

## **Panels**

*Andreea Badea, Bruno Boute, Marco Cavarzere, Rudolf Schüssler (chair: Steven vanden Broecke)*

### ***Administering Truth in Early Modern Catholicism***

The principled existence of absolute truths was a regulative ideal for the authenticity and credibility of the early modern Church of Rome and its representatives. An “orthodoxic religion” in the anthropological sense, it is hard to deny early modern Catholicism’s success in projecting, even achieving, at least a workable semblance of transcendental order and unity. Nevertheless, the last two decades witnessed the emergence of historical studies focusing on the striking plurality of early modern (global) Catholicism. This panel brings together a number of scholars who seek to translate this recent historiographical shift towards early modern Catholicism’s truth-making practices.

Early modern Catholicism can be viewed as a precarious community of (somewhat regulated) conflict, and its engagement with truth is no exception. Inside the black box of unified orthodoxy, we find the day-to-day practical labour of actors negotiating deep-seated cognitive uncertainties, the situational validity of moral, ceremonial, or liturgical codes, or the fragility of political, social and religious configurations. In the domain of truth, too, practices are what united communities of belief on a day-to-day basis, including a global Christian denomination like early modern Catholicism.

In this panel, contributors to a forthcoming book volume on this issue demonstrate the stunningly broad range of this early modern endeavour by offering case studies from early modern Catholic astronomy, casuistry, jurisprudence, and historiography. The panel is introduced and chaired by two of the volume’s editors, Steven Vanden Broecke and Bruno Boute, who briefly discuss its approaches to the question of early modern Catholic making and operationalizing of truth.

*Rudolf Schüssler*

### ***Scholastic Approaches to Reasonable Disagreement***

The scholastic controversy on probable opinions in the seventeenth century was one of the most extensive and acrimonious debates of the early modern era. Historiography has treated it as a quarrel over moral casuistry, but this underestimates its import. The scholastic preoccupation with the ‘use of opinions’ should be understood as a search for a general framework for dealing with reasonable disagreement between competent evaluators of truth claims (not only moral ones). In the early modern era, scholastic analyses as well as regulations concerning the prudent and legitimate use of opinions acquired an unprecedented scope and depth.

*Marco Cavarzere*

### ***Regulating the Credibility of Non-Christians. Oaths on False Gods and Seventeenth-Century Casuistry***

The paper explores how casuistry served as a versatile body of knowledge, capable of connecting and adapting the allegedly immutable tradition of Catholic truth to specific social and political changes. Contractual oaths in the context of cross-cultural trade prove to be a case

in point to explore the potential of casuistry. In cross-cultural trade, trust was in fact sanctioned by oaths. The problem was, however, that the authority called as a witness to the validity of these oaths was no longer the Christian God, but often the ‘false gods’ of other cultural traditions. Both in Catholic and Protestant contexts the problematic nature of such practices was solved through an innovative application of Christian moral law.

*Andreea Badea*

***Presenting the Past. Writing and Censoring History within Seventeenth-Century Catholicism***

The paper deals with the Curia’s reaction to the uprising of Catholic historiography in the late seventeenth century. These books, written by leading Catholic historiographers, enjoyed admiration and recognition throughout Europe, even among Protestants, above all because of their methodological approach. However, it was exactly their use of the historical-critical method that led them to compete with Rome. The Curia accused them of questioning the tradition and the canonically- attested factuality of a truth already defined by Rome. Instead of simply banning them, Catholic censors and, in particular, some factions of the Curia, commissioned learned men to discredit these historiographical works in order to stage the Roman conception of history as the only true one.

*Alice Blow, Anneke de Bont, Alexander Marr, Fran Hughes, Stella Wisgrill (chair: Alexander Marr)*

***Ambiguity in Early Modern Visual Culture***

This panel questions what it meant for artists and craftsmen to deliberately invoke ambiguity, at a time before modern boundaries between bodies of knowledge, and concepts of identity had developed. During this time of pre-disciplinary knowledge, there was a growth in concern with ambiguity, from paradoxes to puns, as artists, writers, and philosophers probed the not yet distinct boundaries between phenomena. Meanwhile, the early modern period also witnessed an extraordinary growth in artistic use of ambiguity. Despite some traditional resistance to ambiguity in art history, iconographic complexity and double meanings have recently become recognised as early modern artistic strategies, explored in the work of artists such as Leonardo da Vinci, Pieter Bruegel the Elder, Hieronymus Bosch and Albrecht Dürer. Encompassing visual indistinctness, hybridity, moral ambivalence, conflicting meanings, ambiguity of genre, and of gender, this panel will elaborate on how and to what ends artists generated ambiguity in their works. Drawing on the idea that ambiguity was often a self-reflexive strategy, this panel will explore ambiguous imagery as thematising its own limits. Collectively, these papers will offer a model of early modern art that blurs boundaries, and explores the limits of meaning in the visual realm.

*Alice Blow*

***Gender Ambiguity in Early Modern English Prints and Visual Culture***

In 1620, pamphlets, sermons and plays began to heavily criticise gender ambiguous fashions, and especially masculine styles on women. What constituted masculine or effeminate apparel,

however, was not limited to the exchange of breeches for skirts or vice versa, but often took a subtler form. This paper therefore seeks to historicise gender ambiguous fashions, reintroducing the ambiguity that this costume once held for contemporaries. The density of attacks on masculine women in particular developed this costume into a recognisable iconography of ‘bad’ women in prints, the recognition of which can enrich our understanding of the art in this period.

*Anneke de Bont*

***Disciplinary Hybridity in the Galenic Fons Vitae of Jacobus Meilingius***

This paper explores a previously unstudied engraving by Jacobus Meilingius entitled *Figurata Meditatio Microcosmi* (1629) which depicts four interlinking fountains and a tiered flower vessel surrounded by personifications in order to allegorize the second century physician Galen of Pergamum's writings on the organization of the human soul. As a physiological allegory rendered in diagrammatic form, *Figurata* lies somewhere in the interstices between art and medicine, and between religious context and secular meaning. It is at once thoughtful and playful, derivative and inventive. *Figurata* resists categorization and therefore provides an ideal case study for exploring the blurred boundaries between bodies of knowledge in the early modern period.

*Alexander Marr*

***Ambiguity, Anthropomorphism and Misogynist Aesthetics in Niklaus Manuel and Urs Graf***

This paper will explore the ways in which the Swiss mercenary artists Niklaus Manuel (ca. 1484-1530) and Urs Graf (ca. 1485-1528) treated ambiguity in their graphic works. It will be focused on a series of drawings of Alpine landscape capricci, which render form and subject purposely ambiguous through a variety of compositional means, especially the incorporation of anthropomorphic motifs. Informed especially by the latent anthropomorphism of Albrecht Dürer's early engravings, the style and subjects of which both artists consciously emulated, the drawings are bound up with Manuel and Graf's fascination with violence and the eroticized female figure. In these images, it will be argued, ambiguity serves as a means to grapple artistically with a misogynistic fear of female power, expressed as brutality—both actual and aesthetic—towards the female body.

*Fran Hughes*

***The Heraldry of Nobody: The Uncertainty of Visual Identification in German Lands at the Beginning of the Sixteenth Century***

This paper will explore the emergence of virtuosic depictions of generic, fictive coats of arms in German-speaking regions in the early-sixteenth century as a response to the cultural destabilisation of heraldry as a form of visual identification. Following the rise of print culture and alternative types of non-noble signs, such as monograms and devices, heraldry was increasingly aestheticised as a category of ornament. Artists began inventing unattributed coats

of arms as collectible, independent sheets, often thematising the paradoxical status of the ‘heraldry of nobody’, thus drawing attention to the open-endedness and uncertainty of visual identification.

*Stella Wisgrill*

***Picturing Celestial Majesty in the Holy Roman Empire: The Visual Ambiguity of Iridescence***

In a remarkable piece of heavy horse armour made for Emperor Frederick III in 1477, the Augsburg armourer Lorenz Helmschmid recreated the transient colour of peacock feathers. Helmschmid tempered and etched the wings of the repoussé angel on the horse’s chest into delicate peacock eyes and feathers of ephemeral iridescence. Embracing the visual ambiguity of their heraldic animal’s plumage allowed members of the House of Habsburg to express their claim for imperial rule and celestial majesty. This paper will trace these efforts by drawing on various realms of early modern knowledge, such as alchemy, weaving, genealogy and metalworking.

*Matthijs Boom, Patrick Anthony, Hanna Roman, Wouter de Vries*

***The Darkness of Distant Time. Thinking About the Deep Past in the Long Eighteenth Century***

These panels reconsider how Enlightenment disciplines of human and natural history understood the deep human and natural past. While large timescales and a global scope are increasingly common in contemporary studies of the past, such approaches have a long and rich history of their own. Over the course of the long eighteenth century, savants of all stripes repurposed older traditions to fashion new chronologies, narratives, and images to represent the past.

Received scholarship was questioned by new interpretations of the Earth’s natural features and ancient religious texts, as well as by rapidly growing information about the civilizations of Asia, Africa, and of the Americas. Non-European sources revealed apparent conflicts and inconsistencies in chronologies, prompting scholars to compose histories of various regions and to combine them into coherent narratives of universal history. ‘Theories of the Earth’ meanwhile sought to integrate natural history, biblical, and human history in a new planetary narrative, while mining industries began to unearth ever more complex ruins of the deep past. In this changing world of science and scholarship, old religious interpretations of history were reappropriated, challenged, and defended, shaping historical thought in unforeseen ways.

We want to ask how practices of history, definitions of time and temporality, and use of evidence were reimagined in the Enlightenment, through fields such as the theory of the Earth, sacred history, universal history, conjectural history, and natural history. These panels explore the dialogues between Scripture, myth, history, and natural philosophy in an era when historical thought changed profoundly.

**Thinking About the Deep Past in the Long Eighteenth Century: Planetary Ruins**

*Wouter de Vries*

***Visions of the Early Earth***

New ways of knowing the Earth that emerged during the seventeenth century included new modes of representation, and the wealth of visual material is characteristic of these discussions: knowing earth meant seeing earth. However, it is also a complicating factor: prints cannot simply be analysed as supplements, or by ‘translating’ them into text. What is the epistemic function of these prints? Building upon extensive recent research into ‘epistemic images’ and the interaction of art and science, this paper intends to study the way in which these prints ‘work’ in relation to the aims of the scholars using them – combining a ‘slow looking’ approach with insights from the history of science.

*Hanna Roman and Patrick Anthony*

***Revisiting the Enlightenment through Ruins***

In the Enlightenment, history was understood as the convergence of human and natural activity. The idea of ruins played a key role in giving shape and meaning to historical time, allowing naturalists not only to investigate the past but to rework and develop concepts of creation, causality, and narrative. The paper will use ruins as a tool for accessing and re-evaluating the structure and morality of time in the Enlightenment. A wide-angle view of ruins and the role they played in the concurrent movements of human and natural history will be followed by a case study of how mining technicians in Central Europe dwelt in ruins of their own making. It was in the language of ruins that both intellectuals and earth workers gave new value to historical and industrial ‘waste,’ positively viewed as the “vestiges of the former industriousness.” The quest for progress and utility was placed upon a firm historical bedrock. From natural theologians to mining technicians, ruins were key to productive thought in the Enlightenment. Moreover, reappraising Enlightenment practices through the optic of ruins helps to explain how the ‘oeconomic’ balance found in Nature coalesced with the dynamic directionality of earth and human histories.

*Mathijs Boom*

***Secularizing Earth’s History in the Austrian Netherlands***

Between 1740 and 1780, the study of Earth’s history shifted from philosophical ‘Theories of the Earth’ to regional natural histories in service of extraction and improvement. The latter supplanted the planetary-scale biblical narrative in Earth histories. The works of the English Catholic John Turberville Needham and his contemporaries illuminate parallels and tensions between theological and utilitarian readings of the remains of deep history. At the Academy of Brussels Needham repurposed his religious understanding of Earth’s history—and his feuds with Voltaire and d’Holbach—to fit the secular aims of improvement and economic reform. Yet, providential and directional interpretations of the past continued to inform newly-minted geological histories.

*Vladimir Brlajk, Hannah Bower, Ali Madani, Elizabeth Swann; Bryan Brazeau, Francesco Brenna, Michael Hetherington, Lucy Rayfield, Micha Lazarus*

***Poetics among the Disciplines***

Gathering scholars working on all aspects of c.1400–1700 intellectual history, the Scientiae conference is the ideal venue for a conversation about where knowledge about imaginative literature fits into the period's disciplinary map, and how the key developments in the sphere of poetics and literary criticism in this period relate to those in other fields and disciplines. The two proposed panels gather new work on the subject, extending across the full chronological range covered by the conference, and exploring links between the period's poetic theory and relevant developments in historiography, the history of emotions, logic, medicine, optics, philosophy, psychology, rhetoric, scriptural hermeneutics, technology, and theology.

***Panel I: Bryan Brazeau, Francesco Brenna, Michael Hetherington, Lucy Rayfield  
(chair: Micha Lazarus)***

*Bryan Brazeau*

***God's Grandchildren: Augustinian Theology and the Poetics of Torquato Tasso***

At the end of the first book of the *Discorsi del Poema Eroico* (1594, but drafted in the early 1580s), Torquato Tasso argues for the independence of poetry as an art in its own right to stand alongside history and rhetoric. Later in his career, Tasso would further develop this argument in his *Giudicio sopra la Gerusalemme da lui medesimo riformata* (1595), underlining the superiority of poetry over history as a discipline for representing truth, and rejecting the idea wholesale that poetry imitates history. In the same late treatise, Tasso relies increasingly on the intersection between theological and poetic arguments, referring frequently to Saint Augustine's *De Civitate Dei*. This paper seeks to investigate the influence of Augustinian ideas on Tasso's poetic thought as a case study for the intersection of poetics and theology as ways of knowing. Along with Augustine and Tasso, it may also discuss the role of such poetic interdisciplinarity in the work of Dante and in the poetics of Lodovico Castelvetro as key intermediaries with whom Tasso meaningfully engaged.

*Francesco Brenna*

***When Poetry Seems to Vanish: The Place of Poetry within Human Learning in  
Girolamo Fracastoro***

In this paper I study the definition of the role and value of poetry within human learning in Girolamo Fracastoro's dialogue on poetics, the *Naugerius, sive de poetica* (1555). I argue that this short treatise, despite its relatively limited influence on the history of poetics, was one of the few early modern texts to really test and deconstruct (rather than to harmonize, as most critics have claimed) several classical and Renaissance commonplaces on the essence of literature (from Aristotle's mimesis to Plato's divine frenzy). I will focus on the attempt to find poetry's distinctive value, neither one that makes it a simplified or more persuasive version of what other disciplines such as history or philosophy do better, nor one that is based on

supernatural explanations of poetry's origin. I analyze how this attempt reflects Fracastoro's methodology in his medical and philosophical treatises.

I argue that Fracastoro's main achievement is to establish how to not defend poetry, rather than to show how to defend poetry. Fracastoro's dissatisfaction with traditional commonplaces is critical: If they cannot find a distinctive role for literature, and if we cannot define what only poetry can do, then there is no place for imaginative literature among the different fields of human learning, and poetry, as Fracastoro put it, is at risk of vanishing. At the same time, I suggest how Fracastoro's indications on what path to take in order to find a distinctive value for poetry, although not fully developed, foreshadow the future directions of poetic theory and are valuable resources to define the importance of literature even today.

*Michael Hetherington*

***The Poet as Man of Parts***

A common basic feature of ancient and early modern works of technography, across various disciplines, is their tendency to divide their subjects into parts, either as heuristic aids to teaching and learning or as analytic tools of disciplinary knowledge. Prominent examples in the rhetorical and humanist traditions include works like Cicero's *Partitiones oratoriae*, whose title identifies rhetoric's conventional division into the five 'parts' of *inventio*, *dispositio*, *elocutio*, *pronuntiatio*, and *memoria*, as well as a number of other distinctions constitutive of the discipline, like the enumeration of the parts of an oration. The *partitio* became a common tool of humanist encyclopaedism: Conrad Gesner's *Pandectae* (1548), for example, are subtitled 'partitionum universarum [...] libri xxi'. It was partly in his commentary on Cicero's *Partitiones* that Johannes Sturm developed ideas about method that would later become central to the pedagogical culture of the later sixteenth century, particularly in the wake of Ramus; Sturm also published his own *Partitiones* of dialectic. This paper explores parts and partitions as tools of knowledge in the sixteenth century, drawing on texts in a number of disciplines, and charts the emergence of the related concept of the 'man of (many) parts', which owes something to Castiglione. It asks what epistemic claims about the nature and exercise of skill this language entailed, and examines the creative consequences of the part-whole model of artistic ability in the work of two English poets who responded particularly richly to this paradigm: George Gascoigne and Ben Jonson.

*Lucy Rayfield*

***Poetics, Joy, and the Emotions in Sixteenth-Century France***

In this paper I examine the poetics of comedy and laughter in France in the mid-sixteenth century, within a broader context of the history of emotions. My paper will focus mainly on one of the most influential literary treatises in early modern France, penned in 1555 by the mathematician and orthographer Jacques Peletier du Mans. Although this treatise inspired a range of theoreticians—as well as dramatists, historiographers and translators—Peletier's contribution to sixteenth-century comic poetics has been neglected in modern scholarship. My paper looks at how Peletier developed classical theories on comedy into his own rules for

crafting successful comic work, setting out the ways in which comedy might most benefit early modern writers and readers and situating comedy as a pleasant and productive means of experiencing emotion. Although he is one of France's first literary theorists to consider laughter as a powerful tool, he forms part of an important discourse with contemporary medics, playwrights and satirists, who considered the writing (and reception) of comedy to be convivial and restorative—as well as highly dangerous at times. Whereas other humanists outlined the power of laughter as a tool for community building, a method for teaching an important lesson, or even a useful way of gaining promotion at the royal courts, Peletier is convinced that comedy is primarily a means of elevating and enhancing French language and literature. As well as deepening and broadening our understanding of Peletier's literary theory, my paper thus helps to determine the rhetorical, theoretical and psychological position of comedy in France in the mid-sixteenth century, in relation to its classical and contemporary counterparts.

***Panel II: Hannah Bower, Ali Madani, Elizabeth Swann (chair: Vladimir Brljak)***

*Hannah Bower*

***Impossible Transformations and Intertextual Puzzles: Rethinking Fifteenth-Century Trick Recipes***

This paper will set fifteenth-century recipes for tricks, optical illusions and impossible transformations alongside particular kinds of imaginative literature. Such recipes appear in late medieval household books and scientific compendiums; they contain instructions for creating marvels such as white crows, headless bodies, solid starlight, and illusory floods. These instructional texts, which are only just beginning to receive significant critical attention, not only evoke medieval psychological writings on the workings of the imagination: they also form one strand of a larger intertextual web drawing together Aristotelian logic, Ovidian metamorphoses, satirical imaginings, and fabliaux mischief. These diverse texts are connected through recurring motifs but—on account of their various modes, forms, manuscript contexts, and apparent preoccupations—they are rarely discussed together.

In this paper, I will probe some of these writings' interconnections and overlaps further. I will contend that some of these trick recipes suggest or exemplify similar ideas about human creation to more explicitly imaginative or poetic texts: I am particularly interested in the way some recipes draw attention to the limitations of this creative power and the way those limitations are played out in imagined time and space. This focus will in turn lead to a broader consideration of the ways in which recipes and more poetic texts theorise (and problematise) the relationship between language, matter, and thought.

*Ali Madani*

***Britain's Literary-Historical Giants***

For a brief period during the modernization of historiographical practices in the seventeenth century, fact-oriented historians in England and France debated and defended the credibility of giants in the historical record. Adherence to the belief in giants had assumed greater significance with the coronation of James I and VI, who saw in Trojan Brutus' slaying of

ancient Albion's giants in the founding myth of Britain a claim for the legitimacy of Stuart succession. Flickering between the modernizing disciplines of literature and history, the giant was essential to the British founding narrative but ill-fitted to emergent evidentiary standards. This paper will consider the disciplinary ramifications of the representation of these giants in English chronicles and historical verse. Historical conjecture, theorized by William Camden in his *Brittania* (1610), served to bridge the widening disciplinary divide separating literature from history at the turn of the seventeenth century. I demonstrate the necessity of conjectural historiography to perceive erstwhile historical objects by analyzing debates concerning the proper representational home for giants between writers of history and poetry: William Camden, Raphael Holinshed, Michael Drayton, and John Selden.

*Elizabeth Swann*

***“An art to make dust”: Thomas Browne’s Medical-Temporal Poetics***

‘Wolfgang Iser is the Thomas Browne of literary theory’ (Stanley Fish). Fish’s uncompromising pronouncement here neglects the possibility that this paper argues for: that Thomas Browne is in fact the Thomas Browne of literary theory. Browne’s self-reflective interest in the epistemic and temporal ‘superconsequencies’, or implications, of literary form has, I propose, been overlooked by scholars preoccupied with condemning or defending his own ravishingly idiosyncratic prose style. In contrast, this paper argues that Browne’s literary-theoretical observations are enmeshed throughout his disciplinarily diverse, polymathic output both within his own literary practice, and with other concerns: most obviously, scriptural hermeneutics, but also his work as a physician, and his engagement with Baconian natural history.

More specifically, the paper draws on Browne’s lesser-known epistolary pieces (notably his *Amico Opus Arduum Meditanti*), alongside his *Religio Medici*, *Pseudodoxia Epidemica*, and *Hydriotaphia*, in order to explore how his medical training informed his sustained investigation of the capacity of literary form to rupture conventional linear temporality. I suggest that Browne’s extreme sensitivity to how the unfolding and enshrouding of knowledge in time might be enacted in language (including the complex rhythms of his own prose) derives partly from his experience of temporal paradigms associated with bodily disease and medical treatment (such as the regime, the case history, the prognosis, the crisis, and the recovery). Ultimately, what Kevin Killeen calls Browne’s ‘obsessive concern with the metaphysics and meaning of time’ should be understood in a literary-theoretical and medical (as well as a theological, millenarian, and historiographical) context.

*Richard Calis, Lilian Datchev, Erin Maglaque (chair: Gelder, Maartje van)*

***Ethnography in the Early Modern Mediterranean***

In the early modern world, the Mediterranean served as a laboratory for the investigation of different cultures and their interactions. Being home to the great ancient empires, from the Assyrians to the Romans, and the cradle of the three Abrahamic religions, this sea has long been an important site of cultural exchange. In the course of the fifteenth and sixteenth centuries, however, the nature of such

cultural exchange was transformed: for the first time, the frequent interactions between peoples of the Middle Sea's different shores became a source of systematic inquiry into their differences. Antiquarians, humanists, merchants, and a host of other individuals made careful observations about peoples and places, took measurements of areas, cities, and buildings, conducted interviews, collected archival documents, and read old and new texts exhaustively and comparatively, giving rise to new intellectual practices, including geography and antiquarian scholarship. Our panel will interrogate how and why these intellectual developments occurred in the Mediterranean. The three papers will examine how the Venetian colonization of the Eastern Mediterranean and the rise of the Ottoman Empire created the circumstances in which merchants, displaced people, humanists, and university scholars produced new kinds of discussions, drawings, and texts. By examining mercantile account books, travel diaries, letters, interviews, treatises, and maps, the individual papers will explore how the special circumstances of cultural exchange in the Mediterranean allowed for the rise of new studies of culture. We will eventually suggest that these Mediterranean experimentations in scholarly method helped establish the foundation of ethnography as a discipline.

*Lillian Datchev*

***Italian Mercantile Training in the Study of Foreign Peoples***

Following the medieval commercial revolution, Italians invested in Mediterranean enterprises. Venice first traded with the Eastern Roman Empire, Muslim Africa, and the Levant, while Pisa and Genoa with Corsica, Sardinia, and northwestern Africa. To build this commercial empire, they relied not only on account books, family diaries, and merchant manuals but also on portolan charts, lists of place names and coinage, and phrase books. By analyzing some of these early texts, which survive in abundance after the fourteenth century, I will study how Italian merchants developed 2 special skills in the observation, description, and even analysis of foreign peoples, which laid a foundation for the development of early modern ethnography.

*Erin Maglaque*

***Ethnographies of Rebellion on Early Modern Crete***

The Lassithi Plateau is a fertile plain in the Dicte mountains of Crete. A natural fortress, Lassithi became a refuge for Greek rebels from the Venetian colonial state on Crete. The rebels of Lassithi, and the physical geography of the plain, were of great interest to humanist geographers of the Renaissance Mediterranean. Describing their interviews with local rustici, agricultural practices, and recent political history, these writers participated in a nascent ethnography of this upland peasant rebel community. In doing so, their work offers a starting point for wider reflections about the place of the rural poor in Mediterranean ethnographies.

*Richard Calis*

***Mediterranean Encounters in Early Modern Tübingen: Martin Crusius (1526-1607) and his Greek Orthodox Informants***

Not all Mediterranean stories took place in the Mediterranean. This paper examines the cross-cultural encounters between an otherwise undocumented group of Greek Orthodox Christians

—who were collecting alms to ransom family members enslaved by the Ottomans — and a Lutheran professor of Greek called Martin Crusius (1526-1607) in his Tübingen home. It reconstructs the intellectual exchange that took place there and demonstrates how Crusius learned about the Ottoman Greek world through conversation over dinner; through interaction with books and paintings; through various forms of visualization; and even through taste. The kind of ‘Mediterranean’ ethnography that went on in Crusius’s household was thus a deeply embodied and sensory practice —and one made possible by the flows of peoples and the forms of connectedness that the early modern period is increasingly known for.

*Mihnea Dobre, Jonathan Regier, Ioana Bujor, Silvia De Bianchi, Anna Jerratsch, Scott Mandelbrote, J.B. Shank*  
***The Spectre of Heresy in Early-Modern Cosmologies***

The demise of the traditional Aristotelian cosmos and rise of early-modern cosmologies offer a fruitful ground to explore the interaction of disciplines during the emergence of modern science. Consequences of the new philosophies were often highlighted as potentially dangerous for religion, up to the point of heresy. Facing an increased confessionalization of learning, sixteenth-century institutions needed to accommodate not only a variety of “Aristotelianisms,” but also the ambitious claims of new philosophies. Our panel will explore early modern cosmologies in light of their heretical potentialities. Individual papers will investigate how natural philosophy intermingled with religious topics, bringing to the fore case studies of early modern thinkers dealing with traditional religious sources and recent theories about the constitution of nature. Papers will investigate how early modern figures appropriated ancient sources and how the interplay between pagan, Jewish and Christian traditions allowed a fresh reconceptualization of cosmological views. Papers will also give attention to the varieties of influence that could exist between spiritual or confessional pressures and cosmology, both before and after the introduction of Newtonian physics. In this way, the panel will contribute to the most recent discussions on the “science-religion” rapport in early-modernity.

*Jonathan Regier*

***Girolamo Cardano and the Naturalization of the Holy Spirit in the Sixteenth Century***

Girolamo Cardano was the most prominent natural philosopher to be tried by the Roman Inquisition before Giordano Bruno. In a recent study, I have considered how his cosmological views were confronted by Inquisition censors (Isis 110:4). On the heels of the Council of Trent, the Inquisition saw Cardano’s celestial physics and astrology as a threat to freewill, that is, to the human capacity to accept or reject spiritual gifts. In this paper, I would like to build from these earlier results to ask whether Cardano’s cosmological views can be set within another current of sixteenth-century philosophy: the naturalization of spiritual inspiration, that is, of activities associated with the Holy Spirit.

*Ioana Bujor*

***Johannes Amerpoel’s Quest for Reconciliation in the Cartesius Mosaizans (1669)***

This paper brings into light the work of Johannes Amerpoel, Cartesius Mosaizans (1669), and aims to focus on his ambition to bridge the gap between the natural philosophy of Descartes and the Creation story from Genesis. This specific type of discourse, part of what is often called “Mosaic physics”, is poorly researched and thus, Amerpoel has not been receiving much attention from scholars. My interest turns toward a particular segment of his work, namely the controversy dealing with the doctrine of the souls (Genesis 1:20-30). A second emphasis will be put on the (possible) limitations of Amerpoel’s attempt of reconciliation.

*Mihnea Dobre*

***Cartesianism at Bay: Rohault as a defender of Cartesian cosmology***

Abstract: Notoriously, after he learned about the condemnation of Galileo, Descartes abandoned *Le Monde* in the 1630s. The implicit Copernicanism of his cosmology was eventually reworked in the subsequent years and presented – in a mitigated form – in the *Principles of philosophy*. This strategy had further consequences in the reception of his cosmological views, which I exemplify here with Jacques Rohault. Allegedly, Rohault’s religious views were tested by the Archbishop of Paris just a few months before his death. I will investigate Rohault’s commitment to Cartesian cosmology and how his views were phrased to avoid the specter of heresy of the day.

*Anna Jerratsch*

***The Role of Astrology and Religion in the Formation of Modern Science. The Case of Comets in Early Modern Germany***

In Early Modernity, comets are interdisciplinary objects revolving around the fields of natural philosophy, astrology and theology. In the 16th century, comets were seen as ephemeral meteorological phenomena, while being regarded as predictable celestial bodies by the end of the 17th. Rather than characterizing this process as a rationalization by implementing a new method and cutting ties to superstitious and religious belief, I claim that particularly elements of astrology and theology functioned as catalysts in this epistemological transformation of cometary knowledge. Referring to German vernacular pamphlets, I will present two case studies showing, firstly, that it was the need to decipher the comet’s meaning that legitimized its astronomical observation, while, furthermore, their theological conceptualization as divine signs was not simply abandoned, but rather reinterpreted as causal-teleological in the framework of Newtonian cosmology.

*Scott Mandelbrote*

***Heresy & Cosmology in England around 1700***

This paper will consider what theological issues were raised by competing cosmologies put forward by English authors in the years between 1680 and 1720 and consider why writers were accused of heresy. It will discuss, inter alia, the ideas of Thomas Burnet, Isaac Newton, Henry Dodwell, and William Whiston.

*J.B. Shank*

***We Weren't Modern Then, Either: Cosmological Thinking at the Dawn of Hazard's 'Secular Enlightenment', 1670-1730***

The perception that a concentration of modernity-making publications after 1670 (Spinoza, Newton, more) ushered in a new secular naturalism in European thought has been a staple of the historiography since at least 1935 when Paul Hazard placed this constellation at the heart of what he called *la crise de la conscience européenne* around 1700. My paper will examine the intersection of scientific writing, publishing, and image making in exactly these years, focusing on the question of the primordial origins of the cosmos. It will show the presence of strong intellectual continuities across the period 1670-1730, and the absence of any clear naturalist/secular rupture. The absence of clear lines separating religious orthodoxy from heterodoxy, and Christian scriptural understandings of the cosmos from either ancient pagan conceptions or new naturalist scientific understandings will also be stressed.

*Silvia De Bianchi*

***Kant's pre-critical cosmology and its debt to the Ancient World***

Kant's 1755 *Universal Natural History and Theory of Heavens* has been the object of a vast literature compared to his 1754 minor writings on the axial rotation of the Earth and on the history and evolution of our planet. In order to assess the nature of Kant's criticism of models inspired by Biblical exegesis, I highlight the role that Ancient cosmological models played in Kant's 1754 essays, thereby influencing his cosmology. In particular, I shall emphasize the presence of Platonic and Stoic conceptual underpinnings that allowed Kant to produce one of the most advanced cosmological and cosmogonic hypotheses.

*Ofer Gal, Paddy Holt, Laura Sumrall, Eric Hodoba*

***London, 1665***

The historiography of early modern science used to be the locus of great narratives, from 'secularization', through 'rise of modernity' to 'revolution'. Consequently, it was also the arena where raged the (rather successful) battle for their demise in the name of carefully constructed, agent-oriented 'micro-histories'. Unsurprisingly, it is also a field that has recently seen some hankering for the old themes, with the rich philosophical debate they gave rise to and expressed.

The suggested session is a modest exploration of a middle ground. On the one hand, it commits to an immediate and non-teleological historiography by concentrating on a very particular time and place. On the other, this almost-arbitrary choice of micro-concentration – 1665 was neither *annus horribilis* nor *annus mirabilis* – allows a wide range of perspectives, thematic, philosophical, and historiographic, because, intertwined by the vicissitudes, neither perspective nor choice of agents can assume authority, nor can centre and periphery be taken for granted.

Thus it turns out that the plague that sent the gentlemen of the Royal Society to indulge their experimental tastes in the comfort of the countryside, became an opportunity for the English Helmontians to demonstrate their medical efficacy and moral superiority by staying in town – often at

the price of their own life. And that as the Society's aging outcast Thomas Hobbes lost his intellectual interlocutor with the passing away of Kenelm Digby, close in age and in continental affiliation, he gained an unacknowledged and censured disciple in their young employee Robert Hooke. The relations between old and new ideas get blurred by the Helmontians' import of demonology and magic to produce novel disease theory, and Hooke's reinvocation of classical ideas of the antiquity of fossils, while the boundaries between the New Science and old humanism were redrawn by Hobbes' sophisticated optics and the Royal Society's courtly attitude to experiments.

*Cindy Hodoba Eric*

***Hooke and the philosophers' stones***

Robert Hooke first publicised his answer to the question of fossils in the *Micrographia*, published in London in 1665. Here, he showcased the development of a new way to identify the origin of things like petrified wood and shellfish: by disclosing internal, microscopic, characteristic marks. Implicit in his approach was the idea that these telling traces were stamped not on things but were in the things themselves. In this replacement of the Paracelsian world-picture of signatures and sympathies, Hooke would also attempt to transfer, and usurp, alchemical metaphors and themes to his lifelong studies of fossils and extinction.

*Paddy Holt*

***An appetite for experiment: putting early Royal Society tastes back on the table***

In 1665 Thomas Sprat stopped writing his *History of the Royal Society* to defend the hospitality bestowed on Samuel Sorbière when he visited the savants in London, describing how he had been 'entertained,' and insisting he 'be grateful for a good potage' and 'sound up his meat.' Experiments were not to be imagined growing from nothing. London was a place in which the table loomed large as an indispensable part of the experimental furniture. From the lavish banquets over which experiments were discussed, through to feasts that were themselves experiments, experimental knowledge was fed in settings of appetite and gratification. A relationship important enough for devotees as well as detractors, the character of English experimental philosophy was on the table.

*Laura Sumrall*

***Imagining disease and its universal cure in early modern chymical medicine***

Four years before dying of the plague in 1665, the American physician and 'chymist' George Starkey related that he had consumed more than a decade on a single project: synthesising 'Alkahest.' This chemical was to be a universal solvent for synthesizing all-curing medicines, challenging the traditional physicians' 'incurable diseases'. His claim to success may be challenged by his demise, but it had sound theoretical foundations. The evolving chymical philosophy of disease, entailing psychosomatic processes of conception, fermentation, and generation in the human imagination, enabled physicians like Starkey to promote with boundless optimism a highly ambitious therapeutic program in the contested arena of early modern English medicine.

*Ofer Gal*

***Digby, Descartes, Hobbes***

On July 11, 1665, his 62nd birthday, Sir Kenelm Digby passed away in his London home, symbolically marking the demise of a path that English New Science did not take: eclectic and adventurous, befitting Digby's boisterous personality and privateering youth. Yet the ideas that excited him did survive as fertile undercurrents of mathematical natural philosophy. The alchemical metaphysics with its active concept of matter that legitimized transubstantiation for Digby's renewed Catholicism famously served Newton's conceptualization of universal gravitation. The passionate epistemology that Digby mediated between René Descartes and Thomas Hobbes is, however, less known, and the subject of this paper.

*Torrance Kirby, Joshua Hollmann, Eric Parker*

***Divine Illumination: Early Modern Mystical Theologies***

*Joshua Hollmann*

***Nicholas of Cusa's Mystical Reading of the Qur'an***

Nicholas of Cusa (1401-1464) is well known for his mystical masterpiece *De visione Dei* (1453). As evidenced in *De docta ignorantia* (1440) and *Apologia doctae ignorantiae* (1449) Cusanus was versed in the Neoplatonic mystical tradition. What is less well known is Cusanus's mystical exegesis of the Qur'an. In the *Cribratio Alkorani* (1461) Cusanus reads the Qur'an as a work of mystical theology in order to discover common ground between Christianity and Islam on the concepts of plurality and unity, and God in relation to Jesus Christ. The paper pays special attention to the images and metaphors Cusanus applies throughout the *Cribratio Alkorani* to unfold the mystical theology shared by Christians and Muslims. Cusanus's theology of religion as evidenced in *De pace fidei* (1453) vis-à-vis Islam is ultimately explicated in the *Cribratio Alkorani* as mystical theology whereby Christianity and Islam transcend differences and ascend to unity in God who is beyond all knowing. In book two of the *Cribratio Alkorani*, Cusanus identifies his aim as mystical theology (*mysticae theologiae*) according to which God is ineffable (*secundum quam deus est ineffabilis*). Mystical theology, through which one desires union with God and the many becoming one, accentuates Cusanus's method of learned ignorance in approaching the circularity of the ineffable God in the concentric Divine revelations of Christianity and Islam. Cusanus's application of mystical theology to interpret the Qur'an presents an innovative late medieval approach to religious comparison and coherence at the advent of early modern religious toleration.

*Eric Parker*

***'Inseparable Society of Heavenly Love': Peter Sterry's Triune Method of Peace***

The Cambridge Platonist, Peter Sterry utilizes a Trinitarian method for viewing reality, one that draws on the Trinitarian and Christian-Platonic thought of the German cardinal, Nicholas Cusanus. For Sterry, as for Cusanus, the Christian religion is composed of "one religion in a variety of rites." Sterry, who was exiled from the Church of England owing to his non-

conformity, instructed family and friends in the Triune principle of unity-in-variety, referring to his conventicle under the patronage of the Viscount Lisle as a “lovely society.” Drawing on Cusanus’s names for the Trinity, Sterry argues that Trinitarian love requires one to give oneself to the image of God in the other, in order to receive oneself back as an other-image. Through the “omniform power of judgment” that humans share with Christ, one is able to convert differences of opinion, or the sadness of parting or death to unity-in-variety, joy-in-sadness, and life-in-death. These triads reflect the Triune activity of the human mind as a “living image” of the Trinity. Sterry believed that the application of this Trinitarian method of love would lead to universal peace.

*Torrance Kirby*

***Configuring God as Law: Richard Hooker’s Neoplatonic poetics of law***

In Book I of his treatise *Of the Lawes of Ecclesiasticall Politie* (1593) Richard Hooker employs several striking metaphors in his discussion of Law. Some emphasize the “hiddenness” of the ultimate source of Law. He likens Eternal Law to the divine Sophia. Hooker’s sustained use of the feminine pronoun echoes the sapiential books, viz. Proverbs, Job, Wisdom of Solomon. Moving beyond the limits of metaphor Hooker proceeds with an account of the disposition of the species of law derived from the scholastic conception of the ‘lex divinitatis’, especially as formulated by Pseudo-Dionysius the Areopagite in *De Divinis Nominibus* and later by such medieval Canon lawyers as Aegidius Romanus. Both his sapiential theology and his invocation of the lex divinitatis stand in creative tension with his professed adherence to the doctrine affirmed by the Elizabethan Articles of Religion (1571). Is Hooker successful in reconciling his Neoplatonic legal ontology with his Reformed soteriology?

*Manuel Llano, Koen Scholten, Justine Rinnooy Kan, Luke Freeman, Lieke van Deinsen, Floris Solleveld*

***Portraits of scholars and scientists***

*Panel I: Koen Scholten, Justine Rinnooy Kan, Luke Freeman (chair: Manuel Llano)*

***Galleries of Learning: the organisation of portraits***

In this panel we will discuss the rise of the scholarly portrait gallery: when, where and why did powerful individuals and institutes start collecting and putting on display series of portraits of learned men and women. Did the creation of a learned pantheon in itself, as an extension of the library, aim to give the external portrait of the heads who produced the contents of the books? Were the portraits meant to reinforce the relation between reader and author? Or did galleries also aim to convert new onlookers to become readers? To what extent do the galleries create canons of authoritative members of the Republic of Letters?

*Koen Scholten*

***Hanging the Illustrious Heads of Learning: Italian Sala Virorum Illustrium and University Portrait Galleries***

Surrounding oneself with portraits of fellow learned men is a long-standing tradition. Early books were adorned with authors' portraits to guide and inspire the reader. Similarly, libraries were embellished with inspirational portraits of illustrious learned men. In this talk I will trace the general development of the tradition. I will distinguish two stages in the development: first, the early instance in the Sala Virorum Illustrium in Padua and the Uomini famosi tradition in Florence in the fourteenth and fifteenth century. Secondly, the continuation of this tradition in universities. We see the first traces in the memorialization of scholars and professors in elaborate tomb monuments in Padua and Bologna. I will argue this memory culture gave rise to a rich culture of learned portraits in later university settings. For this, I will look at the case of universities in the newly-founded Dutch Republic in the seventeenth century such as Leiden University and Utrecht University.

*Justine Rinnooy Kan*

***In Prominent Sight: Portraits of Early Modern Scholars at Dutch Universities***

This paper examines the longstanding tradition of displaying portraits of professors at Dutch universities, by studying the early modern paintings in these collections. When, how, and why were the oldest paintings in the portrait galleries exhibited? What purpose did these portraits serve? How does the quality of these artworks and the way they were displayed relate to their purpose? And was there ever an interest in portraits in other media than oil, such as sculpture, or print? The early modern examples of painted portraits, sometimes collected by the university as early as the late sixteenth century, other times proactively secured only in the nineteenth century, shed light on changing purposes of and attitudes towards the displays. This opens up theoretical perspectives into e.g. the portraits' function in the creation of institutional identities, and to which degree this was intentional during different periods.

*Luke Freeman*

***Portrait(s) of a Liberal-Arts Engraver: Bernard Picart (1673–1733)***

In 1734, a book called *Imposture Innocentes* appeared in Amsterdam with the name Anne Picart listed as the “scientific editor.” It contained an essay by Bernard Picart, an “Eloge” to Bernard Picart, and seventy-eight engravings signed with his name. In this paper, I will analyse how Picart portrayed himself as a liberal arts-trained expert in the techniques of reproductive engraving. I will identify three ways in which he crafted this identity: first, he combined the craft-based work of engraving and the intellectual demands of the liberal arts, which were typically held in tension with one another. Secondly, he left Paris and moved to Amsterdam where he collaborated on ambitious publishing projects like *Cérémonies et coutumes religieuses des tous les peuples du monde* (1723-1741). While in Amsterdam, Picart produced numerous portrait images of contemporary intellectual figures. I will argue that these portraits show his ambition to engage with and further elevate the liberal arts. Thirdly, I will describe how he engaged with learned networks in the Republic of Letters. In particular, I will describe two pieces of understudied evidence for this engagement: the two small portraits that he painted for his friend, Prosper Marchand, and Marchand's wife, Catherine Cottin. Picart

produced these intimate portraits for his friends, but they also serve as evidence for the “portrait” that Picart endeavoured to craft of himself as a liberal artist. Lastly, I will return to the “Eloge” that appeared in *Imposture Innocentes*, which portrayed the engraver Picart in terms befitting a Renaissance painter.

*Panel II: Lieke van Deinsen, Floris Solleveld, Manuel Llano (chair: Koen Scholten)*

***Reverse images? Printmaking and scholarly portraiture***

This panel will address changes and continuities in the representations of scholars and knowledge producers during the mid to late seventeenth century in printed portraits. We will examine the design, production, uses and circulation of prints in order to address an overarching set of questions: How did scholars fashion their identity through their portraits? How did the expectations and regulative ideals of the learned community influence the representation of learned women and men? How did the medium influence the message?

*Lieke van Deinsen*

***The Many Faces of a Learned Maiden. The (Changing) Uses of Portraiture in the Public (self-) Representation of Anna Maria van Schurman (1607-1678).***

Over the course of the seventeenth century, public fascination for the biographical and the physiognomic characteristics and particularities of intellectuals gave rise to the publication of printed author portraits. Author portraits – which were included in books, but also sold, exchanged, collected, and displayed separately – started to play a formative role in the construction of intellectual authority. Nevertheless, their importance in the construction of female intellectual authority has scarcely been explored. Incidental attention for the subject has stuck to the observation that the growing demand for author portraits proved a bottleneck in women writers’ public image: since women’s possibilities in the public sphere remained limited, and publicly speaking and writing were already considered challenges to the prescriptive definition of modest female behaviour, printing a picture of one’s person available for purchase seemed all the more scandalous. Some aspiring women of letters, however, did seize the opportunity to present both their peers and the public with a carefully constructed image uniting their gender with their intellectual ambitions. Among the most prominent was Anna Maria van Schurman, the first female student in Europe. This paper will analyse how Van Schurman used the growing demand for portraits of the learned to model her public (self) image throughout her intellectual career.

*Floris Solleveld*

***All the King’s Illustrious Men (and those of the Republic of Letters): Bullart’s Académie des Sciences et des Arts (1683) and Perrault’s Les Hommes Illustres (1696-1700)***

Two of the most prestigious paper monuments erected for the Republic of Letters were the portrait collections of Isaac Bullart and Charles Perrault. Both brought together the images and biographies of illustrious men (and one woman) in two folio volumes; both eulogized the

respective virtues of statesmen and churchmen, professors and literati, painters and architects. There were also distinct differences between the two projects. Bullart's *Académie des Sciences et des Arts* (1683) was an ecumenical collection of historical figures from all over (western and central) Europe, Protestant and Catholic, from the last three centuries; Perrault's *Les Hommes Illustres qui ont paru en France pendant ce Siècle* (1696-1700) focused on 17th-century France, and put the statue of Louis XIV on the frontispiece. Perrault, after all, was a leading academician who had sparked the *Querelle des Anciens et des Modernes* with his poem *Le Siècle de Louis le Grand* (1683); his collection celebrated the achievements of the Sun King and the Modern Age. Bullart, in contrast, was a provincial official in Arras, born in Rotterdam and educated in Bordeaux, whose Academy was a timeless imagined community, marked by the emblem of an elephant, *tardius sed grandius*. But the virtues praised by Bullart and Perrault are largely the same. To what extent do these collections, then, reflect different conceptions of the position of scholarship?

*Manuel Llano*

***Learned commissions of the black arts: the impact of mezzotint portraiture on Dutch scholarly presentation and representation, 1670-1715***

In the 1670s a well-defined clique of painters, print-makers and publishers based on Amsterdam and London introduced a new engraving technique in the professional market; one that had remained privy to some amateurs. This technique —called in different contexts mezzotint, black art, or “the English manner”— allowed printers to reproduced skin tones and expressive nuances with great detail and was immediately purposed for portraiture and reproductive printing. Furthermore, its material affordances made it very convenient from a business point of view. Plates could be easily scrapped off and started anew, and even repurposed changing only the poser's facial traits and a few symbolic details. Thus *ad vivum* mezzotint portraits and reproductions of existing oil portraits were made affordable to run-off-the-mill scholars. In my contribution I will assess how the introduction mezzotint impacted the self-fashioning practices of Dutch intellectuals, using portraits by Abraham Blooteling and his disciple Pieter Schenck, the most prominent advocates of this technique, as a case study. I will argue that the lower prices of this printing technique increased the circulation of scholar's prints both as self-standing objects, as well as book frontispieces. Mezzotint also consolidated and interplayed with a certain domestic and *negligée* aesthetic affected by scholars in this period, and due to the easy reproducibility of this medium, conventions and common places present in oil portraits were further solidified.

*Ruth S. Noyes, M.K. Foster, Jennifer Nelson*

***Early modern celestial novelties: imagination, innovation, annihilation***

Shortly after 1600, following more than a half-dozen comets during the last quarter of the 16th century, a confluence of celestial innovations appeared in the heavens in rapid succession, demanding accelerated observational activity among astronomers and theorizing among intellectual communities

across confessional-geographical divides. With an eye on Earth's predestined close-encounter with 99942 Apophis in April 2029, this thematic panel revisits 17th century interpretations and images of asteroids, comets, and similar celestial phenomena, exploring the ways in which hypotheses of astral activity from this period participate in premodern imaginings of global annihilation and mass extinction, reconceptualizations of possible authorial personae, and innovations of epistemic and aesthetic technologies. Among others from the period, John Ray in 1692 suggests the "Suns extinction" as a possible cause for "the world's destruction in a natural way," and in 1698, William Whiston proposes the comet of 1680 as "the cause of the Deluge". The urgency issued not least because all these phenomena bore in one way or another the mark of heterodoxy, threatening to undermine the intellectual primacy and socio-cultural hegemony of various constituencies, and their undergirding Aristotelian and Ptolemaic episteme. Papers explore interconnected re-imaginings of cosmological innovation and global annihilation, and theorize the ways in which these readings might frame "extinction poetics" as a critical methodology for engaging the brutal impact of early modern Europe's shifting attitudes towards the natural and celestial domains, and the place of personhood within these spheres.

*M.K. Foster*

***'the last Fire': Celestial Weather & Extinction Poetics in 17th-c. Europe***

While in 15th- and 16th-century texts, "extinction" usually describes the demise of a family line or the physical body, over the course of the 17th century, "extinction" garners a wider, more visceral application signaling a pivot away from Biblical natural history to reimagining the Earth's monstrous age, its spectacular devastation in "the Flood," and its eventual horrific termination. This essay theorizes the ways in which these close readings of astral activity might be used to develop "extinction poetics" as a critical methodology for engaging the brutal impact of early modern Europe's shifting attitudes towards the natural world.

*Jennifer Nelson*

***Ce acatl, ce tecpatl, ce calli, ce tochtli: Mexica Cosmology in Christian Eyes***

Prehispanic Mesoamerican cosmology, perhaps even more apocalyptic than its European counterparts, immediately fascinated Spanish colonizers. In Book VII (and parts of Book VI) of Bernardino de Sahagún's late-sixteenth-century bilingual Spanish and Nahuatl collaboration with Mexica scholars, *Historia general de las cosas de Nueva España*, as well as the previous *Primeros memoriales*, the Franciscan and his assistants attempted to present and preserve Mexica astronomy and timekeeping for a future Christian audience, both Mexica and European. Informed by textual close reading, this paper will focus on the use and adaptation of familiar visual idioms of European astronomy.

*Ruth S. Noyes*

***Syzygy & self-fashioning: Celestial Novelties & the Poetics of Parallax in 17th-c. astronomy***

By way of a tandem biography of Jesuit astronomer-mathematician Odo van Maelcote and his invention, the equinoctial astrolabe, this essay proposes a microhistory of the early 17th-century ‘space race’ in the age of celestial novelties fueled by the doctrine of parallax. Plotting the astrolabe and its author against the complex matrix of cultural exchange that engendered the instrument, I argue for the premodern advent of authorial ‘parallactic self-fashioning’, whereby fractures and divisions, maskings and personifications, transmutations and multiplication, were represented instead as a series of successively clarifying parallactic relocations revealing a previously obscured but predestined truth.

*Katrina Olds, John Slater, Renee Raphael*

***Read Locally, Write Globally: Communicating Alchemical Knowledge in the Early Modern Atlantic***

One primary way that early modern science has been approached from a global perspective has been through a focus on objects and people that circulate: through histories of collecting, trade, empire, and so forth. This panel, in contrast, approaches the global nature of early modern science and knowledge production through a practice that is (usually) static and local: the act of reading. It draws inspiration from two sources: Marroquín Arredondo and Bauer’s recent claim in their 2019 *Translating Nature* that translation, not discovery, was central to the writing of early modern science; and Jim Secord’s exhortation that viewing science as an act of communication, paying more attention to issues of reception and appropriation, would better equip them to write global histories of the field. To these ends, each presentation considers a distinct example of literate engagement with alchemical and metallurgical texts and practices in the early modern Atlantic, and examines how readers in Zaragoza, Potosí, and Mexico City negotiated between their individual, local contexts and knowledge claims circulating in print across the Iberian world.

*John Slater*

***The Control of Alchemy in Early Modern Spain: The Case of Garau Ros***

In early modern Spain, there existed primarily two forms of control of alchemy. One, focused on chrysopoeia, was religious; manuals for confessors included descriptions of licit and illicit alchemical practices. The other, related to spagyria, was legislative; in 1592, the crown issued regulations for apothecaries, including legislation regarding the vessels used for distillation. These regimes of control come together in one copy of the royal legislation owned by a distiller of Zaragoza named Garau Ros, who commercialized a medicine he created. The talk will examine the religious marginalia of Ros’ copy of the legislation, and his work as a distiller.

*Renee Raphael*

***Mining (on) the printed page: Andean mining knowledge and European citation practices in Barba’s 1640 *El arte de los metales****

In 1640 Alvaro Alonso Barba, educated in Seville but living in Potosí, had his *Arte de los metales* printed in Madrid. Often lauded for its technical details and compared to period

metallurgical treatises like Agricola's *De re metallica*, Barba's publication is distinctive for the administrative context in which it was generated, namely as the product of negotiations over improved silver refining methods between Barba and the colonial officials. This contribution examines Barba's citation of metallurgical and alchemical authors to situate his practices of reading in the realm he straddled as a university-trained mining practitioner negotiating with an early modern bureaucracy.

*Katrina Olds*

***An Alchemical Hermeneutic in Late-Colonial New Spain***

In the last decades of the eighteenth century the watchmaker and metallurgist Joaquín Muñoz Delgado was prosecuted for blasphemy by the Inquisition. His rich trial record reveals that this latter-day alchemist traversed a variety of social, occupational, and intellectual milieus in a picaresque itinerary through Spain, Cuba, and Mexico. Muñoz claimed to have obtained hermetical knowledge through the well-known genre of books of secrets, but also through his own allegorical reading of Cervantes' *Don Quixote*. This paper considers how Muñoz's case illuminates a history of knowledge formation 'from below' at the intersections of erudition, artisanal practice, charlatanry, and popular culture.

*Anne Por, Hidde Slotboom, Edurne de Wilde (chair: Herman Paul)*

***Vices and Errors of the Learned: Modern Afterlives of Early Modern Scholarly Vices***

When seventeenth-century doctoral dissertations discussed the *vitia sive errores eruditorum*, their catalogues of 'vices and errors of the learned' were often broad enough to encompass vices as diverse as ambition, futile quarrelling, and titulomania. Many of these vices, or at least their names, did not survive beyond the early modern period. Other vices, by contrast, such as dogmatism, prejudice, and speculation, became sufficiently well established to persist into the modern period. Despite all discontinuities between early modern learning and modern science, they entered the vocabularies of nineteenth- and twentieth-century scientists, as legacies from another age or as terms able to adapt themselves to changing circumstances. How can this (selective) persistence of early modern scholarly vices be explained?

In exploring this question, the panel proceeds from three assumptions. One is that the meaning of words like 'dogmatism' tends to be context-dependent. So what needs to be explained is not primarily what dogmatism meant to one or another author, but why the term was kept in usage despite changing meanings. A second assumption is that such usage is best studied from a rhetorical point of view, sensitive to what authors hoped to achieve by drawing on early modern repertoires. Finally, the panel hypothesizes that vices were more likely to persist if coupled to rhetorical commonplaces like 'dark Middle Ages' (paper 2) and 'idols of the mind' (paper 3) – commonplaces that were transmitted over time through educational practices (paper 1) and historical accounts of the progress of learning (paper 2).

*Anne Por*

***Hodegetik, or How the Codification of Vices Helped Discipline Knowledge***

Around 1700, an academic genre called Hodegetik (Wegweisung, or ‘showing the way’) emerged in Halle. It quickly spread throughout the German lands. Hodegetical courses and textbooks provided first-year students with advice on how to live a morally sound life and avoid falling prey to scholarly vices. Based on the initially courtly concept of Klugheit as well as a Christian understanding of Glückseligkeit, hodegetical texts cultivated scholarly personae and helped discipline fields of knowledge. Focusing on early hodegetical textbooks (1688-1738), this paper examines how early modern moral cultures contributed to the shaping of eighteenth-century conceptions of knowledge and the academic being.

*Hidde Slotboom*

***The Dark Middle Ages: Language of Vice in Histories of Science***

Eighteenth- and nineteenth-century historians of science typically held rather negative views of medieval science. Among other things, they routinely called it ‘dogmatic’, implying that the Middle Ages had been a period of decline in an overall progressive development of science. Comparing a selection of eighteenth-century histories of science, *historia literaria*, and dictionaries of arts and sciences to a sample of nineteenth-century histories of science, this paper examines which scholarly vices were considered typically as ‘medieval’. More in particular, it analyses how these negative perceptions travelled through time. By doing so, the paper studies how and why (to what rhetorical effect) eighteenth-century scholarly vices were used in later periods.

*Eduarne de Wilde*

***Idols of the Mind: Modern Variations on a Baconian Theme***

This paper focuses on Francis Bacon’s ‘idols of the mind’: four interconnected scholarly vices, which unlike other early modern vices were typically seen as the brainchild of one particular thinker. Over time, however, these idols assumed a life of their own. Independent of Bacon’s philosophy, they were appropriated in often debates revolving around modern notions of objectivity and subjectivity. By comparing a selection of modern references to Bacon’s idols, this paper argues that these *idola* were rhetorically utilised by polemical thinkers, mainly to anchor their new understandings of objectivity and scientific method in time-honoured language.

*Joshua Scarlett, Felicity Henderson, Didi van Trijp, Kerrewin van Blanken (chair: Rebekah Higgitt)*

***In and out of the Royal Society: Transferring and translating practice, theory and skill***

Concurrent with recent historiographies that have considered the close connections between practical, artisanal, learned and scholarly knowledge, this panel (re)examines our accepted notions of who counted as experts in the early Royal Society in London. The correspondence that poured onto the desk of its Secretary Henry Oldenburg from various corners of the world is evidence that the Society should not be characterised as a closed circle, but rather an open network – as David Lux and Harold Cook have contended.

While their analysis has focussed on correspondents from (relatively) faraway, informants and contributors were there just around the corner, in the city, the countryside or on the coast.

This panel draws together a wide array of historical actors in and around the Society not usually affiliated with it: from fishmongers and instrument makers to artists and miners. It investigates why and how exchange of knowledge took place between these heterogeneous groups and the Fellows of the Society. It examines the extent to which the two-way process of knowledge transfer between different agents in the first century of the Royal Society blended complex theoretical knowledge and understanding with both learned and practical knowledge and skills, and how this facilitated investigation and better understanding of the mechanical and natural worlds.

By making these complex entanglements explicit, these case studies can be compared so that together they contribute to a more nuanced understanding of the role of translation and negotiation between different social, institutional, professional and epistemic contexts in early modern knowledge making.

*Felicity Henderson*

***Conversations with artists: the Royal Society and the art world in Restoration London***

Interactions with artists were significant for the early Royal Society. Drawings of artefacts, experimental apparatus, and others of philosophical interest made their way into its archives, and illustrated the Fellows' works. This paper considers the relationships between artists and scientists in terms of the spaces they met in. While artists rarely attended the Society's, they did with Fellows, in private homes, studios, taverns and coffee-houses, and on building sites. What types of exchanges did these locations facilitate? Drawing on the diary of Robert Hooke, this paper discusses artists as one element in a dispersed group of actors who were never elected Fellows, but crucial.

*Didi van Trijp*

***On telling fish tales: notions of experience in and around the *Historia piscium* (Oxford, 1686)***

With their *Historia piscium* (Oxford, 1686), Francis Willughby and John Ray sought to restore order to the wonderfully varied world of fish. The book, published under the auspices of the Royal Society, emphasized direct observation as the main way to accomplish this. Since a supply of fresh fishes (before rotting set in) was essential, the Fellows sought out and drew on the "experiential understanding" of fishmongers and fishermen. Among them was the Strasbourg fisherman Leonhard Baldner. Taking his little-known manuscript as a case study, this paper examines how the Society and its Fellows navigated layers of observation across class lines.

*Joshua Scarlett*

***A Question of Attribution: knowledge transfer and the evolution of the role and status of the mathematical instrument maker after the foundation of the Royal Society***

In the 1630s, mathematical thinkers like Oughtred argued about who should use instruments: the professors who understood their theoretical foundation, or the makers. This distinction manifested in the relationships between designers and makers of mathematical instruments,

when the Royal Society was founded. This paper argues the traditional separations of modes of knowledge between ‘codified’ and ‘tacit’ thus broke down. This had an impact on how instruments were made, sold and used, and on who could claim to be the ‘maker’. By the 1720s, makers (such as George Graham) were no longer craftsmen, they were Fellows of the Society as well.

*Kerrewin van Blanken*

***Diligent observers of natural things: Lay observations and the natural philosophy of earthquakes in the Royal Society***

Although the 1755 Lisbon earthquake is regarded as the catalyst of modern seismology, the preceding century already saw a lively scholarly debate on earthquakes. This period saw the growing use of eye-witness testimonies as empirical evidence. These observers came from a variety of social backgrounds and challenged not only natural-philosophical ideas on earthquakes, but also the social hierarchies of early modern knowledge making. This paper examines why naturalists of the early Royal Society turned towards lay observers, and how their findings, as well as shifting epistemic hierarchies of experiential and theoretical knowledge shaped the field of seismology in the eighteenth century.

*Marco Storni, Andrea Strazzoni, Laura Georgescu, Mattia Mantovani*

***Early Modern Science and Its Institutions***

Although approached in several studies, the multifaceted topic of the practice of science in institutional settings in the early modern age still deserves further investigation. The panel ‘Early Modern Science and Its Institutions’ will focus on the question how scientific theories and practices got reshaped in the institutional setting—universities, academies, learned societies and observatories—in the seventeenth and eighteenth century. From Descartes to Newton, the teaching of science at the university progressively incorporated new theories and findings. The European university system, however, resisted change. In university teaching, one sees in fact a continuous mediation between the old and the new. On the other hand, from the seventeenth century onwards, several scientific academies, societies and observatories were established all over Europe. Contrary to universities, these were centres of knowledge production where the latest scientific discoveries were presented and discussed in restricted circles of experts, and their teaching had less importance.

With regard to these aspects, the panel is aimed at the discussion of the following questions:

- How did the implementation of new scientific contents take place in university courses?
- Was there any significant change in the ways science was taught at the university before and during the Scientific Revolution?
- What was the relationship between the scientific debates taking place in the restricted circles of the academicians, and the dimension of practice?
- How did observatories participate in the renewal of scientific practices in the early modern period?

*Laura Georgescu*

***Between Evidence and Research: the Early Modern Experimental Report***

It is well known that, in its early days, the activities of the Royal Society were centred around experimentation. The documented meetings of the Royal Society show that experimental reports were debated no matter their subject matter. But what counts as an experiment in these discussions? What turned a report into a credible and an authoritative experiment? By looking at the ways in which magnetism-related experimental reports were handled in such meetings, this presentation shows that the Royal Society's interest in experimental reports was much less centred on their evidential weight than on their methodology and research potential.

*Mattia Mantovani*

***Smuggling Optics into the Catholics' Stronghold. Leuven, 1648-1671***

'The University of Louvain has long been honored for not accepting novelties.' And so things ought to stay, admonished the papal nuncio in his 1662 letter to the Faculty of Arts. His concerns were not without foundations. Starting from 1648, more and more professors had indeed started to lecture on the 'new philosophy.' As a case study of this secretive teaching, I will consider how Kepler's, Descartes' and Stevin's optical theories found their way into the traditional courses on Aristotle's *De anima* and were readapted as to fit the teaching requirements, to eventually prompt a reform of the philosophy curriculum.

*Marco Storni*

***The Debate on the Earth's Shape in the Paris Academy: Natural Philosophy and Cartography***

The paper investigates the debate on the earth's shape in the Paris Academy of Sciences as an instance of the deep connections of academic research with both broad natural-philosophical questions and the dimension of practice. On the one hand, I show how the Earth's shape question is linked to the debate over Descartes's and Newton's natural philosophies. On the other, I insist on the practical dimension of the academic debate on geodesy. The importance of the enhancement of cartography in the arguments displays in fact the necessity for the academicians to produce 'useful' results as an outcome of their research.

*Andrea Strazzoni*

***Burchard de Volder's Directorship of the Leiden Astronomical Observatory***

This talk explores a neglected theme in the history of scholarship, namely the Burchard de Volder's directorship of the Leiden astronomical observatory in the years 1682-1705. Established in 1633 in order to host the quadrant of Rudolph Snellius, the observatory became a full-blown scientific institution only under De Volder, who provided it with a relatively large number of quadrants, telescopes, and lenses. While discussing some neglected handwritten sources, I will shed light on De Volder's acquisition of instruments from Jacques Borelly, Nicolaas Hartsoeker, Huygens, and Coenraet Metz, as well as on his overall scientific policy.

*Arnaud Zimmern, Ivana Bičák, Clair Preston*

***Fluid Exchanges: Blood, Verse, and Medical Satire***

17th century medical verse satire has received far less attention than its theatrical counterpart, with Jonson and Molière being perhaps too big a pair of stars for many other lights to shine through. But while Jonson and Molière's comedy of humors and manners – as well as their antecedents and imitators – tend towards wit and social satire by mocking practitioners' hypocrisy, ineptitude, or greed, verse satire opens up possibilities for more intricate conceptual critiques of medical practices, theories, and innovations. Ironically, then, those qualities that make verse satire essential for studying the history of medicine – its bristling topicality, overt didacticism, and often gritty detail – also make it less popular for anthologies. This panel therefore brings forward examples of little-known verse satire that arose around what was perhaps early modernity's most debated bodily fluid, blood. William Harvey's sanguine revolution, bold attempts at transfusion and dissection, changing understandings of menstruation and greensickness, and rising uncertainty over the validity of bloodletting gave sharp wits motive to write. We are interested in how verse was used within and by various epistemic communities who debated and criticized these vital matters. What availabilities did verse provide for thinking critically? What satirical traditions and literary conventions were invoked, invented, or surpassed? How did writers respond to each other, and what impact (if any) did such exchanges have on the larger tide of opinions surrounding blood and bodies?

*Ivana Bičák*

***Dissectors, not Doctors: English Manuscript Satires of Early Modern Anatomy***

This paper will examine two neglected manuscript satires on the horrors of early modern post-mortem dissections in England. The Cutting Up of Marjerie, found in the British Library, satirises the desecration of a body of a criminal woman, while Sir Thomas Clayton or a Fearful Anatomy Lecture, found in the Bodleian Library, attacks Dr. Thomas Clayton, Regius Professor of Medicine at Oxford. The paper will investigate the entanglement of life and death in these verses and the ways in which the anatomical practice of seventeenth-century physicians, stimulated by the rise of experimental philosophy, changed the cultural reception of their profession.

*Clair Preston*

***The anatomical underworld of Jane Barker***

Jane Barker (1652-1732) is best known for her Jacobite poetry and verse romances. However, under the tutelage of her brother, Dr Edward Barker (d. 1675) she was also an accomplished scholar and occasional practitioner of learned medicine. When Edward died young, she vowed to renounce her literary activities in favour of medical studies in an early work called 'A Farewell to Poetry' (c. 1675), in which she imagines a journey around the interior of the human body guided, like Dante in the underworld, by a Virgilian William Harvey. Conducted through various parts of the internal anatomy, she encounters a world that she evokes with the high seriousness of Spenser's House of Alma (*The Faerie Queene*, II.9), ancestor of the observational mode of the guided literary perambulation, which includes the comic and parodic

observations of the strolling Ned Ward, the ‘London-Spy’ whose sketches of quacks, medics, and the Royal College of Physicians appeared in a short-lived periodical of that name (1698-1700). This paper will consider Barker’s remarkable poem in relation to the early-modern anatomy as a literary and a medical format, to social circulation and circulation of the blood, and to parody and pastiche as competing forms of imitation.

*Arnaud Zimmern*

***Harvey via Ptolemy: John Collop’s Cosmic Conceits of Circulation***

The English poet John Collop (bap. 1625) constitutes one of the most charmingly incongruous figures in early modern letters. A lackluster physician known for religious and amatory verses that attempt at Donnean metaphysical wit, he satirized growing sectarianism during Cromwell’s regime as a side-effect of heliocentrism – “Copernicism these by their whimsies prove;/ Where all are giddy, how can the Earth not move?” – and praised William Harvey’s discovery of blood’s circulation through Ptolemaic conceits of cosmic order. This paper will attempt to understand his progressive satire of bloodletting practices – purging, issues, and fontanelles – from the perspective of his antiquated cosmology. Collop, I will argue, provides a telling example of how thinking/writing in a Donnean poetical idiom shaped the reception of medical innovation.

**Roundtables**

*Vittoria Feola, Stephanie Ann Frampton, Gianmarco De Angelis, Ottavia Mazzon*

***Mobility and the Scientiae***

Mobility studies have been gathering momentum since scholars started thinking in terms of mobility turn-related phenomena. Early modern knowledge production was more often than not the product of highly mobile scholars; it moved around in mobile objects of knowledge, and pushed scientiae towards ever quickest modes of knowledge communication. Today’s high-speed learning processes seem the heirs of their early modern forefathers. Are they really, though? The mobility of knowledge is usually presented in a positive light. Isn’t there any dark side to it, though? This roundtable aims to bring together the two fields of mobility and early modern scientiae in order to generate thought-provoking discussions about their interrelations and, who knows? false likenesses. We are going to throw around historiographical notions of mobility through time and early modern knowledge-production case studies, both in Europe as well as in Asia. We’re going to ask ourselves and our audience what links, if any, may be observed between mobility and the scientiae, what connections may be drawn and which ones should be rejected. Above all, we aim to start a conversation about the apparent links between mobility and knowledge.

*Stephanie Ann Frampton*

***Letters and the Scientiae in antiquity and the early modern period***

My contribution can focus on giving a general overview of the nature of correspondence in the Roman Empire in military, administrative, commercial, and intellectual dimensions. This is

what I've called the "Empire of Letters" in my book, and I will try here to highlight the similarities and differences between the phenomena enabled by the dramatically expanding uses of epistolary and documentary communication in the ancient context and the Early Modern "Republic of Letters" more familiar to the *Scientiae* audience. I can also highlight the importance of Rome's military expansion and colonial administration as motors of this "Empire of Letters." It will also, perhaps, be interesting to discuss distinctions between Roman and Greek attitudes toward written correspondence, especially as tools of dissemination of knowledge. I'm likely to focus on the figure of Cicero, whose correspondence demonstrates all of these themes as it follows his varied intellectual career as a senator, provincial governor, traveller, philosopher, etc. The questions I would like our audience to address with us have to do with the ways in which the mobility of letters in Roman antiquity may have impacted on early modern perceptions and actual antiquarian works about *scientiae* in the classical world and in their own.

*Gianmarco de Angelis*

***Letters on the Middle Ages. Themes, methods, practices of historical research in the epistolary of Ludovico Antonio Muratori***

The rich epistolary of Ludovico Antonio Muratori covers almost the entire career of the scholar, from the years of his cultural training, at the end of the 17th century, up to his death, in 1750, and represents a privileged point of observation of that vivid intellectual sociability of the Enlightenment age known as "Republic of Letters". Focusing on the correspondences with some of the main European historians, paleographers, librarians of the time (among them Jean Mabillon, «Galilée de l'histoire savante», and above all the great friend-rival of Muratori, Scipione Maffei), my contribution aims at reflecting on the mobility of knowledge and on the close relationship between antiquarianism, erudition and the birth of a modern idea of Medieval Studies.

*Ottavia Mazzone*

***Library Access and the Expansion of Knowledge: The case of the Libreria di San Marco***

While the widespread dissemination of the printing press in the first half of the 16th century made a large body of ancient texts available to an unprecedented number of scholars, many rare works, not yet printed, remained inaccessible due to lack of free library access. In 1544, the Libreria di San Marco in Venice established clear rules for book loan that granted readers with access to its manuscripts. This change is documented by the first systematic loan registers of the library: a systematic inquiry on the book loans here recorded, their borrowers, the use they made of library books (traced through the copies they made, annotations, and letter exchanges about their studies) will shed light on the impact a library collection had on the progress of scientific speculation in the central decades of the 16th century.

*Vittoria Feola*

***Mobility of knowledge and violence in early modern Western Europe and China***

Historians in the West have observed an increase in new technology in times of war, thereby linking violence to “science”. Chinese thought, with its emphasis on civil harmony, instead, stresses the link between peace and science. Mobility of people, texts, and other objects, complicates both scenarios. Mobility increases in war times, though evidence from war-torn European Republic of Letters shows people's desire for less mobility in order to boost scientific exchanges. Further, during Chinese persecutions of the Mother Goddess cult, mobility of texts and people became a hindrance to their survival and to any scientific activity. Given current narratives linking mobility to science in a highly positive lights, what can we infer from early modern evidence when we complicate our scenarios by throwing in war, technology, and religion?

*Anna Maria Roos, Cesar Pastorino, Rens Bod, Dirk van Miert (chair: Surekha Davies)*

***Object Lessons: Early Modern Empiricism, Natural Philosophy and Antiquarianism***

This roundtable discusses recent and current scholarly perspectives on the links between the history of antiquarianism, the history of the sciences, and more generally the history of knowledge. We analyse interrelationships between early modern natural philosophy, antiquarianism and empiricism. In particular, both early modern antiquarianism and natural philosophy were concerned with categorisation, standardization of the empirical description of objects, citation, and information management.

Themes (inter alia) will include:

*Collecting, natural philosophy, antiquarianism and empiricism.* In early modern Europe, the ancient unification of museum, library, and scholarly centres joined new-found concerns about the relationship between the collection, the ruler, and the public. Debates over practices of collecting and classification impinged not only upon learned practices and taxonomies, but on the role of knowledge and access to it in the public realm. Contrasts and collaborations in collecting practices across linguistic and cultural realms thus had great agency in establishing the supra-national standards and avowedly universal languages required for global enterprises in natural philosophy, antiquarianism and knowledge dissemination. At the same time, localized collecting practices and empirical descriptions highlighted what was not translatable, as knowledge sometimes does not circulate or is blocked by societal inequities. We will thus discuss the importance of decolonizing the early modern antiquarian and natural philosophical collection for our own empirical understanding.

*Physicians, natural philosophy, empiricism and antiquarianism.* Reading clues for diagnoses sharpened a physician's ability to understand and contextualize the empirical details of ancient artefacts and the processes of their creation, a different set of skills from those used in philology, which is more traditionally associated with antiquarianism.

*Metrology, empiricism, natural philosophy and antiquarianism.* We will discuss relationships between antiquarianism or learned travel in which empirical tools like metrology were utilised to understand not only the aesthetics but also the engineering principles of antique buildings and artefacts, as well as their sociocultural contexts.

*Rens Bod*

***Linking Approaches to the Study of Antiquity and Nature in the Seventeenth Century.***

While the role of antiquarianism in the history of knowledge and science has been widely acknowledged, it is less well studied how the humanistic/antiquarian backgrounds of the major actors of the “new sciences” influenced their practices in studying nature. I will argue in this roundtable that we need to take into account the scholarly practices and backgrounds of actors like Galileo, Snellius and Kepler in order to understand why some of them employed (mainly) an experimental approach while others used a more mathematical approach in their understanding of nature. By placing the study of nature in the context of the various approaches in studying antiquity, we may be able to grasp the differences in the ways of working of these early “new scientists”.

*Cesare Pastorino*

***On Antiquarianism and Quantitative Epistemic Practices.***

Scholarship generally associates the origins and growth of empirical practices in early modern Europe with the establishment of the physico-mathematical sciences of nature. Historians have started to consider the contribution of different domains only recently. A crucial discussion in the literature has regarded the role of early modern historical disciplines. Prior to the last two decades, almost no study addressed the overlaps of early modern historical and empirical investigations.

Recent research has produced important analyses, mostly focusing on the intersections between antiquarianism, medicine and natural history. Great attention has also been dedicated to the links between antiquarianism and the early modern practices of collection, observation and description of naturalia. At the same time, no proper study has been devoted to the antiquarian use of quantitative epistemic practices. While it is clear that antiquarians were inherently concerned with the study of the material culture of the past, little research has been dedicated to the way in which they –well before seventeenth-century natural philosophers– weighed, measured and tested ancient evidence to produce knowledge. In my discussion I will propose some ways in which the quantitative epistemic practices of antiquarians can be fruitfully addressed in future research.

*Anna Marie Roos*

***The First Egyptian Society (1741-3).***

Roos will examine the first Egyptian Society (1741-3) in England that evinced an empirical and object-oriented approach to artefacts similar to that in the Royal Society and the Society of Antiquaries. As Mark Young has suggested, early Royal Society fellows attended experimental demonstrations not only to recreate experimental results, but also have access to empirical material to derive causal principles. This empirical information could be accessed through experimental and travellers’ reports, and accounts of lay empirical practices. The Egyptian Society followed the same methodology, to discover principles of sociocultural and religious practices in Egypt, as

well as to provide ‘object biographies’ of artefacts (such as mummies) that belonged to members that they subjected to experiment and examined with speculations on manufacture and use.

*Dirk van Miert*

Dirk van Miert will argue that, while confronted with the increasing interdisciplinarity of the scholarship on antiquarianism, the History of Knowledge is the banner we need to follow: it allows to overcome modern disciplinary boundaries not just pragmatically (as is the practice today), but also programmatically. As early modern historians of knowledge, the new Journal for the History of Knowledge, available on Open Access as of 2020, offers itself as the natural shelter to meet each other and set up interdisciplinary approaches involving several scientiae. Besides the assumption of the interrelation of ideas in various domains, three important concerns of the History of Knowledge are: the institutional contexts, the material conditions, and silent practices. Social, political, and cultural history thus intermingle naturally, while methods move beyond textual analysis into reenactment and big-data explorations by means of DH techniques.

*H. Darrel Rutkin, David Juste, Helena Avelar, Steven Vanden Broecke, Stephan Heilen, Tayra Lanuza-Navarro*  
***Astrology and the History of Knowledge: Problems and Prospects***

The aim of this roundtable is to gather six cutting edge researchers in the history of astrology to discuss the state of the field and to indicate the most important problems and prospects that we think should be addressed. Although the history of astrology has increasingly been taken more seriously by historians of ancient, medieval and early modern science, historians of knowledge more broadly do not seem to realize how important the history of astrology can be in exploring and understanding their field as well. This panel intends to address this issue from six different perspectives, including some particular challenges to studying astrology as a serious subject of scholarly inquiry.

The structure of the Roundtable will be for each participant to give a ten minute presentation reflecting on their experience as scholars and teachers of this material, and then to offer a range of suggestions indicating (i.a.) some of the many remaining problems to be solved and/or promising areas for further research. These will follow the order of the individual abstracts listed below. Then we will open the floor to discussions between the participants and engagement with the audience, hoping that in this way, historians of knowledge can begin to engage more fully with the history of astrology.

*David Juste*

In this paper, I would like to recount my experience as a historian of astrology. As an undergraduate student in the early 1990s, my proposal to devote my BA thesis to medieval astrology was officially rejected by the head of department on the ground that ‘we do not deal with superstition in this university’. In other contexts, I would have been sent to a re-education camp. Thirty years later, the situation has changed so dramatically – in my experience – that if you deal with any aspect of the history of premodern science (or knowledge, ideas or learning,

does it matter?) without taking astrology into account, you would be sent to a re-education camp. This is both good and bad. Good, because as a young academic, I had a battle to fight: namely, to convince the audience that astrology had to be taken seriously or that one would fail to grasp premodern science altogether. Bad, because things have changed so fast (and behind my back!) that there is no more battle to fight. While reminiscences persist here and there, no more justifications or explanations are needed today. Dealing with astrology has become 'normal science'. We are now not only free to do the job, but even commanded to do it. As far as I am concerned, the job consists of what I believe to be the most urgent tasks, without which no intellectual history is possible, that is, to unearth and publish documents.

*Helena Avelar de Carvalho*

### ***Misrepresentation and Anachronism in the History of Astrology***

Whenever academics address the history of astrology, they often have to deal with a set of preconceptions and misunderstandings that surround the topic. These ideas are present even among scholars who deal with the history of astrology on a regular basis. They are seldom examined with a critical mindset, and thus never really questioned. One of the most prevalent, and most damaging, of these misconceptions is [1] the confusion between premodern astrology and contemporary astrological practices. This is often overlooked by most historians of astrology when talking to a wider audience, as they optimistically assume that this has already been clarified, but it is often not the case. Another source of confusion is [2] the indeterminate status of astrology, which can be classified as science/ancient knowledge by some, as 'interpretative art' or 'mysticism' by others, and as 'wretched sciences' by most academics outside this field. This leads me to the last point, which is [3] the prevalent tendency to locate astrology in the vague and assorted field of esotericism, together with other practices, such as geomancy and talismanic magic.

Although there are evident and undeniable connections between these fields, they are also independent, following specific rules and based on different concepts, and with strikingly different histories. Thus, it is important to present these fields of study as autonomous, having an identity of their own, with specific methodologies. These preconceptions can seriously hinder the dissemination and advance in research in this field, as they constantly derail any line of thought or project. This is particularly evident in lectures or classes, but is also present, often subliminally, in projects involving multi-disciplinary research. It is difficult to follow a clear line of research if the topic is constantly being questioned, not only in its methods but in its very essence, and even its overall legitimacy. Thus, before any further consideration, it is important to clarify these topics, in order to define astrology's place in the academic field.

*Stephan Heilen*

I plan to address three points: (1) it may be worth examining and re-evaluating the relevance of the concept of "tacit knowledge" (Michael Polanyi, "The tacit dimension", 1966) to astrology. (2) Other desiderata are of a prosopographic and terminological nature: we need more studies on the biographies of individual astrologers and on specific doctrines; (3) it seems

worth the effort to examine if Ernst Feil, "Religio, Die Geschichte eines neuzeitlichen Grundbegriffs" (vol. 1, Göttingen, 1986), suspects correctly that the modern concept of religion grew out of historical astrology, i.e., out of the theory of conjunctions of the superior planets.

*Tayra Lanuza-Navarro*

When discussing the themes and methodologies resulting from the rise of interest in the global history of science, and while making an effort to differentiate such approaches from the Sartonian concept of science's universality, scholars in the field have addressed several questions focusing on global relationships and interactions. Reflections on the circulation of knowledge, people and objects, on the transformations that science went through in the process, and on how scientific exchange took place in different historical situations, have defined the field in recent years.

Although studies on the history of astrology have likewise experienced many transformations within the field in the last two decades, one of them in particular seems to be closely related to this global turn. While the idea of studying astrology in different national contexts in order to develop a comparative history (if only within Europe) suggested by Keith Thomas in the 1970s is no longer a suitable historiographic project in this context, I would like to reflect on the fact that considering the shared contents and traits of astrological knowledge can sometimes obscure the diversity created by regional, vernacular, and of course social and political circumstances. Just as it is important for the history of science in general to reconsider the relationships between the global, the regional and the local, I would like to highlight the relevance of this for the case of early modern astrology, particularly concerning discussions of its legitimacy and the arguments used in these debates, the meanings of which were sometimes significantly altered by local circumstances, as well as concerning the search for a general explanation for the decline of astrology at the end of the seventeenth century.

*Steven Vanden Broecke*

### ***Astrology as Technology of the Self***

For the most part, historians have tended to approach "astrology" as a discrete historical object. On this basis, they conceptualize its relation to historical change in two basic ways. On the one hand, historians focus on the object's changing textual materials, technical apparatus, and predictive techniques. On the other hand, they focus on the object's cross-disciplinary, institutional, cultural, or political implementations, and on epochal changes in its public credit. Oddly, this situation recalls the internal/external distinction of the 1980s, which I believe history of science was right to abandon thereafter.

The price that historians of astrology pay for their failure to do so as well, is considerable. Among several other issues, it has led them to approach early modern astrology as a victim of the modernizing tendencies in 'external' culture. In stark contrast with, say, the history of medicine, no attempt has been made to robustly integrate astrology into broader long-term narratives about the development of scientific modernity.

How does one work oneself out of this historiographical situation? In my contribution to this panel, I would like to reflect on my own attempt to do so, which hinges on approaching astrology not as a ‘thing’, but as a perennially reinvented human practice of self-care and self-transformation. On this alternative basis, I suggest ways in which astrology can be more thoroughly embedded in early modern intellectual history and history of science.

*H. Darrel Rutkin*

### ***Astrology and the History of Knowledge***

With deep roots in Babylonian and Greco-Roman Antiquity, and as transmitted and transformed in Persian and Arabic cultures (among others), there was once a time, not so very long ago, when astrology was studied, practised and taught in the finest medieval, Renaissance and early modern European universities, where it was embedded within, and both generated and integrated many types of knowledge. In the modern and postmodern worlds, on the other hand, astrology was removed from the map of legitimate knowledge—having been delegitimized as both knowledge and practice during the Enlightenment—in a process that is not yet fully understood. For all of these reasons and more, I will argue in my presentation that astrology can provide a revealing case study for the history of knowledge.

## **Workshops**

*Jenny Boulboulé, Maartje Stols-Witlox*

### ***Corps de couleur: Theodore de Mayerne and the body of black pigments***

In this paper we will discuss the vivid “body language” of colour, pigment, and paint recipes, collected by Sir Theodore de Mayerne between 1620-1655. Citing from a conversation with an excellent illuminator, De Mayerne notes, for example, that a resin-like colorant imported from the East Indies, can produce a black “as beautiful as ivory black,” but with “more body” and exceptional painting properties.

Even with today’s highly advanced tools for the scientific analyses of paints and pigments, black still remains one of the most difficult colours to characterise in premodern artefacts. Furthermore, scientific analytical tools cannot tell us much about artists’ preferences for particular pigments or the link between pigment properties and specific uses. Our current knowledge of the great variety of black colorants used by artists to obtain desired hues and shades of black, and the technologies for making pigments, derives mainly from textual sources and recipe reconstruction experiments.

Close readings of the Mayerne Manuscript MS 2052 reveal a rich corps-terminology in colour making recipes. The concept “corps de couleur” is frequently used to discuss the properties of colours, and to describe the material and embodied practices with which colorants can be manipulated. Studying De Mayerne’s documentation of practice-based terminologies provides insight into the linguistic strategies that were used describe properties and affordances of artists’ materials. Furthermore, we argue in this paper that reworking colourmaking recipes with performative methods and historically informed materials and tools allows for a better understanding of conceptualisations and codifications of early modern colour knowledge.

We would very be interested to discuss the possibility of a hands-on workshop on black pigments and paints to explore the different degrees of “corps” described in black colourmaking recipes in the so-called Mayerne Manuscript (MS Sloane 2052), a much-cited source in conservation studies and (technical) art history.

*Jessie Chen*

***Colorful Knowledge: Hand-Coloring in the Early Modern Period***

This workshop maps historical remaking methodologies against the thriving scholarship that takes up the role of images in the early modern knowledge production. Although surviving copies are relatively rare, hand-colored herbals, atlases, and other scientific treatises have provided insight on how the use of color added important visual information in these epistemic images. While hand-coloring could be a pastime for an interested or learned early modern savant, systematically colored books would have been executed by professional and skilled colorists. The process of hand-coloring involves layers upon layers of explicit and implicit knowledge. On the one hand, many plants or minerals for making pigments and dyestuff were often described in books of medicine and natural history, only focusing on their different properties. On the other, preparing one’s own artist materials, such as preparing pigments and mixing paints, requires technical and artisanal knowledge to manipulate the materials. The colorist also needed an understanding of the color conventions or accuracy of the subjects being hand-colored. This workshop explores these interconnected knowledge domains through hands-on practice. Participants will learn about several pigments and their constituent raw materials that crossed the socio-epistemological boundaries between the realms of humanists and artists. Participants will also make their own watercolor paint using pigments that were made closely to historical methods, and color a set of pre-selected images, such as woodcuts and engravings of flora and fauna, people in costumes, and maps. By having participants engage with the process, this workshop aims to particularly amplify the implicit knowledge in making early modern epistemic images.