

# Preliminary Research on Visual Rhetoric of the Perspective Box

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the metaphor of darkness and light (of self-revelation and self-concealment) [is the] founding metaphor of Western philosophy as metaphysics ... [I]n this respect the entire history of our philosophy is a photology, the name given to a history of, or treatise on, light.

—Jacques Derrida, *Writing and Difference*.

## 1. Ocularcentrism as a *Problematic* for the Visual Rhetoric

As a field of inquiry for visual rhetoric, Bruce Gronbeck delineates ocularcentric rhetoric that problematizes Western epistemological bias of vision ever since pre-Socratic era. According to Gronbeck, ocularcentric rhetoric is a mode of inquiry that critics of visual rhetoric should investigate because the sense of vision is ideologically rationalized in a specific culture, or scopic regime, “wherein acts of Seeing and the Seen itself are integrally related within culturally based systems for comprehending, interpreting, and evaluating visually framed materials.”<sup>1</sup>

Gronbeck maintains that ocularcentrism is historically underpinned by an ideological institution of scopic regime that gives seeing a cultural impulse of what is seen and unseen. Study of a dominant scopic regime becomes important for a rhetorical critique of the sense of vision because it illuminates a semiotic system of visual meaning at a given culture wherein a certain interpretation and judgment of

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1 Bruce Gronbeck, “Three Rhetorics of the Seen,” *On The Lookout, or Visual Rhetorics and Rhetorical Visions: Position Papers and A Roundtable Discussion*, eds. Barbara Biesecker and John Louis Lucaites, 1998, National Communication Association Convention, Critical and Cultural Studies Division, 15 December 2013 (<http://www.indiana.edu/~rhetid/gronbeck.htm>).

the visual material is taken for granted and self-referentially rationalized. The way in which seeing and the seen are integrated is historically specific, and a sense of vision is a rhetorical product mediated by the cultural praxis of vision in any given society and any given period of time.

Ocularcentric rhetoric is best exemplified as the modern scopic regime of “Cartesian perspectivalism.” The Cartesian perspectivalism is a modern scopic regime “which we can identify with Renaissance notions of perspective in the visual arts and Cartesian ideas of subjective rationality in philosophy.”<sup>2</sup> Arguably, perspective in the visual art and Cartesian rationality are two dominant visual models of the modern era. By the separation between subject and object, this hegemonic model of modern vision makes the subject into the transcendental and the object into inert a thing waiting to be observed by this transcendental subject. This categorical separation privileges the purely optical form in visual art, to which painting periodically follows, and the form is immersed in the visual technology of the perspective. In Albrecht Dürer’s famous “Draughtsman Drawing a Recumbent Woman” (1525), an etching illustration of perspective plane in his *Manual of Measurement*, he reveals the relationship of the male artist to the naked female observed to be drawn. The attitude toward women here implies a commanding attitude taken toward the possession of the world, i.e., visually operating a naked body through the length and breadth of grid separated by threads from the wooden frame and fragmenting the body into parts. This separation of the observer and the body observed produces an epistemological effect of locating the subject and perspective. In the scheme of visual pyramid, the observer (or his monocular eye) is fixed at the edge of a pointer right in front of him, and becomes a mere definite point (or subject) at the top of a circular cone of perspective from which he observes the object. The subject is mediated by the grid separating the observer and observed that perspective guarantees for the correspondence of object and its representation. In this scheme, by seeing through perspective grid, an observer becomes the subject who could visually control the object of vision, and the

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2 Martin Jay, “Scopic Regimes of Modernity,” *Vision and Visuality*. ed. Hal Foster (Seattle: Bay Press, 1988) 4.

perspectival grid, which transcribes a thing into a representation on a paper on the board with the corresponding grid, guarantees the precision of observation. Here equation between subject, object and representation as correspondence among them is organized in the form of perspective. Traditional perspective is seen as empirically true and universally valid; in this configuration, epistemological bias filtering the sense of vision is constituted under the hidden assumption of the representation that symbolized correspondence between subject and object.

This correspondence of subject and object in a representation assumed as the relationship of the seventeenth and eighteenth century suggests what Michel Foucault calls the “Classical Age” among the three *epistemes* he identifies in the Western history of representations.<sup>3</sup> In the Classical Age, it is precisely the representation that subject and object are supposed to correspond in its relationship, and a visual technology of perspective becomes the medium in which the equation among subject, object and representation was set up. Through a repetition of this understanding, the Western sense of vision under Cartesian perspectivalism has been hegemonized by the epistemological assumptions of the integration of both perspective technology and philosophical Cartesianism.

The Cartesian perspectivalism has been developed as an important subject for a critique of modern epistemological model of vision. Current critical challenges to Cartesian perspectivalism show us its various approaches. As a critique of Cartesian perspectivalism, the purpose of this essay is to investigate a rhetorical and historical significance of the perspective box as a form of visual culture by locating it as an historical nexus in seventeenth century European cultural milieu of the rhetorical vision. This is a part of my larger project of researching on the historical change of perspective and rhetorical vision in the European and Western history of fine art. Specifically, besides the technological mode of looking into the box, this essay examines two forms of visual communication, *trompe-l'œil* and anamorphosis—forms of which praxes of looking are constituted—converging into a visual apparatus of the perspective box, as a *problématique* of the modern subject.

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3 Michel Foucault, *The Order of Things: An Archeology of the Human Science* (New York: Vintage Books, 1994) xxii.

The perspective box has specific historical values to our theorization of visual culture and practices of politically enabling media history in the modern age. People peeped into the wooden perspective box, in which an anamorphic illusion is painted as a *trompe-l'œil*. This cultural praxis of looking into illusion presents the rhetorical potentials inherent in this visual technology: the painter's compositional scheme structures the viewer's ways of seeing and mediates the subject, discourse and materiality in the seventeenth century Europe.

## 2. Camera Obscura and the Optical Regime in the Seventeenth Century

My starting point is the historical observation conducted by art historian Jonathan Crary, whose argument provokes controversies among theorists and historians of visual culture. For the historical research on the relationship between the modern subject and visual technologies, Jonathan Crary's brilliant seminal work, *Techniques of the Observer*, is worth mentioning for the sake of visual rhetoric and culture. Drawing upon Michael Foucault's landmark *The Order of Things*, Crary argues that a dramatic change of modern vision occurred in the beginning of the nineteenth century. For Crary, the camera obscura is precisely the metaphor of Cartesian perspectivalism that offers the model for an observer and for the functioning of human vision during the seventeenth and eighteenth century, suddenly losing its power at the beginning of the nineteenth century. This essay supplements his arguments on this historical observation. This section maps out Crary's observation of the observer and the sense of vision as a historical framework of this essay.

Crary establishes the difference of two visual equipments between perspective and camera obscura. He states that "the camera obscura defines the position of an interiorized observer to an exterior world, not just a two-dimensional representation, as is the case with perspective. Thus, the camera obscura is synonymous with a much broader kind of subject-effect: it is about far more than the relation of an observer to a certain procedure of picture making."<sup>4</sup> Admitting

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4 Jonathan Crary, *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century* (Cambridge, MA; London: MIT Press, 1990) 34.

similar usage of the equipments as a device to help depicting pictures on canvas, he sees camera obscura as an apparatus for a model of vision during seventeenth and eighteenth century, and prescribes the precise location for observer to view and depict the world in this technological apparatus.

For Crary, the camera obscura is not a simple piece of equipment to take objective pictures of the external world, but a socially constructed apparatus for the “metaphysics of interiority,” as a strong epistemological figure for a model of viewing, embedded in a large organization of knowledge and discourse that regulate the ways of seeing. Referring to John Locke and René Descartes, Crary argues that the camera obscura is the model during the seventeenth and eighteenth century for how observation leads to truthful inferences about the external world.

The camera obscura before the nineteenth century is regarded as equipment or a technique that offers a neutral view toward the inert objective world through the observation of light shading into its inner space. In the model of the camera obscura, the inference by observation that guarantees access to an objective truth should be made from the specific position of a passive observer where quasi-enclosed space separating from the external world is established, as analogically applied to the inside of a camera obscura.<sup>5</sup> This inner space, darkened by the separation from the outside, keeps a single small hole on the opposite wall, from where lights are flowed into the interior, and an inverted image pops up upside down on the wall.

As a matter of fact, this phenomenon has been empirically known ever since Aristotle and Euclid, who depict a pinhole projection in a dark room. Yet, unique to the figure is the location and status of the observer; the observer in the camera obscura is privileged as the one who can know the world through reflective introspection of one’s mind where representations of the object emerge. The introspection becomes an act of self-observation and of tracing and describing images in one’s mind that suppose no distortion from the objective world, by means of disembodiment in excluding the sense perceptions that obscure one’s mind, and

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5 Metaphysics of interiority that camera obscura supposes is best described by Athanasius Kircher’s etching, *The Great Art of Light and Shadow* in 1646.

correspondence between the exterior world and interior representation functions as the criteria to check its truthfulness. Crary summarizes the powerful metaphor of the camera obscura as the model of vision during the seventeenth and eighteenth century as follows:

If part of Descartes's method implied a need to escape from the uncertainties of mere human vision, the camera obscura is compatible with his quest to found knowledge on a purely objective view of the world. The aperture of the camera corresponds to a single mathematically definable point from which the world could be logically deduced and re-presented. Founded on laws of nature—that is, geometrical optics—the camera provided an infallible vantage point on the world. Sensory evidence that depended in any way on the body was rejected in favor of the representations of this mechanical and monocular apparatus, whose authenticity was placed beyond doubt.<sup>6</sup>

The totally disembodied sense of vision, residue of mental representation in mind supposed to correspond to the external world guaranteed in the scheme of camera obscura, becomes the subjective re-presentation of the objective truth. The observer is supposed to be disembodied, and capable of seeing a mental picture re-presented in mind. Supposing the capacity of disembodiment, as the subject-effects of the observer by its model, it should be understood that camera obscura is a metaphor of the Cartesian perspectivalism. It is not a simple technology of perspective as an equipment of drawing, but precisely a dominant understanding of the way of seeing at this period of time.

In *Techniques of the Observer*, based on the above historical analysis, Crary further argues historical rupture starting from the beginning of the nineteenth century when epistemology of the camera obscura totally collapsed. Crary finds a profound shift in the location and conception of the observer in the discourse at the beginning of the nineteenth century: “There is a profound shift in the way in which

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6 Jonathan Crary, “Modernizing Vision,” *Vision and Visuality*. ed. Hal Foster (Seattle: Bay Press, 1988) 32.

an observer is described, figured, and posited in science, philosophy, and in new techniques and practices of vision.”<sup>7</sup> According to Crary, between 1810 and 1840, vast amount of discourse by physiologists across multiple disciplines are produced as studies of vision in which a new term is introduced for new understanding: the human body. Along with the emergence of a new field of physiology and its discourse investigating the human body and vision—then not institutionalized as a field of inquiry and hence interdisciplinary *per excellence* among intellectuals across multiple fields—the metaphor of vision is transformed from the traditional model of camera obscura.

Crary argues that, by physiological accounts of human body and subjective experience of seeing in one’s mind, vision becomes known as produced in the body and regarded as productive and constitutive; the observer is located as an active subject.<sup>8</sup> Unlike the traditional account in the Classical Age or the Cartesian perspectivalism, in the nineteenth century, visual experience becomes understood as something enabled by the subjective vision created by physiological reaction of the human body.<sup>9</sup>

The point of this historical change for visual rhetoric, however, lies not on the new finding of nature of vision; rather, it shows a drastic change of relationship and nature of representation under the new modern *episteme* in which man emerges as a being in whom the transcendent is mapped onto the empirical. The emergence of physiology indicates the beginning of modern *episteme* when new epistemology and knowledge, along with technology, are conditioned by physical and anatomical structure and function of the human body, and in particular of the eyes.

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7 Ibid, 31.

8 Crary points out that Johan Wolfgang von Goethe was the turning point, when he published *Theory of Color* in 1810, in order to find the centrality of the body and to form a new observer with a subjective vision to generate visual experience. In *Theory of Color*, one of Goethe’s main concerns is retinal afterimage and chromatic transformations, from which he deduces productive observer whose body holds a range of capacities to produce its images without referring to anything external to the observing subject. Goethe’s text is important, Crary states, “for its articulation of a model of subjective vision in which the body is introduced in all its physiological density as the ground on which vision is possible” (Crary, 1988: 34).

The empirical knowledge produced from human activity as a new science of the nineteenth century *a priori* posits a productive body existing to be set to work. This body is posited behind the representation that the observer actually sees as phenomena on surface, and the body itself is supposed to be an empty space in which representation becomes fully explainable as the effects of the human body as the subject. Behind the surface is an empty space for which the human body occupies as the cause for some phenomena on the surface like afterimage or chromatic transformations. Those phenomena, explained by the structural depth of the human body, are metonymically reductive to the cause behind the seen in one's vision, and the unseen cause is regarded as a blind spot in a field of vision or surface representation which no longer sustains the relationship of correspondence between subject and object. The productive body or subject of observer, produced by discursive (and rhetorically modern) structure that explains the constitutive mechanism of seeing, is indeed the nineteenth century invention of the modern discourse and technology, when the human body, which is productive of capable of seeing, is invented as the depth behind a surface of visual field by physiological organization.

As a study of visual history, Cary pinpoints the rupture between the nineteenth century and the (seventeenth and) eighteenth century when vision was illustrated by the idea of the camera obscura. He rejects the continuity of the Cartesian perspectivalism from the eighteenth to nineteenth century, and displaces its historical continuity with the shift from geometrical optics to a physiological account of vision, which invented the human body as a locus of vision.

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9 Following Goethe, many researchers become interested in afterimage in the 1820s and 1830s through Europe. Besides Goethe, other physiologists studying human vision—such as David Brewster, who invented the kaleidoscope and stereoscope, Joseph Plateau, who studied the persistence of vision, and Gustav Fechner, one of the founders of modern quantitative psychology—all enthusiastic about viewing sun lights and became a blind or permanently damaged their eyesight. In the late 1830s and early 1840s, we witness T. J. Turner's paintings are other proof of this new *episteme* whose later works abandons protective walls of his retina (by camera obscura) and touches sun lights without any screen to his bare eyes. There is no more camera obscura that protects human observation from a distance inside of a box.



Accordingly, he rejects the persistent idea of Western epistemology that metaphorically idealized the camera obscura as its visionary paradigm and common historical narrative of the linear technological progress from the seventeenth century invention of camera obscura to the one of nineteenth century's photography and movies.

As an alternative of camera obscura, Cray offers stereoscope as the model in the modern (and even postmodern) vision. In accordance with this production of discourses on a sense of vision during nineteenth century, such modern visual technologies as stereoscope and zoetrope invented; the invention which resulted in the emergence of human body as a site of technological extension and manipulation. The stereoscope, invented in 1838 by Sir Charles Wheatstone and extended by David Brewster in 1839, is a nineteenth century visual technology that enables users to see a single three-dimensional image by a virtual depth on a flat surface that takes advantage of a binocular difference of our eyes.<sup>10</sup>

The user of the stereoscope is required to force one's eyes either to cross, or to diverge, so that the two images appear to be three. As each eye sees a different image, the effect of depth is achieved in the central image of the three. Unlike the monocular view of a camera obscura, the stereoscope shows slightly different pictures printed side-by-side for each different eye, and makes us produce depth in the convergence of two images fused into one stereo view by the binocular depth perception. Artificial depth of the vision, created through the binocular difference as a foreground before the surface picture as a background, is calculated within our visual perception, and the visual blending of the two images into one three-dimensional image is ensured by a set of separate lens.

What Cray identifies as the moment of collapse in the epistemology of the

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10 Discourse of physiology surrounding vision enables its scientists to produce visual technology like stereoscope or kaleidoscope as by-products of their discourse and knowledge. What they find as a mechanism of vision through their analysis can be applied to what and how one's visual experience is created by human body through technological manipulation; a condition of manipulating vision is the new quality of vision supposedly produced by human body apart from the representations illuminate by the lights flown into the mind.

camera obscura as the historical model of vision demonstrates a moment of transformation that dramatically altered the sense of vision and the nature of vision as the historical medium of seeing—with the shift of optical sense, of the way to construct the modern subject, to reconfigure the visual and optics, and to locate the body which is seen as objects of science and technology.

### 3. The Perspective Box as an Alternative Visual Technology

The significance of Crary's observation on the historical rupture around the beginning of the nineteenth century for this essay are threefold: 1) he demonstrates the sense of vision as a historical medium in the context of Foucauldian archaeology and the problem of *episteme* that stipulates the relationship of representations in a certain period of time; 2) he identifies a historical moment of change in the sense of vision when the relationship of representations also changes; and 3) he critiques the dominant history of visual technology that presupposes continuity of technological development from camera obscura to modern visual technologies. By emphasizing historical discontinuity and dislocation of the observer in discourse and in such visual materials as paintings in different time period, Crary succeeds effectively in critiquing the reductive teleologies embedded in the history of visual technology such as photography, modernist paintings, and films and cinema.

While Crary's argument is highly reputed, it is also controversial among theorists and historians of visual culture. He is often alleged to be too reductive for a complex history of visual technology and simplifies the historical discontinuity of camera obscura.<sup>11</sup> By emphasizing the historical rupture, Crary fails to notice the resistance against Cartesian perspectivalism even in the Classical Age during the seventeenth and eighteenth centuries. While he notices the importance of the

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11 For the reference of a critique of Crary's idea of camera obscura, see, for example, Anne Friedberg, *The Virtual Window: From Alberti to Microsoft* (The MIT Press, 2009). Friedberg is one of those who critique Crary's epistemological account of camera obscura. She addresses the problem of discontinuity and emphasizes a complexity of genealogical account of visual technology from camera obscura to the optical systems of stereoscope and the phenakistoscope and eventually film technologies.

camera obscura and its power as an epistemological model of vision, he seems to reject other possible models of vision that resist the dominant view of camera obscura. Still the variety of visual technologies (some variations of the camera obscura) and even various uses of camera obscura like magic lantern, almost dismissed from his analysis, hold further possibilities to extend the genealogical history of vision and representation. The sense of vision before 1810 (and after 1840) Crary analyzes still holds a possibility of alternative ways of seeing as a form of modern vision even before the eighteenth century. The seventeenth and eighteenth centuries for the history of vision, also known as the *episteme* of the Classical Age, can be critically reconsidered not as a unified structure for this period.

What I would like to broach here is the seventeenth-century Dutch invention of visual technology, perspective box or peepshow—a wooden box to view an illusionistic art deflected by artificial perspective—which, in itself, acts against the historical understanding of the Western sense of vision, and consequently, presents a resistance to Cartesian perspectivalism. Martin Jay refers to two scopic regimes, Northern Renaissance and baroque art, to resist Cartesian perspectivalism in the Western history of arts.<sup>12</sup> Northern Renaissance and baroque art are both counter-traditions that show us the rhetorical conventionality of vision and historical contingency of the Cartesian perspectivalism as a symbolic form. Northern Renaissance and baroque art show different forms of perspective and vision inherited from different tradition and principle: Northern Renaissance emerged in seventeenth century Dutch painting based on cartographic principles, and baroque art was developed from rhetorical conventionality of sight as its visionary madness by anamorphic illusion. These scopic regimes are indeed the cracks within the traditional Cartesian perspective, which presupposed empirical truth and universal validity of the vision, and conventional praxes of optical sight to challenge the hegemonic vision of the Cartesian perspectivalism.

The perspective box is a historical nexus of the two scopic regimes, to be produced as a minor culture of peepshow, a technological apparatus in the

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12 Jay, 4.

seventeenth-century European rhetorical culture. Having crystallized as a visual technology, integrating Northern Renaissance and baroque art, the perspective box constituted the rhetorical sense of vision for its observer to counter against Cartesian perspectivalism.

For a critique of Cartesian perspectivalism, as Jay upholds, it is important not to assume a unified scopic regime that integrates complex theories and practices to dominate the power of vision, but to see the field of vision as a contested terrain challenged by subcultures within the scopic regime of Cartesian perspectivalism.<sup>13</sup> In so doing, it becomes known that persisting technology of subcultures like perspective box holds a potential to subvert the scopic regime, as a by-product of the Cartesian perspectivalism. The perspective box is precisely a form of this subculture in the history of visual technology during the seventeenth century, and should be understood in the lineage of popular culture that focuses on illusionism and peeping, leading toward the film technology in the nineteenth century.

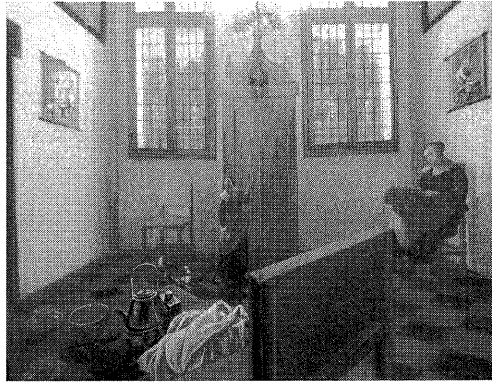
The perspective box or peepshow is an optical device that creates a convincing illusion of interior space inside of a wooden box.<sup>14</sup> Constructing perspective boxes was a popular activity among Dutch painters of the seventeenth century for the relatively short period of time about 1650 to 1675. How many perspective boxes were created is still unknown; currently there are only six boxes left in the entire world, three of which are preserved by the National Gallery of Denmark (*Statens Museum for Kunst*), one by the Detroit Institute of Arts Museum, one by the Museum Bredius, Den Hague, and one by the National Gallery, London. The inside of the perspective box is painted with *trompe-l'œil*, which gives a viewer the illusion of a three-dimensional interior, even with a monocular view, when seen from a certain angle through the pinholes drilled on a side(s) or front plate of the box (Figure 1). Painted inside is an interior of either house or church where depth of the space is constructed by means of anamorphosis. Looking through the

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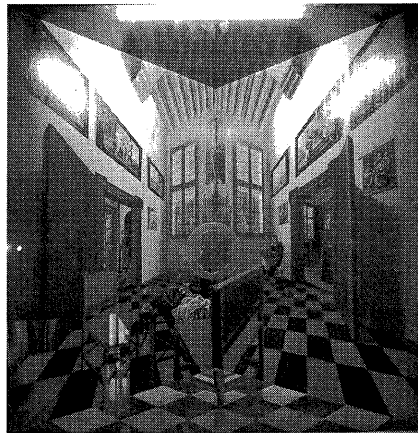
13 Ibid.

14 For a standard interpretation of perspective box from a view of art history, see Susan Koslow, "De Wonderlijke Perspetyfkas: An Aspect of Seventeenth Century Dutch Painting," *Oud Holland* 82 (1967): 32-59.

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**Figure 1: Adjusted view of interior from a right angle  
(Photo taken by the author)**



**Figure 2: View of the whole panels  
(Photo taken by the author)**

opening in the either front or side panel of the box gives a strange impression of distorted floors, doors, and furniture (Figure 2). The view requires an observer be located at a specific vantage point to reconstitute the image; from a different vantage point, the painting itself is a distorted (enlarged and/or squeezed) picture of its space. In Bredius Museum's perspective box, attributed to the artist Pieter Janssens Elinga, for instance, from a front position, the deformed walls of the room supposed as a

rectangular shape in space appear to jut out towards the viewer in a sharp triangle (Figure 2). Although the apex of the triangle appears to move towards the viewer, these walls are painted on two separate panels angled away from the viewer. Inside the imagined rectangular form, extending the imaginary space with the apex of the triangle, the viewer projects one's vision stretching away beyond the actual triangular shape of the perspective box. The imaginary rectangular space behind the surface screen of the two separate panels adjusts the deformation of the image the one actually sees into a flat surface of the imaginary rectangular room. The viewer indeed sees and imagines that the space is meant to be the rectangular shape (Figure 1).

Among the six boxes, I would like to particularly focus on two boxes, the one at Museum Bredius, Den Hague, and the one at National Gallery, London, because the two boxes show us most clearly the anamorphic mechanism of viewing. Besides this reason, the "Peepshow with Views of the Interior of a Dutch House" at London is the only one among the six whose author is identified: the author is Samuel Van Hoogstraten (1627-1678), born in Dordrecht, a pupil of Rembrandt, and famous for his talent of creating the perspective box.<sup>15</sup> Hoogstraten is also famous as one of few Dutch art theorists during the seventeenth century, leaving theoretical documents based on his philosophy of epideictic rhetoric. I would like to focus on three points: namely, peeping culture, anamorphosis, and *trompe-l'œil* as a visual rhetoric. In the following sections, as a preliminary research of seventeenth-century visual rhetoric, I would like to briefly outline the three orientations for analyzing the perspective box as an apparatus of visual culture. I maintain that the perspective box is a visual apparatus of the seventeenth century on which three cultural orientations of the vision are merged and performatively constitute the subject as its nexus. The each of the following section respectively concerns how the constitutions of the seventeenth-century observer who views an interior of the box from a single pinhole takes place, and how the act of viewing is constituted in the Dutch rhetorical culture.

### *1. The culture of peeping and location of observer*

The perspective box, borrowing the label from Hoogstraten's naming of

“*perspectyfkas*,” is also called “peepshow,” naming for a different cultural function. The box is acknowledged as a visual entertainment for people to see an illusion. John Evelyn, the English diarist, wrote and testified to its popularity in 1656: “It was shown me a pretty perspective and well represented in a triangular box, the Great Church of Haarlem in Holland, to be seen through a small hole at one of the corners and contrived into a handsome cabinet. It was so rarely done that all the artists and painters in town flocked to see and admire it.”<sup>16</sup> A viewer would look through a hole in a cabinet-like a small chest, and a miniature world is revealed for one’s eye.

The keen interests in playing with the perspective box indicate popular enjoyment in its illusionism. The shape of equipment as the wooden box may be borrowed from raree show, another form of entertainment in the same period of time—the doll house. Cabinets at a nobleman’s home, the basis for the early

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15 Hoogstraten is also an important figure for studies of the visual rhetoric because he is one of a few theorists of the Dutch art leaving a treatise on art work and visual theories. For the reference of Hoogstraten, see Thijs Weststeijn, “Rembrandt and Rhetoric: The Concept of *Affectus*, *Energeia* and *Ornatus* in Samuel van Hoogstraten’s *Judgment of Hist Master*,” in Marieke van den Doel, Natasja van Eck, Gerbrand Korevaar, Anna Tummers, and Thijs Weststeijn, eds., *The Learned Eye: Regarding Art Theory, and The Artist’s Reputation* (Amsterdam: Amsterdam UP, 2005) 111-130 and Thijs Weststeijn, *The Visible World: Samuel van Hoogstraten’s Art Theory and the Legitimation of Painting in the Dutch Golden Age* (Amsterdam: Amsterdam UP, 2008). Particularly, Hoogstraten identifies the arts of paintings as “epideictic rhetoric” actively forms mental images of reality (Weststeijn, 2008, 70-73). Hoogstraten became interested in rhetoric presumably because he took rhetorical education in the Latin school in Dordrecht, and learned rhetorical principles with other former students of the university in Leiden in Rembrandt’s studio. Rhetoric was popular among Dutch intellectuals during the seventeenth century, and became an indispensable skill in all branches of professional life (Weststeijn, 2008, 111). The optical mechanism of the Dutch perspective box, echoing a rhetorical theory of vision, should be analyzed as a theory of visual rhetoric for art works that in itself is constructed as a culture of visual rhetoric, *trompe-l’œil*, a deception of vision. As Weststeijn (2005) testifies, “Van Hoogstraten’s appreciation of the deceiving skills of the painter reflects the rhetorical tradition in which these were positively evaluated” (113).

16 John Evelyn, *The Diary of John Evelyn*, ed. Austin Dobson (London, 1908), 188.

museum collections, displayed various items in miniature, and people enjoyed seeing it on the façade that is cut open to view inside of the house.

Unlike a doll house, which does not demand the spectator to change the vantage point to view its miniature world from the outside, a perspective box is an art form of visual technology, which transforms the spectator of the box into the observer of its interior by making the one virtually entering into the box of painting. In order to view the three-dimensional scene, the spectator indispensably adjusts oneself into the scale of the objects. By imaginarily placing oneself inside the room, the viewer can indeed see the interior space with depth outreached to the wall of the room and beyond. Only when the spectator enters into the inside space, the one becomes the subject of the illusionistic image.<sup>17</sup> As a didactic device of cultural viewing, the perspective box instructs the one how to observe the tableau itself.<sup>18</sup>

Svetlana Alpers points out a unique feature of Dutch painting in respect to the perspective and the location of observer.<sup>19</sup> According to Alpers, the way to observe a tableau in Dutch paintings is culturally unique to the Northern European Renaissance, which is different from the Southern European Renaissance like Italian paintings. Northern Renaissance adopts the multiple-point perspective that constructs a different mode of space in tableau and a different location of the observer. The Italian Renaissance invention of the (one-point) perspective, starting from Filippo Brunelleschi's architectural invention in 1420 and being treated by

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17 From this space, one is looked back as subject who observes the one observing an interior space from within the tableau.

18 For analyzing the spectator of the perspective box, see Justina Spencer, "Baroque Perspectives: Looking into Samuel Van Hoogstraten's Perspective Box," MA Thesis, McGill University, 2008. Justina Spencer (2008) analyzes voyeuristic character of the viewer's engagement with the box piece at London, and argues that the observer of the perspective box becomes a voyeur by peeping the interior. Setting the perspective box in the traditional lineage of "baroque perspective" and drawing on the Lacanian psychoanalysis, she understands the viewer of the interior as a subject of observer who becomes a voyeur of a girl sitting and reading a book in the behind room from the outside through a glass window.

19 Svetlana Alpers, *The Art of Describing: Dutch Art in the Seventeenth Century* (The U. of Chicago P, 1983).



Leon Battista Alberti in *On Painting* in 1436, supposes an observer who looks from one vantage point at the image on the tableau. In the one-point perspective, the observer is located outside of tableau, and sees the two-dimensional image as a representation of the external space of the three-dimensional world, like Masaccio's *Holy Trinity*.

On the contrary, the Northern Renaissance does not presuppose the single frame of tableau, perspective to see the image became multiple, and the location of observer is set inside of the tableau. It contains two vanishing points on the horizontal line, and the whole space depicted in tableau can be observed within the picturing space. On the surface of tableau, an observer moves one's location into the space. For instance, Pieter Saenredam's *Interior of the Church of St. Bavo in Haarelem* (1636), is a typical example, and actually he marks the point at a column on the right corner in its study from which actual observation of the space in Church interior starts.<sup>20</sup> Alpers points out the specific mark Saenredam makes: "It is from here that the view could be seen across the nave into the complex of space beyond and also up into the vault with the painted shutters of its great organ. One could see this, that is, if one adjusted one's gaze."<sup>21</sup> Alpers calls this observer within the picture "lookers,"<sup>22</sup> distinguishing it from the viewers external to the work usually assumed in Southern Renaissance paintings. Lookers as an observer of the interior space designed by the artist do not look out of the pictures at us because the pictures do not presuppose the existence of viewers prior and external to the tableau. The spectator sees the tableau from where lookers observe the interior by

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20 The didactic function, a part of rhetorical principle, of cultural viewing is in part proven by the production process of perspective paintings by Pieter Saenredam—another supposed inventor of the Dutch perspective box—who specialized painting of architectural view and left paintings of the great Church of Haarlem in Holland, as John Evelyn testified, although it was not produced in a form of perspective box. Saenredam's paintings are unique for identifying the specific location in tableau from which observer sets one's perspective to view the whole space of church interior. Saenredam marks the location for the viewing subject in a study, and the work executed sets a perspective for the subject from the location marked.

21 Alpers, 64.

22 Ibid., 68.

adjusting oneself into a scale of the observer. The observer walking in the Church is situated within tableau, and the location from where one sees, as marked in the study, is on the horizontal line. Adjustment of gaze is necessary part of viewing the Dutch paintings; and the perspective box, a popular form of entertainment, also requires this adjustment.

As a Dutch painting, in a perspective box, a monocular eye around the imaginary space on entire tableau seeks a series of vanishing points, and the position of subject for the spectator is established within anamorphic configuration. The spectator must tentatively suspend observation from the outside, and align to the place where one can grasp the entirety of the representational space.

## 2. *Anamorphosis as rhetorical image*

Primarily, the perspective box is a visual technology that shows the spectator a three-dimensional illusion of interior and artificial depth of visual space beyond the physical limit of a wooden box. This is sometimes explained by a drawing technique of the perspective, and understood as an effect of geometrical matrix created by a perspectival grid.<sup>23</sup> However, the images illustrated in the inside of the box are not precisely perspectival paintings *per se*. Rather, the images in the box are indeed anamorphosis—a distorted projection to use special devices to view the perspectivally true image of illusion—that requires the viewer to occupy a specific vantage point to reconstitute the image.<sup>24</sup> The wooden box of the perspective box is precisely this special device to reconstitute the image as a three-dimensional reality.

Etymologically speaking, anamorphosis consists of the two Greek terms “morphe,” meaning form, and the preposition “ana” meaning “again”. Taken together, this denomination literally translates to “reform” or “distortion”. It is

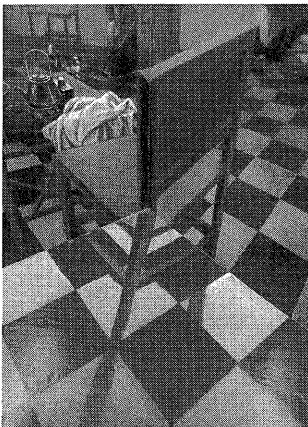
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23 For geometrical analysis of perspective box, see Clause Jensen, “The Geometry of 17th Century Dutch perspective Box,” in Bharath Sriraman, Claus Michelsen, Astrid Beckmann, and Viktor Freiman, eds., *Proceedings of the 2nd International Symposium on Mathematics and its Connections to the Arts and Sciences* (Denmark: Centre for Science and Mathematics Education, University of Southern Denmark, 2008) 89-105.

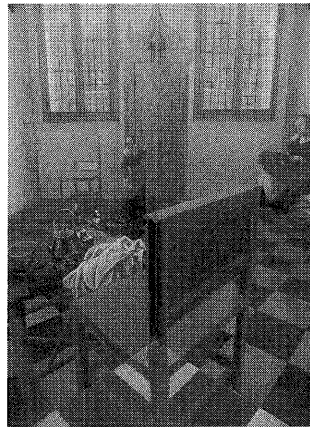
24 For the historical account of anamorphosis, see Jurgis Baltrušaitis, *Anamorphic Art* (New York: Harry N. Abrams, 1977).

obvious that the perspective box is in a lineage of the anamorphic tradition. In the first place, outside boards on the top of the perspective box at the National Gallery, London is painted as anamorphosis, which invites and prepares the spectator to peep into the inside from the side holes.<sup>25</sup> Outside paintings of the cabinets provide previews for what a viewer will see inside the box, and create one's expectations.<sup>26</sup>

Not only the exterior but also the interior of the perspective box is a series of anamorphic paintings combined by the multiple edges. For instance, Bredius Museum's triangular perspective box portrays the illusionistic interior of a Dutch house. This piece of work depicts the interior of a room with high ceilings and large windows. The floor is tartan with black and white tiles, moving out towards lined walls. In the far right corner of the front room a mistress of the house sews, while a maid sweeps the floors close by. A man is descending stairs seen in the open door of the left room. In the front room, several chairs are placed beside a table set for tea. Next to the tea table, the half of a front chair, a part of foot in the foreground, is illustrated on the floor panel (Figure 3). The bottom half of the chair is refracted, uneven from the upper half. Combining other parts of the chair, when viewed from the right angle, it appears as if it stood on the tiles as a chair with height and depth, and in the foreground of the entire room (Figure 4). Similarly, in the case of



**Figure 3: Chair deflected from a straight view  
(Photo taken by the author)**



**Figure 4: Chair adjusted with a view from the fixed angle  
(Photo taken by the author)**

Hoogstratens' piece preserved at London, the top half of anamorphic dog depicted on the end panel facing the peephole is undistorted. Yet, the bottom half is distorted, while it looks as if it was standing still in the three-dimensional hall.

This constructed vision, distorted from a regular perspective by an enlargement of a persepctival painting, utilizes an old technique of anamorphosis. With the help of Jean-François Nicéron, French mathematician and Minim friar, who wrote the most comprehensive books on the drawing of anamorphic pictures in the seventeenth century, we can illustrate an example to understand how to design an anamorphic drawing by perspective deformation. In the Figure 5, from Nicéron's *Perspective, Catoptric and Artificial Magic* (1646), the two pictures in the centre are the images to be made anamorphic using the grid method. One needs to look from the right side of the picture to see them restored. Figure 5 shows the face of a bearded man, divided into a grid of thirty six square boxes. If we deform the grid so that the horizontal lines are converging towards the point X, and the vertical lines are drawn as a function of the position of the point Y, we obtain the shape at the bottom of Figure 5, divided in thirty six trapezoids.

The perspective box takes advantage of the anamorphic deformation. For instance, Bredius museum's piece doubles the anamorphic deformation for either plate, and symmetrically combines left and right sides with a foreground of the tiled floor from which a line toward two vanishing points (set beyond far end of the next room to the presupposed outside) on the horizon line is placed (Figure 6). Two perspectives extending to both sides are deformed, and from a low angle, the field of vision seems spread wider toward the outside beyond the inner rooms, on the same horizontal line of the bottom of the windows in all the rooms. At the same time, the wall with big windows from the top in the front room directly viewed by the spectator of the box functions as a screen to block seeing the outside of the rooms behind. This screen projects depth of the room with the chair centrally located in the space so that it posits the presupposition of the external world. The

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25 David Bomford, "Perspective and Peepshow Construction," *National Gallery Technical Bulletin* 11, (1987): 67.

26 Spencer, 81.

Preliminary Research on Visual Rhetoric of the Perspective Box

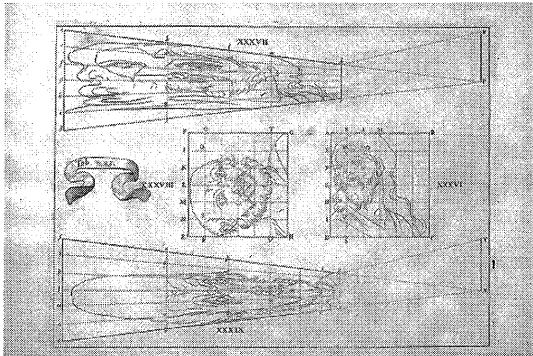


Figure 5: Diagram of an anamorphosis by perspective deformation<sup>27</sup>



Figure 6: Wide view of the interior  
(Photo taken by the author)

wall becomes a virtual screen when it stands as the background behind the chair in front of the spectator as a foreground. The distance toward the outside becomes tangible in the inside space only when this deformation is adjusted by means of

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27 Lyle Massey, "Configuring Spatial Ambiguity: Picturing the Distance Point from Alberti to Anamorphosis," *Treaties on Perspective: Published and Unpublished* ed. Lyle Massey (New Heaven; London: Yale UP, 2003) 168. Figure 9: Jean-François Nicéron, Anamorphosis of heads, in *La perspective curieuse*.

anamorphic understanding of geometrical space.

### 3. *Trompe-l'œil* as a visual rhetoric: Exposing the trick itself

One unique genre of the seventeenth century Dutch paintings is *trompe-l'œil*, an art technique that creates the optical illusion of realistic imagery to depict objects in three-dimensions. It is a technique to deceive the eye to create an illusion on the flat surface and to make the viewer fooled by depicting a window, door, or curtains intending to suggest a larger space behind the surface of a tableau. Historically, this genre is considered to have begun in the Italian Renaissance: late painters of Quattrocento drew illusionistic fresco paintings to create impressions of greater space. The phrase *trompe-l'œil* was often used in the Baroque period, referring to perspectival illusionism, and more fully integrated approach to architectural illusion was attained during the seventeenth century. In the seventeenth century Dutch context, *trompe-l'œil* paintings were often denoted as “pleasurable,” or “praiseworthy,” as they deceived the eye in an agreeable manner.<sup>28</sup>

*Trompe-l'œil* is a form of visual rhetoric in which the sense of vision is constituted. It is a rhetoric that structures ways of seeing while it structures the observer's sense of vision. From the conventional usage of the term, it seems that rhetoric of *trompe-l'œil* lays a power to fool eyes. Yet, I argue that what rhetoric meant for the perspective box is not exactly to deceive the eyes, but, rather, to reveal the deception itself. Paintings are deceptive surfaces that enable us to find what is wrong with the appearance by virtue of their rhetorical power to deceive. The rhetoric of *trompe-l'œil* is not a power to deceive people: it reveals a falsehood of appearance by virtue of its falsity. It is a principle of *trompe-l'œil* that self-referentially reveals deceptiveness of the painting so that the concept of illusion becomes important to understand the idea of representation during this period of time.

The perspective box is a spatial form of *trompe-l'œil*; a small space of the interior

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28 Celeste Brusati, “Honourable Deceptions and Dubious Distinctions,” *Illusions: Gijbrecchts, Royal Master of Deception*. ed. Olaf Koester (Copenhagen: Statens Museum for Kunst, 1999), 54.

is illustrated as such, and the visual illusion is technically created. How did the Dutch people understand the illusion as a form of representation? Is it the representation that the relationship of correspondence between subject and object establishes criteria to understand the illusionistic image by means of the camera obscura model? What did representation mean during the seventeenth century? The question is whether or not people did think the illusion emerged in their field of vision a mere reflection of the external world. All these questions concern the link between *trompe-l'œil* and representation in respect to the perspective box.

*Trompe-l'œil* as a genre of art history offers particularly important genealogy to understand the history of representation during the seventeenth century. In *The Self-Aware Image*, Victor I. Stoichita argues that Western art during the seventeenth century—the self-conscious definition of paintings as tableau—culminates in a series of *trompe-l'œil* by a Flemish painter, Cornelis Norbertus Gijsbrechts (ca 1630 - after 1683).<sup>29</sup> Gijsbrechts was active from 1668 to 1672 at the court in Copenhagen, Denmark. All Gijsbrechts' paintings during those years, including the subject of *vanitas*, are categorized as *trompe-l'œil*, which realistically shows the powerful verisimilitude by his descriptive skill and simultaneously self-referentially subverts its power by exposing itself as merely a tableau.

Climax of Gijsbrechts' *trompe-l'œil* is *The Reverse of a Framed Painting* (1670), which he draws *verso* of the canvas as *recto*. What we see is a painting of frame and canvas. That is to say, this is a painting of a tableau. The object of the tableau is tableau itself. In Gijsbrechts' *trompe-l'œil*, tableau becomes an object of representation. Here, paradoxically, this image is nothing and everything. This is nothing because this evokes the question of whether this image actually exists. And this is everything because this embodies everything, even including the negative (i.e., reversed canvas) of its own. By virtue of flipping the reverse side into surface, the tableau becomes a positive representation.

This masterpiece seems to declare that every painting is a mere tableau, as if declaring that nothing exists, recalling Gorgias's famous aphorism. An image

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29 Victor I. Stoichita, *The Self-Aware Image: An Insight into Early Modern Meta-Painting* (Cambridge UP, 1997).

represents nothing but something beyond the flip side of another image. Rhetorical manipulation of *trompe-l'œil* resides in the context of self-referential activity to define paintings as self-aware image. By assimilating the own negative of canvas, and at the same time alienating the self from the image as *ex nihilo*, the painting is read as nothing but a mere representational image, i.e., the self of painting that becomes aware of its nature as representation. Stoichita's analysis of Gijsbrechts shows us one important aspects of the seventeenth century representation: No matter how real paintings look, they are nothing but images, yet the nature of representation is revealed as such. In this context, we can confirm that the nature of representation during the Classical Age—to re-present the objective world—becomes highly paradoxical.

What *trompe-l'œil* during the seventeenth century reveal as the paradoxical is understood in terms of the self-referential movement of signs that Foucault indicates as the *episteme* of the Classical Age. As opposed to the Renaissance in which signs implied three elements—"that which was marked, that which did the marking, and that which made it possible to see in the first the mark of the second,"<sup>30</sup> the final element being resemblance—Foucault argues that signs in the Classical Age were organized in binary terms, i.e., an idea or an image associated with or substituted for another. But an idea or an image becomes a sign only when it manifests "the relations that links it to what it signifies":<sup>31</sup> It must represent and contain within it the idea of its role as representation. Unlike resemblance that organizes signs in the Renaissance, it is the sign-ness of sign that a sign must show, and hence it becomes "transparent and duplicated representation." Thus the sign in this period, unlike the Renaissance Age before the Classical, "has no content, no function, and no determination other than what it represents: it is entirely ordered upon and transparent to it."<sup>32</sup> Nevertheless, the sign is duplicated representation that functions *both* indexical (pointing to another) *and* surface appearance (signs, maps, drawings, tables). The sign itself becomes self-aware of its nature as representation

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30 Foucault, 64.

31 Ibid., 63.

32 Ibid., 64.



by being capable of being re-presented by other signs, the composition of which perpetually generates the sign system.<sup>33</sup> The sign in the Classical Age becomes self-referentially determined as re-presentation of itself as a part of the dispersed sign system, and the relation of a sign to the signified is now one of direct representation of one idea by another.<sup>34</sup>

At first glance, it seems that Foucault argues the Classical Age excludes resemblance along with similitude as the *episteme* of the Renaissance from the world of knowledge. Crary's observation on camera obscura is indeed based upon this simple understanding of the Classical Age. Crary argues that the camera obscura effectively abolished the magical illusion of the Renaissance that was based on the relations of resemblance, which did not distinguish image and object as "all things were adjacent to each other, linked together in a chain."<sup>35</sup> In Crary's understanding, the camera obscura, as a technology and an epistemological metaphor of the sign system, establishes an optical regime that separates *a priori* the representational image from the object that is represented.

It reveals Crary's epistemological bias toward the hegemonic function of metaphysics of interiority and his failure to notice an important discussion of nature and the function of imagination in the Classical Age. The dominant power of camera obscura Crary finds as an epistemic metaphor rests upon the mere side of sign as representation that Foucault describes. While the hegemony of sign as representation modeled on the camera obscura may be true enough for understanding the mechanism of the sign in the epistemological field, Crary does

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33 In the Classical Age, sign comes to be conventional, privileged over the natural sign that representativeness by appearance on the surface of image becomes the proof of its truthfulness. Yet, as seen in the above, this conventionality is considered as a self-referential meta-movement toward exclusions of intermediary elements, and the relationship between the sign and the signified becomes transparent. As opposed to the Renaissance, in which hermeneutics based on resemblance determines the meaning behind the sign, the signifying system of representation during the Classical Age functions as "the totality of the signs arranged in their progression; it will be given in the complete table of signs" (Foucault, 66).

34 Ibid., 63.

35 Crary, 1992, 37.

not take the tradition of illusion seriously, for the sake of his argument focused on the optical regime of the camera obscura.

Foucault's analysis of the Classical Age actually goes a step further in regard to the relation to the previous *episteme*, the Renaissance (as well as its transformation toward the modern in the nineteenth century). Whereas similitude as the dominant relation of representation during the Renaissance as the *episteme* seemed to disappear from the realm of knowledge during the Classical Age, it indeed survives in a different form of imagination behind the realm of the sign system. Indeed, in the Classical Age, similitude is put to the border of knowledge as its most unrefined form of the same, yet still continues to flounder: "At the border of knowledge, similitude is that barely sketched form, that rudimentary relation which knowledge must overlay to its full extent, but which continues, indefinitely, to reside below knowledge in the manner of mute and ineffaceable necessity."<sup>36</sup> According to Foucault, similitude does not disappear even in the Classical Age; it is still necessary for establishing the hidden ground on which knowledge becomes possible as the indispensable part for imagination. As Foucault puts it, "resemblance is situated on the side of imagination, or more exactly, it can be manifested only by virtue of imagination, and imagination, in turn, can be exercised only with the aid of resemblance."<sup>37</sup>

Appreciating the hidden dimensions of imagination beneath the surface appearance of signs, Foucault defines it as a different part of knowledge, i.e., "genesis," that "provides a foundation for, and makes possible, all the empirical sciences of order."<sup>38</sup> The imagination not only becomes a prior foundation of epistemology but also provides a ground for a mechanism of epistemology, including an optical regime that is capable of intervening into the order of things.

Foucault's explanation of genesis is suggestive of anamorphic representation. As a genre of *trompe-l'œil* and optic illusion, the illusion of anamorphic representation is created in the process that reverses the procedure of perspective drawing. Seeing an anamorphic image can be understood in an exact reversal of seeing in a

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36 Foucault, *Ibid.*, 68.

37 *Ibid.*

perspectival painting.<sup>39</sup> In a perspective painting, things that are close to the observer are painted large, and those distant are smaller, while in anamorphosis, the proportion is exactly the opposite. When the proportion in anamorphosis is enlarged and exaggerated, the image becomes chaotic and incomprehensible—yet when it is perceived from a certain vantage point, the image suddenly takes a comprehensible form. This mechanism of anamorphosis, as we will see below, can be understood as an attempt to picture the outside of epistemology. It can be said that illusionistic anamorphosis, as a realm of the imaginary beyond the visual order, is suggestive of the constitutive outside that bolsters the sign system that functions on the basis of perspective.

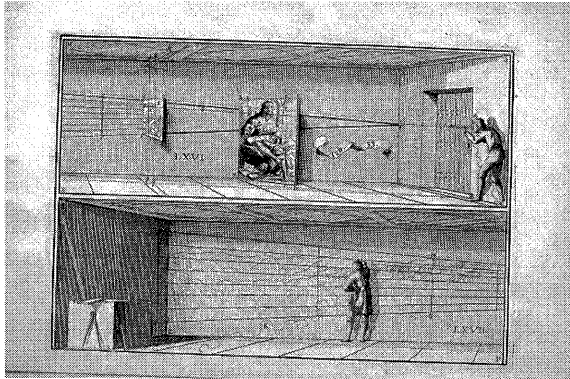
In order to clarify the reversed relationship between perspective and anamorphosis, let us look at the fresco painting of St. Francis of Paola (1642),

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38 Ibid., 71. Foucault further divides the two opposing stages of imagination in the idea of genesis: positive and negative stage. These two stages have different areas of analysis and are considered as having different derivations of imagination. The positive stage, attributed to shifting resemblances and vague similitude, accounts for the inversion of the series of representations such as impressions, image and memory. This provides the mechanisms of the image in time: “that representation, perpetually bound to contents so very close to one another, repeats itself, recalls itself, duplicates itself quite naturally, causes almost identical impressions to arise again and again, and engenders imagination” (Foucault, 70). It is easy to find out this power of imagination in Gijsbrechts' *trompe-l'œil*, which produces an image as the duplicate. The negative stage, with the analysis of nature, recognizes the disorder outside of tableau that in turn intervenes into its surface. It is imagination itself in so far as it is prevented directly from perceiving, and cannot be analyzed by identities and differences of things. Hence analysis of nature illuminates “the disorders that confuse the tabulation of beings and scatter it into a series of representations that vaguely, and from a distance, resemble one another” (Foucault, 70). This is precisely the image of anamorphosis as the nature of disorder. Anamorphosis is a duplicating representation, preventing us from directly perceiving the image by our eyes (with a help of mirror or apparatus of deflection, it becomes an image to be perceived), and requires us a power of imagination to see beyond the chaotic and catastrophic image. Hence, the power of imagination “is only the inverse, the other side, of its defect” (Foucault, 70). These two stages of imagination are integrated into the idea of perspective box.

39 Bomford, 67.

drawn by Maignan, in *Santa Trinità dei Monti*, Rome. The view of the Maignan painting from the perspective point gives the illusion that the image of the Saint leans out of the wall. The observer perceives the drawing that leans out of the wall, just as if there was a canvas perpendicular to the wall. This procedure is illustrated by Nicéron as the apparatus used to paint anamorphic frescos (Figure 7).



**Figure 7: The procedure to draw an anamorphosis painting<sup>40</sup>**

The two illustrations in this figure are consecutive from the top to bottom pictures and viewed as a sequence from the right to left. The portrait of a person is placed on the vertical axis from the wall, and a perspectival grid toward the painting is also set from the wall on which wires from the ceiling traverse. From the right side wall, another wire is pulled passing in close proximity to the canvas perpendicularly hanging on the wall to reach the same wall in the left half, where the corresponding point of the portrait is reached. Once all points on the wall are marked, joining them gets the anamorphic figure. From the right side wall, an observer placed on the wall perceives a drawing that leans out of the wall, just as if there was a canvas perpendicular to the wall. Unlike classical perspective where the

40 Martin Kemp, *The Science of Art: Optical Themes in Western Art from Brunelleschi to Seurat* (New Heaven; London: Yale UP, 1992) 211. Figure 422: Jean-François Nicéron, Demonstration of the method for painting his anamorphic wall painting of *St. John the Evangelist*, in *Thaumaturgus opticus*.

canvas is understood as a window through which one sees the world, in anamorphosis the window must be reconstructed by the observer's mind, placing it where the painter had put the drawing before projecting it on the wall.<sup>41</sup> Picture plane in the conventional perspective shifts from the vertical position to the horizontal on the ground with painted image in anamorphosis. Anamorphic paintings come with a supposed depth seen behind the perceived surface image, which is in turn posited as the conventional perspective. The perceived image in anamorphosis vertically stands up from the ground to the imaginary field of vision on the surface of perceived image.

The perspective box indeed takes advantage of anamorphic means of visual composition. It includes *trompe-l'œil*, i.e. the imaginary vision of a three-dimensional space, the observer of which sees a field of vision beyond the physical limit of a wooden box by illusionistic paintings on its walls. Unlike the anamorphosis, the perspective box offers the spectator a rational view of geometrical space with an artificial depth of illusion. The interior space of a Dutch house epistemologically constituted by this visual technology, in its illusionistic three-dimensionality, mirrors a realistic place of Dutch life. Yet, from different angles other than the precise vantage point, the images painted on the walls are seen merely as anamorphic deflections that alone show a strange composition of perspective image created with several others on flat panels, and have no spatial depth like anamorphically deflected images. Only when it is seen from a specific vantage point, all the panels constitute an appropriate view of the space in perspective.

The perspective box is valuable for the theoretical and historical inquiry of visual rhetoric because it suggests comprehensive understanding of representation in the seventeenth century. Samuel van Hoogstraten, the author of the perspective box in

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41 Paolo Di Lazzaro, Daniele Murra, "Figurative art, perception and hidden images in inverse perspective," *Studi & Ricerche: Review & Assessment Papers* January/February 2013. 15 December 2013 <<http://www.enea.it/it/produzione-scientifica/EAI/anno-2013/1-2-gennaio-aprile-2013/figurative-art-perception-and-hidden-images-in-inverse-perspective>>.

London, writes, “through the knowledge of this science one can also make the strange miraculous perspective box which if painted right and with knowledge shows a finger-long figure as though life-size.”<sup>42</sup> Hoogstraten’s comments echoes Foucault’s understanding of representation in the Classical Age. His comments cover both the epistemological understanding of geometry and the imaginary projection of anamorphosis. Unlike the simple anamorphosis, the perspective box shows both a geometrical construction of the spatial perspective and an illusionistic image at the same time.

Samuel van Hoogstraten theorizes art of painting as the mirror of nature. In juxtaposition to the one of classical rhetoric, he views the mirror as an apparatus that traces only appearances, not penetrated inner essence, that reflects outward qualities of things.<sup>43</sup> What mirror metaphor suggests is a dilemma of painting as a representation: a painting can exist both as a form of truth (a mirror of nature) and as a form of deception. A painting serves to deceive the eye as an illusion, yet what Hoogstraten argues with the metaphor of mirror is precisely the system of representation in the seventeenth century described above.

In designing the perspective box, Hoogstraten reiterates the *episteme* of the Classical Age to foreground the knowledge of both the semiotic system of seventeenth century representation and the genesis of imagination. The spectator of a perspective box sees both the symbolic image of a Dutch house as the order of things and the three-dimensional space as the genesis of anamorphic vision, inverted image of a perspective. The perspective box comprises with both a mirror

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42 Samuel van Hoogstraten, *Inleyding tot de Hooge Schoole der Schilderkerst [Introduction to the Academy of Painting]* (Rotterdam, 1678) 274, qtd. in Bomford, 68.

43 The spectator of the perspective box sees both a deflected illusion and a mirror image of the geometric space. Besides fresco paintings there is another type of anamorphosis, the image of which shows incomprehensible design in appearance, yet the reflection of the image on a cylindrical mirror placed on the image shows a comprehensible image. Famous anamorphosis of a reflection created in and by cylindrical mirror by Jean François Nicéron is a case in point. The deformed image painted on canvas becomes a picture on the cylindrical mirror put on the center of an anamorphic image, and the deflection is calculated as a distance from the central location where cylindrical mirror tube is supposed to be put.

of nature and imagination, as a flipside of the sign system and genesis. Whereas perspective helps one to visualize the order of things in a sign system of configuration, anamorphosis puts on view of genesis that underpins the dominant order. In Hoogstraten's argument, the mirror of nature corresponds with perspective, while the deception matches with anamorphosis. The perspective box paradoxically makes two visual forms of communication, perspective and anamorphosis, coexist in the *episteme* of the Classical Age.

#### 4. Tentative Conclusion

With three orientations to map a cultural milieu, I would like to draw a tentative conclusion for further analysis of the perspective box. The perspective box shows the spectator not only an illusionistic painting but also the mechanism of visual trick. Indeed, the paintings without the trick are fairly mundane, and do not have artistic value itself. What is truly valuable about the perspective box, then, is understanding how well the illusion is constructed, including its rhetorical mechanism to show the trick. The trick can be seen when the perspective is not in the right place and the view is out of position. This is also true of *trompe-l'œil*, which reveals its mechanism. The main purpose of *trompe-l'œil* is not to construct illusion, rather to show a mechanism of deceiving the eyes. Both purposes are served for the culture of peeping. People enjoy peeping of the illusion as well as understanding the trick.

Understanding the visual trick is an important part of perspective box and *trompe-l'œil*, both of which allow the observer to move and slide from their right position to see the trick. Even a slight moving of the body allows one to see the trick people try to understand. Mobility of the observer is secured, and open seam of the visual technology is part of enjoyment, as long as the observer understands that it is a rhetorical device. It is a rhetoric of the perspective box that the observer always already knows that one is in the rhetorical space of visual illusion, and self-consciously knows that what one is doing is entering into the space of illusion from where one observes as the subject departed from one's body.

This observation of the perspective box counters the historical account of Cray. First, the three-dimensional sense of vision, even by monocular view, was already

invented during the seventeenth century. The mechanism of the stereoscope is almost the same as the perspective box because it, too, combines multiple perspectives. Second, the illusionism Crary identifies from the new technological innovation during the nineteenth century was also realized in the seventeenth century Dutch culture. This form of illusionism became popular as a visual entertainment known as the peepshow in the eighteenth century. This popular culture of entertainment spread to all over Europe as well as China and Japan.<sup>44</sup> Also, as Friedburg points out, the camera obscura was used as a magic lantern that projects illusion.<sup>45</sup> Epistemologically, another possible model of vision during the seventeenth century, delineated as rhetorical culture of epideictic by *trompe-l'œil*, could give other possible understanding of representation in the Classical Age.

Yet, it is precisely the existence of the perspective box, a primitive form of modern observer in the previous episteme, to prepare the emergence of its subject as a condition of possibility to produce the modern subject emerged after the nineteenth century. Crary's observation of the nineteenth century when the new observer emerged as the subject—who holds a subjective body to create a stereoscopic vision by means of a structural depth of representation seen by a binocular view—was already prepared in the Cartesian perspectivalism during the seventeenth century. The existence of perspective box that sets multiple perspectives and produces a three-dimensional vision demonstrates that the modern vision was already in bud in the Classical Age. It is this potentiality held in the scopical regime of Cartesian perspectivalism that enables the modern observer being in reality. Emergence of the modern observer Crary finds can be a possible return of the perspective box in a different shape of stereoscope. Further researches are necessary in the above areas, and to find out the way to synthesize above analyses is a next assignment for my larger project.

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44 For the reference of peepshow, see Richard Balzer, *Peepshow: A Visual History* (Harry N. Abrams, Inc., New York, 1998).

45 Friedberg, 66.