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A WINDOW ON PANOFSKY'S GOTHIC ARCHITECTURE AND SCHOLASTICISM

If there is one work that has served to frame interdisciplinarity for generations of scholars, it is Erwin Panofsky's *Gothic Architecture and Scholasticism*.¹ Through Panofsky's analyses, we learn that a medieval structure can share in the same kind of organizational logic as a contemporaneous scholarly argument's division into chapters, sections, and subsections. Panofsky examines church buildings of the 12th and 13th centuries within a 100-mile radius of Paris in terms intended to demonstrate that they share the same "distinctness and deductive cogency" as arguments advanced by scholars at the university of Paris.² His is an important contribution to the understudied field of architectural iconography.³

But it is not only the argument Panofsky advances in *Gothic Architecture and Scholasticism*, but his method, that has garnered attention. In passages that display his full rhetorical skill, Panofsky sought to describe the "mental habit" that fostered a common approach to form by theologians and builders. He characterizes the impact of

scholasticism as being "more concrete than a mere 'parallelism' and yet more general than those individual [...] 'influences,'" which he calls "a genuine cause and effect relation [that] [...] comes about by diffusion."⁴ Because of his methodological transparency, his reader may root for his point of view, even if the evidence underwhelms.

In this short paper, I will engage with Panofsky's foundational text using the lens of a study I am preparing on early Gothic rose windows. I seek to establish what was important about Panofsky's work, what he might have developed further, and in some cases did develop in other writings, and what kinds of current thinking did not figure in his argument.

THE TEXT & ITS IMPACT

Initial reviews of *Gothic Architecture and Scholasticism* by Panofsky's peers Harry Bober, Jean Bony, and Robert Branner were admiring, and praised the volume's "humanistic breadth," and "intellectual elegance." Yet they also expressed reservations about Panofsky's method, chronological parameters, and the slim evidence he adduced for actual contacts between scholars and makers of Gothic buildings. Bober spoke of the danger "of forcing the interpretation of form, and forcing the pattern of historical development."⁵ Bony observed that Panofsky focused on developments of the 13th century, rather than the entire Gothic period he designated (c.1130-1270).⁶ And Branner not only asked where the building that embodies the architectural solutions Panofsky identified might be

¹ E. PANOFSKY, *Gothic Architecture and Scholasticism: An Inquiry into the Analogy of the Arts, Philosophy, and Religion in the Middle Ages* was originally published in 1951 by the Archabbey Press in Latrobe, Pennsylvania. However, all citations within will be to my well-worn paperback copy, which is a Meridian Book (New York, 1971).

² E. PANOFSKY, *Gothic*, pp. 49–50 (as in note 1).

³ For architectural iconography, besides H. SEDLMAYR, *Die Entstehung der Kathedrale* (Zurich, 1950), which Peter Kurmann incisively discussed at the Iconologies conference in Krakow, where this paper originated, see R. KRAUTHEIMER, 'Introduction to an 'Iconography of Medieval Architecture,' first published in 1942 and reprinted with Postscript in idem, *Studies in Early Christian, Medieval, and Renaissance Art*, New York, 1969), pp. 115–150; P. CROSSLEY, 'Medieval Architecture and Meaning: the Limits of Iconography,' *The Burlington Magazine*, 130, 1988, pp. 116–121.

⁴ E. PANOFSKY, *Gothic*, pp. 20–21 (as in note 1).

⁵ H. BOBER, 'Review of Panofsky, *Gothic Architecture and Scholasticism*', *The Art Bulletin*, 35, 1953, no. 4, pp. 310–312 at p. 312.

⁶ J. BONY, 'Review of Panofsky, *Gothic Architecture and Scholasticism*', *The Burlington Magazine*, 95, 1953, pp. 111–112 at p. 112.



found, but also answered his own question, stating that it was “a monument that never actually existed [...] [one that was] never, in fact, achieved.”⁷ In the book’s early reviews, then, there was ample airing of sticking points in Panofsky’s bold undertaking.

It is certainly also the case, as later critics established, that Panofsky’s analyses are better understood as an extended analogy between scholastic argumentation and its reflection in architecture, than as a study that grapples with questions of agency.⁸ *Gothic Architecture and Scholasticism* is not as broadly based as it purports to be. In passages at approximately mid-point in his slim volume, Panofsky’s discussion shifts to an imagining of what “a man imbued with the Scholastic habit” would make of the new architecture and how he might “re-experience” familiar processes of cogitation.⁹ This passage lays bare Panofsky’s focus on the elite viewer; it is this *litteratus* who could infer “the organization of the whole system from the cross section of one pier.”¹⁰

Why then, have scholars continuously returned to Panofsky, either to argue against the claims advanced in *Gothic Architecture and Scholasticism* or to associate themselves with his endeavor? Bony, for one, was convinced by Panofsky’s visual analyses, and drew attention to his approximately fifteen pages that establish the guiding principles of divisibility and homology in elegant readings of select Gothic monuments.¹¹ Stephen Murray has suggested that scholars return to synthetic narratives like Panofsky’s because the field of medieval architecture is now dominated by monographic studies.¹² In addition, because Panofsky had also translated Abbot Suger’s writings about Saint-Denis only five years before,¹³ scholars could engage with *Gothic Architecture and Scholasticism* as well as *Abbot Suger* in a single discussion of Panofsky’s Gothic.¹⁴

Indeed, *Gothic Architecture and Scholasticism*, an essay-length work of little over 100 pages, has been made to do some heavy lifting as a “master narrative” of Gothic architecture.¹⁵ This considerably overstates the nature of Panofsky’s intervention, which is conducted with the give and take of a collegial thought experiment.¹⁶ He himself concedes that his comparisons might seem like nothing more than a presentation of a “natural evolution after the Hegelian scheme of ‘thesis, antithesis, synthesis.’”¹⁷ Moreover, he acknowledges that Bourges Cathedral constitutes an exception – and a major one at that – to the Gothic monuments he examines.¹⁸ And finally, in his conclusion, he freely admits that he can adduce only “one scrap of evidence” that 13th-century architects thought in scholastic terms, namely Villard de Honnecourt’s ground plan with a later inscription stating that its form was arrived at “*inter se disputando*,” or in a disputation.¹⁹ Panofsky’s argument, which makes note of problems, and his conclusion, which is couched in speculative language, therefore scarcely resemble the overdetermined Gothic structure he has been accused of constructing. Whatever its deficiencies may be, the influence and authority of Panofsky’s study are undeniable, and it has offered scholars a purchase of Gothic

⁷ R. BRANNER, ‘Books’, *Journal of the Society of Architectural Historians*, 13, 1954, no. 1, pp. 28–31 at p. 31.

⁸ See CH.M. RADDING, W.W. CLARK, *Medieval Architecture, Medieval Learning: Builders and Masters in the Age of Romanesque and Gothic*, New Haven, 1992, esp. pp. 1–8, 57–76, and 150.

⁹ E. PANOFSKY, *Gothic*, pp. 58–59 (as in note 1).

¹⁰ Ibidem, p. 51. Also see C. RUDOLPH, ‘Inventing the Exegetical Stained-Glass Window: Suger, Hugh, and a New Elite Art’, *Art Bulletin*, 93, 2011, pp. 399–422.

¹¹ J. BONY, ‘Review’, p. 112 (as in note 6). Although Bony does not specify which pages he is talking about, these must correspond to the case studies Panofsky undertakes on pp. 70–86.

¹² S. MURRAY, *Plotting Gothic*, Chicago, 2014, pp. 1–2. The problem of the dearth of broader treatments of medieval architecture was already raised by R. BRANNER, ‘Books’, p. 28 (as in note 7), who was writing in 1954.

¹³ E. PANOFSKY, ed. and trans., *Abbot Suger on the Abbey Church of St.-Denis and its Treasures*, originally published in 1946, with a second ed. by G. Panofsky-Soergel (Princeton, 1979).

¹⁴ H. BOBER, ‘Review of Panofsky’, p. 310 (as in note 5), referred to it as a companion volume for *Gothic Architecture and Scholasticism*. Among works engaging with both works of Panofsky, see:

S. GARDNER, ‘Two Campaigns in Suger’s Western Block at St.-Denis’, *The Art Bulletin*, 66, 1984, pp. 574–587; P. KIDSON, ‘Panofsky, Suger and Saint-Denis’, *Journal of the Warburg and Courtauld Institutes*, 50, 1987, pp. 1–17; L.R. HOEY, ‘A Critical Account of the State of Some Questions Concerning Suger’s Architecture at Saint-Denis’, *AVISTA Forum Journal*, 12, 1999, pp. 12–19; S. MURRAY, *Plotting Gothic*, Chapter 3, pp. 73–95 (as in note 12). For an elegant historiography that borrows the scholastic structure of *Gothic Architecture and Scholasticism*, see M.T. DAVIS, ‘Sic et Non: Recent Trends in the Study of Gothic Ecclesiastical Architecture’, *Journal of the Society of Architectural Historians*, 58, 1999, no. 3, pp. 414–423.

¹⁵ S. MURRAY, *Plotting Gothic*, p. 2 (as in note 12).

¹⁶ See the insightful comments of K. MICHELS, ‘Pineapple and Mayonnaise – Why Not? European Art Historians Meet the New World’, in *The Art Historian: National Traditions and Institutional Practices*, ed. M.F. Zimmermann, Williamstown, MA, 2003, pp. 57–66 at 59 on European scholars’ inclination for a problem-based approach over the comprehensive surveys favored in American universities of the day.

¹⁷ E. PANOFSKY, *Gothic*, p. 86 (as in note 1).

¹⁸ Ibidem, p. 30 and n. 17. For key studies of Bourges, see J. BONY, *French Gothic Architecture of the 12th & 13th Centuries*, Berkeley, 1983, pp. 195–244, and M. TRACHTENBERG, ‘Suger’s Miracles, Branner’s Bourges: Reflections on ‘Gothic Architecture’ as Medieval Modernism’, *Gesta*, 39, 2000, no. 2, pp. 183–205.

¹⁹ E. PANOFSKY, *Gothic*, p. 87 (as in note 1). Also see R. BRANNER, ‘A Note on Gothic Architects and Scholars’, *The Burlington Magazine*, 99, 1957, pp. 372–375. For Villard de Honnecourt’s folio, see C.F. BARNES, JR., *The Portfolio of Villard de Honnecourt: a New Critical Edition and Color Facsimile*, Farnum, 2009, esp. Folio 151, pp. 95–96.



1. West façade of Saint-Denis, consecrated 1140, view taken following its 2012–2015 restoration. Reproduced courtesy of Wikimedia Commons: Thomas Clouet.

architecture on which they could build. This study is no exception.

VIDETUR QUOD: THE ROSE WINDOW

At the core of *Gothic Architecture and Scholasticism* is a series of architectural case studies.²⁰ These test cases involve decisions such as the location of the rose window on the west frontispiece, the organization of the wall beneath the clerestory, and the design of compound piers, all staples of modern architectural analysis. Solutions are arrived at as in a scholastic argument, through the comparison and eventual alignment of different sets of authorities, or in this case, one design choice with another.

We can see how these choices play out in Panofsky's example of the placement of the rose window in the west façade.²¹ He turns first to the earliest identified rose window in the west façade of the royal abbey of Saint-Denis



2. Exterior detail of the western rose window of Saint-Denis, completed 1140, restored 1840 and 2012–2015. Photograph by the author.

of 1140,²² an aperture just under 4 meters in diameter, the dimensions of which have been established by the recent cleaning of the façade which confirmed the presence of a 12th-century sculptural border [Fig. 1].²³ Panofsky observes that when the diameter of a rose window remains comparatively small, as here, it creates an “un-Gothic” space of wall around the aperture [Fig. 2].²⁴ The awkwardness of the rose window's placement at Saint-Denis is underscored by the narrow and dissimilar arches with polychrome stonework to either side of the aperture, which date to the 12th century, and by the medallions of the Four Evangelists, which were added in the 19th century.²⁵

In contrast, the nearly 10-meter in diameter western rose of Notre-Dame of Paris of c. 1220 is more cohesively anchored into the tripartite geometries of its façade [Fig. 3]. However, enunciating a key concept of his study, that the decorative program of a Gothic portal must reflect the logic of its structure, Panofsky points out that the triple division of the façade of Notre-Dame does not correspond to the interior organization of the building, which has five aisles. According to him, it was not until the construction of Saint-Nicaise of Reims in the mid-13th

²² Following the understanding of his day, *ibidem*, p. 70, suggests that the rose of Saint-Etienne of Beauvais might have been earlier than Saint-Denis. But now see A. HENWOOD-REVERDOT, *Saint-Etienne de Beauvais: Histoire et Architecture*, Beauvais, 1982, pp. 90–96, and 113–114, who established that its rose cannot be earlier than c.1150. For more on the Beauvais rose, see *ibidem*, pp. 123–132.

²³ On the recent cleaning of the façade of Saint-Denis, see A. ERLANDE-BRANDENBURG, CH. CORVISIER, D. CERCLET, 2012–2015: *La basilique Saint-Denis, Restauration de la façade occidentale*, Paris, 2015, esp. pp. 56–57.

²⁴ E. PANOFSKY, *Gothic*, p. 71 (as in note 1).

²⁵ See E. CARSON PASTAN, “Familiar as the Rose in Spring”: The Circular Window in the West Façade of Saint-Denis, *Viator*, 49, 2018, no. 1, pp. 99–152 at pp. 113–118.

²⁰ E. PANOFSKY, *Gothic*, pp. 70–86 (as in note 1).

²¹ *Ibidem*, pp. 70–74.



3. View of Notre-Dame of Paris from the west before the fire of 2019, with its rose window of c. 1220. Wikimedia Commons: Peter Haas, CC BY-SA 3.0.

century that a “final solution” was reached [Fig. 4], although this is a structure that no longer exists. Here, the rose window (probably about 12 meters in diameter) was inscribed within the pointed arch of a huge window wall composition, thereby mirroring the cross section of the nave, and allowing the placement of the rose to become both more elastic and more harmonious. As articulated by Panofsky, the problem of the rose was essentially the design issue of how to incorporate a round form into a rectilinear setting, though he cast the undertaking in scholastic language as “a genuine reconciliation of a *vide-tur quod* with a *sed contra*.”²⁶

Subsequent studies, including Panofsky’s own, have contributed greatly to our understanding of rose windows. But for a moment I want to appreciate what Panofsky accomplished in *Gothic Architecture and Scholasticism*. His case studies allow the reader to think holistically about a building, and to understand connections between design choices and structure as a contingent process that reflects the “visual logic” of the edifice.²⁷ Prior scholarship on rose windows had approached them on a mac-

ro level, as the image of the cosmos,²⁸ or as elements of architectural engineering,²⁹ or had focused on the individual panes of glass as if through a microscope in order to investigate their style and iconography.³⁰ In contrast, Panofsky’s inquiry encourages his reader to imagine how a rose window mirrored spatial relationships throughout the building and thus participated in the actual space of the site.

QUI LOCUS QUAM SECRETUS: SUGER AND THE WINDOW

In other publications, Panofsky himself undertook studies that could have informed his discussion of the rose window in *Gothic Architecture and Scholasticism*. For example, his translation of Abbot Suger’s texts about the rebuilding of Saint-Denis made available primary evidence for the importance of stained glass as a transmitter of iconographic themes, through Suger’s detailed description of the subjects of several windows of the abbey choir.³¹ It is thus curious that Panofsky omits any discussion of the importance of the glazing that filled rose windows, although he does gesture elsewhere in *Gothic Architecture and Scholasticism* to the role played by the representational arts of sculpture and painting.³²

This is all the more curious because Panofsky was highly attuned to the iconographic contributions of the new medium of his own day, film, and compared the collaborative effort that called a motion picture into being to that of creating a medieval cathedral.³³ This extended and

²⁸ H. SEDLMAYR, *Die Entstehung der Kathedrale*, esp. pp. 144–148 and 296–299 (as in note 3).

²⁹ E.-E. VIOLLET-LE-DUC, ‘Rose’, in idem, *Dictionnaire raisonné de l’architecture française du XI^e au XVI^e siècle*, vol. 8, Paris, 1869, pp. 38–69.

³⁰ See Y. DELAPORTE, *Les vitraux de la cathédrale de Chartres: Histoire et description*, Chartres, 1926, pp. 519–521, and the study based on the west rose’s recent conservation: C. LAUTIER, ‘The West Rose of the Cathedral of Chartres’, in *Arts of the Medieval Cathedrals: Studies on Architecture, Stained Glass and Sculpture in Honor of Anne Prache*, eds. K. Nolan, D. Sandron Farnum, 2015, pp. 121–33.

³¹ E. PANOFSKY, *Abbot Suger*, pp. 72–76 (as in note 13). Because Panofsky only undertook a partial translation, scholars working intensively on Suger’s writings now generally consult F. GASPARRI, ed. and trans., *Suger, Oeuvres*, 2 vols., Paris, 1996, 2001, and A. SPEER, G. BINDING, ed. and trans., *Abt Suger von Saint-Denis, Ausgewählte Schriften: Ordinatio, De consecratione, and De administratione*, Darmstadt, 2000.

³² E. PANOFSKY, *Gothic*, pp. 38–42 (as in note 1).

³³ Idem, ‘Style and Medium in the Motion Pictures’, in idem, *Three Essays on Style*, ed. I. Lavin, Cambridge, Mass., 1995, pp. 91–128. Originally written in 1936, this important essay has been expanded and anthologized several times.

²⁶ E. PANOFSKY, *Gothic*, p. 74 (as in note 1); R. BRANNER, ‘Books’, p. 30 (as in note 7), observed that Panofsky articulates his own arguments in a very casual way in order to better offset the scholastic mode of reasoning he sought to highlight.

²⁷ E. PANOFSKY, *Gothic*, pp. 52–60 (as in note 1).

lesser-known analogy of Panofsky's, which specifically mentions glass painters, is worth quoting in full:

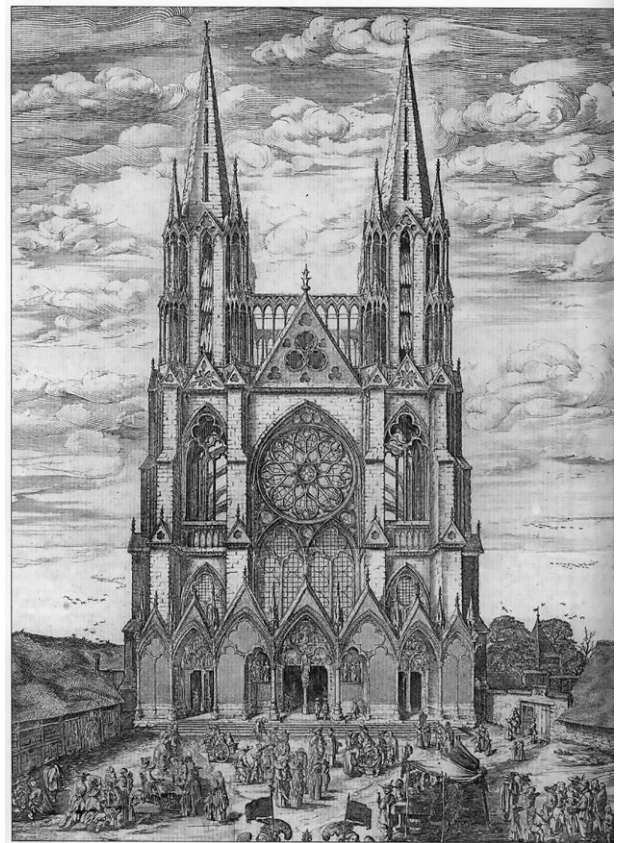
It might be said that a film, called into being by a co-operative effort in which all contributions have the same degree of permanence, is the nearest modern equivalent of a medieval cathedral; the role of the producer corresponding, more or less, to that of the bishop or archbishop; that of the director to that of the architect in chief; that of the scenario writers to that of the scholastic advisers establishing the iconographical program; and that of the actors, camera men, cutters, sound men, make-up men and the divers technicians to that of those whose work provided the physical entity of the finished product, from the sculptors, glass painters, bronze casters, carpenters and skilled masons down to the quarry men and woodsmen. And if you speak to any one of these collaborators he will tell you, with perfect *bona fides*, that his is really the most important job which is quite true to the extent that it is indispensable.³⁴

His conclusion, emphasizing the importance of the community of workmen and the contributions of the many parts of the endeavor to the effect of the whole, works well with the themes he enunciates in *Gothic Architecture and Scholasticism*.

I have argued elsewhere that Suger's writings about the rebuilding of Saint-Denis provide compelling evidence for the devotional importance of the upper chapel located immediately behind the western rose window of the abbey as it was conceived in 1140.³⁵ Although the rose window of Saint-Denis no longer retains any stained glass, and likely no longer did by the early 17th century when the medieval aperture was turned into a clock face [Fig. 2], we understand the significance and centrality of this upper chapel because Suger describes the relics, ceremonial processions, and liturgies located there in detail.³⁶ Looking at the west rose from within the upper chapel, even in its current state of abandonment with the old winding mechanism for a clock partially blocking the lower rim of the aperture [Fig. 5], it is not possible that anyone within the chapel, as Suger's description implies he was, could fail to notice this window. Though it is unmentioned by Suger, the rose window must have contributed to Suger's sense of already dwelling in heaven, as he articulates in this oft-quoted yet rarely contextualized passage:

Qui locus quam secretalis, quam devotus, quam habilis divina celebrantibus, qui ibidem Deo deservunt, ac si jam in parte dum sacrificant eorum in coelis sit habitatio, cognorunt.

How secluded this place is, how hallowed, how suitable for the celebration of the divine offices. Those who serve



4. View of the west façade of Saint-Nicaise of Reims from the mid-13th century, engraving made by Nicolas Son in 1625. Bibliothèque municipale de Reims. Wikimedia Commons: Nicolas_de_Son — Bibliothèque municipale de Reims.

God here know that while they are sacrificing, it is almost as if they were already dwelling in Heaven.³⁷

Suger urges an anagogical role for the setting, but tellingly places the liturgy at the center of that process of transference from this realm to the heavenly one and extends this ability to the clergy who celebrate the divine office.³⁸ Yet for all the times that this passage has been invoked, the connection between Suger's words and the actual physical setting of the chapel of St. Romanus and the rose window within it that gave rise to Suger's celebration of the space has rarely been made.³⁹

³⁷ My translation, adapting E. PANOFSKY, *Abbot Suger*, pp. 44–45 (as in note 13); F. GASPARRI, *Oeuvres* I: 115 (as in note 31); A. SPEER, G. BINDING, *Abt Suger*, pp. 320–321 (as in note 31).

³⁸ For the importance of the liturgy to Suger, see Andreas Speer's many publications on the theme, including idem, 'Is There a Theology of the Gothic Cathedral? A Re-reading of Abbot Suger's Writings on the Abbey Church of St.-Denis', in *The Mind's Eye: Art and Theological Argument in the Middle Ages*, eds. J.F. Hamburger, A.-M. Bouché, Princeton, 2006, pp. 65–83.

³⁹ For example, see S. MURRAY, *Plotting Gothic*, pp. 88 and 191 (as in note 12); S. GARDNER, 'Two Campaigns', p. 587 (as in note 14).

³⁴ Idem, 'Style and Medium', pp. 29–30 (as in note 33).

³⁵ See E. PASTAN, 'Familiar as the Rose in Spring', (as in note 25).

³⁶ Ibidem, pp. 104–113.



5. Interior view of the central upper western chapel dedicated to St. Romanus at Saint-Denis, looking west towards its rose window. Reproduced courtesy of Stephen Murray © Mapping Gothic France, The Trustees of Columbia University, Media Center for Art History, Department of Art History and Archaeology.

INTER SE LABORANDO: ART AND SCIENCE

Examining Saint-Denis through Abbot Suger's testimony is one way that Panofsky's own scholarship could have enriched his analyses of the rose window, and there are others. In his essay of 1938 on "The History of Art as a Humanistic Discipline,"⁴⁰ Panofsky waxed eloquent about the symbiotic relationship between science and the humanities, but in *Gothic Architecture and Scholasticism* he forsakes an obvious application of the relationship, the engineering that lies behind rose windows.⁴¹ Viollet-le-Duc had argued that only with careful calculations about stresses and counter stresses could a large hole be opened into the wall and withstand wind shear, or the increase

in wind speeds in the upper stories of a structure where the rose window is located.⁴² Bringing the connection between science and the humanities into the present, which is an important theme of Panofsky's, Viollet-le-Duc pointed out that when a modern engineer takes the effects of wind loading into account in designing a bridge, he returns to those principles established six centuries earlier in designing a rose window.⁴³ Sadly, Panofsky does not actually cite the work of Viollet-le-Duc's that would have underscored this technical aspect of the rose, but only those of the Parisian architect and restorer's critics such as Pol Abraham.⁴⁴

Full-scale designs incised into some two dozen Gothic sites – including the cathedrals of Bourges, Clermont-Ferrand, Soissons, and Byland Abbey – attest to another way that art and science work together to achieve both the viability and visibility of large rose windows.⁴⁵ These incised designs that have been discovered are located close to the site of their intended installation, such as crypts, tower floors, and terraces. These full-scale designs must have helped to model the creation of rose windows and other large architectonic compositions involving multiple parts before the builders hazarded installation. In addition, such full-scale designs facilitated the manufacture of standardized templates during production, furnished a check on the accuracy of stones cut, allowed for the assembly of glass panels prior to hoisting them into the aperture, and provided an archive of key building elements.⁴⁶ In short, such tracings serve as a kind of "inter

⁴² E.E. VIOLLET-LE-DUC, 'Rose', p. 51 (as in note 29). For more on the engineering of rose windows, see J. HEYMAN, 'Rose Windows', in *Essays on the History of Mechanics: in Memory of Clifford Ambrose Truesdell*, eds. A. Becchi, M. Corradi, F. Face, O. Pedemonte, Berlin, 2003, pp. 165–179; E.M. BERETZ, 'Adjustments for the innovation: installing a rose window into the north façade of Saint-Etienne, Beauvais', *AVISTA Forum Journal*, 14, 2004, pp. 17–24; and R. SMITH, 'Flowers of Fragility: A Discussion of the Structure and Design of Gothic Rose Windows', *AVISTA Forum Journal*, 23, 2013, pp. 52–60.

⁴³ E.-E. VIOLLET-LE-DUC, 'Rose', p. 52 (as in note 29).

⁴⁴ E. PANOFSKY, *Gothic*, p. 101, notes 33–34 (as in note 1).

⁴⁵ See P. COWEN, *The Rose Window: Splendor and Symbol*, London, 2005, pp. 258–259 with images from Byland and Bourges. For more on these full-scale designs, see W. SCHÖLLER, 'Ritzzeichnungen: Ein Beitrag zur Geschichte der Architekturzeichnung im Mittelalter', *Architectura*, 19, 1989, pp. 31–61; and idem, 'Le dessin d'architecture à l'époque gothique', in *Bâtisseurs des cathédrales gothiques*, ed. R. Recht, Strasbourg, 1989, pp. 227–235; R.W. SCHELLER, *Exemplum: Model-Book Drawings and the Practice of Artistic Transmission in the Middle Ages (ca. 900–1470)*, trans. M. Hoyle, Amsterdam, 1995.

⁴⁶ M.T. DAVIS, 'On the Drawing Board: Plans of the Clermont Terrace', in *Ad Quadratum: The Practical Application of Geometry in Medieval Architecture*, ed. N. Wu, Aldershot, 2002, pp. 183–204, esp. pp. 185–186.

⁴⁰ E. PANOFSKY, 'The History of Art as a Humanistic Discipline', reprint in idem, *Meaning in the Visual Arts, Papers in and on Art History*, Garden City, NY, 1950, pp. 1–25.

⁴¹ See R.O. BORK, 'Art, science, and evolution', in *Making Art History: A Changing Discipline and its Institutions*, ed. E.C. Mansfield, New York, 2007, pp. 185–209, esp. 195.

se laborando" to coordinate the human labor of these tall, multimedia structures.

MATERIALITY

Current scholarship has pursued the importance of materials, including the translucency and charisma of the colored glass panes that fill the window and serve as a conduit between interior and exterior. Indeed, it is remarkable how often scholars had discussed the importance of light in abstract terms, while failing to discuss the actual medieval stained-glass windows through which light entered the building.⁴⁷ This approach, sometimes known as an iconology of materials, establishes that physical matter has a symbolic signification that enhances our understanding of the work of art.⁴⁸

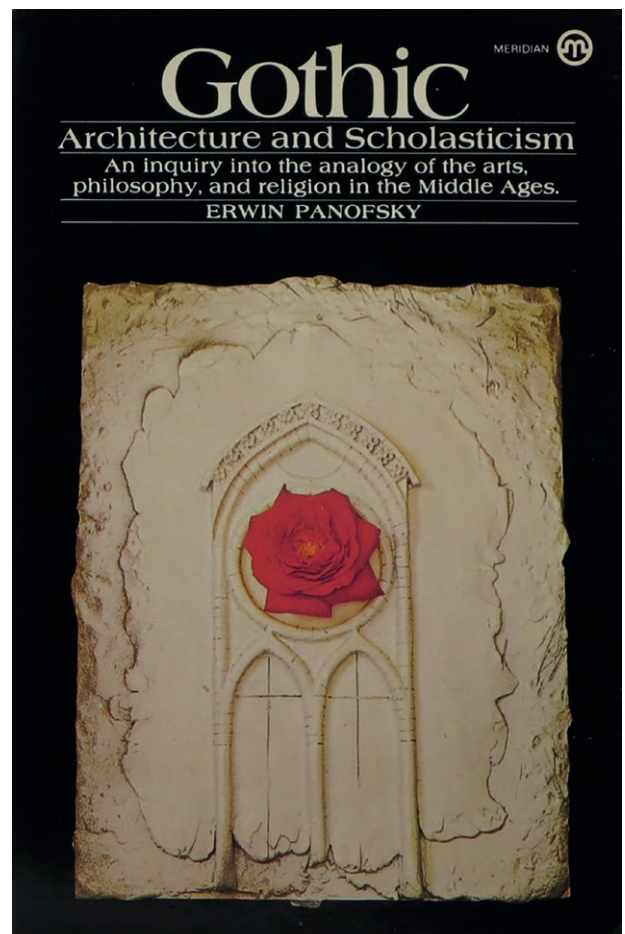
For scholars of stained glass it is a familiar mode of thinking, attested in the well-known patristic metaphor (often attributed to Bernard of Clairvaux), that even as light passes through a glass without breaking it, so can we understand the miracle of the birth of Christ, whereby Mary was penetrated by the Word of God and yet remained a virgin.⁴⁹ Building on such studies, Herbert Kessler has argued that the transformation of the base material of sand into the translucent imagery of stained glass effects a metamorphosis that parallels Christian eschatological thinking.⁵⁰ Understanding the windows' materiality

⁴⁷ M.W. COTHREN, 'Some Personal Reflections on American Modern and Postmodern Historiographies of Gothic Stained Glass', in *From Minor to Major: The Minor Arts in Medieval Art History*, ed. C. Hourihane, Princeton, 2012 (= The Index of Christian Art Occasional Papers 14), pp. 255–270 at pp. 255–256.

⁴⁸ See C. WALKER BYNUM, *Christian Materiality, An Essay on Religion in Late Medieval Europe*, New York, 2011, esp. pp. 15–36. Important literature on the materiality of stained glass includes: L. GRODECKI, 'Fonctions Spirituelles', in M. AUBERT et al., *Le Vitrail français*, Paris, 1958, pp. 39–54; J.T. SCHNAPP, 'Crystalline Bodies: Fragments of a Cultural History of Glass', *West 86th*, 20, 2013, no. 2, pp. 173–194; W. BAËUS, 'A Matter of Matter: Transparent – Translucent – Diaphanum in the Medium of Stained Glass', in *Investigations in Medieval Stained Glass: Medium, Methods, Expressions*, eds. E. Carson Pastan, B. Kurmann-Schwarz, Leiden, 2019 (= Reading Medieval Sources series), pp. 109–118.

⁴⁹ L. GRODECKI, 'Fonctions', p. 40 and n. 18 (as in note 48). For the textual development of the metaphor, which has been traced to the church father Athanasius, see Y. HIRN, 'La verrière symbol de la maternité virginale', *Neuphilologische Mitteilungen*, 29, 1928, pp. 33–39; J. DAGENS, 'La métaphore de la verrière', *Revue d'Ascétique et de Mystique*, 25, 1949, pp. 524–532; M. MEISS, 'Light as Form and Symbol in Some Fifteenth-Century Paintings', *The Art Bulletin*, 27, 1945, no. 3, pp. 175–181; F. DELL'ACQUA, 'Between Nature and Artifice: "Transparent Streams of New Liquid,"' *RES: Anthropology and Aesthetics*, 53/54, 2008, pp. 93–103 at pp. 100–103.

⁵⁰ H.L. KESSLER, "They preach not by speaking out loud but by signifying": Vitreous Arts as Typology', *Gesta*, 51, 2012, no. 1, pp. 55–70 at p. 61.



6. Cover of Erwin Panofsky, *Gothic Architecture and Scholasticism* (Meridian 1971 edition).

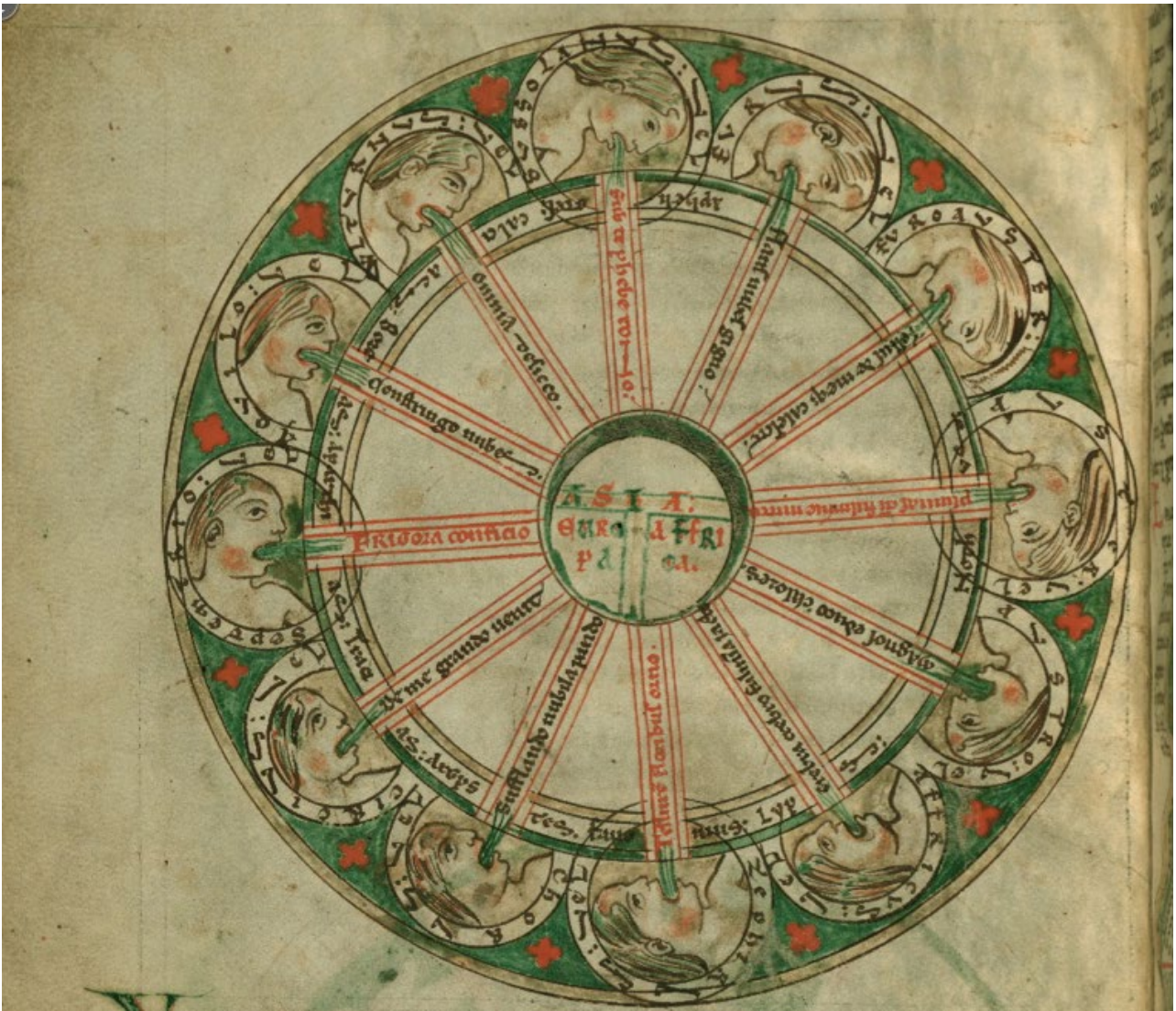
contributes to our appreciation of why medieval builders undertook such costly and potentially dangerous airborne compositions as rose windows.

THE ROTA WINDOW

In closing, I turn to the terminology by which we refer to rose windows.⁵¹ Circular windows of the 12th century and later have three distinguishing characteristics: first, they are large, at 4 to 13 meters in diameter; second, the traceries of these windows are grooved in order to hold stained glass;⁵² and finally, they appear in prominent locations on

⁵¹ Earlier studies established that circular apertures existed in structures going back to the Babylonians. See H.J. Dow, 'The Rose Window', *The Journal of the Warburg and Courtauld Institutes*, 20, 1957, pp. 248–297, esp. pp. 249–253, and narrowing the timeframe considerably, see P. COWEN, *The Rose Window*, pp. 41–51 (as in note 45).

⁵² On window tracery and methods of fixing of glass into the window aperture, see M.H. CAVINESS, *Stained Glass Windows*, Turnhout, 1996, pp. 56–57; and S. BROWN, 'The Medieval Glazier at Work', in *Investigations in Medieval Stained Glass*, pp. 9–22 at



7. Detail of the Wind rose from *The Walters Cosmography*, c. 1190–1200, Baltimore, Walters Art Museum, MS W.73, fol. Iv. Reproduced courtesy of The Digital Walters Creative Commons Attribution-ShareAlike.

the terminal arms of the building. The term “rose window” does not derive from floral imagery, as its current appellation or one of the popular covers of *Gothic Architecture and Scholasticism* suggests [Fig. 6], but rather is a deformation of the Latin word “rota,” or wheel.⁵³ “Rose

window” was not used before the 15th century, and likely originated as a vernacular version of the Latin word *rota*, such as the Old French *roe*, or *roes* in the plural. The term “rota window” encompasses both the shape of what we now call a rose window and the traceries to secure the glass into the aperture.⁵⁴

In the Middle Ages the most common association with the *rota* was the wheel-shaped diagram of the kind shown here depicting the winds from the *Cosmography* at the Walters Art Museum [Fig. 7]. As Michael Evans summarized, “in the Middle Ages [the *rota*] would have been as

pp. 19–20 (as in note 48). Also see J. HILLSON, ‘Villard de Honnecourt and Bar Tracery: Reims Cathedral and Processes of Stylistic Transmission, ca. 1210–40’, *Gesta*, 59, 2020, pp. 169–202; and for the well-preserved tracery of a rose window, complete with its wrought-iron armature set into a wooden frame rebated into the stone, see C. LAUTIER, ‘The West Rose of the Cathedral of Chartres’ (as in n. 30).

⁵³ C. ENLART, *Manuel d’archéologie française: depuis les temps mérovingiens jusqu’à la Renaissance*, 3rd ed., Paris, 1927, p. 329; discussed in H.J. DOW, ‘Rose-Window’, pp. 268–269 (as in note 51); R. SUCKALE, ‘Thesen zum Bedeutungswandel der gotischen Fensterrose’, in *Bauwerk und Bildwerk im Hochmittelalter*:

Anschauliche Beiträge zur Kultur- und Sozialgeschichte, eds. K. Clausberg, D. Kimpel, H.-J. Kunst, R. Suckale, Giessen, 1981, pp. 259–294 at p. 264, n. 7.

⁵⁴ E. CARSON PASTAN, ‘Regarding the Early Rose Window’, in *Investigations in Medieval Stained Glass*, pp. 269–281 at pp. 273–275 (as in note 48).

familiar a part of the educated man's visual experience as the graph is of the modern reader's."⁵⁵ The *Walters Cosmography* is a typical monastic schoolbook of c. 1190–1200 which is probably English in origin, and at only 9 folios, excerpted from a larger volume.⁵⁶ Fully 18 of its 20 diagrams take the form of rotae, and besides the winds, these include: the signs of the Zodiac, planetary orbits, solstices and equinoxes, phases of the moon, climate zones, harmony of the elements, seasons and humors, movement of the tides, and a consanguinity chart indicating degrees of kinship that determine whether individuals related by blood may marry. The rota diagrams in much of this text might be imagined as a kind of stand-in for the cosmos, demonstrating the underlying order of the created universe, enunciated in the accompanying texts from Bede, Isidore of Seville, and Abbo of Fleury. However, the consanguinity chart on f. 9r also adopts this wheel-shaped format, underscoring that medieval authors used circular compositions for organizing all kinds of knowledge systems.⁵⁷ In addition to cosmology, medieval rotae also contain content drawn from the liturgy,⁵⁸ philosophy and the liberal arts, typology, and the virtues and vices.⁵⁹

⁵⁵ M. EVANS, 'The Geometry of the Mind', *Architectural Association Quarterly*, 12, 1980, no. 4, pp. 32–55 at 43. Evans also makes the point that although wheel diagrams were the most popular, they were one of several different types of medieval diagrams, which included trees, towers and ladders. On this point, also see J.E. MURDOCH, *Album of Science: Antiquity and the Middle Ages*, New York, 1984, esp. 15–84.

⁵⁶ See H. BOBER, 'An Illustrated Medieval School-Book of Bede's "De Natura Rerum"', *The Journal of the Walters Art Gallery*, 19/20, 1956–1957, pp. 64–97; M. HOLCOMB, *Pen and Parchment: Drawing in the Middle Ages*, [ex. cat., The Metropolitan Museum of Art, New York, June 2–August 23, 2009], New York–New Haven, 2009, cat. no. 28, pp. 105–107; K.A. SMITH in *The Digital Walters*: <http://thedigitalwalters.org/Data/WaltersManuscripts/html/W73/description> (accessed 28 April 2021); L. CLEAVER, 'On the Nature of Things: The Content and Purpose of Walters W.73 and Decorated Treatises on Natural Philosophy in the Twelfth Century', *Journal of the Walters Art Museum*, 68–69, 2010–2011, pp. 21–30.

⁵⁷ R. SUCKALE, 'Thesen', pp. 264–65 (as in note 53); and now beautifully developed in contributions to the anthology, *The Visualization of Knowledge in Medieval and Early Modern Europe*, eds. M. Kupfer, A.S. Cohen, J.H. Chajes, Turnhout, 2020.

⁵⁸ J. HAMBURGER, 'Haec Figura Demonstrat: Diagrams in an early-thirteenth century Parisian copy of Lothar de Segni's *De Mis-sarum Mysteryiis*', *Wiener Jahrbuch für Kunstgeschichte*, 58, 2009, pp. 7–76 at p. 9.

⁵⁹ This is by no means an exhaustive list. The examples named here are from the learned text that Herrad of Hohenbourg compiled near the end of the twelfth century for the nuns of her convent. See *The Hortus Deliciarum of Herrad of Hohenbourg*, ed. R. Green et al., 2 vols., London, 1979 (= *Studies of the Warburg Institute* 36), I: 104–106, no. 33; *Philosophy and the Liberal Arts*; pp. 131–132,

A rose window might well be regarded as "a rota diagram writ large," a connection which the etymology supports.⁶⁰ Scholars had long suspected there was a connection between rotae and rose windows, based on the south transept rose of Lausanne Cathedral of c. 1190, the vitreous contents of which evoke a cosmological diagram,⁶¹ and the later south transept rose windows of Strasbourg Cathedral of c. 1228–1235,⁶² which adapt a contrasting pair of rotae portraying Old and New Testament Sacrifice from the *Hortus Deliciarum*.⁶³ Attesting to their origin in a scholarly context, the roses in Strasbourg have an unusually large number of inscriptions identifying the personifications within, which match those in the *Hortus Deliciarum* word for word.⁶⁴

Beyond their shared circular forms and etymology, however, there may also be a connection between the function of rotae and early rose windows. I refer here to the cumulative role played by rota diagrams in medieval

no. 98: *Old and New Testament Sacrifices*; and pp. 195–196, nos. 282–283 the *Chariots of Avaritia and Misericordia*.

⁶⁰ J. HAMBURGER, 'Haec Figura Demonstrat', p. 9 (as in note 58). Among others, W. RANKE, 'Frühe Rundfenster in Italien', Inaugural-Dissertation, The Free University, Berlin, 1968, pp. 72–76 and R. SUCKALE, 'Thesen', pp. 280–284 (as in note 53) have noted the similarity of rose windows to rota diagrams.

⁶¹ For the south transept rose at Lausanne Cathedral, now see Ch. AMSLER et al., *La Rose de la cathédrale de Lausanne: Histoire et conservation récente*, Lausanne, 1999; and the foundational studies by E.J. BEER, *Die Rose der Kathedrale von Lausanne und der kosmologische Bilderkreis des Mittelalters*, Berne, 1952), and eadem, 'Nouvelles réflexions sur l'image du monde dans la cathédrale de Lausanne', *Revue de l'Art*, 10, 1970, pp. 58–62. In addition, see E. CARSON PASTAN, B. KURMANN-SCHWARZ, 'Seeing and Not Seeing the Rose Window of Lausanne Cathedral', in *Unfolding Narratives: Art, Architecture, and the Moving Viewer, circa 300–1500 CE*, eds. A. Heath, G. Elliott, Brill, 2021, pp. 1–23.

⁶² The south transept roses of Strasbourg Cathedral are 4.65 meters in diameter each. See J. WALTER, 'Les deux roses du transept sud de la cathédrale de Strasbourg', *Archives Alsaciennes d'histoire de l'art*, 7, 1928, pp. 13–33; V. BEYER, Ch. WILD-BLOCK, F. ZSCHOKKE, *Les vitraux de la cathédrale Notre-Dame de Strasbourg*, Paris, 1986 (= *Corpus Vitrearum France* 9–1), pp. 123–140; J.-PH. MEYER, B. KURMANN-SCHWARZ, *La cathédrale de Strasbourg chœur et transept: de l'art roman au gothique (vers 1180–1240)*, Strasbourg, 2010, pp. 251–270.

⁶³ See *The Hortus Deliciarum*, I: 131–32, no. 98; II: 11–12, plates 46 and 47 (as in note 59). For lucid discussions of how rotae in the *Hortus Deliciarum* functioned, see A. KRÜGER, G. RUNGE, 'Lifting the Veil: Two Typological Diagrams in the *Hortus Deliciarum*', *Journal of the Warburg and Courtauld Institutes*, 60, 1997, pp. 1–22; D.B. JOYNER, 'Counting Time and Comprehending History in the *Hortus Deliciarum*', in *Was Zählt: Ordnungsangebote, Gebrauchsformen und Erfahrungsmodalitäten des "numerus" im Mittelalter*, ed. M. Wedell, Cologne, 2012, pp. 105–118.

⁶⁴ J.-PH. MEYER, B. KURMANN-SCHWARZ, *Cathédrale de Strasbourg*, p. 266 (as in note 62).

scholarly texts. The *De Natura Rerum* of Isidore of Seville (c. 560–636), which was one of the most important medieval school texts, was referred to throughout the Middle Ages as the *Liber Rotarum* because of Isidore's frequent recourse to the rota, to summarize visually what he had explained in pages of text.⁶⁵ As such, the rota was both a tool and an emblem of medieval learning, involving the reader-viewer's reasoning to actively connect disparate arguments and synthesize them into a single memorable form (or contrasting pair). Given the important heuristic role that the rota played in medieval scholarly texts, the appearance of early rose windows may also refer to the *activity* the rota signals — its role as a visual instrument that stimulated its beholders to think connectively. Here then is a scholarly connection of the kind Panofsky provokes us to think about, compatible with, yet expanding beyond, what he outlined in *Gothic Architecture and Scholasticism*.

As my remarks have sought to make clear, Panofsky's text can only be recommended with reservation as a sustained examination of the development of 12th- and 13th-century architecture, as a consideration of questions of artistic agency, or as an investigation of rose windows. But as a short, thesis-driven study introducing key principles of Gothic architecture and its context in a stimulating way, it remains a study that is good to think with and a springboard for further work.

SUMMARY

Elizabeth Carson Pastan

A WINDOW ON PANOFSKY'S

GOTHIC ARCHITECTURE AND SCHOLASTICISM

Erwin Panofsky's *Gothic Architecture and Scholasticism*, an essay-length work of little over 100 pages, has been garnering scholarly attention ever since it was written in 1951. His interdisciplinary approach to church buildings and analogies he sought to establish with the structure of arguments advanced by scholars at the university of Paris have made it a foundational work in the study of iconology. Yet it has also been the subject of numerous critiques as a "master narrative" of the study of Gothic architecture. In this essay, I focus on his discussion of the placement of rose windows in the facades of Gothic buildings in order to highlight what was important about Panofsky's work, what he might have developed further, and in some cases did develop in other writings, and what kinds of current thinking did not figure in his argument.

⁶⁵ Noted in H. BOBER, 'An Illustrated Medieval School-Book', p. 85, n. 43 (as in note 56); M. EVANS, 'The Geometry of the Mind', pp. 42–43 (as in note 55); and also F. WALLIS, 'What a Medieval Diagram Shows: A Case Study of *Computus*', *Studies in Iconography*, 35, 2014, pp. 1–40, with extensive further bibliography, esp. pp. 1–4, and p. 37, n. 35.