Standing
Mountains Move
Like Clouds
A Watercolor Study of the Printed Horizon

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…’tis on the hither side of this
infinity that are found motion, and
rest, and their opposition, and
whatever may be uttered or conceived.
- Nicholas of Cusa, The Vision of God, 1453

Wide Landscape Prospect (1599–1605), on the verso of a drawing, maps out in watercolor an uninhabited dunescape [Figure 1]. Through subtle gradations of wash, the sand dunes emerge from the paper’s ground. Built from translucent layers of light charcoal shading that mimic the strata of the earth and intermittent bands of lucid color that mirror the ground’s surface, this study offers a landscape at the edges of representation. One layer less of color or shading, and this watercolor would be mere abstract strokes on a page. Instead, the artist, Abraham Bloemaert (1566–1651), traces the contours of the paper, sensitive to its minute bumps and crevices. The ground of the paper and its accidents become the foundation for the landscape and its irregularities of rock, sand and grass. A ribbon of white paper stands out against the background of muted green and brown wash. In filiform script, Bloemaert signs the drawing with his initials and a singular f for fecit – Abf [Figure 2]. It might be easy to dismiss this barely-there watercolor as an unfinished work when it is seen within the folio of Bloemaert drawings at the Metropolitan Museum. With his signature, however, Bloemaert asserts that this is not an incomplete study or a sketch on the way to becoming something else. Abraham Bloemaert made (fecit) this; it is complete.

As will be seen, this watercolor looks carefully at the “printed horizon,” a vista that dominated the world of sixteenth-century landscape panoramas, especially those designed by the prodigious Pieter Bruegel the Elder (1525–1569) and put in print and disseminated by the famous publisher and dealer Hieronymus Cock (1510–1570). In his own watercolor Wide Landscape Prospect, Bloemaert examines the horizon that hovered at the back of printed panorama prints. In the medium of watercolor, Bloemaert meditates on the printed horizon, while considering shifts in perception that were generated by the print medium, specifically in regards to movement and force. As will be argued, Bloemaert presents a visual cogitation that resonates with reconsiderations of the correlation between force and movement in seventeenth-century natural philosophy, particularly that of René Descartes. As artists discussed the technical skills necessary to simulate the extension of three-dimensional bodies and objects in two-dimensional space, natural philosophers such as Descartes were radically reconfiguring the relationship between movement and force, reconsidering how bodies that occupied space moved and endured in that space. In turn, in artistic practice, the medium of print introduced a new kind of movement and itinerancy to objects that, I will argue, also challenged previously held beliefs regarding the interrelationship between force and movement. This article will explore the intersection between the developments concerning movement in seventeenth-century natural philosophy and the mobility of objects engendered by the print medium.

Although seventeenth-century Dutch painting is famous for its advancements in printed and painted landscapes,
works that focused on the landscape itself instead of using it as a backdrop for a history painting, this watercolor offers a view unlike any other Dutch panorama or scene. It is neither a study of atmosphere and the atmospheric, as contemplated in the work of Jacob van Ruisdael (1628–1682), nor is it the composed placidity of a cultivated countryside or a dammed and dijked waterway, as may be seen in the landschappen of Jan van Goyen (1596–1656). And although similarly enigmatic, this landscape does not convey Hercules Seghers’ (c. 1589–1638) paradoxical play between disintegration and petrification in his renowned painted prints. Celebrated in later periods for making landscape the focus of the composition as opposed to the figure, Dutch landscape painters invariably included traces of domestication on the surfaces of their worlds: farms and their plotted fields, church spires, bridges, walls, roads, travelers, vagabonds, or the notable Dutch cow. Except for the trace of a path that cuts diagonally across the dunes, Bloemaert brings in no mark of cultivation, urbanization, history or ruin.

In order to understand this strange watercolor, it is necessary to look towards the written body of work surrounding seventeenth-century artistic practice, particularly the theorist and artist Karel van Mander (1548–1606) and his didactic poem, Der Grondt (1604). In this poetical treatise on artistic practice, van Mander spends several verses focusing on the importance of the background in landscape. “The landscape in the distance takes in the form from the air, becoming hazy and almost entirely faded into air; standing mountains move, resembling (lijk) clouds.” Van Mander’s ekphrasis resonates with Bloemaert’s seemingly inexplicable watercolor. According to van Mander, the landscape’s background requires the careful attenuation of light and shadow, the mastery of conveying air and its force on vision and bodies: “Think of the thickness of the air, that blue substance which obstructs … between the eyesight, and which hinders the endeavor to take sharpness out of haziness.” In van Mander’s verse, geological bodies exemplifying dormancy, impenetrability and permanence attain the lightness of a cumulous cloud. Geology becomes meteorology. Standing mountains are capable of striding from their lookout posts. In describing the landscape’s background through the image of moving mountains, van Mander sets the entire landscape into motion and suggests that which is most permanent—the mountain, the horizon, the background—is best understood through the light and transient bodies of clouds. Bloemaert’s watercolor plays a mastery of a landscape in the distance, “taking form from air.” Using the force of the paper’s ground, Bloemaert buoys the landscape out of the page, like a cloud. Van Mander turns the permanency of the mountain range into the ephemerality of a cloud, turning the world on its head.

In his treatise on drawing, the art theorist Willem Goeree (1635–1711) writes about tracing “the interval of a place, or distance which is open and empty between each object (Beeldt ofte Lichaem), receding or advancing naturally to the eye, as if it were accessible with one’s feet.” The practice that Goeree discusses falls under the category of houding. An ill-defined concept in seventeenth-century Dutch art theory, houding describes an ability to make “a sense of space in a picture.” Through the correct variations of hues, lights and shadows, artists create worlds in which bodies properly advance and recess before the eye. Indeed, this is the technical process guiding Bloemaert’s watercolor, light browns and greens blending and contrasting with the paper, in order to shape the relief and crevices of the vale and its dunes.

Although it was not until 1668 that Goeree distinguishes houding as the representation of space, beginning with Karel van Mander’s Der Grondt in 1604, Dutch theorists wrote about the necessity of lucid spatial relationships between objects and bodies in painting. The ability to construct a believable three-dimensional space on the two-dimensional plane depended upon an artist’s capacity to use force (kracht) with “the appearance of solidity” (welstandigheid). Similar to houding, welstandigheid expresses the representation of three-dimensional space on the two-dimensional plane. While houding may give a sense of space, welstandigheid is the artist’s ability to make an impression of the extension of things within that space. In order to simulate this occupation of space by things, artists used “force.” This interrelationship between force (kracht) and “the appearance of solidity” is stressed even further in Philips Angel’s Lof der schilderkonst (1641).

In a famous address to the painters of Leiden, the art theorist Angel (1616–1683) states that the mastery of light and shadow makes objects “actual”:

... for shadow being combined in its proper place gives such enchanting force (tooverachteige kracht), and so wonderful an appearance of solidity (wonderbaerlijke welstandt), that many things, which can hardly be depicted in colours with a brush, appear quite actual...
Angel defines chiaroscuro (building form through light and shadow) as a force that artists use to simulate the *welstandt* or three-dimensional presence of a thing in space. Exemplifying Angel’s words, Bloemaert uses the liquid medium of watercolor to build the tonal variations; the negative space of the page comes into positive relief against the darkened shadings of wash. Through the practice of *houding*, or making space through attention to light and shadow, Bloemaert’s use of force conveys the rising of the dunes from the ground of the paper, occupying the space delineated by his brush.

The question of force itself in the seventeenth century came under pressure, scrutiny, observation, and experimentation. Previously, rest was considered the natural state of bodies, to which all bodies inclined; only a “violent force” could set masses in a motion. This Aristotelian understanding of movement guided the ways that artists wrote about and represented motion, most clearly elaborated in the writings of Leonardo da Vinci, who described force as “a non-material (*spirituale*) power; an invisible potency which is imported by accidental violence from without to all bodies out of their natural inclination.” For Leonardo, bodies inclined towards rest or a “natural state;” only a “non-material power” set them into movement. But studies of movement in natural philosophy began to suggest new conceptions of a body’s displacement and change. Descartes argued that rest and movement were equal “states” of being: bodies moved in relationship to other moving bodies and required force to continue in a state, whether rest or movement. Descartes’ work foreshadowed the foundation for the concept of Newton’s inertia: a body will persist (through force) in a state, either rest or motion, until moved by another body.

### The Printed Horizon

Dutch paintings and works on paper are famous for their horizons, naturally composed by the flatness of the Dutch topography and the meeting point between the land and the sky. But Bloemaert’s watercolor of the dunes is not the infinite line of the flat Dutch farmland. Instead, it is the study of a particular horizon, a type that occurred most often in prints; the slow receding of the valleys, the resting point for the eyes. Bloemaert’s son, Frederick, reincorporated his father’s study of the horizon into the background of a printed landscape for Abraham’s *Large Landscape Series* [Figure 3], making obvious the relationship between this study and the printed background.

As art historians have noted, foremost Joseph Koerner, the horizon is a central trope of sixteenth-century landscape prints. Although the horizon is crucial in painting, it takes on a new dimension in works on paper, which were studied and viewed horizontally on a table or bound within a book. A trendsetter for many facets of Northern painting, Bruegel’s *Large Landscape Series* with its fantastical engravings of craggy mountains, descending vistas and lone travelers influenced the work of Seghers, Rembrandt, and also Bloemaert, who, as mentioned, designed his own *Large Landscape Series*, which shares many affinities with Bruegel’s.

The influence of Bruegel’s printed vistas may not only be traced formally to Bloemaert’s compositions but also are seen in van Mander’s discussion of Bruegel’s horizons: “he [Bruegel] teaches us, depicting without great trouble, how one looks into the angular rocky Alps, the deep sight into the dizzy abysses (*duizelingwekkende vallei*), steep crags, pine trees that kiss the clouds, extreme distances and rushing streams.” As emblematized in the printed landscapes of Bruegel, such as *Large Alpine Landscape* (1553–1556), Bloemaert’s watercolor is a study of the horizon itself that continues at the limits of the viewer’s eye. Bloemaert was teaching himself how to look into van Mander’s dizzying abyss, the extreme distance delimiting the visible world, hovering in the background of landscape prints.

Bruegel’s landscapes position the viewer to enter and to stroll via the eye. In *Large Alpine Landscape* (1553–1556) [Figure 4], a rider sits on his horse, the creature gnawing at his bit and pawing the ground. Despite the horse’s restlessness, the rider stops and breaks his journey to stare out over the mountain dotted with varied domestic worlds. This figure acts as a surrogate, leading the viewer down the ridge and into the valley towards the ever-receding horizon, integral to landscape prints, which are dependent upon the itinerant eye. The horizon demonstrates to the devoted viewer, who has strolled the various lined paths of the print, the limits of one’s own vision, both within the printed world and within one’s own world-view. Bloemaert’s watercolor study foregrounds this remote background space. In studying the limit of the visible, Bloemaert materially realizes this finitude with his just-there watercolor—an image that becomes visible from the page with its translucent washes.

### The State of the Matter

Today, prints are categorized, sold and studied according to their state (in Dutch *staat*). The surface that presses into the
paper to form an impression, either woodblock or metal plate, is called the matrix. Any change to the material surface of the matrix, whether purposeful or incidental, will result in a new state of the print. Through careful examination, print connoisseurs distinguish amongst different printed impressions to determine their “state” (first, second, third, etc.) and thereby establish a historical chronology for a series of impressions made from a single matrix. Each print is a complete work within itself (although it might be one of many of a certain state), but each state can only be determined in relationship to the other states. The concept of the “state” is integral to the practice of printmaking, a process that developed concurrently with explorations of states of being in natural philosophy.

With the work of Galileo Galilei (1564-1642) and Descartes (1596-1650), rest and movement began to be considered as ontologically equal states. As previously discussed, all bodies had been regarded as inclined to rest; only a violent force could initiate movement. Positioning himself against this classical understanding, Descartes argued that a body persists in its state – either rest or movement – until moved by another body. To move a body out of any state requires force, regardless of whether the body is in rest or motion. As Alexander Koyré maintains, the post-Galilean and post-Cartesian idea of motion “is thus conceived as a state; but not a state just like any other, for it is a relational state.”17

The Dutch staat, even more than the English state, speaks to the concept of positioning one’s self, as when the various states of prints are situated in relationship to each other as traces of the matrix change through the force applied on it by the weight of the printing press. Considering the importance of relation in Galileo and Descartes, the staat of the various impressions from a single matrix
reflects the principle of inertia—the persistence within a state, either in rest or in movement, until contact with the force of another body.

The printed landscape, in particular, engages with this material quality of print and the relativity of its states, which may only be perceived when positioned in front of a viewer, who may compare the variations of the matrix's impressions. Like the horizon within the printed landscapes, the state of prints themselves shift in variation to each other and the viewer. Like the landscapes within the prints, the matrix for the print will change over time as various print presses force the matrix into new indentations, pressing down the raised parts of the plate, so that the print of the lines becomes less clear and more obscure, a new printed state emerging.

As the question of the "state" within print demonstrates, the medium is dedicated to exploring the relationship among various states, among various impressions, among various works on paper, each a complete work that exists in relationship to other works. It is within this medium, that artists such as Bruegel (and Bloemaert following in his wake) began to exploit and understand the horizon as an "ideal" site in movement that was only realized by, and only existed in relationship to, the viewer. Prints introduced a radical new understanding of movement that pointed to it as a relational "state." Just as through the force of the printing press, a new "state" of a print emerged, and through force artists simulated space and the positioning and solidity of extended things in space. In studying the printed horizon, Bloemaert evoked a dunescape, his translucent washes resonating with van Mander's cloud-like mountains. But Bloemaert's landscape is not a violent bringing-about of form in the sense understood by da Vinci. Bloemaert's landscape speaks much more to van
Mander’s “mountains that move like clouds,” suggesting an understanding of movement which is not about the “setting of things into motion” through a violent force, but instead positing the notion that the world may already be in movement, and that like the mountains that move like clouds, movement and rest are two different but ontologically equal states.

In his meditation on the horizon formed in the background of landscape prints, Bloemaert moved towards an understanding of force and movement that is relational. In making this world take form, Bloemaert deployed a mastery of light and shadow to give this piece of earth a welstandt, a semblance of a three-dimensional world, a world which only appears, like the horizon itself, in relationship to a viewer. In the nebulous watery medium of watercolor, Bloemaert presented a landscape whose form was inspired by the hard, seemingly immovable lines of the metal print surface. But as the materiality of print revealed, the lines engraved on these various landscapes shift and change—like clouds—obscuring the burin’s original pathways, a new “state” of the print thereby emerging. What is perhaps most radical in Bloemaert’s watercolor, however, is his realization that the force required to simulate the extension of things in space—their welstandigheid—could take shape with a few gradations of wash and charcoal. Bloemaert’s landscape presents itself at the limits of representation, yet with his signature, Bloemaert signals that this work is complete in its current state.
I would like to thank the anonymous readers and Adam Fulton Johnson for their insightful comments and suggestions, which helped this article attain clarity and form.

1 Descartes was not the first to consider new forms of motion: Isaac Beeckman, Pierre Gassendi and Galileo Galilei, among others, presented ideas integral to this developing discourse. I focus on Descartes because his work is paradigmatic of the shift, and he is the thinker discussed most often in relationship to Newton’s definition of inertia in his Principia (1687). As Leibniz pointedly notes in his writings on Descartes, “It is very true and indubitable law of nature that the same thing, so far as in it lies, always persists in the same state—a law which both Galileo and Gassendi, and several others as well, have long held.” Gottfried Wilhelm Leibniz, Philosophical Papers and Letters, ed. Leroy E. Loemker (Dordrecht: Kluwer Academic Publishers, 1989), 359.


3 “Achteraan kun je het niet te vaag uitvoeren; ... minder rojaal zijn met dipeel dan met hoogte ... denken aan de dikte van de lucht, die blauw van substantie is en die, daartussen ... het gezichtsvormen belemmert, en het pogen om scherp waar te nemen door waazigheid gehel verhindert.” (8:10) Van Mander, Der Grondt, 206.


5 Paul Taylor, “The Concept of Houding in Dutch Art Theory,” 212.

6 “Nu moet ik het nodig over iets hebben dat onze welstandigheid met kracht zal bevorderen; namelijk dat men alle gronden, van de voorgroond af, hecht met elkaar verbonden moet schilderen.” (8:20) Karel van Mander, Der Grondt, 209.

7 “Het wel schicken van dagen en schaduwem by een, is een van de principaeltsoe hoofd-banden daer een goet Schilder mede verciert dient te zijn, om de wel-stan ... die de wolken kussen, verre verscheiten en ruisende stromen.” (8:25) Van Mander, Der Grondt, 210.


10 Both Garber and Gabby are careful to note that it is anachronistic to apply the post-Newtonian concept of “inertia” to Descartes’s writings; although both scholars subtly differ on Descartes’s conception of the word inertia and its relationship to Kepler’s definition: the property of bodies to resist movement in favor of rest. Nevertheless, Descartes is considered a precursor to Newtonian inertia. See, Gabby, “Force and Inertia,” 283–297; Garber, Descartes’ Metaphysical Physics, 253–354.

11 Svetlana Alpers famously described this type of landscape under rubric of the “Mapping” impulse in Dutch art, arguing that “surface and extent are emphasized at the expense of volume and solidity.” Svetlana Alpers, The Art of Describing: Dutch Art in the Seventeenth Century (Chicago: University of Chicago Press, 1985), 139. Clearly, Bloemaert’s watercolor landscape offers a concurrent and different tradition that is concerned with the question of volume and solidity (as much as is historically possible)—primarily in regards to questions of extension-as-three-dimensional force and mobility within the landscape.

12 Like Bruegel, Bloemaert designed his own Large Landscape Series (ca. 1635); fifteen landscape studies of rural Utrecht, engraved by his son Frederick. As Jaap Bolten has pointed out, Wide Landscape Prospect reappears as the background in one of Bloemaet’s prints within the Large Landscape Series, print 12, see: Jaap Bolten, Abraham Bloemaert, c. 1565–1616: The Drawings, vol. 1 (Netherlands: J. Bolten, 2007), 439.


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