

VISUAL AND MATERIAL CULTURE, 1300-1700

Edited by Susanna Burghartz, Lucas Burkart,  
Christine Göttler and Ulinka Rublack

# Materialized Identities in Early Modern Culture, 1450-1750

## Objects, Affects, Effects

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The publication of this book is made possible by a grant from the Swiss National Science Foundation

Cover illustration: Details from Karel van Mander, *Before the Flood*, 1600. Oil on copper, 31.1 × 15.6 cm. Frankfurt am Main, Städel Museum, inv. no. 2088. Image © Städel Museum, photo: U. Edelmann / Artothek; High felt hat with silk pile and ostrich feathers, of the kind sourced by Hans Fugger during the second half of the sixteenth century. H: 22.5 cm. Nuremberg, German National Museum. Image © Germanisches Nationalmuseum, Nürnberg. Photo: M. Runge; Glass bowl, Murano, around 1500. D: 25.50 cm, H: 7.0 cm. London, British Museum, museum number: S.375. Image © The Trustees of the British Museum; Jean Jacques Boissard, *Gentil' donne venetiane/ Quando portano bruno et Vedoé*, costume book [Trachtenbuch] for Johann Jakob Fugger, 1559, fol. 63. Pen and ink drawing. Herzogin Anna Amalia Library, Cod. Oct. 193. Image © Klassik Stiftung Weimar, HAAB, Signatur: Oct 193. OpenAccess: "All rights reserved."

Cover design: Coördesign, Leiden

Lay-out: Crius Group, Hulshout

ISBN 978 94 6372 895 9

e-ISBN 978 90 4855 405 8

DOI 10.5117/9789463728959

NUR 654



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# Acknowledgements

This book results from crossovers, transgressions, and an unusually intensive research collaboration. We have deliberately positioned our project between two disciplines – history and art history – two countries – Switzerland and the United Kingdom – and two research cultures – universities and museums. It is only thanks to the Swiss National Science Foundation's special funding scheme "Money Follows Cooperation" that this collaboration and the whole project could take place so successfully. For this, we would like to express our sincere gratitude to the anonymous evaluators of our application who encouraged our research project with their comments.

Over a four-year period, we were able to come together as a research group in London, Cambridge, Bern, and Basel to discuss with colleagues and meet with curators.

Our site visits to the Fitzwilliam Museum and the Hamilton Kerr Institute in Cambridge, the Historical Museums in Bern and Basel, the Kunstmuseum Basel, the Museum der Kulturen Basel, the Swiss National Museum's Collections Centre in Affoltern, and the Abegg-Stiftung in Riggisberg allowed us the opportunity to discuss materials and techniques in relation to concrete objects in these collections, try out hands-on techniques, and explore new possibilities of digital microscopy.

Our special thanks go to the curators, conservators, and practitioners Vicky Avery, Bodo Brinkmann, Alexander Brust, Spike Bucklow, Hilary Davidson, Andrea Franzen, Anna Jolly, Susan Marti, Elke Müräu, Michael Peter, Margret Ribbert, Sabine Söll, Dora Thornton, and Evelin Wetter. They generously shared their time and knowledge, thus making possible a project that could not have happened without this communication across fields and disciplines.

As historians and art historians, we can mostly only grasp the materiality of things through written words or visual representations. Thanks to our site visits and collaborative practices, we were able to find new ways to integrate aspects of material culture as well as questions of materialized identity.

Finally, for publishing a book centring on the agency and allure of tangible material objects Amsterdam University Press provides a unique venue. We offer our very special thanks to Erika Gaffney, Senior Commissioning Editor, Early Modern History and Art History, for her enthusiastic support of our project from its very beginnings, and to Allison Levy, for accepting our book for publication in the series "Visual and Material Culture, 1300–1700," edited by her. We would also like to extend our thanks to the two anonymous reviewers for their encouragement and helpful advice. It is a pleasure to acknowledge the superb work of Jonathan Hoare who copy edited, proofread, and indexed our volume with commitment and



professional expertise. At Amsterdam University Press, we express our gratitude to Chantal Nicolaes, Head of Desk Editing and Production, for her considerable efforts to publish this book in its best possible shape.

Last but not least, for their exceptional support and intellectual collegiality, we owe very special thanks to three pioneering women in the field of material culture studies: Marta Ajmar, Evelyn Welch, and Pamela H. Smith.



Amsterdam  
University  
Press

# Introduction: Materializing Identities: The Affective Values of Matter in Early Modern Europe

*Susanna Burghartz, Lucas Burkart, Christine Göttler, and Ulinka Rublack*

In November 1575, the Augsburg merchant Hans Fugger was busy. He excitedly received two hundred loose, black ostrich feathers alongside two bound feather panaches in the “current Saxon manner” from Nuremberg and returned feathers to Munich as they were not up to date in style. Three months later, Fugger wrote to his Nuremberg agent about further fashionable new Saxon hats for his servants. He continued to inspect deliveries from Nuremberg to control their quality and sent patterns for hats he wanted to have made and accessorized. Each time he noted how much the feathers which adorned them pleased him. His esteem of feathers was no passing passion. In January 1578, Fugger noted the “incredibly beautiful and delicate” material of the new hats from Nuremberg. By 1585, he went to even greater efforts to source eighty to one hundred “really long, delicate and beautiful” heron feathers from either Venice or Vienna, where they were traded via Constantinople and Hungary.<sup>1</sup> Hans Fugger was one of many contemporaries deeply fascinated by the sensual qualities of materials. Fifty years later, Lewes Roberts told readers of his merchant’s handbook that “All commodities are known by the senses.” He added: “experience tells us that all commodities are not learned by one sense alone, though otherwise never so perfect; not yet by two, but sometimes by three, sometimes by four, and sometimes by all.”<sup>2</sup> During the same period, artists all over Europe strove

1 *Die Korrespondenz Hans Fuggers von 1566 bis 1594. Regesten der Kopierbücher aus dem Fuggerarchiv*, ed. Christl Karnehm, 3 vols. (Munich: Kommission für Bayerische Landesgeschichte, 2003), vol. 1, 589, 618, 702, 704, 708–709, 728, 781, 784, 1277, 1790; vol. 2, Part II, nos. 2694–2695, 2720, 2731.

2 Lewes Roberts, *The Merchants Mappe of Commerce: Wherein, The Vniuersall Manner and Matter of Trade, is compendiously handled* (London: Ralph Mabb, 1638), 41. On Roberts see Thomas Leng, “Epistemology:

to represent newly achieved qualities of transparency in glass, the translucency of veil fabrics, the vibrancy and shimmer of feathers, or the mystery of imitating and mimicking the lustre of gold and silver in painting.<sup>3</sup> Artisans learned about innovative techniques, perfected their practical skills, and multiplied their offerings when dealing with materials from the New and Old Worlds to an unprecedented extent. Pursuing ingenious materials and fashions, consumers likewise cultivated new sensibilities for material qualities, which in turn stimulated their buying behaviour. Political and cultural elites engaged in practices of distinctive representation as well as competitive collecting. They furthermore involved themselves in intense debates on luxury and conspicuous consumption, worked out in an ever-growing discourse on materiality and its everyday use in a whole cluster of specific genres such as memoirs, mandates, drawings, paintings, and plays.

This book addresses the interest in the material world of the Renaissance and early modern period that fascinated contemporaries and has been richly explored in recent years. Our volume aims to be distinctive in three regards: it engages with the agentive qualities of matter and aims to show how affective dimensions in history connect with material history. Most importantly, it explores how the use of materials and artefacts interrelated with social, cultural, and religious identifications, which have so far been underexplored in regard to their affective valences and qualities. The book thus aims to refocus our understanding of the meaning of the material world in this period. Rather than reducing the importance of the material world solely to patterns of consumption through the social life of finished goods, we argue that it is important to address the vibrancy of matter itself, that is to say the ability of things to exceed their status as mute objects through their material properties, such as softness or translucency.<sup>4</sup> Matter and materials interrelated

Expertise and Knowledge in the World of Commerce,” in *Mercantilism Reimagined: Political Economy in Early Modern Britain and Its Empire*, ed. Philip J. Stern and Carl Wennerlind (New York: Oxford University Press, 2014), 97–113, here 101–102. For the intersection of commerce, knowledge and the senses see esp. Susanne Friedrich, “Unter Einsatz aller Sinne. Zum ökonomischen Blick und dem Sammeln von Wissen in der Frühphase der niederländischen Ostindienkompanie (1602–ca. 1650),” *Historische Anthropologie* 28, no. 3 (2020): 379–398.

3 Recent literature on the allure of shiny and translucent surfaces: Marta Ajmar, “The Renaissance in Material Culture: Material Mimesis as Force and Evidence of Globalization,” in *The Routledge Handbook of Archaeology and Globalization*, ed. Tamar Hodos (London and New York: Routledge, 2017), 669–686; Sven Dupré, “The Art of Glassmaking and the Nature of Stones: The Role of Imitation in Anselm De Boodt’s Classification of Stones,” in *Steinformen: Materialität, Qualität, Imitation*, ed. Isabella Augart, Maurice Saß, and Iris Wenderholm, *Naturbilder* 8 (Berlin and Boston, MA: De Gruyter, 2019), 207–220.

4 See for example Ulinka Rublack, “Matter in the Material Renaissance,” *Past and Present* 219, no. 1 (2013): 41–85 and Rublack, “Befeathering the European: The Matter of Feathers in the Material Renaissance,” *The American Historical Review* 126, no. 1 (March 2021): 19–53, <https://doi.org/10.1093/ahr/rhab006>; Thomas Raff, *Die Sprache der Materialien. Anleitung zu einer Ikonologie der Werkstoffe* (Munich: Deutscher Kunstverlag, 1994); Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham, NC: Duke University Press,



Figure 0.1: Hieronymus Francken II and Jan Brueghel the Elder (attributed to), *Archduke Albert and Archduchess Isabella visiting the Collection of Pierre Roose*, ca. 1621–1623. Oil on panel, 94.0 × 123.3 cm, detail. Baltimore, Walters Art Gallery, inv. no. 37.2010. Image © The Walters Art Museum, Baltimore.

First produced in Antwerp in the early seventeenth century, paintings of *constcamers* featuring *liefhebbers* (lovers, enthusiasts) of art promoted an affective culture of collecting and display centring on rare and novel things. The detail shows a table laid with objects of knowledge and desire, both natural and man-made, including a celestial globe, a book with coastal profiles, several pieces of jewellery, shells and precious stones, a bird of paradise, and what seems to be a Javanese kris. Engaging all the senses, the tangible microcosm of the Spanish empire stimulated new ways of knowing and approaching the material world.

with the meanings humans ascribed to things and these interactions explain how they could affect the senses and emotions. This raises several important questions. How were interactions with particular materials valorized and which emotions did they elicit in specific knowledge and emotional communities? Can we identify how material qualities and meaning were influenced and changed by the affects of viewers, producers, and users? How were such affective material properties and powers described, interpreted, and performed? Just how *did* the interplay of matter and emotion shape individual and group identities?

To explore these questions, we examine the period from the fifteenth to the eighteenth centuries in Europe, which produced that increasingly diverse and rich world of goods. We focus on materials that have received less attention from researchers, such as veil fabrics, shell gold, and the whole range of pigments, and look at regions and places that have been less frequently addressed in research on material culture, such as the Württemberg court in Germany, Swiss cities, or the Spanish Basque country. We try to ask specifically about production cultures and their effects on the affective worlds of consumption, display, and the formation of identities. And we show how the encounter with new materials and ways of making and consuming affected the vocabularies of visual and sensuous perception and taste. Finally we wish to contribute to widening scholarly perspectives by including the material worlds of the late sixteenth and seventeenth centuries beyond the two main areas of research on early modern consumption culture to date – the Renaissance and the Enlightenment.<sup>5</sup>

Historians of emotions have firmly established that each period is distinguished by different emotional styles, communities, mandatory regimes, and responses to them. However, the role of objects as constitutive of identities, subjectivities, and emotions has only recently begun to attract historians' attention.<sup>6</sup> Material culture studies and the history of emotions need to be brought into a fruitful dialogue, and this implies that we need to be sensitive to contemporary understandings of the emotions and their effects. The assumption that the meanings of matter are fixed and "authentic" has been likewise criticized as problematic, and there has been vigorous debate about the notion that things or materials might "speak" their own language.<sup>7</sup> By taking these current debates into new directions by historicizing

2010), xvi; Pamela H. Smith and Tonny Beentjes, "Nature and Art, Making and Knowing: Reconstructing Sixteenth-Century Life-Casting Techniques," *Renaissance Quarterly* 63, no. 1 (2010): 128–179.

5 For a pioneering exhibition that looked at the entire early modern period see Melissa Calaresu, Mary Laven, and Vicky Avery, eds., *Treasured Possessions from the Renaissance to the Enlightenment* (London: Philip Wilson Publishers, 2015).

6 For a pioneering collection see Stephanie Downes, Sally Holloway, and Sarah Randles, eds., *Feeling Things: Objects and Emotions through History* (Oxford: Oxford University Press, 2018).

7 Michael Stolberg, "Emotions and the Body in Early Modern Medicine," *Emotion Review* 11, no. 2 (April 2019): 113–122; Bennett, *Vibrant Matter*; Tim Ingold, "The Textility of Making," *Cambridge Journal of*



Figure 0.2: Glass bowl, Murano, around 1500. D: 25.50 cm, H: 7.0 cm. London, British Museum, museum number: S.375. Image © The Trustees of the British Museum.

Renaissance societies developed innovative artistry and ingenious inventions when dealing with materialities. This glass bowl from a Murano workshop almost transcends its own materiality by creating effects of translucency and spotless transparency. Additionally, the representation of the Republic's patron saint in the centre of the bowl underlines the artefact's close connection with Venice. Produced in the Lagoon for both the domestic market and for export, however, its distinct malleability and manifest quality to imitate other materials made glass a common Renaissance materiality that was particularly apt to respond to formal and stylistic desires of the time.

early modern affects associated with objects, this project responds to a need to formulate nuanced accounts of agentive materialities in relation to early modern social life, religion, politics, and cultures. Materialized identities often emerged and crystallized through the use of novel materials or new material processes.

While the materials, materialities, and objects explored in this book are different, they all share the alluring qualities of shine, glow, and translucency that particularly attracted contemporaries. The project approaches these qualities through four themes: glass, feathers, painted gold, and veils, which will be discussed in relation to specific individuals, material milieus, as well as interpretative communities. These four types of materialities and object groups were each attached to different sensory regimes and valorizations, which underwent significant changes during this period. Intricate work with new technologies and frequently inexpensive mineral, vegetable, or animal materials such as glass, fibres, pigments, and feathers could rise tremendously in esteem. Specific sites of production, consumption, and practice created specific affective regimes throughout time, inducing fundamental changes in the relationship of materials, bodies, and people, resulting in corresponding re-evaluations of these relationships.

## Relating to Things

The wider approach underpinning this project builds on recent sociological studies that have re-evaluated the relationship between people and things. Recent studies have advocated overcoming any dualism between a socio-cultural and a material sphere. “Interobjectivity” expands the concept of intersubjectivity as founding the social. Seizing on parts of Latour’s actor-network theory, Andreas Reckwitz hence posits the idea of artefacts as “hybrid objects” that are material and cultural at the same time. “The social,” he argues, “is both evolving and reproducing within networks between humans and objects.”<sup>8</sup>

In Reckwitz’s understanding, the material sphere is anything but limited to a common notion of objects and things. His framework of practice theory explicitly describes two categories that are also at the core of this volume: Affects/emotions and space both help to shape individual and collective identities, strengthen communities, and in turn are moulded by them. This approach is inspiring because it allows us to connect the material world with the social, encompassing human actions and artefacts’ agency in one dynamic scheme. By consequence, it can serve as a hermeneutic

*Economics* 34, no. 1 (2010): 91–102; Ludmilla Jordanova, “Review of Lorraine Daston ed., *Things that Talk*,” *The British Journal for the History of Science* 39, no. 3 (2006): 436.

8 Andreas Reckwitz, “Affective Spaces: A Praxeological Outlook,” *Rethinking History* 16, no. 2 (2012): 241–258, here 251.



framework for both specific historical constellations and historical change itself. These methodological reflections contribute to our understanding of social and cultural identities in the making by highlighting the connections between the material and the social, space and practices, and production and consumption as mutually effective.

The contributors work from the premise that subjectivities in this period emerged in relation to an ever-increasing object world. Artefacts embodied and produced values, and they reflected and shaped emotional desires as well as bodily sensations. Such a “material Renaissance” has been brought into focus in various interdisciplinary studies that initially highlighted the importance of architecture and exquisite artefacts. These opened a window onto the experience of consumers while principally focusing on secular objects as tools to claim status distinction and hence on status satisfaction as the key emotion involved.<sup>9</sup> More recent research has broadened the spectrum of how the “world of things” can affect humans in all realms of their existence, including their spiritual lives. Studies increasingly focus on material aspects of production processes and their effects on makers, traders, and consumers.<sup>10</sup>

Objects shaped identities beyond the specific milieus of their production, not only by means of social mobility but also by the materials themselves and their processing. Different markets formed the social and economic platform where producers, traders, and consumers of matter converged. Evelyn Welch has convincingly shown that the prerequisite for a functioning market is a shared sensitivity for the material on both sides, suppliers as well as demanders, first and foremost where price formation is concerned.<sup>11</sup> Building on such research, historians have since followed the engagement with crafted, commodified things into the sixteenth and seventeenth centuries by exploring which groups of society involved themselves with a wide

9 Richard Goldthwaite, *Wealth and the Demand for Art, 1300–1600* (Baltimore, MD: Johns Hopkins University Press, 1993); Lisa Jardine, *Worldly Goods: A New History of the Renaissance* (New York: Nan A. Talese/Doubleday, 1996); Evelyn Welch, *Shopping in the Renaissance: Consumer Cultures in Italy, 1400–1600* (New Haven, CT and London: Yale University Press, 2005); Evelyn Welch and Michelle O'Malley, eds., *The Material Renaissance* (Manchester: Manchester University Press, 2007).

10 Adrian W. B. Randolph, *Touching Objects: Intimate Experiences of Italian Fifteenth-Century Art* (New Haven, CT: Yale University Press, 2014). *The Challenge of the Object: Proceedings of the 33rd Congress of the International Committee of the History of Art = Die Herausforderung des Objekts. Akten des 33. Internationalen Kunsthistorikerkongresses*, 4 vols., ed. G. Ulrich Großmann and Petra Krutisch (Nürnberg: Verlag des Germanischen Nationalmuseums, 2013); Catherine Richardson, Tara Hamling, and David Gaimster, eds., *The Routledge Handbook of Material Culture in Early Modern Europe* (London and New York: Routledge, 2017); Maya Corry, Marco Faini, and Alessia Meneghin, eds., *Domestic Devotions in Early Modern Italy*, *Intersections* 59/1 (Leiden and Boston, MA: Brill, 2019); Marco Faini and Alessia Meneghin, eds., *Domestic Devotions in the Early Modern World*, *Intersections* 59/2 (Leiden and Boston, MA: Brill, 2019); Wietse de Boer and Christine Göttler, eds., *Religion and the Senses in Early Modern Europe*, *Intersections* 26 (Leiden and Boston, MA: Brill, 2013).

11 Welch and O'Malley, *The Material Renaissance*; Evelyn Welch, “The Senses in the Marketplace: Sensory Knowledge in a Material World,” in *A Cultural History of the Senses in the Renaissance*, ed. Herman Roodenburg (London: Bloomsbury, 2016), 61–86.

range of vegetable, mineral, animal, and even human matter, in what way, and for what purposes. Recent research has drawn particular attention to the importance of overseas expansion in facilitating the intensified trade of slaves, precious stones, coral, birds, plants, medicines, artists' materials, fabrics, and food stuffs. In addition, there has also been research into how engagement with matter and materials relates to the formation of various types of knowledge and the ascription of virtue.<sup>12</sup>

Such research draws attention to the fact that the use of material goods was at individuals' disposal but nonetheless followed shared values. The freedom to purchase as many luxury goods as one wished was hampered by socially negotiated norms such as sumptuary legislation, which meticulously prescribed how such goods could be displayed in public. The supposed contradiction between these two habits of consumption strongly suggests that vivid cultural discourses about the appropriateness of the material in the social realm fundamentally contributed to identity formation across Europe. Consumption habits and cultural discourses about matter moreover constantly reacted to spheres of production and the availability of material resources – “material milieus” connected social communities and contributed to their coherence.

## Thinking Materiality

A consideration of such material milieus implies a methodological focus on the crucial phase of their material emergence, making, and “becoming.”<sup>13</sup> This can be made relevant in several respects: first, the materials from which artefacts were generated had unique properties. Second, we need to understand how these properties shaped meanings, forms, and ideas in dialogue with makers or cultivators

12 Pamela H. Smith, *The Body of the Artisan: Art and Experience in the Scientific Revolution* (Chicago, IL: University of Chicago Press, 2004); Ursula Klein and Emma C. Spary, eds., *Materials and Expertise in Early Modern Europe: Between Market and Laboratory* (Chicago, IL: University of Chicago Press, 2010); Sven Dupré, ed., *Laboratories of Art: Alchemy and Art Technology from Antiquity to the 18th Century* (Cham: Springer, 2014); Ann-Sophie Lehmann, Frits Scholten, and H. Perry Chapman, eds., *Meaning in Materials, 1400–1800*, *Netherlands Yearbook for History of Art* 62 (Leiden: Brill, 2013); Corinne Maitte, “The Cities of Glass: Privileges and Innovations in Early Modern Europe,” in *Innovation and Creativity in Late Medieval and Early Modern European Cities*, ed. Karel Davids and Bert de Munck (Farnham, Surrey: Ashgate, 2014), 35–54. The drawing of two Venetian noblewomen, *Gentil' donne venetiane* (Fig. 0.3), recently attributed to Jean Jacques Boissard and dated 1559 by Michael Thimann (“Erinnerung an das Fremde: Jean Jacques Boissards Trachtenbuch für Johann Jakob Fugger: Zu Provenienz und Zuschreibung der Bildhandschrift Cod. Oct. 193 in der Herzogin Anna Amalia Bibliothek Weimar,” *Marburger Jahrbuch für Kunstwissenschaft* 31 (2005): 117–148) shows in a particular way how delicate materials addressed the senses, even including smell. See also Evelyn Welch, “Scented Buttons and Perfumed Gloves: Smelling Things in Renaissance Italy,” in *Ornamentalism: The Art of Renaissance Accessories*, ed. Bella Mirabella (Ann Arbor, MI: University of Michigan Press, 2011), 13–39.

13 Most vocally Elizabeth Hallam and Tim Ingold, eds., *Making and Growing: Anthropological Studies of Organisms and Artefacts* (Farnham, Surrey: Ashgate, 2014).



Figure 0.3: Jean Jacques Boissard, *Gentil' donne venetiane/ Quando portano bruno et Vedoé*, costume book [Trachtenbuch] for Johann Jakob Fugger, 1559, fol. 63. Pen and ink drawing. Herzogin Anna Amalia Library, Cod. Oct. 193. Image © Klassik Stiftung Weimar. OpenAccess: "All rights reserved."

The two Venetian noblewomen, "when dressed in dark colours and widowed," model precious, gossamer mourning veils. Made from striped or crimped, translucent textiles, they represent the highest artisanal standard that was produced at the time in centres like Bologna. Alongside the veils' visually stimulating, delicate materiality, the women's fashionable, perfumed gloves address the sense of smell. The scents they carried offered protection to the highly permeable and vulnerable early modern body. As well as mental, moral, and physical dangers, they also indicated the luxury afforded by the wealthy.

during this process of becoming, as much as in the further course of an object's life or unbecoming. In the case of viticulture or pottery, of course, the properties of specific soils have always been recognized as shaping their end product and commanding a grower's or maker's sustained attention to specific geologies and ecologies in active processes of "environing." But in the case of other objects, the role of materials has often been obscured. Michael Baxandall's by now classical exploration of the chemical structure of limewood, its properties, and supply, remained unusual among art historians for a very long time even though he showed how it shaped German Renaissance sculpture.<sup>14</sup> For the early modern period, Michael Cole, Rebecca Zorach, Christine Göttler, Ann-Sophie Lehmann, and others have more recently spearheaded a "re-materialization" of the discipline. Such research includes consideration of what it meant to paint with different media, such as oils, to understand how techniques evolved in a dialogue with materials, and also the experience and cultural evaluation of their effects, such as surface sheen and lustre.<sup>15</sup>

This third dimension is crucial. It questions how particular types of matter and their effects were loaded with cultural significance, which tends to be historically contingent, but also interrelated with their material base. Sheen, for example, interlinks with surfaces it bonds on to. A linen canvas, panel, or copper plate hence required elaborate types of preparation to optimize the effects of sheen. An archaeology of how such materials and technologies were used thus provides important clues into how important such effects were held to be and what they were associated with. Efforts to enhance lustre, shine, and brilliance (or, conversely, the matte, faded, and roughly textured) consequently elicit questions about the ways in which these qualities were intrinsic to how an object

14 Michael Baxandall, *The Limewood Sculptors of Renaissance Germany* (New Haven, CT: Yale University Press, 1980).

15 Since the mid-1990s, there has been an ever-increasing number of art historical studies on materiality and materials; far from being exhaustive, the following list is meant to be suggestive of the variety of possible topics. For a discussion of recent research with a focus on sculptural materials: Michael Wayne Cole, "The Cult of Materials," in *Sculpture through Its Material Histories*, ed. Sébastien Clerbois and Martina Droth (Oxford: Lang, 2011), 1–15. See further Suzanne B. Butters, *The Triumph of Vulcan: Sculptors' Tools, Porphyry, and the Prince in Ducal Florence*, 2 vols. (Florence: Olschki, 1996); Michael Wayne Cole, "Cellini's Blood," *The Art Bulletin* 81 (1999): 215–235; Rebecca Zorach, *Blood, Milk, Ink, Gold: Abundance and Excess in the French Renaissance* (Chicago, IL: University of Chicago Press, 2005); Lehmann, Scholten, and Chapman, *Meaning in Materials*; Christy Anderson, Anne Dunlop, and Pamela H. Smith, eds., *The Matter of Art: Materials, Practices, Cultural Logics, c. 1250–1750* (Manchester: Manchester University Press, 2015). For the role of painting media and techniques and their effects on viewers' perceptions: Ann-Sophie Lehmann, "Das Medium als Mediator: Eine Materialtheorie für (Öl-) Bilder," *Zeitschrift für Ästhetik und allgemeine Kunstwissenschaft* 57 (2002): 69–88. Recent contributions on affective responses stimulated by objects and materials within the context of early modern globalization include: Alessandro Russo, Gerhard Wolf, Diana Fane, and Luisa Elena Alcalá, eds., *Images Take Flight: Feather Art in Mexico and Europe, 1400–1700* (Munich: Hirmer, 2015); Christine Göttler and Mia M. Mochizuki, eds., *The Nomadic Object: The Challenge of World for Early Modern Religious Art*, *Intersections* 53 (Leiden and Boston, MA: Brill, 2018).

might turn into an agent in particular social networks that were likely to value splendour and sheen. Such qualities connected to an object's power and presence.

The upshot of such perspectives is easy to follow but profound in implications for new research methods and areas. History was not made by disembodied minds generating abstract ideas, but in dialogue with materials that shaped cultures. Enquiry into where materials came from and how they were used and acquired cultural association typically reveals a surprising amount of material experimentation and nuanced material perception in the global Renaissance and thereafter. The well-known rise of oil painting is only one case in point, and in itself reveals what other case studies further elaborate. The closer one looks, the more evident it becomes that general material descriptors, such as "oil on canvas," in oil painting, or "silk" in textiles, are misleading abstractions. Different species of silkworms could be handled in different ways to keep temperatures steady, for example, while the silk thread could be extracted and turned into a fibre in a variety of ways, all of which shaped the texture, tension, and strength of the end product.

This underlines the sheer intelligence and effort required to work with materials as well as the great ecological variety so characteristic of this period. Walnut or linseed oils, which were often used for painting, could thus be applied in different parts of a painting, themselves differing in their properties depending on where they came from, how they had been transported, how old they were, or even how they were stored. Makers could experience this endless variety of material properties as obstacles, take advantage of them, or seek to manage them by standardizing known supplies.<sup>16</sup>

Michelangelo acutely struggled with these problems during the winter of 1508. In Rome, this famous artist stared in disbelief at the ceiling of the Sistine chapel. His image of the Flood began to grow mould and obscured the figures. By January, the thirty-two-year-old turned to the pope in despair about the state of his work and did not dare to ask the pope for pay. Michelangelo knew how Tuscan materials behaved in particular temperatures, but not those in Roman surroundings in the freezing cold. An important part of how he matured and succeeded as a painter was to develop his material knowledge in relation to different environments and material properties of matter, or, as contemporaries put it, his "mindful hand."<sup>17</sup>

16 These issues are explored in Pamela H. Smith, Amy R.W. Meyers, and Harold J. Cook, eds., *Ways of Knowing: The Material Culture of Empirical Knowledge* (Ann Arbor, MI: Bard Graduate Centre; University of Michigan Press, 2014).

17 Giorgio Vasari, *Lives of the Painters, Sculptors and Architects*, trans. Gaston du C. de Vere, vol. 2 (New York: Knopf, 1996), 667. Cf. Fabrizio Mancinelli, "Michelangelo's Working Technique and Methods on the Ceiling of the Sistine Chapel," in *Michelangelo, the Sistine Chapel: The Restoration of the Ceiling Frescoes*, vol. 1, ed. Fabrizio Mancinelli (Treviso: Canova, 2001), 15–28, especially 24–26. For the notion of the "mindful hand," see Lissa Roberts, Simon Schaffer, and Peter Dear, eds., *The Mindful Hand: Inquiry and Invention from the Late Renaissance to Early Industrialisation* (Amsterdam: Nederlandse Akademie van Wetenschappen, 2007).



Material experimentation and innovation in this way typically thrived from failure in the first instance. Material achievement is hence revealed in the persistence and problem-solving abilities of makers. An enquiry into such processes has two main implications. It first tends to draw attention to a much larger number of collaborators and makers than a traditional focus on the sole master-genius like Michelangelo would lead us to believe. Around and alongside such a man would have been those who knew, for instance, about the best animal parts collected at particular times of the year from which to make the most suitable glue. Many material achievements were reached cumulatively and in milieus which fostered experimentation by translating skill sets from one area to another. This means, secondly, that such complex material knowledge could interlink with wider understandings about the body and the universe. The early modern period, on which this volume focuses, was a time in which the macrocosm in many contexts was thought to interrelate with the microcosm. The strength and nature of biochemical substances, for instance, was held to vary in relation to the cycle of the moon and seasons. In addition, a maker's diet might interrelate with her or his breath and the outcome of working with metals, for example. Body, mind, and the cosmos were not necessarily conceived as distinct or irrelevant forces. Such investments increased through surging vitalism and Paracelsianism in natural philosophy, the extraordinary interest in astrology and alchemy, as well as the greater emphasis upon the way in which religious belief and matter flowed into each other during an age of the Counter-Reformation.<sup>18</sup>

Historians of science, art historians, conservators, archaeologists, and anthropologists as well as historians of the environment have all helped to introduce such perspectives in discussions of the material turn. This profoundly re-shapes the nature of historical research through new research questions as well as new research tools and interdisciplinary methods. These include historical reconstruction, digital microscopy, 3-D modelling, chemical analysis, and object handling. The *Materialized Identities* project hence drew on the knowledge of conservators, curators, and makers to understand the vibrancy of matter and agency of objects. Analysis resulting from the experience of object handling and historical reconstruction underlie all chapters and are embedded as case studies in three of our four sections. Digital microscopy contributes to Stefan Hanß's study into the allure of exotic feathers and their skilled assemblages in early modern headwear. As Hanß argues, microscopy helps us to trace artisanal ingenuity through making craftsmanship visible, for instance by drawing attention to the careful layering of colours to achieve particular effects.<sup>19</sup> Michèle Seehafer collaborated with a gilder

<sup>18</sup> Smith, Meyers, and Cook, *Ways of Knowing*.

<sup>19</sup> Stefan Hanß, "Digital Microscopy and Early Modern Embroidery," in *Writing Material Culture History*, 2nd ed., ed. Anne Gerritsen and Giorgio Riello (London: Bloomsbury, 2021), 214–221; Stefan Hanß, "New



Figure 0.4: High felt hat with silk pile and ostrich feathers, of the kind sourced by Hans Fugger during the second half of the sixteenth century. H: 22.5 cm. Nuremberg, German National Museum. Image © Germanisches Nationalmuseum, Nürnberg. Photo: M. Runge.

These hats were relatively cheaply produced through new techniques that imitated velvet and were similarly soft. The ostrich feathers on this hat were added later but cohere with images from the period. They would have contributed to the new haptic and affective experience of a supremely soft piece of headwear for men.



and conservator to reconstruct two sixteenth-century recipes for shell gold. The intellectual, sensory, and physical engagement with these recipes led her to redefine the concept of virtuosity that encompasses preparatory and performative work. Working together with dress historian Hilary Davidson, Katy Bond and Susanna Burghartz explored her concept of the “embodied turn” to understand translucency and malleability as key characteristics of veil fabrics.<sup>20</sup>

Yet a crucial question less frequently addressed by recent research remains just how affects and ideas arose from embodied experiences of matter and material worlds, such as feathers, fabrics, paints and glass, and how specific social milieus influenced the ways in which human subjectivity and cultural understanding during this period might be said to have emerged from this engagement with materials and their properties.<sup>21</sup> Just how *does* materiality evoke affects and facilitate thought, sensuousness, the imagination, and emotions?<sup>22</sup> This interest in affective responses follows from a focus on “agentive materials” – that is, specific material qualities, material perceptions, and cultures of material experimentation, as well as collecting and media and performance strategies in specific social networks.

## Evoking Affects

Gazing upon Aztec treasures at the Brussels court in 1520, Albrecht Dürer found himself overcome by the artefacts, textiles, and weapons “from the new land of gold.” Recording the encounter in his diary, the Nuremberg artist admitted he did “not know how to express” his thoughts. Trying nonetheless to articulate his feelings, he famously proclaimed: “All the days of my life I have seen nothing that rejoiced my heart so much as these things [...] and I marvelled at the subtle ingenia of people in foreign lands.”<sup>23</sup> The artisans’ *ingenium* – that artistic invention and “innate

World Feathers and the Matter of Early Modern Ingenuity: Digital Microscopes, Period Hands, and Period Eyes,” in *Ingenuity in the Making: Materials and Technique in Early Modern Europe*, ed. Alexander Marr, Richard Oosterhoff, and José Ramón Marcaida (Pittsburgh, PA: Pittsburgh University Press, 2021, in press).

<sup>20</sup> Hilary Davidson, “The Embodied Turn: Making and Remaking Dress as an Academic Practice,” *Fashion Theory* 23, no. 3 (2019): 329–362, DOI: 10.1080/1362704X.2019.1603859.

<sup>21</sup> Rublack, “Matter in the Material Renaissance.”

<sup>22</sup> Anthropologists and archaeologists have been at the forefront of posing these questions, see Nicole Boivin, *Material Culture, Material Minds: The Role of Things in Human Thought, Society and Evolution* (Cambridge: Cambridge University Press, 2008). For a recent summary and discussion see Timothy J. LeCain, *The Matter of History: How Things Create the Past* (Cambridge: Cambridge University Press, 2017).

<sup>23</sup> Translation as quoted in Hugh Honour, *The New Golden Land: European Images of America from the Discoveries to the Present Time* (New York: Pantheon Books, 1975), 28. Original passage may be consulted in Albrecht Dürer, *Schriftlicher Nachlass*, ed. Hans Rupprich, vol. 1 (Berlin: Deutscher Verein für Kunstwissenschaft, 1956), 155.

talent” to transform matter and activate its wondrous qualities – produced such an affective response in Dürer that it physically manifested itself as a quickening of the heart and a blossoming in the chest.<sup>24</sup> Dürer’s familiarity with Nuremberg’s “culture of ingenuity,”<sup>25</sup> his expert knowledge of the goldsmith craft, and his experience of worldly goods circulating around Venice and Antwerp guided his reaction and its focus on *ingenium*, a concept that existed in intimate relationship with vibrant matter.<sup>26</sup> While the novelty of objects and materials from the New Worlds provoked particularly explicit outbursts of wonder and admiration in Renaissance Europe, Dürer’s well-known exclamation underscores the physical sensations that engaged people from all walks of life as they fashioned, handled, used, and observed material goods.

This applies to the physical sensation of wearing textiles like veils on the body, as well as to noticing the slightest of scents during the preparation of shell gold, sensing delicacy when handling fragile glass objects, and experiencing joy when observing shimmering, fluttering feathers and feather panaches. These experiences could enable joyful emotions or relate to constraints. In early eighteenth-century Protestant Basel, for example, the wife of town citizen Walter Merian declared that she could no longer bear the excessively stiff veil she had to wear in church because of her bad constitution. Others reported even more drastically on the negative health effects of church veils and their rupture of the church community. A notary testified that his wife was very narrow-chested and bothered her neighbours in church with her coughing when she wore the veil.<sup>27</sup> Colours were believed to have transformative powers over the bodies and minds of animals and humans, as Karel van Mander and other writers on art have documented with many examples. These examples illustrate just how closely material properties and effects interlinked with bodily affects. Moreover, they clearly show that embodied experiences played a central role in the evaluation of things, as they shaped people’s emotions and feelings towards different materials and objects and vice versa.

As set out above, cultural theories inspired by Bruno Latour have increasingly addressed human-object relationships in recent years. With the affective turn,

24 This interpretation of *ingenium* in the Renaissance mindset is described by Michael Baxandall in *Giotto and the Orators: Humanist Observers of Painting in Italy and the Discovery of Pictorial Composition, 1350–1450* (Oxford: Clarendon Press, 1971).

25 For the broad semantic field of *ingenium* in early modern Europe: Alexander Marr, Raphaële Garrod, José Ramón Marcaida, and Richard J. Oosterhoff, eds., *logodaedalus: Word Histories of Ingenuity in Early Modern Europe* (Pittsburgh, PA: University of Pittsburgh Press, 2018), 19.

26 Alexander Marr, “Ingenuity in Nuremberg: Dürer and Stabius’s Instrument Prints,” *The Art Bulletin* 100, no. 3 (2018): 48–79.

27 StaBS, Protokolle E 13,1, on 27 November 1709.

“doing things”<sup>28</sup> and “feeling things”<sup>29</sup> have entered into the vocabulary of cultural historians. As precognitive and prelinguistic physical reactions, affects are phenomena that simultaneously affect and are affected, prompt and discern embodied sensations. They have a relational function, connecting bodies and things as well as bodies or people to one another. Because affects are preconscious, they cannot be suppressed: “affect is, in a way, ‘matter in motion’ since it ‘moves’ the body.”<sup>30</sup> As Kathleen Stewart puts it, matter and materials have “a heartbeat.”<sup>31</sup> Like things, matter and materiality do not remain static, but receive a specific relational agency as they effect affects. This makes affects paramount for dealing with materiality and renders the senses, sensory perception, and material qualities a meaningful question for historical analysis.<sup>32</sup>

When dealing with affects, processes, relationships, energies, rhythms, flows, and forces come to the fore, rather than fixed structures. With this perspective, things begin to move, just as bodies or people do. A world in which things happen and act (in relation to one another) becomes tangible. Things touch and affect people and bodies emotionally and viscerally. They evoke affects through senses, perceptions, and mental reactions. The new theories of the cultural therefore reach the conclusion that the interactions and interrelations of people and things are necessarily connected to emotions and affects, and must become part of corresponding analyses of the social. They also agree to not strictly separate affects and emotions, but rather address both as part of a continuum between body and mind, which can no longer be thought of as independent of each other. By paying attention to materials affecting bodies and arousing emotions, it is easier to understand feelings as no longer primarily inner states, but as practices based on dynamic relationships between things, bodies, and minds.

From a praxeological point of view, space therefore comes into play. It is only through the interrelation of affects and spaces that affect-cultures are formatted. As Reckwitz argues, they exceed the registers of classical social analysis – the normative, the rational, and the semiotic. Instead, his praxeological perspective on the social provides “a conceptualization of emotions and affects and simultaneously of artefacts and space, which integrates them as basic components of sociality.”<sup>33</sup>

28 Jo Labanyi, “Doing Things: Emotion, Affect, and Materiality,” *Journal of Spanish Cultural Studies* 11, nos. 3–4 (2010): 223–233.

29 Downes, Holloway, and Randles, *Feeling Things*.

30 Labanyi, “Doing Things,” 225.

31 Kathleen Stewart, “In the World that Affect Proposed,” *Cultural Anthropology* 32, no. 2 (2017): 192–198, here 196.

32 Stewart notes the same for anthropology: “Affects helped return anthropology to sense and sensation, materialities, and viscera.” Stewart, “In the World that Affect Proposed,” 194.

33 Reckwitz, “Affective Spaces,” 242.

Such a concept assumes that bodies and material objects form networks in which “social practices” develop. With their relational powers, affects play an essential role. Bodies and things react physically and mentally to materials that cause reactions via the senses, material properties, and the mind. This is where artisans and their “mindful hands” require consideration.<sup>34</sup>

At this point we develop Reckwitz’s framework further by thinking about how materials and artisans were attuned to and moulded things to create particular sensations, desires, and emotional reactions. We look at the world of makers, with their agency to prepare materials for affective reactions, and consider the abilities and sensitivities of users and consumers to react to specific material features and to appropriate them.

In order to explain the cultural change of affective structures through history, it is furthermore crucial to analyse the emergence of new affective sites and constellations; this brings to life new artefact-space complexes as well as new cultures and regimes of affects. Rublack’s contribution, for instance, shows how exotic feathers and their replicas could inform specific emotional styles and embodied practices in a leading Protestant court advocating commerce, industry, and delight in commodities as a means to reach social harmony. Here, feathers became agents that “enmeshed” an audience to endorse social, economic, and political norms, forming part of an affective culture and habitus reproduced in similar spaces and environments.<sup>35</sup> The same is true for specific groups of women, such as Zurich’s patrician wives. Going to church was a ritual in which the sensory experience of translucent, fine veils and their paradoxically stiff composition made them a unified body within the Sunday congregation. Scuro’s example of Murano, on the other hand, shows how on the island of glass a specific atmosphere could be created by the proximity of workshops and their shared experience of intense physical exertion and heat, accompanied by the acute mutual observation of secret recipes. Seehafer, moreover, observes that the shimmering surface of a shell-gold-illuminated page could enact a site for both contemplating the bonds of patronage and exploring the reciprocities of friendship. Focusing on Haarlem at the turn of the seventeenth century, Göttler traces the emergence of a new culture of connoisseurship and expertise revolving around singular artworks, objects, and technologies. As in the case of Antwerp these shared interests in the tangible world of things were fostered by engaged rather than traditional or authoritative knowledge and guided by friendship and social interactions. Thus courts, cities, workshops, sites of production, books, images, or church rooms could create specific conditions and constellations for

34 Roberts, Schaffer, and Dear, *The Mindful Hand*.

35 Petra Lange-Berndt, “Introduction: How to Be Complicit with Materials,” in *Materiality*, ed. Petra Lange-Berndt (London: Whitechapel Gallery and MIT Press, 2015), 18.

affective relationships between materials, things, bodies, and people. Throughout history, then, specific materials and specific sites of production, consumption, and knowledge could create particular affective regimes.

## Touching on Values

Among the sites that impressed themselves most deeply on the mind of the Saxon nobleman Johann Wilhelm Neumair during his travels through Antwerp in February 1614, were Plantin's publishing firm, the "Tapissierspand" with its display of tapestries woven with silver and gold, the "House of Glass," where "Venetian style glass was produced in Antwerp in beauty almost equal to that of Murano and Venice," and the houses of the city's most renowned painters, Jan Brueghel the Elder and Peter Paul Rubens. While Rubens's large paintings brought very high prices, ranging between one to five hundred guldens, Brueghel's subtly and skilfully painted small panels with landscapes excited the wonder and amazement of those who looked at them.<sup>36</sup> Neumair's account is relevant because it documents the multiple functions of these places as sites of production, display, valuation, and wonder as well as the emotions stirred up by luxury materials, virtuoso technologies, and glittering things. Judgements about the value, worth, and qualities of material objects were thus also shaped by affective components. Inventories, auction catalogues, and the letters exchanged between art collectors, agents, and artists open up a window into the complexities of judgement about the value of artworks and objects. Establishing the value of a material object was an unstable process. It emerged within a dynamic interplay between various considerations including the labour and skill invested in its making, its material, style, and aesthetic allure, as well as the ways in which it was described and displayed.<sup>37</sup>

Feathers, veils, paints, and glass – the object groups investigated by the authors of this volume in their various interpretative contexts – were each subject to different kinds of valorizations, which underwent significant changes during this period.

36 Neumair undertook these travels in the entourage of Duke Johann Ernst the Younger of Saxe-Weimar: Johann Wilhelm Neumair von Ramsla, *Des durchlauchtigen hochgebornen Fürsten und Herrn, Herrn Johann Ernsten des Jüngern, Hertzogen zu Sachsen, Gülich, Cleve und Berg [...] Reise in Franckreich, Engelland und Nederland* (Leipzig: Henning Große der Jüngere, 1620), 261.

37 Bert De Munck and Lyna Dries "Locating and Dislocating Value: A Pragmatic Approach to Early Modern and Nineteenth-Century Economic Practices," in *Concepts of Value in European Material Culture, 1500–1900*, ed. Bert De Munck and Lyna Dries (Burlington, VT: Ashgate, 2015), 1–29; Christine Göttler, Bart Ramakers, and Joanna Woodall, "Trading Values in Early Modern Antwerp: An Introduction," in *Trading Values in Early Modern Antwerp*, ed. Christine Göttler, Bart Ramakers, and Joanna Woodall, *Netherlands Yearbook for History of Art* 64 (Leiden: Brill, 2014), 8–37; Evelyn Welch, "Making Money: Pricing and Payments in Renaissance Europe," in Welch and O'Malley, *The Material Renaissance*, 71–84.





Figure 0.5: Karel van Mander, *Before the Flood*, 1600. Oil on copper, 31.1 × 15.6 cm. Frankfurt am Main, Städel Museum, inv. no. 2088. Image © Städel Museum. Photo: U. Edelmann / Artothek.

Created in the auspicious year of 1600, Van Mander's depiction of nude figures in a landscape setting is a self-assertive statement about his role as a painter-poet and a promoter of Netherlandish art. The reflecting surfaces of the golden vessels and the golden hues on the foliage display his mastery in "reflexy const," considered as the greatest achievement of Netherlandish art. The metallic support enhances the jewel-like appearance of this small painting in oil that catered to a growing taste among art collectors for effects of light and shade.

Skill and ingenuity – considered by Baxandall back in 1972 to be defining features of fifteenth-century Italian painting<sup>38</sup> – have since been researched with regard to a broad variety of media and techniques, from arts involving costly metals to those based on almost “worthless” materials such as glass and paint.<sup>39</sup> Intricate work using new, foreign, or not readily available (secret) technologies and frequently inexpensive materials rose tremendously in esteem. Early modern courts and cities competed against each other for both access to raw materials and the knowledge about how to process them into valuable products.

In early modern usage, Latin *valor* and its vernacular equivalents were linked to *vis*, *virtus*, and *potentia*, notions used to designate material or immaterial entities or things imbued with power, strength, and animating force.<sup>40</sup> In a world of expanding markets and trades, the value of objects was increasingly tied to their power to seize the eye and stimulate desires, elicit affects, and act as a binding force. Over the time period considered in this book, different repertoires and hierarchies of values were competing against each other, and the multiple relationships between monetary, moral, spiritual, aesthetic, and affective values became increasingly complex and unstable. Early modern men and women were well aware of the fluidity and volatility of material values. Elaborating on values and the market, the Flemish Jesuit Leonardus Lessius, in his 1605 *De iustitia e iure* (*Of Justice and Law*) states that such things as “gems, special dogs or falcons, exotic birds, and ancient paintings” that do not have a “legal or common price,” could nonetheless not be sold for whatever the owner wants, but “should be priced according to the common estimation of knowledgeable men or through the estimation of the seller himself.” Lessius also allows the seller, who “feels very strongly about the good [...] to estimate his personal affections, provided this estimation comes about in good faith.”<sup>41</sup> But how were the values of the luxury items on Lessius’s list determined? Was it according to their

38 Michael Baxandall, *Painting and Experience in Fifteenth Century Italy: A Primer in the Social History of Pictorial Style* (Oxford: Oxford University Press, 1988), 14–16.

39 For glass (in addition to the contributions in this volume): Sven Dupré, “The Value of Glass and the Translation of Artisanal Knowledge,” in Göttler, Ramakers, and Woodall, *Trading Values*, 138–161; Corine Maitte, “*Façon de Venise*: Determining the Value of Glass in Early Modern Europe,” in De Munck and Lyna, *Concepts of Value in Early Modern Material Culture*, 209–237; Pamela O. Long, *Artisan/Practitioners and the Rise of the New Sciences, 1400–1600* (Corvallis, OR: Oregon State University Press, 2011), 1–9.

40 Olga Weijers and Marijke Gumbert-Hepp, eds., *Lexicon latinitatis nederlandicae medii aevi*, vol. 8 (Leiden and Boston, MA: Brill, 2005), 5247: *waarde, vis, virtus, dignitas; achting; bonum iudicium; kracht; vigor*.

41 Cited from: Leonardus Lessius, S.J., *On Buying and Selling* (1605), translation by Wim Decock, introduction by Wim Decock, *Journal of Markets & Morality* 10, no. 2 (Fall 2007): 433–516, at 470–471 (liber II, cap. 21, 15–17); Leonardus Lessius, *De iustitia et iure caeterisque virtutibus cardinalibus libri IV* (Leuven: Jan Maes, 1605), 253: “[...] ut sunt quaedam gemmae, insignes canes, falcones, aves indicae, picturae veteres, & similia [...] nempe res tales no[n] posse vendi pro arbitrio venditoris, sed iuxta aestimationem intelligentiu[m], vel certe iuxta aestimationem ipsius venditoris [...]”



singularity, rarity, or beauty, their novelty or age, or the time, skill, and knowledge invested in their making, breeding, or growing? Debates on wealth and luxury within and across confessions complicated definitions of value. The global movement of materials, objects, and techniques, as well as the emergence of new luxury items, broadened the range of values and interests. The secrecy surrounding the manufacture of exotic luxuries such as porcelain and lacquer added to their value and prestige, and initiated numerous attempts to imitate the translucent quality of their glazes that were so pleasing to European eyes.<sup>42</sup> But the sheer quantities of Chinese export porcelain that entered the European market in the seventeenth century also transformed the desired tableware into everyday household items.<sup>43</sup> In sixteenth-century Venice, Venetian glass had acquired equally mundane qualities, as amply documented in the contributions by Lucas Burkart and Rachele Scuro.

Of particular interest in the context of this book is the emergence of loosely connected groups of experts who shared interests in rare objects, elaborate instruments, exceptionally beautiful artworks, material practices (such as drawing), and craft skills. Artisans' workshops, artists' studios, printing shops, meeting places of guilds, and rhetorician chambers, as well as private households with their libraries and collections, could all serve as sites of judgement, assessment, and valuation. In the preface to the widely read *Schilder-Boeck* of 1604, the painter and poet Karel van Mander recommended Prague with its many *constcamers* as a site ideally suited to "estimate and calculate [the] values and prices" of precious works, including paintings.<sup>44</sup> Inventories drawn up by practitioners and traders engaged in certain crafts (i.e. silversmiths and book sellers) provide additional insight into local practices of assessment. Such material-based sensuous knowledge was often described as "judgement," or a kind of knowing that could not be learned from books alone but which also required skilled and sensitive hands as well as practised eyes. Likewise, individuals combining virtue, expert material knowledge, and observational skills were called either *virtuosi* or *liefhebbers*.<sup>45</sup> Coined in Antwerp, the Dutch word *liefhebber*, in particular, underscores the affective and emotional

42 Craig Clunas, "Luxury Knowledge: The Xiushilu ('Records of Lacquering') of 1625," *Techniques et cultures* 29 (1997): 27–40.

43 Claudia Swan, "Lost in Translation: Exoticism in Early Modern Holland," in *Art in Iran and Europe in the 17th Century: Exchange and Reception*, ed. Axel Langer (Zurich: Museum Rietberg, 2013), 100–116.

44 Karel van Mander, *Het Schilder-Boeck* (Haarlem: Paschier van Wesbusch, 1604), fol. \*iiiiv.

45 Harold J. Cook, *Matters of Exchange: Commerce, Medicine, and Science in the Dutch Golden Age* (New Haven, CT: Yale University Press, 2007); Elizabeth Honig, "The Beholder as a Work of Art: A Study in the Location of Value in Seventeenth-Century Flemish Painting," in *Image and Self-Image in Netherlandish Art, 1550–1750*, ed. Reindert Falkenburg, Jan de Jong, Herman Roodenburg, and Frits Scholten, *Netherlands Yearbook for History of Art* 46 (Leiden: Brill, 1995), 252–297; Vera Keller, "The 'Lover' and Early Modern Fandom," *Transformative Works and Cultures* 7 (2011), <https://doi.org/10.3983/twc.2011.0351>.

dimensions of these shared activities.<sup>46</sup> The emphasis on the sensuous experience of objects of knowledge and art was also a response to the massive destruction targeting the “sensual materiality” of images that occurred during the waves of iconoclasm.<sup>47</sup> The focus on bodily and affective practices, has increased scholars’ awareness of the levels of attentiveness and discernment expected from skilled craftsmen and artists. A heightened sense for colours and shades, for example, distinguished a whole range of early modern professionals including physicians, metallurgists, glassmakers, featherworkers, and, of course, painters. But, as is also shown by several contributions in this book, forms of material and sensuous discernment extended beyond the visual to include tactile values and qualities such as temperature, texture, and weight.

Finally, as Pamela H. Smith and others have shown, there was an almost explosive increase in written records left by practitioners and makers involved in a wide range of specializations from the 1400s onwards. These writings express authors’ self-assertion about their own creative acts in engaging with the material world, which was viewed as closely related to the cosmic and divine orders.<sup>48</sup> Written in the vernacular, they were directed at both fellow artisans and a steadily growing group of “lovers” who shared their affective interests in material objects and the ways in which they were made. Such writings were in themselves innovative acts of verbal dexterity, in that they created a language to converse about matter, materiality, and objects in a range of social contexts, as Christine Göttler’s contribution argues. They also helped develop repertoires of aesthetic and moral values associated with material appearances and sensations, such as transparency and glow, but also durability and longevity, the very qualities that drew early modern eyes to the objects and materials that are at the centre of this book.

## Four Fields of Enquiry

This volume’s distinctive perspective lies in its commitment to place the entanglement of humans, materials, and environments at the heart of our analyses, emphasizing that the subjectivities of matter are fundamentally social, awakened by the interrelation between space, bodies, and things. It focuses on glass, gold paints, feathers, and veils in order to examine artefacts and objects that have very different textures and

46 Cornelius Kiliaan, *Etymologicum teutonicae linguae* (Antwerp: Jan Moretus, 1599): *amator, amans, fautor, studiosus, lief-hebber der konsten*.

47 Koenraad Jonckheere, “Images of Stone: The Physicality of Art and the Image Debates in the Sixteenth Century,” in Lehmann, Scholten, and Chapman, *Meaning in Materials*, 116–147.

48 Pamela H. Smith, “Why Write a Book? From Lived Experience to the Written Word in Early Modern Europe,” *Bulletin of the German Historical Institute* 47 (2010): 25–50.

span the whole spectrum of animal, vegetable, as well as mineral matter. Investigating these four different types of materials, we will address their wide range of medial qualities, such as transparency and opacity, stability and transmutability as well as softness and solidity, qualities that were by no means constant and could shift within historical parameters. They were manipulated by craft skills and chemical processes, provoked by site-specific, environmental conditions, and enhanced by bodies-in-motion. Across the contributions, the impact of light and colour is profound. Early modern Europeans enthused over the qualities of luminosity and lustre, delighting in glistening veils, shimmering shell gold, dazzling crystal glass, and iridescent feathers. Knowledge of the techniques and skills that enhanced properties of light went hand-in-hand with the exploitation of elemental forces to activate these materials' radiance. Through analyses like these, the following contributions tease out the complex ways matter, elemental conditions, and embodied sensory experiences intertwined in Renaissance and early modern Europe.

The first section focuses on glass, an antique technology and a pervasive art form. From the Renaissance down to the present day, however, glass has been closely associated with Venice and the nearby island of Murano. This section analyses how glass contributed to the shaping of social and cultural identities in Renaissance Venice. Lucas Burkart's contribution examines the economic importance of glass for the Republic. Its ubiquity as a consumer and export good is considered by Burkart to be the basis of a highly developed sense for the material's features and qualities, which reveals itself in contemporary literature and visual culture. Glass was so embedded into the popular interpretative framework of contemporaries that it fed into discussions about the nature of the sacred and the profane and formulated a lexicon for affective and bodily regimes. Rachele Scuro's essay studies the organizational, institutional, and social sites the glass industry cultivated in the Venetian Lagoon. Focusing on glass-making families and their workshops, Scuro explores the collective dynamics between production sites, artistic ingenuity, the circulation of knowledge, and the social mobility of the people involved in the Murano glass industry. Burkart and Scuro jointly show that material qualities including transparency, surface texture, and colour occupied the experimental chemical practices of glassmakers as much if not more than form. Inexpensive, malleable, and highly imitative, glass enriched its societal position not by the intrinsic rarity of its minerals so much as by the allure of its unique characteristics and the skilled hands that worked it. The mutual affinities between matter, the social body, and artistry fostered the industry's ingenuity and innovation, making glass an integral part of the community's identity.

The next section focuses on a fragile animal material – feathers – and their application in dress. In 1480 few Europeans were depicted wearing feathers, yet within decades, as feathers and featherwork from the Americas began to be eagerly received

in Europe, feathers became prestigious objects indispensable to achieve a military as well as a “gallant” look. Feathers could be part of specific emotional styles and embodied practices. They indexed courage and masculine daring, but also subtlety, amorousness, and artistry. They frequently characterized lovers or musicians. The dyeing of feathers in multiple colours and its crafting into intricate shapes turned into a major sixteenth-century European fashion trend. To understand this uncharted and surprising history this section focuses first on the feather-makers positioned in different European cities, who together advanced a new and buoyant craft. Stefan Hanß shows that the application of complex techniques helped to perform feathers’ material properties – their lightness, translucency, motility, and colourfulness – in culturally appreciated forms. Hanß’s contribution highlights the intricate processing skills and knowledge about raw materials which made featherworking a subtle and valued craft. Ulinka Rublack turns to the Lutheran court of Württemberg, where elaborate feather displays formed part of an endorsement of trade and pleasure in artefacts designed to accomplish societal concord and civilization. Feathers not only fostered emotional communication but aimed at affective transformation in performances which sought, above all, to stabilize optimism about future discoveries, territorial development, and the strength of the Protestant Union on the eve of the Thirty Years’ War. Materials could thus be deployed in the re-coding of emotional values and political ideas. Feathers, Hanß and Rublack demonstrate, were sensorially rich. Registering environmental conditions and bodily motions, they generated embodied sensations and embedded themselves into early modern affective regimes.

Gold, as a material used by artists and as a metal whose vibrant visual appearances can be imitated and emulated through paints, forms the central reference point of the next section. Whereas the wide range of yellow pigments used by early modern painters displays their skills in recreating the appearance of other materials and techniques, in its liquid form, gold brought its connotations of preciousness to the artist’s page, where it enriched discourses about honour, craft skill, and mastery over matter. Moreover, the properties of gold and gold-imitating pigments – their brightness and their capacity to shimmer and glow – augmented their emotional resonances. Focusing on the four chapters on colour in Karel van Mander’s *Schilder-Boeck* (Haarlem, 1604), the most important treatise on Netherlandish painting of its time, Christine Göttler’s contribution examines the dynamic relationship between yellow, vermillion, and gold, including their material and sensory affinities and their life-like and lively appearances. Van Mander’s practical and theoretical explorations into painting – as an art requiring both ingenuity and experience – form part of a much larger project to establish a new vocabulary for writing and talking about the values and virtues of Netherlandish paintings, including their visual and tactile allure. Both a painter and a writer van Mander developed what can be understood as contemporaneous theory about the allure of glowing and sparkling surfaces, made

possible by the Netherlandish “invention” of painting in oil. With the example of the celebrated Antwerp illuminator Joris Hoefnagel, Michèle Seehafer explores how shell gold, a well-known but exclusive painter’s material in the early modern period, was used to reference artistic virtuosity and mediate friendship and patronage in different social environments and milieus. Aspirations and social relationships were negotiated through Hoefnagel’s gifting of lavishly gilded illuminations, upon which gold flourishes served as a site to materialize professional identities. As a whole, the section engages with the growing interest in a “connected” history of art that takes into account shared forms of knowledge and sensitivities about material properties, their affective values, and interpretative potentials.

Lastly the volume turns to veils, a universal garment in the wardrobes of early modern European women. Made of linen, silk, and cotton fibres, their drape, shape, weight, and light-density varied considerably, particularly as new fashions and changing desires brought diverse veil-cloths to the market, the trade of professional veil-makers situated across European centres. In this abundant marketplace, veils’ material characteristics incorporated the delicate and diaphanous, the heavy and densely woven, and the stiffly starched and flowing. In this section, the question of their materiality proves to be the key to deciphering veils’ affective dynamics and symbolic meanings. Katherine Bond attends to the vibrant visual culture that sprung up to document the transformative powers of these malleable veils, emphasizing the veil’s capability to materialize social and cultural identities. Sixteenth-century costume books paid close attention to the sensory affects of diverse forms of veils, where they contributed to discourses about youth, beauty, and widowhood. Following the enchanting powers of Italian sheer silk veils to the artful compositions of linen veils in the north of Spain, Bond demonstrates that veils and their idiosyncratic forms invigorated women’s position within their communities. The early modern Protestant cities that Susanna Burghartz deals with in her contribution reveal the veil as a site of negotiation and agency; a battleground that highlights the degree of attentiveness certain Protestant cultures paid to material issues. Women’s veils caused consternation and debate among civic and ecclesiastical authorities, weavers and entrepreneurs, and church-going women, as the fashioning of veils clashed with growing rivalries over economic resources, labour, and morality. Concentrating on the tension between tradition and fashion in the cities of Basel and Zurich from the fifteenth through to the eighteenth centuries, the historically changing relationship between veils’ materiality, form, and the embodied sensations and emotions they enacted is shown to be contingent upon shifting societal pressures, legislative mandates, and identity politics. Both case studies sharpen our attention for embodied experiences and the emotional effects of dress codes and their regulation. This section thus engages with the intense interactions of materiality and identity, its bodily sensations, and cultural meanings.

The objects encountered in our studies take on meaning in different confessional as well as social settings, often eliciting considerable emotional excitement and an absorbing sense that the world could be renewed through making. Each case study shows how makers, urban consumers, communities of like-minded individuals, and courts mutually spurred on innovation, rooted in their sensuous and emotional responses to matter and its value regimes.

Our methodology combines an in-depth qualitative analysis of serial records and ego-documents with object-led approaches. Items of visual, print, and manuscript culture, as well as social spaces like courts, workshops, streets, and churches are highlighted as important sites in which the affective resonances of materials were teased out, and as such were indispensable for charging materiality with cultural meaning. Qualities such as the transparency of *cristallo* glass, the gracility of feathers, the gleam of shell gold, the allure of yellows and reds, or the pliability of veil-cloths began to be linked to emotions and desires, shaping a widely approved, but nonetheless debated “period sense” that bound societies into communities of shared arguments about values and vocabularies. Researching, handling, or remaking such materials or artefacts enables scholars to engage with them as sensory objects, as potentially novel and striking visual acts in their time. This provides us with a better sense of how they might have incorporated or superseded elements of tradition. Putting featherwork under the microscope, reconstructing Zurich church veils, or recreating shell gold used in miniatures, illuminates contemporaries’ sensitivity for matter and its manifold possibilities. By uniting object- and material-centred approaches with the history of affects in these ways, our book reveals how the interplay between vibrant matter and sensorially attuned contemporaries re-shaped early modern Europe.

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