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Reflections on the Pragmatics of the Illustrated Perspective Treatise : Performative Failures and (Pre-) Romantic Innovations

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Résumé de l'article

Cet article examine les dispositifs de monstration visuelle à l'intérieur de certains traités de perspective illustrés. En se basant sur une distinction fondamentale en pragmatique, l'auteur soutient que les images conçues pour démontrer/enseigner/instancier le système perspectiviste sont minées par une contradiction entre le « contenu » de la perspective et les moyens figuratifs déployés pour exposer ce contenu. Dans tous les cas, cette aporie, qui définit l'enseignement de la perspective par le biais d'images, surgit lorsque le discours figuratif de perspective tente d'intégrer la représentation de son usager à l'intérieur du système en soi. En définitive, l'auteur affirme que la « pragmatique inconsciente » du traité de perspective permet de porter un nouveau regard sur les innovations picturales du romantisme allemand, et plus particulièrement sur l'oeuvre de Caspar David Friedrich, dans la mesure où celle-ci s'avère fondamentalement liée aux échecs de l'âge classique.

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Reflections on the Pragmatics of the Illustrated Perspective Treatise

Performative Failures and (Pre-) Romantic Innovations

EDUARDO RALICKAS

This essay focuses on an issue that has remained unaddressed in the critical fortune of the illustrated perspective treatise,¹ namely, the pragmatic conditions whereby perspective is “demonstrated.”² By drawing on a set of—now common³—critical tools developed in the fields of linguistics and the philosophy

163

1. For an overview of recent research on the perspective treatise, see Lyle Massey (ed.), *The Treatise on Perspective: Published and Unpublished*, Washington, New Haven and London, National Gallery of Art and Yale University Press, 2003. For a comprehensive survey of such treatises, see Kirsti Andersen, *The Geometry of an Art: The History of the Mathematical Theory of Perspective from Alberti to Monge*, New York, Springer, 2007.

2. The question pertaining to the “demonstration” of perspective has been addressed by Hubert Damisch in his influential study *L'origine de la perspective* [1987], Paris, Flammarion, coll. “Champs”, 1993, p. 81-187. My analysis differs from Damisch’s though, insofar as I attend to a recurrent problem that arises in the context of printed perspective treatises from the 16th century onwards, whereas Damisch mostly focuses on Brunelleschi’s prototype, the so-called *tavoletta*, which was presumably the first instrument designed for the teaching and dissemination of linear perspective.

3. My methodological framework draws on the theory of performative speech acts developed by John Langshaw Austin. See John Langshaw Austin, *How to Do Things with Words* [1962], Cambridge, Cambridge University Press, 1972. This methodological positioning has its own set of *historical* implications, for my approach also draws on the thought of Johann Gottlieb Fichte. Recent research on Fichte convincingly demonstrates that his philosophy contains the first modern account of performativity. My analysis of the performative shortcomings of the perspective treatise can thus be read as an attempt to provide a material basis for Fichte’s claims in the 1794-1795 *Grundlage der gesamten Wissenschaftslehre*, that the classical age’s system of representation is inconsistent when regarded from the point of view of its pragmatic uses. The present paper thus sets the stage for reappraisal of the pre-history of the German romantic paradigm itself. For an analysis

of language, I consider a corpus of illustrated books published between the early 16th and the mid-17th centuries, whose purpose was to teach its “users” (who were more than just “readers”) to construct homogeneous perspectival spaces. As will be made clear in what follows, the demonstration of perspective relies on ambiguous devices that lie between the book page and the autonomous “tableau,” between the “ideal” and abstract space of mathematical geometry and the concrete materiality of images. The users of such books are required to negotiate their passage through this porous boundary by literally performing with and according to the perspective treatise’s discursive parameters. By remaining sensitive to the ambiguities such performances entail, this paper sheds new light on the pragmatic structure of the illustrated perspective treatise.

164

Based on a fundamental distinction made in the field of pragmatics, I contend that much like speech acts (whose propositional content may or may not enter into conflict with a given speech act’s illocutionary force) the images designed to demonstrate the perspectival system are plagued by an opposition between the *conceptual* “content” of perspective and the *figurative means* deployed to convey such content. In all cases, this aporia between concept and display, which defines the teaching of perspective by means of images, arises when the figurative discourse of perspective attempts to integrate a representation of its actual user within the system’s framework. In the final analysis, figuring the user of perspective is one of perspective’s chief impossibilities. Furthermore, given the epistemological context in which such treatises were written, this pragmatic problem ought to be regarded as a performative contradiction that is *constitutive* of the perspectival system’s mode of visual rationality. In closing, I suggest that the performative incongruities endemic to the perspective treatise allow one to reconsider some of the pictorial innovations of German romanticism, particularly those of Caspar David Friedrich, a painter whose work is tied in fundamental (and hitherto unforeseen) ways to the “failures” of the classical age.

When one casts a backward glance at the early modern history of the printed scientific treatise, the illustrated perspective treatise, which was invented in the first years of the 16th century, emerges as an innovative genre in which word and image are set against one another in a fundamentally new way. Whereas in early printed

of Fichte’s theory of performativity, see Isabelle Thomas-Fogiel, *Critique de la représentation. Étude sur Fichte*, Paris, Vrin, 1999.

editions of Euclid's *Optics*,⁴ for instance, both text *and* image share the burden of scientific proof, the first illustrated perspective treatise, Jean Pélerin's *De artificiali perspectiva*⁵ foregrounded its illustrations as the sole conveyors of the conceptual information it sought to disseminate, while textual explanation was relegated to the ancillary role of providing contextual or preliminary data. The fact remains: in *De artificiali perspectiva* and in most subsequent treatises, however sophisticated they were to become, text plays an introductory role that does not *ground* the demonstration of perspective as a rational system *epistemically*. Once the meaning of the various lines and functions that make up a given perspective diagram have been comprehended by the reader, the image itself functions as the ultimate instantiation of *what* perspective *is*. Here, images are both the means and the ends, the method, evidence, proof, and performance of the nature of perspective.

It can safely be argued that such a shift towards an imagistic form of rationality placed greater emphasis on the reader's cognitive abilities, if only because the "reader" was suddenly required to decipher complex visual information that simultaneously demonstrated *how* perspective is constructed while *enacting* that very construction in the first place. Although perspective treatises were not scientific tracts in any strong sense of the term (for they were produced for varying forms of readership spanning humanistic circles and the workshops of artists and artisans), one general characteristic underpins the genre as such, namely, the *pragmatic* structure of these publications. Such books invariably make use of what Damisch has termed a "scientific protocol" whereby the demonstration and, correlatively, the transmission of objective knowledge to a second party tacitly involves the claim that such a party re-enact and substantiate all the steps that comprise a given demonstration's experimental basis. In other words, the objective validity that the *illustrations* contained in perspective treatises claim to instantiate are grounded, in the final analysis, on "first-person" reconstructive acts *performed* by the users of such pictures.⁶ In keeping with

4. See, for example, the influential Italian edition of the *Optics* that was translated and edited by Egnazio Danti, *La prospettiva di Euclide*, Florence, nella Stamperia de'Giunti, 1573. This edition is noteworthy if only because it is one of the principal sources of many subsequent perspective treatises—including those analyzed here—that reproduced Euclid's theorems and illustrations.

5. Viator, *De artificiali perspectiva*, Toul, Petri Jacobi, 1505. Viator is a Latin form of Pélerin's name.

6. I am using the term "first person" to denote performative acts undertaken by self-conscious, autonomous agents. I intend it as a marker of rationality, rather than *merely* as a sign of what is irreducibly individual.

Damisch's account of Brunelleschi's lost *tavoletta*, this protocol of *autonomous* counter-verification partakes in the very "origin"⁷ of perspective itself—an origin that is rehearsed anew every time the pedagogical relation between image and user is played out.

It follows, moreover, that the users of such images stand on the same ground as the "artists" who produced them, insofar as these illustrations make epistemological claims. The illustrations contained in perspective treatises are exemplars of a unique cross-fertilization process that is located precisely at the crossroads of the modern histories of science and art. Part and parcel of the rise of this artistic-scientific regime is the disenfranchisement of the autonomy of the artist and the invention of a new, inter-subjectively bound form of spectatorship that is simultaneously a mode of spectatorial *production*. What is produced and re-produced by artist and beholder, respectively and reciprocally, is the shared epistemological space of perspective.

166

Given this general framework, it is worth reconsidering a series of emblematic images drawn from the golden age of the perspective treatise—that is, the late 16th to mid-17th centuries—in order to understand the pragmatic basis upon which perspective is taught. Chief among these is a diagram that was first published in Jacopo Barozzi da Vignola's posthumous *Le due regole della prospettiva pratica*⁸ as an illustration of the author's *prima regola* (fig. 1). A careful reading of this image ought to acknowledge that its components have heterogeneous semiotic values that span symbolic and iconic forms of representation (the lines of sight and the female figure from which they originate, respectively), as well as "ideal," mathematical ones (the geometrical relations denoted by such perpendicular lines as GB and AB; the series of squares lying below line CD, etc.).⁹ However, in many instances a given segment may conflate two or more kinds of representation, as is the case with line AB, which is both a symbolic representation of the picture plane as seen by the female figure CG as well as a

7. Damisch, 1993, p. 89 et sq.

8. This treatise was edited and published by mathematician Egnazio Danti: Jacopo Barozzi da Vignola, *Le due regole della prospettiva pratica di M. Iacomo Barozzi da Vignola con i comentarij del R.P.M. Egnatio Danti dell'ordine de predicatori matematico dello studio di Bologna* (Roma, per Francesco Zanetti, 1583). For an account of the history of this treatise, see Francesca Fiorani, "Danti Edits Vignola: The Formation of a Modern Classic on Perspective," in Massey, 2003, p. 127-159. Also see Timothy K. Kitao, "Prejudice in Perspective: A Study of Vignola's Perspective Treatise," *The Art Bulletin*, vol. 44, n° 3, September 1962, p. 173-199.

9. I am using the term "ideal" to denote the ideality of geometric space.

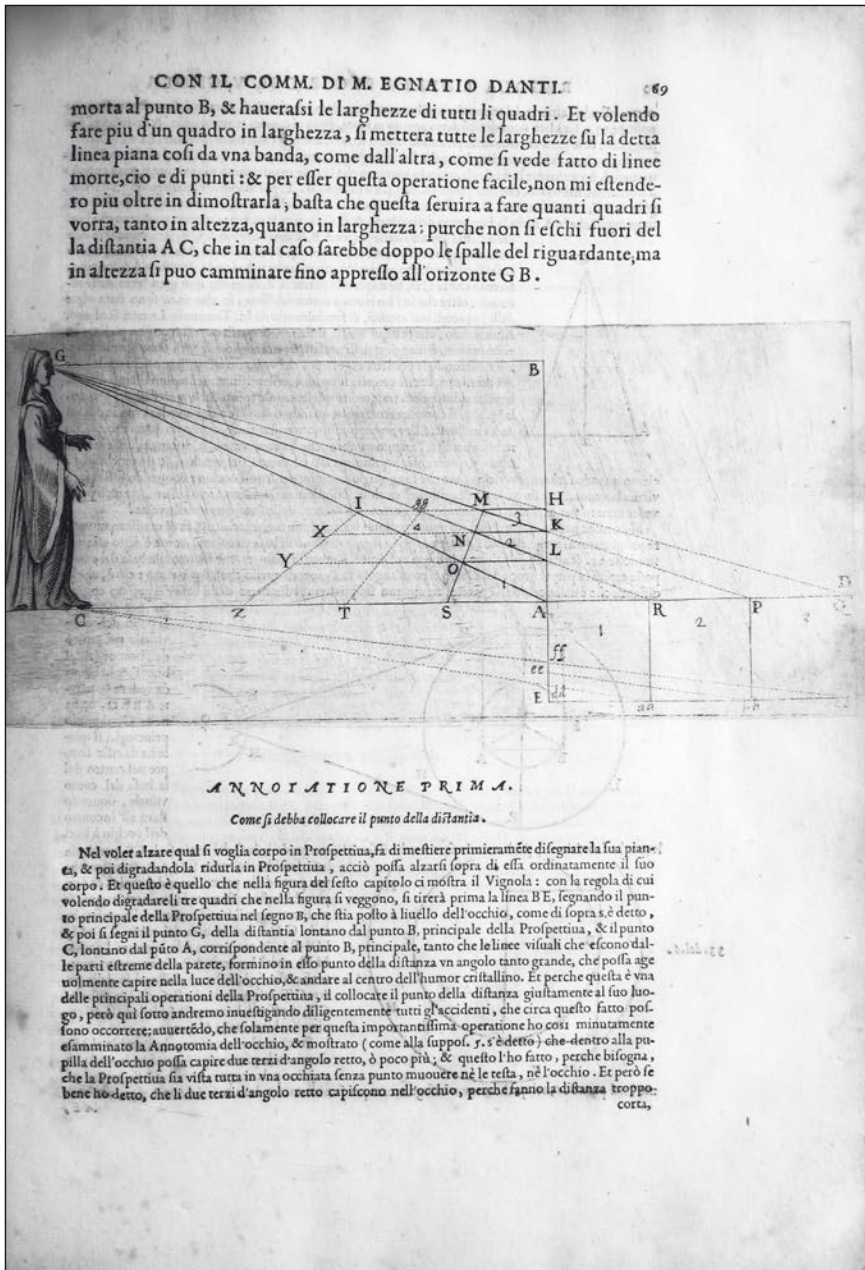


Fig. 1: Jacopo Barozzi da Vignola and Egnatio Danti, *Le due regole della prospettiva pratica di M. Iacomo Barozzi da Vignola con i comentarij del R.P.M. Egnatio Danti dell'ordine de predicatori matematico dello studio di Bologna*, Rome, Francesco Zanetti, 1583, p. 69. Collection Centre Canadien d'Architecture/Canadian Centre for Architecture, Montréal. Photograph by Eduardo Ralickas.

geometrical entity whose mathematical properties are strictly consistent with the laws of two-dimensional, Euclidian geometry.

The demonstration of Vignola's "first rule" begins by formulating a set of clear, textual definitions. The line that links points A and C is defined as the distance between the viewer's position in space and the picture plane AB (literally *la parete*: the wall). GB is both the horizon line as well as the distance between the female figure's eye to the picture plane. Thus, the plate depicts a female figure seen in profile who stands in front of a picture plane, which is also seen in profile.¹⁰ Importantly, all elements lying below the ground line AD belong to a ground-plan rendering of the volumes that are to be projected into perspectival space (in the central portion of the illustration). In keeping with Euclid's tenth proposition expounded in the *Optics*¹¹ contemporary readers were asked to understand that AR, RP, and PQ are perceived by the female figure as lengths AL, LK, and KH. Moreover, the success of this rich illustration is partly due to the way it synthesizes concepts with the illusion of space, for the actual viewer of *Le due regole* also perceives the former lengths as equal quantities qualitatively receding in space in the middle of the image. As Lyle Massey has aptly noted, what is surprising about Vignola's demonstration to readers familiar with Leon Battista Alberti's so-called *costruzione legittima* is that the centric point is

168

10. Vignola's readers would have been familiar with the function of this human figure: it is an iconic representation of the user of perspective and, hence, of the reader of *Le due regole*. In fact, an illustration that appears earlier on in the book (on page 55) shows a male figure in profile standing in front of a transparent wall or picture plane through which pass the visual rays linking the man's eye and the vertices of a uniform octagonal prism that lies on the ground, to the right. Interestingly, this octagonal prism can be regarded as an abstract schema of the octagonal baptistery in Florence; the square-shaped wall and the image projected upon it thus recall Brunelleschi's mythical *tavoletta* as reconstituted in the writings of the latter's early biographers, Manetti and Vasari. Vignola's and Danti's commentary seems to support this view, for Vignola claims that the image in question shows "il nascimento di questa regola" and Danti posits that it shows "l'origine, anzi l'essentia della Prospettiva" (Vignola, 1583, p. 55-56).

11. Danti, Vignola's posthumous editor, had previously translated the *Optics*. For a reproduction and analysis of this proposition, see Samuel Y. Edgerton Jr., "Alberti's Perspective: A New Discovery and a New Evaluation," *The Art Bulletin*, vol. 48, n° 3, September-December 1966, p. 373 et sq. For an analysis of the relation between optics and perspective, see C.D. Brownson, "Euclid's Optics and its Compatibility with Linear Perspective," *Archive for History of Exact Sciences*, vol. 24, n° 3, September 1981, p. 165-194.

not the starting point of the operation, but rather its ultimate conclusion.¹² In this way, Vignola's text (as well as Danti's lengthier commentary) go on to explain that the transverse lines that generate the full illusion of perspective are determined according to a set of measurements taken on the floor plan. Thus, segments SA, OL, NK, and MH are obtained by measuring the distance between segments AE, ADD, AEE, and AFF.

Given that Vignola's first move was to define both the figure on the left and the vertical line AB as the viewer who stands in for the image's actual spectator and as the picture plane seen in profile, respectively, it follows that this highly synthetic diagram is in fact a *representation* of one's *present* act of looking. Thus, Vignola's discourse on perspective disavows any external or meta-discursive position, for the grammar by means of which perspective is explained here is itself constituted by the rules of perspective. One could term this state of affairs the "systemic closure" of perspectival demonstrations.

Moreover, the viewer of Vignola's demonstration is given to see the exact same perspectival image that the female figure has putatively been seeing all along upon the surface of the *parete* that she faces (a surface that is invisible from the reader's point of view, for whom this entity functions as a fully present geometric line and not as an iconic "representation" of an object, be it a wall or a painting).¹³ In light of this reciprocal yet temporally displaced ordering of gazes, Vignola's plate illustrates that the demonstration of perspective is a matter of *signifying one gaze by means of another*. Here, seeing "correctly" (read: in accordance with the epistemological framework to which this image lays claim) implies that one must *submit* to the vision of the other—to the woman represented on the left. One could term this function of perspectival demonstrations the "delegation of looking." Furthermore, Vignola's diagram implicitly summons the viewer to make use of two distinct cognitive abilities, namely, that of *perceiving* space and that of *conceiving* mathematical relations. Massey, who has studied this

12. See Lyle Massey, "Configuring Spatial Ambiguity: Picturing the Distance Point from Alberti to Anamorphosis," in Massey, 2003, p. 164-166. Also see Lyle Massey, *Picturing Space, Displacing Bodies: Anamorphosis in Early Modern Theories of Perspective*, University Park, Pennsylvania State University Press, 2007, p. 51 et seq.

13. This difference hinges on the semiotics of the line: as opposed to the *representation* of a referent (such as a wall) which, by definition, is absent, a *geometric* line fully instantiates *itself* as it collapses the gap between sign and referent. As a result, the viewer who focuses on segment AH must make a choice between perceiving this entity as the instantiation of a geometrically valid figure or as an *image* (i.e., as a line that recedes into perspectival space).

image at length, makes this point in a very convincing and succinct way: “The demonstration is quite extraordinary in the precise way that it shows how the perpendicular line marking the plane of intersection, *BA*, represents both what we see and how we see it.”¹⁴ Put otherwise, from a series of conceptual, mathematical operations, which the viewer *understands*, Vignola’s image ultimately depicts a space that one *experiences*. Massey writes in this respect:

[Vignola] presents us with a fallacy, pointing out that while we can see that the perspective is measured and rational, nevertheless we cannot actually see ourselves seeing this. We must make a choice between apprehending the geometric relationships illustrated in the diagram and embodying the external viewpoint that the diagram constructs.¹⁵

170

Massey’s unusual approach to Vignola, which is sensitive to the way viewers experience space in an embodied way, opens up a new avenue of enquiry for approaching all images designed to teach readers/viewers how to construct perspectival spaces. However, her insight concerning the disjunction between conceiving and perceiving can be taken out of the domain of “embodied experience” and recast in terms of a “visual epistemology” (for lack of a better term). As such, it allows one to pinpoint a pragmatic flaw that becomes “visible” provided one is attentive to the actual *use value* of the illustrations at hand (as opposed to the conceptual content they presumably picture). In what follows, I sidestep what could be called the “descriptive fallacy” of perspectival demonstrations in order to target their performative modalities.¹⁶ More specifically, I suggest that these illustrations foster a *performative contradiction*, i.e., a contradiction between what the illustrated demonstrations *claim* to do and the actual *means* afforded their users for doing it. I demonstrate that the very *validity* underpinning the allegedly rational demonstration of perspective is unstable, if only because *to use* the images that drive such demonstrations *is to transgress* the rules of perspectival space; as a result, the system violates its own validity in the very process of its demonstration. In the language of pragmatics this inconsistency—arising out of the use value of a given epistemological system—is termed a performative contradiction. In the case of the illustrated perspective treatise, performative contradictions arise time and again as the system attempts to picture its real users *as they are engaged in the act of using the system*.

14. Massey, 2003, p. 165.

15. Massey, 2007, p. 53.

16. See Austin, 1972, p. 3 et sq.

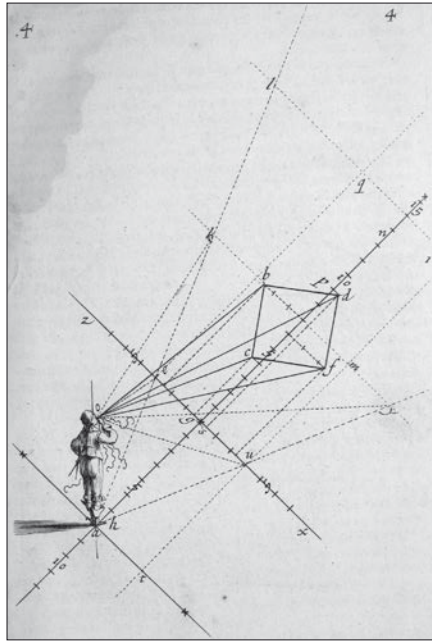


Fig. 2: Abraham Bosse, *Manière universelle de Mr Desargues, pour pratiquer la perspective par petit-pied, comme le geometral*, Paris, Pierre Des-Hayes, 1648 (plate 4). Collection Centre Canadien d'Architecture/ Canadian Centre for Architecture, Montréal. Photograph by Eduardo Ralickas.

The following image (fig. 2) is a case in point. It was originally published in what is no doubt one of the classical age's most "rigorous" French perspective treatises: Abraham Bosse's *Manière universelle de Mr Desargues pour pratiquer la perspective* (Paris: Des-Hayes, 1648). For the sake of my argument, it suffices to understand the general purpose of Bosse's illustration. Putting aside such technical innovations whereby Bosse (and his mentor, Girard Desargues)¹⁷ successfully construct perspectival spaces in an immanent fashion,¹⁸ I would like to focus on the place of the viewer and his or her relation to the perspectival space that he or she projects.

17. The intellectual relationship between Bosse and Desargues is a well documented affair. For a contextual analysis, see Marianne Le Blanc, *D'acide et d'encre. Abraham Bosse (1604-1676) et son siècle en perspectives*, Paris, CNRS éditions, 2004. Also see Maxime Préaud, Sophie Join-Lambert, et Idelette Ardouin-Weiss (eds.), *Abraham Bosse. Savant Graveur, Tours, vers 1604-1676, Paris*, Paris et Tours, Bibliothèque nationale de France et Musée des beaux-arts de Tours, 2003.

18. Bosse's system does not presuppose the construction of a ground plan that transcends the perspectival frame as such.

Much like in Vignola's previous illustration, the user of the perspectival system is assigned a precise location within the image. The page-long caption that accompanies this illustration explains how one ought to interpret the various lines depicted. Accordingly, they stem from heterogeneous semiotic regimes. The protagonist stands on a plane that is marked by a coordinate system. He holds a set of strings in his right hand, vis-à-vis his eye; these strings, which represent the so-called pyramid of vision, are linked to the vertices of a square that appears on the ground plane. Thus, this image functions as a meta-discursive representation of the apparatus of perspective itself and it is consistent with other such representations.

However, on closer inspection one fact will no doubt perturb any interpretation that seeks the comfort of coherence: how ought one to comprehend the position of the small man's body with respect to the—highly ambiguous—space in which he stands? Bosse's text makes no mention of this problem. In fact, the man's body functions much like a liminal object as it belongs simultaneously to two spatial worlds without, however, subscribing to either. Although the man's body

172

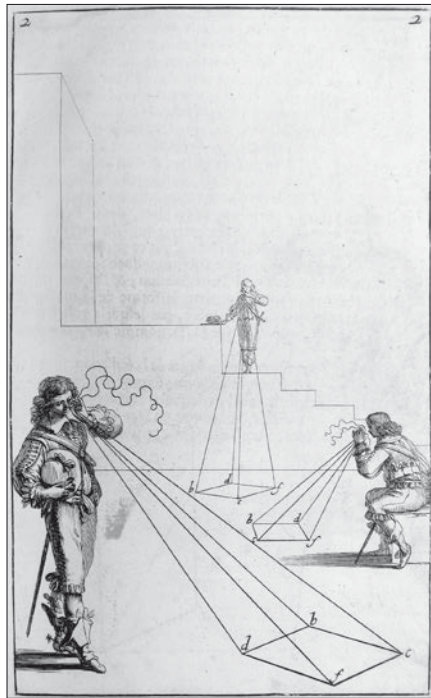


Fig. 3: Abraham Bosse, *Manière universelle de Mr Desargues, pour pratiquer la perspective par petit-pied, comme le geometral*, Paris, Pierre Des-Hayes, 1648 (plate 2). Collection Centre Canadien d'Architecture/ Canadian Centre for Architecture, Montréal. Photograph by Eduardo Ralickas.

is represented as a three-dimensional object seen from above (above where?), he stands on a “floor” whose purpose and structure are of a purely *geometric* nature. Indeed, this “floor” is really a plane; as such, it is not only wholly two-dimensional but also “immaterial.” Thus, it simply makes no sense to conceive its mode of spatialization in three-dimensional terms, or to regard it as the stage for objecthood. Nevertheless, the sheer placement of the protagonist’s body on/within this grid is to impute three-dimensionality to it—an inconsistent gesture from a mathematical point of view.

Moreover, when compared to a plate that appears just a few pages earlier (fig. 3), one immediately realizes to what extent Bosse’s demonstration is comprised of a patchwork of incongruous notions of space. In the earlier image (which is sometimes called *Les perspectiveurs*), several men conduct experiments in perspective by holding a set of strings that are attached to figures drawn on an actual ground. Importantly, these men, the space that surrounds them, as well as the figures they study are depicted within a single, pervasive perspectival space. This “scenographic” principle whereby pedagogical narration is framed by one homogeneous spatial code finds no purchase in fig. 2. In fact, trying to determine the exact position of the small man’s body in the latter image is an exercise in futility: if one considers that his body is a three-dimensional object, with respect to the geometric ground (which now must function as a “floor” and requires the viewer to shift semiotic regimes with respect to this portion of the image) the man is neither upright nor slanted, but both at the same time (depending on the frame of reference one chooses). Furthermore, the “link” between the heterogeneous spatial regimes of geometry and perspective—i.e., the visual pyramid whose apex lies at the man’s eye—is an early example of axonometric projection¹⁹ (provided one singles out this object as an autonomous entity).

Pedagogical reasons may have motivated a mathematically minded artist such as Bosse to construct this layered and incongruous image. For the sake of pedagogy Bosse no doubt attempted to accommodate both an illusionistic, three-dimensional space and a “flat,” geometric space on the same page. One ought to bear in mind here that perspective is an operation that transforms and projects two-dimensional, geometric shapes—which are shapes seen from

19. In axonometric perspective parallel lines do not converge at a point on the horizon line; rather, they remain parallel, as is the case with the two sets of parallel segments that comprise the square in question. For an overview of the pre-20th-century history of axonometry, see Yve-Alain Bois, “Metamorphosis of Axonometry,” *Daidalos* 1, September 15, 1981, p. 41-58.

nowhere, which is to say, from everywhere—into situated shapes, i.e., shapes seen *from* somewhere. Thus, in perspective a square *looks* trapezoidal and a circle *appears* elliptical. Bosse perhaps sought to draw shapes that do not *look like* other shapes but that *are* self-evident presentations of themselves. In fact, it can be said that Bosse’s illustration strives for the utmost clarity: in this plate three-dimensional space (which is the space the actual viewer is believed to inhabit) subsists alongside the space of geometry (which is the space of “reason” and, by extension, of “explanation”).

Nevertheless, Bosse’s illustration transgresses the laws of one-point, linear perspective, if only better to illustrate the overall parameters by means of which such laws operate. The resulting contradiction bears on the image’s claim to rational validity, since the demonstration of how perspective’s putative users relate to the geometrical properties of perspectival space produces a curious situation in which portions of that space are represented in such a way as to violate the coherence of perspective itself. In the case of Bosse’s meta-discursive image it is impossible to determine the point of view from which the image was made. Who is “speaking” and from “where” does this invisible subject of enunciation profess the present discourse on perspective? Such questions remain unaddressed. Nevertheless, these ambiguities are symptomatic of the failure that is *constitutive* of the demonstration of perspective as such, namely, the failure of fully encompassing the *user* of perspective as he or she fulfils the functional role the image assigns him/her.

Bosse seems to have struggled with these issues, for in a later re-working of his method in the self-published volume *Traité des pratiques géométrales et perspectives* (Paris, 1665) he reconsidered this illustration by translating it into a three-dimensional object (fig. 4). As such, the demonstration of perspective shifts as it oversteps its previous, merely pictorial bounds and embraces the wider context of the book page itself. In this new pedagogical instrument (which recalls an earlier device Salomon de Caus designed in another context²⁰), the reader is asked to lift a small tableau bearing a perspectival representation of a portion of the ground plan/book page onto which the picture itself has been glued, and to

20. See Salomon de Caus, *La perspective, avec la raison des ombres et miroirs*, London and Frankfurt, Chez Jan Norton Imprimeur du roy de la Grande Bretagne, aus langues estrangeres and Ches la vesue de Hulsius, 1612, n.p. (see the plate opposite Chap. 10). Daniele Barbaro had already made use of similar popup devices in the manuscript of *La pratica della perspettiva* that is now housed at the Biblioteca Nazionale Marciana in Venice, MS. IT. CL. IV. Cod. 40 (=5447).

place it vertically, that is, parallel to the cutout of the protagonist who is also to be set into vertical position.

Notwithstanding the originality of Bosse's solution, this new device in fact reproduces the very same performance problems that plagued the original plate: whereas the small tableau is drawn according to the rules of one-point perspective, its referent (i.e., the ground plan) is comprised of objects stemming from incompatible spaces. Although the tiled ground itself ought to be regarded as a mathematical plane or grid, the objects it "supports" (which in itself contradicts the ideality of the grid)—i.e., the human figure seen in profile, the pyramid, and the rectangular parallelepiped—simply lack a shared spatial consistency. In addition, although the shadows projected from each object onto the ground plane seem to create the illusion of spatial unity, the human figure on the top-left seems to lie flat on the ground, and the two solids are drawn by following the rules of axonometry (as if axonometry were somehow more "natural" or more "primeval" than "artificial" perspective). Again, what is at stake here is the violation of the perspectival system's validity precisely when that validity is most crucial: at the moment in which the function of the spectator is demonstrated in relation to the space which he or she is to project.

What these examples seem to suggest is that the problem at hand ultimately concerns the perspectival system's pragmatic unconscious. One could say that

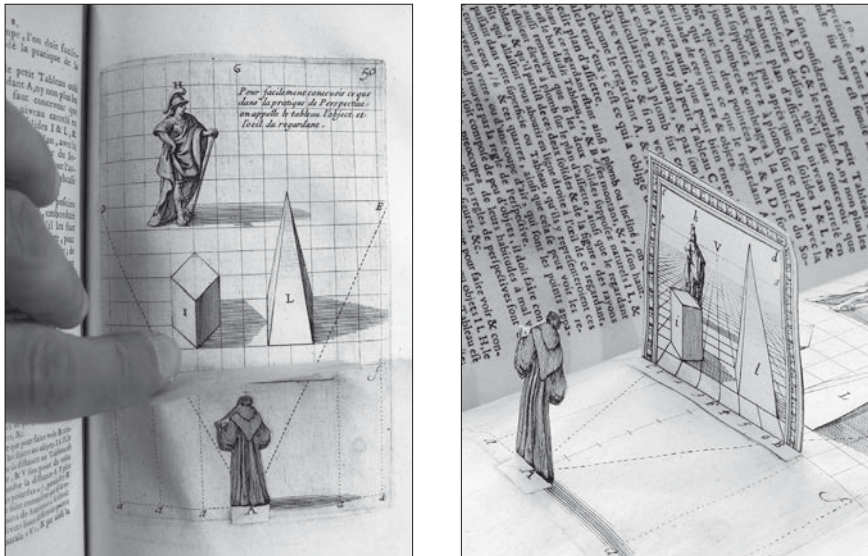


Fig. 4: Abraham Bosse, *Traité des pratiques géométrales et perspectives enseignées dans l'Academie royale de la peinture et sculpture*, Paris, Chez l'auteur, 1665 (plate 50). Collection Centre Canadien d'Architecture/Canadian Centre for Architecture, Montréal. Photograph by Eduardo Ralickas.

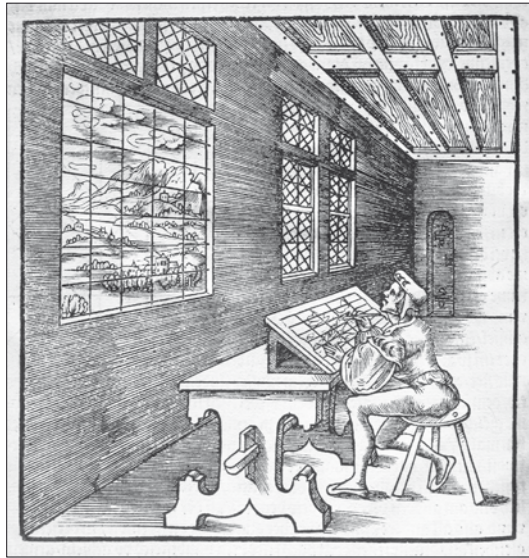


Fig. 5: Johann II, Pfalzgraf und Herzog von der Pfalz Simmern-Sponheim and Hieronymus Rodler, *Eyn schön nützlich Büchlin und Underweisung der Kunst des Messens*, Simmern, Rodler, 1531, n.p. (signature H2-v). Collection Centre Canadien d'Architecture/Canadian Centre for Architecture, Montréal. Photograph by Eduardo Ralickas.

it is a matter of figuring the real user's "representative" in the picture plane in such a way as to have the latter's gestures relate coherently to the former's own gestures, which are bound to the requirements of the image's meta-discourse itself. If the draughtsman (in the broadest sense of the term) is the "origin" of perspective, it follows that the figure of the draughtsman is the locus of perspective's chief performative inconsistency. Interestingly enough, in the history of the perspective treatise there are a number of images in which the draughtsman takes centre stage.

Such is the case with one of the earliest illustrated perspective treatises (which is sometimes regarded as the most "naïve," and for that reason most simple treatise of all): the anonymous *Eyn schön nützlich Büchlin und Underweisung der Kunst des Messens*.²¹ In this woodcut (fig. 5) one sees a seated

21. *Eyn schön nützlich Büchlin und Underweisung der Kunst des Messens, mit dem Zirckel, Richtscheidt oder Linial. Zu nutz allen kunstliebhabern, fürnemlich den Malern, Bildhawern, Goldschmidern, Seidenstickern, Steynmetzen, Schreibern auch allen andern, so sich der kunst des Messens (Perspectiva zu latin gnant) zugebrauchen lust haben*, Simmern, Hieronymus Rodler, 1531. This book has been variously attributed to its printer, Rodler, and to its alleged sponsor, Johann II, Pfalzgraf und Herzog von der Pfalz Simmern-Sponheim.

draughtsman at work in the middle of a small room. Given the woodcut's pedagogical function, this draughtsman sits in for the book's actual reader.²² His desk is theatrically positioned below a large window, and he busies himself with the task of copying the landscape that it frames. The window panes comprise a grid-like structure which the draughtsman has reproduced on the broad sheet that lies before him. Although this image is clearly not devised as a demonstration of perspective (instead, it rhetorically illustrates the method of squaring up a given drawing, or here a scene that is "squared down," so to speak²³), the woodcut as such, the site of this demonstration's conditions of enunciation, is itself structured as a homogeneous perspectival space.²⁴ As a result, *reading* this image is of necessity a *performance* undertaken under the aegis of its perspectival framework.

As one begins to compare the draughtsman's drawing with the *veduta* that the window frames, one begins to realize that both images are quite similar (particularly when viewing details such as the clouds). It is imperative to note, however, that these two landscape representations *should be radically different*. Given that perspective necessarily positions its static viewers at precise locations derivable from each of the system's interconnected variables, it is a sheer impossibility that the beholder's and draughtsman's respective points of view be identical. In this light, what the beholder perceives through the window should in no way correspond to the draughtsman's visual possibilities with respect to the same scene. After having taken note of this incongruity, two interpretive possibilities remain open: either the draughtsman draws what the beholder sees through the

22. The figure of the draughtsman one encounters in many perspective treatises is no doubt linked to the figure of the admonisher advocated by Alberti in *De Pictura*. The difference between both figures may well lie in their respective rhetorical functions: whereas the Albertian admonisher tends to emphasize the affective nature of beholding, the draughtsman's function is of an "epistemological" nature. For an analysis of Alberti's admonisher, see Alain Laframboise, *Istoria et théorie de l'art. Italie, 15^e, 16^e siècles*, Montréal, Les Presses de l'Université de Montréal, 1989, p. 47 et sq.

23. This technique notwithstanding, the rhetorical function of the "open window" sets the stage for a perspectival reading of this image.

24. Here, perspective is the condition of possibility of the woodcut's figurative discourse as such. For an analysis of perspective as a mode of enunciation in the early Renaissance (particularly in the work of Paolo Uccello), see Louis Marin, *Opacité de la peinture*, nouvelle édition revue par Cléo Pace, Paris, Éditions de l'École des hautes études en sciences sociales, 2006, p. 95 et sq.

window²⁵ (thus, his drawing is a fiction of a fiction so to speak) or, conversely, what the beholder is given to see through the window is none other than the draughtsman's own vantage point onto the landscape, which the latter truthfully draws. For the purposes of the present argument though, the difference between these two interpretations is irrelevant, as they are symmetrically inverted versions of one another when considered from a pragmatic point of view. In both cases, the cognitive choices afforded to this image's real user *exceed* the draughtsman's visual possibilities, for the draughtsman is unable to compare both landscapes and thus *reflect* on their differing conditions of possibility (i.e., on the incompatible vantage points from which they are viewed).²⁶

In the final analysis, this illustration contradicts its own purpose, namely, that of teaching the beholder how to subject himself or herself to the sole valid point of view: that of the draughtsman. Clearly, the pedagogical narrative this illustration projects is inconsistent with the figurative means such a narrative deploys to entice the beholder to enter into this space of visual rationality. In *Eyn schön nützlich Büchlin* the two functions that were at play in the illustration of Vignola's *prima regola* (i.e., "systemic closure" and the "delegation of looking") enter into an open conflict: if perspective is a looking at looking, in the present case the image of the draughtsman, to whom the beholder delegates his or her looking, is incapable of effecting epistemic closure, for the book's real user performs beyond the limits ascribed by the image. In this sense, the act of delegation begins to appear as an act of self-alienation.

From this sampling of the visual record one can formulate the following hypothesis: perhaps what perspective treatises attempt, but are simply unable to accomplish, given the inherent limitations of the system, is to depict the viewer engaged in his or her act of viewing. The images that have been analyzed here indicate that as soon as one inserts the figure of the draughtsman—in its various guises, be they implicit (Vignola, Bosse) or explicit (*Eyn schön nützlich Büchlin*)—within the framework of perspective demonstrations as a stand-in for

25. This interpretation has been espoused by Lawrence Wright in *Perspective in Perspective*, London, Routledge & Kegan Paul, 1983, p. 314, as well as by Andersen, 2007, p. 220.

26. My use of the term "reflection" is informed by Sartre's terminology in *L'imaginaire*: "Pour déterminer les caractères propres de l'image comme image, il faut recourir à un nouvel acte de conscience: il faut *réfléchir*. Ainsi l'image comme image n'est descriptible que par un acte du second degré pour lequel le regard se détourne de l'objet pour se diriger sur la façon dont cet objet est donné." Jean-Paul Sartre, *L'imaginaire. Psychologie phénoménologique de l'imagination* [1940], édition revue et présentée par Arlette Elkaïm-Sartre, Paris, Gallimard, coll. "Folio. Essais", 2005, p. 15.

the beholder's looking, one is somehow attempting to figure the viewer/user of perspective. Yet this leads to pragmatic inconsistencies that come to the fore as the user performs the gestures that are scripted by the illustrations themselves. Ultimately, these pedagogic diagrams fail to account pictorially for the very acts they have their viewers accomplish in order to enter the system being described.

The narratological concept of metalepsis is useful to further understand the scope of the problem at hand.²⁷ Metalepsis is a textual strategy in which the border between two narrative levels becomes uncertain as one or more stories proliferate *within* a given narrative stream. Metalepsis may function in various ways: for instance, there are cases in which a story's narrator suddenly takes part in the story he or she recounts. In other instances, the author of a given story includes himself or herself in the narrative frame by interacting with the characters he or she originally created.²⁸ According to Marie-Laure Ryan both these types of metalepsis may be termed "rhetorical." She writes: "Rhetorical metalepsis opens a small window that allows a quick glance across [narrative] levels, but the window closes after a few sentences, and the operation ends up reasserting the existence of boundaries."²⁹ But what would happen if the *window* remained *open*, one wonders?

There is another type of metalepsis, which, unlike the rhetorical sort, threatens the coherence of the narrative frame itself. Ryan calls this *ontological* metalepsis. It arises in cases in which a *voice* stemming from a heterogeneous discursive field intervenes in a *subordinate* narrative space in such a way as to subvert the original narrative frame as such:

[in] a narrative work, ontological levels will become entangled when an existent belongs to two or more levels at the same time, or when an existent migrates from one level to the next, causing two separate environments to blend.³⁰

For perspective treatises to be epistemically consistent, they would have to make use of a kind of ontological metalepsis in which the *actual viewer* of a given perspective demonstration would be included in the image he or she sees. As

27. For a sampling of recent research on metalepsis, see John Pier and Jean-Marie Schaeffer (eds.), *Métalepses. Entorses au pacte de la représentation*, Paris, Presses de l'École des hautes études en sciences sociales, 2005.

28. See Gérard Genette, *Figures III*, Paris, Éditions du Seuil, coll. "Poétique", 1972, p. 243-246. Also see Gérard Genette, *Métalepse. De la figure à la fiction*, Paris, Éditions du Seuil, coll. "Poétique", 2004.

29. Marie-Laure Ryan, "Metaleptic Machines," *Semiotica* 150, 2004, p. 441.

30. *Ibid.*, p. 442.

been analyzed here, the draughtsman functions merely as the *sujet de l'énoncé* and the image as such can be likened to a mysterious voice that speaks from nowhere.

One of Vignola's illustrations, also from *Le due regole*, emphatically drives this point home (fig. 6). In this striking, self-referential image Vignola spatializes this paper's opening diagram (fig. 1). As a result, Vignola's *prima regola* now functions as a three-dimensional model drawn in correct perspective. The figure's protagonist, now male, faces the *parete* (which, as an image, forfeits its previous mathematical significance). The large picture plane upon which he gazes is in perspective, both for him as for the reader of *Le due regole*. As in the earlier plate the human figure on the left stands in for the reader's act of looking, Vignola has taken great care in representing the lines that determine the protagonist's angle of vision. These lines allow him to see the entire span of the vertical picture plane that stands erect before him. However, since Vignola's illustration is now in perspective, *it has its own vanishing point and horizon line*, which are *independent* of the relations being demonstrated in the foreground. As one projects the image's orthogonal lines to determine the location of the plate's "ultimate" and "original" vanishing point, one discovers that it lies in the eye of a second protagonist who lurks in the background, near the top-left corner of the image. *Who* is he? The answer is as simple as it is paradoxical: he is *also* a representative of the image's real spectator. It follows that Vignola has unwittingly placed the viewer in an ambiguous situation, for in attempting to represent the beholder's act of looking within the frame of perspective, the author has literally split the beholder in two. Ostensibly, what the "ultimate" beholder, on the top left, "sees" (given his own angle of vision, which coincides with the picture's orthogonals) *is himself—but from behind*.

Based on this reading of the pragmatic dynamics of the perspective treatise, one could argue that the artistic project of early German romanticism consisted not only in disclosing the pragmatic shortcomings of the classical age's regime of representation,³¹ but also in devising a new pictorial paradigm whereby images were to fully address their beholders *qua* pragmatic users as artists espoused a new role in the shaping of political consciousness. With romanticism, the mode of address of images becomes a more sophisticated affair as the "failures" of the classical age are progressively internalized. In keeping with the romantics'

31. Fichte is now regarded as having effected such a (pragmatically based) critique of the classical paradigm. See Thomas-Fogiel, 1999. The romantics, I contend, followed suit by displacing Fichte's discourse into the fields of art and aesthetics.

enthusiastic conflation of “republicanism” and “transcendental philosophy,” one could term their programme an “image-based performance of republicanism.”³²

During his tenure at the University of Jena between 1794 and 1799, Fichte developed a philosophical programme which is now regarded as an original and powerful critique of the classical age’s representational paradigm. Importantly, Fichte’s critique operates by addressing what I have termed here the classical age’s *pragmatic unconscious*. Fichte contends, for instance, that discourse on representation stemming from the early modern period systematically fails to account for the illocutionary acts of those who utter such discourse. These innovative ideas were first published in the *Grundlage der gesamten Wissenschaftslehre*, the book upon which the romantic “revolution” was modelled.³³ This text was immediately hailed, moreover, as a contribution, in the field of philosophy, comparable in merit, rigour, and method to the geometric work of Euclid.³⁴

182

There is a programmatic fragment written by Friedrich Schlegel for the *Athenaeum* that can now be understood in a new light. Indeed, in fragment n° 238 Schlegel contends that the romantic project (here designated by means of the open-ended term *Poesie*) is, in the wake of Fichte’s *Wissenschaftslehre* or “philosophy of philosophy,” a “poetry of poetry.” Schlegel’s “transcendental poetry” is no mere art of reflexivity though, whereby artistic *forms* refer to themselves in what is no doubt one of modernity’s chief tropes, as many scholars have argued. In fact, Schlegel’s programmatic concept is to be read in terms of a *new* kind of self-reference, espoused by the German romantics, which the foregoing critique of one of the classical age’s pedagogical paradigms has made clear,

32. In this respect, the romantic paradigm subscribed to what Éric Michaud has aptly termed “salvation by means of images” in *La fin du salut par l’image*, Nîmes, Jacqueline Chambon, 1993. In what follows, I can only sketch a set of arguments that I develop at length in my doctoral dissertation (in progress) which is provisionally entitled *La naissance de l’art performatif. Image, action et subjectivité dans le romantisme allemand*.

33. This critique of representation is undertaken in §4, “Grundlage des theoretischen Wissens.” See Johann Gottlieb Fichte, *Grundlage der gesamten Wissenschaftslehre als Handschrift für seine Zuhörer* (1794), Einleitung und Register von Wilhelm G. Jacobs, Vierte Auflage, Hamburg, Meiner, Philosophische Bibliothek Band 246, 1997, p. 44-164. For an English translation, see Johann Gottlieb Fichte, *Science of Knowledge, with the First and Second Introductions*, ed. and trans. by Peter Heath and John Lachs, Cambridge, Cambridge University Press, 1982, p. 120-217.

34. Fichte himself may have authored this comparison, which was published in Jena’s *Intelligenzblatt der Allgemeinen Literatur-Zeitung*, n° 113, October 1, 1794, p. 899. See Xavier Léon, *Fichte et son temps*, vol. 1, Paris, Armand Colin, 1922-1927, p. 378, note 1.

namely, *self-reference as performativity*. Indeed, Schlegel defines *Transzendentalpoesie* as a process that “represents the *producer* along with the product.”³⁵ In other words, self-reference is here conceived in terms of a *generative performance with the user* in which representational content fully acknowledges its producers and consumers as the “origin” of the system in which they take part.

It lies beyond the scope of the present paper to discuss the ways in which Schlegel himself enacts this performative paradigm within fragment n° 238, which is both a *model* and a *performance of Transzendentalpoesie* itself, or to address the contradictions that arise. Suffice to say that Fichte’s insights, as well as Schlegel’s aesthetic appropriation thereof, reached the Dresden-based painter Caspar David Friedrich, who was an industrious reader of perspective treatises.³⁶ His art is, to some extent, a mimetic extension of *Transzendentalpoesie*, now couched in pictorial terms. As such, it seeks to perform “republican” space with and for the attentive viewer. Given Friedrich’s involvement with perspective treatises, there is sufficient evidence to demonstrate that his politics compelled him to reconsider pictorial space as a vector of social change.

35. The original terms are “das Produzierende” and “das Produkt.” See Friedrich Schlegel, *Kritische Friedrich-Schlegel-Ausgabe*, vol. 2, hrsg. von Ernst Behler unter Mitwirkung von Jean-Jacques Anstett und Hans Eichner, Padeborn, Munich and Vienna, Verlag Ferdinand Schöningh, p. 204.

36. This fact has largely escaped art-historical attention. It remains to be demonstrated that Friedrich’s pictorial devices, such as the *Rückenfigur*, are partly motivated by a reflection on the pragmatic issues I have addressed here. In particular, Friedrich’s work instrumentalizes Johann Henrich Lambert’s *J.H. Lamberts freye Perspective, oder Anweisung, jeden perspektivischen Aufriß von freyen Stücken und ohne Grundriß zu verfertigen, zweyte Auflage, mit Anmerkungen und Zusätzen vermehrt*, Zürich, bey Orell, Gebner, Fueßlin und Compagnie, 1774. The second (expanded) edition of the *Freye Perspective* is of capital importance for Friedrich studies. Not only does Lambert append what is one of the first German-language *histories of perspective* (all the examples I have analyzed here are mentioned in the 1774 edition), but more interestingly, Friedrich made explicit use of Lambert’s treatise when conceiving his 1805-1806 sepia diptych *View from the Artist’s Studio, Left Window, Right Window* (Vienna, Österreichische Galerie im Belvedere; Inv.-Nr. 1850, 1849)—a work that epitomizes the painter’s attempt to address the viewer as both producer and witness of a new, intersubjective form of space. Structurally speaking, this work is the genesis of the larger *Rückenfigur* canvases. Arguably, the development of Friedrich’s pictorial devices dialogues with Lambert’s treatise in fundamental ways, as the artist quotes Lambert’s image of two mirrors with differing angles of incidence (Lambert’s fig. 56), as well as his motif of a room with two rear windows and a continuous horizon line. This motif is in fact one of Lambert’s prime examples for the teaching of perspectival space (see Lambert’s image: Tab. III, fig. XIII).

Friedrich, Fichte, and the Jena romantics were highly critical of the *structure* of French art. From the romantic vantage point, although the French had instigated a social and political revolution unlike any before it, the framework of French art remained well within the conservative paradigm of the *Ancien Régime*. In this light, Friedrich's "republicanism" underpins his critique of the perspectival paradigm—that is, his critique of the classical age's unacknowledged beholder. As of 1806, the year in which he completed the diptych *View from the Artist's Studio, Left Window, Right Window*, Friedrich's concerns turned to the problem of intersubjective space. Although art historians have simply failed to notice the extent to which Friedrich's art constantly dialogues with the perspective treatise, all the major elements of the 1806 diptych, which lays the ground for Friedrich's later *Rückenfiguren* canvases, stem from illustrations contained in identifiable and widely circulated treatises.

184

The classical age's pragmatic unconscious is arguably the ground upon which Friedrich's pictorial *dispositifs* develop. In this light, Friedrich's paintings can be regarded as performative instruments that are *about* the (political) agency of the beholders who use them. Such paintings, moreover, were conceived precisely in highly heated political moments, such as the *retour à l'ordre* following the Wars of Liberation. His famed *Rückenfigur* entitled *Wanderer Above a Sea of Fog* (circa 1818; Hamburg, Kunsthalle) is a case in point.³⁷ In all probability it depicts a fallen hero of the wars of Liberation (and as such, it was devised as a commemorative "portrait"). Importantly though, the *function* of this image, as history painting, is to enact history with and for the attentive viewer.³⁸ For Friedrich, it is a discourse on political freedom couched in what was regarded as the visual language of that very freedom. Pictorial space and the constitution

37. The *Rückenfigur* was not developed as a rhetorical device as some art historians would have it, but as a pragmatic *dispositif* that addresses the types of problems I have been exploring in the context of the perspective treatise.

38. My approach differs from leading Friedrich scholar Joseph Leo Koerner's in many respects. Whereas Koerner tends to emphasize the irretrievably lost sense of time Friedrich's works foster (and thus the historical gap between artist and viewer), I contend that as history painting, Friedrich's paintings are *indexes* of their present beholders (they are not site-specific but "time-specific"). By providing an alternative genealogy (Fichte/Schlegel/Hardenberg/Friedrich), my approach addresses the pragmatic dynamics of romanticism as such. As a result, in Friedrich's hands history painting becomes a "pragmatic history" of present viewer, to use an expression coined by Fichte, who regarded his own philosophical work as "*eine pragmatische Geschichte des menschlichen Geistes*." (Fichte, 1997, p. 141).

of a “republican” community go hand in hand in this process of social transformation by means of painted images. Future research may well show that as self-referential, performative devices, such romantic works are constructed on the very site of the failure of perspective: the place in which *saying and doing are part and parcel of the same operation*. To modern ears such a turn of phrase may sound overly Austinian. In actual fact, it is highly “romantic” as it is a quote from Friedrich von Hardenberg (“Novalis”), who incidentally coined a term to designate that “operation”: *romantisieren*.³⁹

39. Quoted in Jean-Marie Schaeffer, *La naissance de la littérature. La théorie esthétique du romantisme allemand*, Paris, Presses de l'École normale supérieure, coll. “Arts et langage”, 1983, p. 21.

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