.

Sykora, Katharina. *Das Phänomen des Seriellen in der Kunst: Aspekte einer künstlerischen Methode von Monet bis zur amerikanischen Pop Art*. Würzburg: Königshausen & Neumann, 1983. Print.

Tantillo, Astrida Orle. “The Subjective Eye: Goethe's *Farbenlehre* and *Faust*.” *The Enlightened Eye: Goethe and Visual Culture*. Ed. Evelyn K. Moore and Patricia Anne Simpson. New York: Rodopi, 2007. 265-288. Print.

Taylor, Charles. *Sources of the Self: The Making of the Modern Identity*. Cambridge, MA: Harvard University Press, 1989. Print.

Torbruegge, Marilyn K. “Goethe's Theory of Color and Practicing Artists.” *The Germanic Review* 49.3 (1974): 189-199.

Tuchman, Maurice, Judi Freeman, and Carel Blotkamp, editors. *The Spiritual in Art: Abstract Painting 1890-1985*. New York: Abbeville, 1986. Print.

Vergo, Peter. “Introduction.” *Abstraction: Towards a New Art: Painting 1910-20*. Ed. Alan Bownes. London: The Tate Gallery, 1980. 9-25. Print.

- . "Music and Abstract Painting: Kandinsky, Goethe and Schoenberg." *Towards a New Art: Essays on the Background to Abstract Art 1910-20*. Ed. Alan Bownes. London: The Tate Gallery, 1980. 41-63. Print.
- Vogl, Joseph. "Der Weg der Farbe." *Räume der Romantik: Stiftung für Romantikforschung*. Eds. Inka Mülder-Bach and Gerhard Neumann. Würzburg: Königshausen & Neumann, 2007. 157-169. Print.
- . "Goethes Farben." *Präkare Bilder*. Eds. Thorsten Bothe and Robert Suter. München: Wilhelm Fink Verlag, 2010. 129-139. Print.
- Wahrman, Dror. *The Making of the Modern Self: Identity and Culture in Eighteenth-Century England*. New Haven: Yale University Press, 2004.
- Wellbery, David. *Lessings Laocoon: Semiotics and Aesthetics in the Age of Reason*. Cambridge: Cambridge University Press, 1984. Print.
- Wünsche, Isabel. "Wassily Kandinsky and František Kupka: Between Metaphysics and Psychophysics." *Practices of Abstract Art: Between Anarchism and Appropriation*. Eds. Isabel Wünsche and Wiebke Gronemeyer. Cambridge: Cambridge Scholars Publishing, 2016. 11-30. Print.
- Yonover, Jason. "Goethe, Maimon, and Spinoza's Third Kind of Cognition." *Goethe Yearbook* XXV (2018): 267-287. Print.