

SCIENTIAE 2019: ABSTRACTS (THURSDAY, June 13th).

Thursday 8:30-10:15, Parallel Session (PS) 1: “Faces of Law.”

Manuela Bragagnolo (Max Planck-Frankfurt), “Law, medicine and physiognomy in 16th-century Venice.” This paper sheds new light on the epistemological and historical connections between law, physiognomy, and medicine in early modern times, paying particular attention to the Venetian and Paduan intellectual environment of the second half of the 16th century. The paper focuses on the Venetian bishop of Capodistria, Giovanni Ingegneri (1523-1600), who was both *luris utriusque doctor* at the Studio of Padua, and the author of *Fisionomia Naturale (Natural Physiognomy)* (1606), printed posthumously and anonymously by his nephew, Angelo. By investigating Ingegneri’s network, experience, and works, the paper analyses the different intersections between the early modern legal theory of clues—elaborated by jurists of the University of Padua—medical semiotics, and physiognomic judgment. The paper also shows the crucial epistemological importance, in early modern physiognomy, of medical explanations.

Lisa Klotz (UC Davis), “Bacon’s instrument, Coke’s shield: The Influence of early modern English legal reasoning.” As part of his effort to make England’s common law system more efficient, Sir Francis Bacon formulated an approach to legal reasoning. The data was not “laws” or statutes but rulings under the unwritten law. Meanwhile, Bacon’s nemesis, Sir Edward Coke, devised a different method of legal reasoning. Coke asserted that each individual judge accessed the largely unwritten common law through “artificial reason”: A refinement of natural reason that involved “long study and experience” in legal practice. Bacon and Coke both attempt to discover the unwritten law from the evidence of its application; but their approaches constitute different ways of knowing and exemplify the tension between malleability and consistency in the common law. I will argue that each approach influenced not only Anglo-American law, but also other early modern ways of knowing.

Richard Raiswell (Prince Edward Island), “The Devil, nature and the problem of evidence.” Medieval theologians went to great lengths to confine the devil to the natural realm. The devil might appear to act contrary to nature from time to time, but most agreed with St. Augustine that such effects were a consequence of his angelic essence, his memory, and vast knowledge borne through his long experience of the world from the point of creation. However, the witch hunts, particularly of the later sixteenth and early seventeenth centuries, challenged this position. The interrogation of putative witches, their confessions and subsequent convictions at law, presented scholars with an array of eye-witness evidence—evidence that was often corroborated by the testimony of others—that described the devil as acting beyond the bounds of nature. In many respects, what resulted was an evidentiary crisis. This paper will examine the nature how scholars endeavoured to reconcile the new mass of empirical data about the power of the devil with the natural philosophical frames they had inherited.

Thursday 8:30-10:15, PS 2: “The Culture of Ingenuity: Places, Objects, and Exchange.”

Thomas Colville: Early modern ingenuity has often been thought of as only an internal and intellectual attribute. This panel proposes a very different model to understand ingenuity. In these papers, ingenuity will be presented as something diffuse and interactional. It emerges in exchanges of ideas, materials, skills, and beliefs. Moreover, it had intricate relationships with the specific places where those ingenious interactions took place. By taking an international and interdisciplinary approach, this panel will propose that the early modern period was suffused with cultures of ingenuity, which materialised around objects, performances and ecologies.

Thomas Colville (Cambridge), “Natural philosophy and illusion in 17th-century England.” Natural philosophers and mountebanks had a complex relationship in seventeenth-century England. This paper argues that these interactions between natural philosophers and mountebanks can be best understood using the lens of an early modern concept: ingenuity. Ingenuity was well established within mechanical philosophy in particular (Bennett, 2006) as a quality which encapsulated originality and invention, but the examples of interactions with mountebank performances reveal a far more complex conception, which linked together elite and vulgar, mind and body, ingenious and disingenuous. Natural philosophers presented themselves as using mountebank tricks – such as the infamous Water-Drinker of Bartholomew Fair – as whetstones against which they could sharpen their ingenuity. By reading between the lines of accounts of such experiences, however, we can observe tensions surrounding the issue of where ingenuity really lies. Can a common trickster possess ingenuity? Can ingenuity really dwell in a chaotic space like Bartholomew Fair?

Andrés Vélez Posada (Cambridge), “Natural knowledge, mining locations, and productivity in Sebastian Münster’s *Cosmographia Universalis* (1550).” In his 1550 *Cosmographia Universalis* Sebastian Münster represented the world as a machine turned by angels in which the earth resembled a cosmic engine. Such craft-related thinking was also connected to the abundant terminology and representations of ingenuity. Münster presented what would become a model for the modern geographical description based on surveys of natural productivity or natural resources. *Terrae ingenia*, the ingenuities of the earth, was Münster’s chosen expression to convey this economic attitude to nature, which was distanced from the Roman *genius locis* (the protector of natural fertility in a singular place). I will focus on Münster’s discourse on the origins of metals according to which minerals and precious stones were the best evidence to consider the generative powers of earth. Mining locations such as St. Annaberg, Joachimsthal, Almadén and Potosí were mobilized by Münster to set out his argument. Geography, metalworking, mining, and cosmology appeared as related epistemic practices.

Irene Galandra Cooper (Cambridge), “Household knowledge and ingenious matter in early modern Italy.” In the early modern period, precious stones were often described as *gemme colme di virtù*, ‘gems full of virtues’. They are ubiquitous both in literary accounts and archival records. In these objects, the distinction between ‘religion’ and ‘medicine’ is elided: a rock-crystal pendant with the face of Christ, for example, could have been kept for the stone’s curative powers. Most historians who have hitherto studied the complex relationship between religion and medicine in early modern Italy have focused on the efforts of ecclesiastical and medical authorities to discipline each sphere. But the range of extant objects indicates that such neat distinction between amulets and religious objects was, in fact, very fluid. This paper will submit this fluid area of study to entirely new scrutiny, by proposing a new interpretation of ‘religious’ materiality grounded on the diffused culture of ingenuity that encompassed devotional and medicinal knowledge amongst lay and ordinary people.

Thursday 8:30-10:15, PS 3: “Developments in Learned Medicine.”

Kristy Wilson Bowers (Missouri), “Renaissance surgeons: Language, empiricism, and authority.” The medical field of surgery underwent significant changes in the sixteenth century. This movement paralleled in some ways an earlier medieval one (12th-13th centuries). In renewing their learned tradition, however, renaissance surgeons reflected the changes of their era in several ways. First, many deliberately chose to write and publish in the vernacular rather than (or in addition to) Latin, adding surgery to the many fields which argued for the use of the vernacular as a learned language. Second, they were innovators who offered new methods based in empiricism alongside traditional references to ancient authorities. This paper focuses on the work of learned surgeons in sixteenth century Spain to elucidate the intellectual parallels in these medieval and renaissance efforts, as well as the divergences between them, and offers new contextualization of renaissance learned surgeons both temporally and geographically.

Margaret DeLacy (Independent), “Dr. Richard Davies (d. 1761): Reform, reputation and inflammation.” Richard Davies of Bath (d. 1761), has almost been lost to history. In his time, however, Davies was an innovative medical writer, a controversial reformer, and a path-breaking hematologist (anticipating the work of William Hewson). Davies was one of a small group of Whig “Newtonians” in the early eighteenth century who championed a new experimental and empirical approach to medicine. Other members of this circle included Richard Mead and Stephen Hales. Davies hoped that his work would generate a larger interchange within a new community of medical researchers, but his ambition was repeatedly thwarted. Who was Davies, what did he hope to accomplish, and what was its significance? How was his work received by his contemporaries—and why was it nearly forgotten?

Zrinka Blažević (Zagreb), “How to make solid medical knowledge: The Case of Georgius Baglivi (1668-1707).” Georgius Baglivi (1668-1707) was one of the first promoters of the fibre medical theory. Baglivi conceptualized and propagated a “third path” between humoral and solidist medicine. In addition, Baglivi advocated a (Neo)methodist theory which stated that life and health were determined by the physical balance of the active solids (fibres) and the more passive fluids of the body. Despite his distinguished institutional status and professional prestige, Baglivi’s medical theories, especially those concerning the function of *dura mater*, were not unanimously accepted. The interpretative focus of this paper will be Baglivi’s last work, *Canones de medicina solidorum ad rectum stances usum* (Leiden, 1707). By following theoretical insights of New Historicism and historical praxeology, the paper aims to highlight the “literary technologies” (Shapin), by which Baglivi tried to shape and legitimise his own system of medical knowledge, and to fashion his personal habitus of a Baroque erudite.

Thursday 8:30-10:15, PS 4: “Metaphysics and Epistemology (I).”

Jeff Lambert (Duquesne), “The truth of relations in Leibniz.” Russell’s famous critique of Leibniz’s system of relations is that by making God the only guarantor of the truth of relations, he made Him the guarantor of something superfluous and useless. God is the guarantor of relations because only He can know everything about each related substance such that the relation is truly known. The limited perspective of substances is the main reason why Leibniz asserts that God is the sole guarantor of the truth of all relations. However, I will argue that Leibniz does allow for substances to have infallible knowledge of some relations. My argument will revolve around an analysis of clear and distinct perceptions and the claim that there is at least one relation of which any given monad knows the truth: Its own internal notion. This is what distinguishes even bare monads from one another, and it is this internal notion that determines a given monad’s perspective representation of all other monads. My argument will show that God is not the guarantor of superfluous knowledge, since monads do have access to some relational truths. Lastly, I will examine the truth of monadic relations as intimately co-constituted through what Leibniz calls relational concurrence.

Xiaona Wang (Edinburgh), “John Dee and the mathematical principles of natural philosophy.” This paper looks at an early attempt to demonstrate the mathematical principles of natural philosophy. Mathematics had long been regarded as irrelevant to natural philosophy in the scholastic tradition. However, a number of Continental thinkers in the sixteenth century began to claim that mathematics could make a real and valuable contribution to natural philosophy. The focus of this paper is on John Dee’s role in this tradition. Dee is proven to have been the first English thinker to promote the growing belief in the mathematization of natural philosophy. Moreover, Dee used geometrical optics and the magical tradition known as “light metaphysics” to demonstrate the relevance of mathematics to natural philosophy. Dee’s work prefigured aspects of Newton’s thought, insofar as light is seen as interacting with matter and becoming a principle of activity within matter. When Newton began to make his own major contributions to “the mathematization of the world picture,” he was building upon already established, and flourishing, movements in early modern English thought.

Martin Žemla (Prague), “Marsilio Ficino’s allegorical reading of natural phenomena.” As a Platonist, Marsilio Ficino (1433–1499) was deeply interested in light. As a matter of fact, the metaphysics of light is so fundamental for him that it appears in almost all of his works. As a physician, Ficino was naturally concerned with the corporeality of men and with the relation of the human body to the physical world, both terrestrial and astral. However, when discussing astronomical and optical phenomena, they are important for him not as physical realities but as starting points for his allegorical hermeneutics and analogical interpretations. Similarly, when Ficino situates the Sun in the centre of the universe, as its warming heart, ruling king and animating soul, he does so in the context of metaphysical, rather than cosmological, heliocentrism. Indeed, physical astronomical “facts” seem generally irrelevant for him, being overlaid by their “spiritual” meaning. This becomes especially conspicuous when we realize that Copernicus arrived at his heliocentric hypothesis after reading Ficino’s treatise on the Sun, and even quoting the same sources as Ficino.

Thursday 8:30-10:15, PS 5: “Epistemic Imaging (I).”

Matthijs Jonker (Bibliotheca Hertziana), “Amerindian contributions to the *Tesoro messicano*.” In 1651, the Accademia dei Lincei published its long-awaited encyclopedia of the natural history of Mexico, the *Tesoro messicano*. The importance of this book lies in its systematic coupling of descriptions and woodcut images of the flora and fauna; and in the fact that it was based on material that was collected and produced in Mexico, partly by indigenous informants. Unfortunately, the original manuscripts with color images were destroyed in a fire in 1671. For this reason, it remains unclear how the indigenous knowledge was transformed and translated into the European context. The paper will attempt to answer this question by comparing the woodcuts in the *Tesoro* with the color images in other botanical and medicinal treatises that originated in Mexico in the same period with the help of indigenous artists and informants. These were rendered within their surrounding environment and in more stylized fashion than the more detailed and ‘naturalistic’ images in the *Tesoro*. This suggests that the indigenous medicinal practices were derived from a more symbolical and holistic vision of nature, and that the Lincei Europeanized the indigenous knowledge by individualizing the specimens, which made them easier to classify.

Hannah Kaemmer (Harvard), “Visual representations of Stonehenge in the 17th century.” Stonehenge, as Lorraine Daston and Katherine Park have noted, was the only “artificial wonder” of medieval Western Europe. Until the end of the sixteenth century, the only explanation for its appearance was a supernatural one. Yet, as with other medieval wonders, Stonehenge became increasingly open to scientific scrutiny in the seventeenth century. Discussions of the seventeenth-century Stonehenge debate have traditionally been about texts—the language of treatises, the political and religious intentions underwriting them, and the increasingly scientific methods of interpretation. But with a dearth of written evidence to interrogate the monument, the debate over Stonehenge’s origins was, at its core, about observation—how to comprehend the monument through visual means. This paper will explore that debate. Focusing primarily on the images printed and reprinted in mid- to late-seventeenth-century treatises about Stonehenge’s origins, I will examine how two modes of representation—the descriptive, and the schematic—vied for supremacy and legitimacy.

Erling Sandmo (Oslo), “Transformations of knowledge in Magnus’s History of the Northern Peoples.” The Swedish Catholic priest Olaus Magnus published two major works during his long religious exile: *Carta marina* (1539), a map of the Nordic Countries; and the *History of the Northern Peoples* (1555). Olaus’s map was well known in early modern Europe. Among other things, it was a vision of the dangers of emerging Lutheranism, bridging the gap between earlier maps of a world structured by religion and a modern cartography of secular, uniform space. Olaus’s book was an encyclopedic comment on the *Carta marina*; but the 16 years between the two works had witnessed the permanent religious division of Western Europe. The apocalyptic argument had lost much of its power, and the book should also be read as a renegotiation of the ontology and epistemology of the map. My paper will deal with these renegotiations of knowledge, based not only on the first edition of the *Historia*, but also on the 22 editions and translations published between 1555 and 1658. My main emphasis will be on the transformations of its illustrations, but this historical approach to the book sheds light on basic early modern assumptions of visual and textual knowledge as well as the conceptualization of the North as an object of knowledge.

Thursday 10:45-12:30, PS 1: “Rhetorical Economies.”

Jean David Eynard (Cambridge), “Humanist rhetoric and economic thinking in Bacon’s early writings (1592-1603).” Scholars have commented on the presence of financial metaphors in Francis Bacon’s later writings. This paper argues that many of Bacon’s capitalist ideas can already be found in his early writings, which show his debt to an earlier rhetorical tradition of thinking about knowledge as a commodity. In sixteenth century manuals of logic and civil conversation, the learned exchange of information is often compared to a financial system, and readers are exhorted to treat past sayings as natural riches to be plundered, refined and circulated. In the first part of my paper, I shall offer new bibliographical evidence demonstrating the specific interest in these capitalist ideas nurtured by intellectuals in 1570s Cambridge, when Bacon was a student there. I will then examine Bacon’s own engagement with this humanist tradition, especially in his early *Tribuit* (1592) and *Valerius Terminus* (1603). By analysing and contextualising the economic metaphors found in Bacon’s early writings, I suggest that much of the capitalist ‘utilitarianism’ so often attributed to him is actually rooted in an earlier humanist tradition.

Brent Nelson (Saskatchewan), “The Cabinet of curiosities and the open hand of rhetoric.” This paper examines the cross-currents of humanism and empiricism in the early modern cabinet of curiosities. This was understood (in part) as a site of rhetorical invention that helped people find things to say about the world. Conversely, in the waning days of Renaissance humanism, the resources of rhetoric were commonly represented in spatial terms that evoke the cabinet. It is not surprising, then, that in the mind of a seventeenth-century visitor to such collections the discourse and structures of rhetoric should mingle with the Baconian accumulation and accounting of concrete particulars in “things themselves.” After examining the rhetorical inheritance expressed in this cultural practice, I will explore further the implications of this generative notion of collection for those practitioners who were also participants in the new science. I will then return to the Renaissance topos of the open hand of rhetoric versus the closed hand of logic (originating with Zeno) to explain the sometimes seemingly incongruous credulity and open-mindedness of these early empiricists.

Peter Hess (Texas), “The Backlash against ambiguity: Rejecting humanist epistemology in early 16th-century Germany.” Ambiguity was a central category in the cultures of the Renaissance. The spatial expansion and creation of global networks in the early sixteenth century thrived in an open culture that valued ambiguity. However, tolerance for ambiguity was not a universally accepted norm in Renaissance culture. Rather, we can discern a remarkable intolerance for ambiguity and a rejection of an open humanist knowledge culture among German writers and intellectuals (Brant, Bote, Hutten, Luther, Sachs) during the first three decades of the sixteenth century. This paper will trace the various argumentative strands that made up the German backlash against spatial discoveries and the resulting global trade networks, such as opposition to travel and explorations, to long-distance trading, and in particular the importation of Asian spices, to foreign influences (Roman law, Roman Church), while constructing false memories of a simple, moral, and heroic German past and pushing for the restoration of a nationalist social and political order believed to have existed under the Carolingian and Ottonian kings.

Thursday 10:45-12:30, PS 2: “What Counts.”

Viktor Blåsjö (Utrecht), “Galileo as a failed mathematician.” Galileo’s abilities in technical mathematics were considerably weaker than generally recognised in historical scholarship. For example, he tried and failed to find the area of a cycloid by mathematical means, and in desperation tried weighing physical cut-outs of the shape. Galileo’s achievements look seminal when set against an Aristotelian contrast class, but mathematical contemporaries were much less impressed. “He is eloquent to refute Aristotle, but that is not hard,” said Descartes, speaking for many a mathematician. I articulate and synthesise the mathematician’s view of Galileo encapsulated in remarks such as these, and urge the importance of this perspective as a counterweight to the story, eagerly pushed by Galileo himself, that frames him as a lone rebel in a world beset by rampant Aristotelianism.

Guy Claessens (Leuven), “Bessarion and the Neoplatonists: The Case of mathematics.” In the Plato-Aristotle controversy of the fifteenth century, the Platonic understanding of mathematics was a controversial subject. In the *In calumniatorem Platonis*, Cardinal Bessarion’s reply to George’s anti-Platonic treatise, the Platonic conception of mathematics is defended on several occasions. Scholars have pointed out that in his defense, besides citing Plato’s dialogues, Bessarion often quotes or paraphrases excerpts from Neoplatonic commentaries on Plato and Aristotle. However, Bessarion’s debt to the Neoplatonic commentary tradition has hitherto been relegated to footnotes. In this paper, I want to examine the specific way in which Bessarion uses these sources to construct his own understanding of (Neo)platonist mathematics.

Chris Meyns (Amsterdam), “Data before it was big: The Royal Society.” Little work has been done on the philosophical history of the concept of data. This paper contributes to such a history, by focusing on the concept’s occurrence in the Royal Society’s *Philosophical Transactions* from 1665 up to 1887. I survey how the notion enters the journal as a technical term in mathematics; and chart how over time it expands into various other scientific fields, including earth sciences, physics and chemistry. I argue that in these texts the notion of data is not used a rhetorical category, and can also not strictly be identified with the category of evidence. Instead the notion comes with an associated epistemic structure, one that is in line with its development from an early mathematical use.

Marius Buning (Berlin), “On numerical magnitudes: The Diophantus translation by Simon Stevin (1548–1620).” If we are to believe Jacob Klein, the Renaissance reinterpretation of *eidōs*, as found in Pappus and Diophantus, was crucial for the invention of a symbolic concept of species. This stood at the basis for a new and numerical understanding of magnitudes. Klein devoted ample attention to the work of the Flemish mathematician Simon Stevin (1548–1620), yet he argued that François Viète (1540–1603) should be accredited with the “discovery” of a new conception of number. This essay argues that Stevin could not have known Viète’s work. Instead, he got his ideas directly from Diophantus himself. Stevin greatly admired the Greek mathematician, and translated a large section of Diophantus’s work in *L’Arithmétique* (1585). Stevin’s reformulation of species was inspired by his humanist understanding of language.

Thursday 10:45-12:30, PS 3: “Imagination in Theory and Material Practice.”

Ruth S. Noyes: This thematic panel tracks current transdisciplinary research that build on recent shifts in historical scholarship on the early modern era away from disciplinary boundaries dividing histories of art and of science and toward integrated histories of images, objects, materials, techne and knowledge.

Aline Smeesters (UCLouvain), “The poet’s imagination, 1550-1700.” From the middle of the sixteenth century, the psychological power of *phantasia* is more and more highlighted as an important part of poetical creation. It appears increasingly in the theoretical discourses about poetry (notably in the *artes poeticae* and in the commentaries to Aristotle’s and Horace’s poetics). At the same time, some poets become fond of representing themselves in the grip of some interior imaginative experiences; in parallel, others authors produce satirical accounts of such attitudes. The aim of this paper will be to explore, on the basis of a selection of Neo-Latin and vernacular texts (both theoretical and poetical), some dimensions of this early modern valorization of poetical imagination: its assumed causes (divine or natural) and effects (on the body and mind of the poet, as well as on the texts produced), the underlying anthropological, literary and social models, and the links made with important traditional notions such as *furor poeticus*, mimesis or melancholical genius. Particular attention will be paid to the Society of Jesus, whose spiritual practices gave much space to the power of imagination, and many of whose members were Neo-Latin poets.

Marcia Pointon (Manchester), “In praise of agate: : Materiality and aesthetics in early modern Europe.” In *Gemmarum et Lapidum Historia* (1609), Anselmus Boetius de Boodt introduced his attempt to classify minerals by remarking that they were highly problematic. Uncertain about the nature of agate, he included it with ‘other things that ought rather to be placed under the order of animals and plants than stones’. As with other minerals it is difficult to be sure what is being referenced here. When Sir Hans Sloane (1660-1753) in an undated list of minerals in his collection included an ‘Agitt found at Kentish Towne in Middlesex’ and a ‘Star’d Agit from Wiltshire’ he was more likely referring to flint as opposed to Chalcedony, (the crypto crystalline form of silica that includes agate). What is clear is that even before artificial colouring practices, on account of its translucency and patterning, agate was valued for its aesthetic properties, metamorphic characteristics, and prophylactic capacities. This paper will explore how and why agate was collected, written about, and represented in the late sixteenth and early seventeenth centuries.

Jessie Wei-Hsuan Chen (Utrecht), “Subtle imaginations in botanical illustrations.” Early modern botanical illustrations are known for being lifelike. In herbals and botanical treatises, the authors often claimed that their images had been drawn from life. However, as several scholars have argued, the concept of being drawn after nature should not be taken literally. In the process of making an illustration, much information about a plant is simplified, eliminated, or reinterpreted due to material and technical limitations, and/or to achieve visual hierarchy. For many exotic plants, the lack of a live or well-preserved specimen also required the image makers to add “imagined” details to fill in the gaps when depicting a plant. This paper investigates how the early modern imaginations of plants is reflected in botanical illustrations through material practice. It focuses on the role of the image makers and the process of drafting an image of a plant. By considering the “materials” that were integral in creating an image—such as (the lack of) plant specimens, drawings, and printing blocks/plates—this paper examines the subtle imaginations in the visualization of early modern botanical knowledge.

Thursday 10:45-12:30, PS 4: “Medicine: Knowledge and Experience.”

Ashley Inglehart: This panel considers the uses, variety and authority of medical experience in Early Modern Europe. We consider the plurality of experience, knowledge and expertise from a variety of traditions in Early Modern Europe, including those of physicians, housewives, apothecaries and midwives. The aim of our discussion is to illuminate: the methodological assumptions held by various practitioners, the shifting ideas about the human body and its treatment and the extent to which the social status of various practitioners affected the epistemic authority of their experience.

Benny Goldberg (South Florida), “Early modern recipes and medical experience.” Wendy Wall, in her (2015) *Recipes of Thought*, argued that there is a great deal of congruence between the new notions of experiment promulgated by the Royal Society and the modes of testing, changing, and exchanging recipes between housewives and households. Here I discuss one aspect of these ‘huswifely’ activities, namely the varied uses of experience in some mid-seventeenth century collections of medical recipes, often called ‘kitchen physick’. In particular, I will look at a group of works by a number of elite, Royalist English writers. These works include two published collections of recipes: Elizabeth (Talbot) Grey’s (1653) *A Choice Manual of Rare and Select Secrets*, and her sister Alethia Talbot’s (1655) *Natura Exenterata*. I will also look at an unpublished manuscript of the medical receipts of William and Margaret Cavendish, collected around the same time that these other works were published in the 1650s. I will then compare how the notion of experience is used in these works with that of a more canonical early modern experimentalist, Robert Boyle.

Ashley Inglehart (CHSTM), “Ovism and the early modern period.” In contrast to the anatomical discoveries made during the seventeenth century, little attention has been given to the ways in which specialized anatomical experience and the consequential rise of ovism influenced contemporary ideas about menstrual blood and the purpose of menstruation, which was previously tied either to humoral medicine or Aristotelian theories of generation. Whereas the experience of anatomists came mainly through the vivisection of small mammals and dissection of dead female bodies, midwives treated female patients symptomatically, without the privileged and specialized view of their internal anatomy and focused on the healthy evacuation of blood. By contrasting their practicing experience in treating, dissecting, and investigating female bodies, this paper aims to illuminate changing ideas about the nature and purpose of menstrual blood, menstrual flow, and female internal anatomy.

Jordan Katz (Columbia), “For many physicians err in their understanding’: Jewish midwives, dubious doctors, and medical authority in 18th-century Europe.” Although scholars have acknowledged the critical role of midwives in seventeenth- and eighteenth-century Europe, they have not examined the unique position of Jewish midwives. This paper investigates attitudes towards Jewish midwives in rabbinic correspondences, called *responsa*, as a way of understanding the epistemic authority that these practitioners possessed by the early eighteenth century. In inquiries that touched upon medical questions, rabbis frequently discussed the trustworthiness of midwives’ medical knowledge in comparison with that of physicians, and drew on the opinions of the practitioner who they felt supplied the best reasoning for the problem at hand. ons of Jewish ritual practice. At the same time, *responsa* reveal the limitations of these collaborations, suggesting that there were thresholds that these female medical experts could not cross.

Thursday 10:45-12:30, PS 5: “Metaphysics and Epistemology (II).”

Bogdan-Antoniou Deznan (Bucharest), “Identity and difference in the Godhead: Henry More and Ralph Cudworth.” There has been a tendency in recent scholarship to treat the notion of a group of Cambridge divines sharing a Neoplatonic philosophical and theological outlook with reticence, or even to outrightly reject such a supposition. My paper will challenge this tendency, by developing a fundamental tenant of the theological thought of Ralph Cudworth and Henry More: Their construal of the Deity. The doctrine of God embraced by both these thinkers exhibits significant overlap and essential points of agreement. More specifically, their metaphysics of the Trinity is predicated upon a hierarchical structure of the divine attributes within the Godhead, understood ontologically, not merely logically. I will show that both More and Cudworth can legitimately be distinguished as sharing a (Neo-)Platonic metaphysical outlook.

Cassandra Gorman (Anglia Ruskin), “Atomic congruity: ‘Atom-lives’ in the poetry of Henry More.” The poetic works of the Cambridge Platonist Henry More are often dismissed. Yet More considered his early poetic impulse essential to the fabric of his developing philosophy. It was through poetry that he turned his focus inwards, to investigate the central essences of all living things – which he labelled ‘Atom-lives’. In this paper I focus on how More developed an atomic theory in his poetry that was of vital importance to his later metaphysics. The first section introduces some of his key philosophical theories surrounding matter and spirit, notably his dedication to the presence of ‘indivisibility’ (a word he coined in his early poetry.) The second section turns more directly to the (literally) vital importance of poetry for the exploration of ‘Atom-lives’. More’s early writings present an easy intimacy between Platonic poetics and atomic thought, countering any assumptions that such a philosophical pairing would be antagonistic.

Vincent Roy-Di Piazza (Oxford), “Haec vera sunt quia signum habeo: Aspects of Swedenborg’s theory of knowledge.” Emanuel Swedenborg (1688-1772) was a Swedish scientist and visionary theologian. A member of the House of Nobles and an elected member of the Swedish Royal academy of sciences, Swedenborg resigned in 1747 to focus on theology, claiming to have acquired the gift to speak with angels, the spirits of the dead and to travel through the heavens and hells. Mostly remembered today as a seer, Swedenborg is best known by the public for his spiritual writings and detailed descriptions about the nature of the afterlife and his complex revealed doctrine of correspondences. This paper will look at the main features of Swedenborg’s theory of knowledge and legitimate sources of evidence, both through his anatomical and theological works.

Thursday 1:30-3:15, PS 1: “The Legacy of Proclus and Late Antique Geometry in Seventeenth-Century Europe.”

J.B. Shank: This panel (linked with Wednesday 3:00 PS1), brings together core investigators in the “The emergence of mathematical physics in the context of experimental philosophy” project at the Institute for Research in the Humanities (IRH) at the University of Bucharest with an array of other interested scholars from around the world working on related topics.

J.B. Shank (Minnesota), “Materialist Euclid: Proclean themes In European geometry after 1550.” While there was a long continuity of Euclidean geometrical thinking stretching from late antiquity through to the medieval university, the 1533 publication by Simon Grynaeus of the recently rediscovered complete Greek edition of the *Elements* marked a major spur toward new thinking. The appearance at the same time, and from the same printing house, of Proclus’s *Commentary on the First Book of Euclid’s Elements* further provoked reflection. My paper will examine some of this new geometric thinking after 1550, focusing in particular on the nexus that joined in debate those who professed the scholastic liberal arts of the quadrivium with humanist critics of university scholasticism, and the practitioners of the mechanical mathematical arts. My argument will draw out of these sources a premodern tradition of mathematical thinking that stressed the material (as opposed to the abstract cognitive and apodictic) nature of Euclidean geometry.

Dana Jalobeanu (Bucharest), “Francis Bacon’s theory of science: A Legacy of mixed mathematics.” This paper investigates Francis Bacon’s theory of science against the background of early modern debates on the nature of mathematics, and physics. In defining *scientia* as a mixture of principles, axioms and inquiries coming from different branches of knowledge, Bacon departs from the Aristotelian theory of subalternation and takes a position somewhat closer to Proclus’s. As has been shown, Proclus’s tree of applied mathematics was very influential in shaping sixteenth-century debates about the role and status of mathematics in natural philosophy. My claim is that we can read Bacon as siding with mathematicians against philosophers in at least two important issues: the redefinition of mathematics as a universal instrument of knowledge, and the possibility of ‘mixing’ mathematics with physics. However, in elaborating the details of such a mixture, Bacon also departs from the mathematical tradition.

Grigore Vida (Bucharest) “Newtons ‘Preface’ to the Principia and Proclus’s commentary on the first book of Euclid’s Elements.” Proclus’s philosophy of mathematics has recently received renewed attention as being relevant for such important figures as Descartes, Kepler or Leibniz (Hattab 2016, Claessens 2011, Rabouin forthcoming). For Newton, Domski 2012 has provided a parallel reading of *De gravitatione* and Proclus’s *Commentary on the First Book of Euclid’s Elements*, arguing for a similar a progression from geometrical to metaphysical truths and interplay between imagination and understanding. My interest is in the classification of the sciences and the possibility of a Proclean interpretation of it. Newton’s mysterious “universal mechanics” from the “Preface” to the *Principia*, which comprises both mechanics and geometry, can be interpreted in light of Proclus’ concept of “universal mathematics,” a science that transcends arithmetic and geometry, while grounding both of them.

Thursday 1:30-3:15, PS 2: “Interpreting and Healing (I).”

Dina Bacalexi and Mehrnaz Katouzian-Safadi (CNRS), “Galen’s *On the pulse for beginners* and its reception in the medieval Latin, the Islamic Oriental and the Renaissance world.” Galen’s *On the pulse for beginners* (ca. 162-166 BC) condenses nearly the whole Galenic pulse science, making it accessible. Widely commented and translated (into Syriac, Arabic and Latin) or imitated (for example in the early Byzantine period), this short treatise’s reception from Late Antiquity until Renaissance shows its importance for medical education and practice. In Galen’s treatises, the only “instrument” used to check the pulse rate is the physician’s hand. Yet, given the wide range of variants included in *On the pulse for beginners*, the tricky point is the actual capacity of a physician, particularly a beginner, to clearly distinguish all of them. Does Galen exaggerate his ability to feel? Is it possible to transmit skills, such as touch subtlety, through a book?

Adam Rzepka (Montclair), “‘What hath he in his boxe?’: Encryption and decryption on the early modern stage.” The (in)visible, (il)legible grave, coffin, or tomb is a recurrent figure in Shakespeare’s theater. In these figures, Shakespeare takes up a nascent tradition of morbid black boxes, including the “boxe” in The Spanish Tragedy that ostensibly contains Pedringano’s pardon, though its emptiness in fact ensures his death. My paper traces the circulation of illegibility around encrypted spaces on early modern stages like Kyd’s and Shakespeare’s, and briefly considers the uniquely sustained drive for numerical and alphabetical decryption in Shakespeare scholarship since the early-nineteenth century. The paper takes as a theoretical framework the account of “cryptonymy” developed by the psychoanalysts Maria Torok and Nicholas Abraham in their post-Freudian work on mourning and melancholia, as well as Derrida’s extended critical introduction to that work.

J.D. Fleming (SFU), “*Informatio medici*: Timothy Bright, melancholy, and characterie.” The London physician Timothy Bright (1551-1615) is best remembered today for two of his books: *The Treatise on Melancholy* (1586), and *Characterie* (1588). The former is the most significant treatment of its subject-matter in English. The latter is the first manual of shorthand note-taking since antiquity—which sparked the seventeenth-century shorthand movement, inspired Bacon’s call for “real characters,” and eventually led to the work of John Wilkins. (Who, in turn, informed Leibniz’s vision for a *characteristica universalis*; which, in turn, is a *terminus a quo* for modern information theory.) Why was it a doctor—to be precise, a doctor of melancholy—who produced in 1588 a revolutionary technique for taking down speech verbatim? I will argue that Bright’s invention was a prophylactic response to the turbulent oralities of late sixteenth-century London.

Thursday 1:30-3:15, PS 3: “Maps and Landscapes.”

Astrid Ogilvie (Stefansson) and Viðar Hreinsson (Icelandic Museum), “Early modern maps of Iceland.” In ca.1575 the Icelandic Bishop Guðbrandur Thorláksson constructed a celestial globe accommodated to the latitude of Iceland. Most seventeenth-century maps of Iceland resemble this map, except for a severely damaged vellum-fragment of a map preserved in Copenhagen. “Iceland sketched by him was at the Academy-library in Copenhagen” wrote an Icelandic pastor in c. 1720-1736 concerning the Icelandic autodidact Jón Guðmundsson the Learned (1574-1658). Jón was a farmer, fisherman, poet, scholar, writer, artist, healer, magician and even investigative journalist. It is likely that this damaged fragment is the map that was sketched by Jón the Learned. This map is of interest not least because it is quite different from all other seventeenth-century maps. Also, many of the place-names are not found on other maps but can be related to Jón. The reverse side of the parchment shows a possible draft of a world map. The presentation will discuss early map-making in Iceland in general and also provide a detailed analysis of this one particular map.

Catherine S. Porter (QUB), “A digital exploration of the early modern cartography of Ireland.” A sixteenth century map of Ireland attributed to Robert Lythe was distinctive from all that came before. It was the culmination of the first large-scale survey of the island, and in readiness for Plantation, was a key resource in the English government’s developing a truer geographical picture of Ireland. The importance of the cartography drawn from Lythe’s surveys is noted through its use by government and its borrowing by contemporary map-makers for decades to come. How Lythe produced a map that appears to have satisfied the cartographic appetite of even the most captious government officials, and how robust his surveying and cartographic practices were, remains largely unknown. This paper centres on an emerging interest among historical geographers and historians of cartography in the application of spatial technologies to analyse historic maps. Employing said techniques in combination with archival study it investigates: (I) the survey that helped to create Lythe’s greatest cartographic achievement and; (II) the cartographic genealogies in the maps that followed.

Nancy McLoughlin (UCI), “Speculative travel, allegorical entanglements, and political cosmologies.” The monastic tradition of the seven deadly sins invited individuals to imagine themselves as the site of an intense battle between the virtues and vices. Only by carefully guarding the soul against the influences of deceitful sins could the medieval pilgrim safely navigate the hazards of the surrounding environment. The evocative power of such visual demonizations encouraged their rapid adaptation from popular monastic texts into works of political theology and geography with far-reaching consequences. Exploring the dialogic intersection of such allegorical patterns of thought in fifteenth-century speculative travel accounts, political sermons, and royal processions, my paper interrogates the aggregate abstractions of virtues and sin inhabiting the resulting political and geographical landscapes for evidence of the implicit premodern understandings of dynamic, co-creative, and porous relationships among humans and landscapes embodied in late medieval constructions of political and theological truth.

Thursday 1:30-3:15, PS 4: “New World Commodities.”

Tatiana A. Matasova (Moscow), “The bird papagal and a variety of aroma: Reflections on the Spice Islands and the New World in Muscovy of the 15th–17th centuries.” In 1490 an ambassador of “the king of Rome” Maximilian (future emperor Maximilian I) presented a parrot to Zoe Paleologina (the bird papagal, prov. it. papagallo, gr. παπαγάλος). What were the interpretations of this gift in Moscow? For Russian intellectuals, a parrot was a message from the Heavenly Islands as a really fantastic bird. According to Muscovites, these islands were located far in the East and were separated from *oikoumene* by waters, which were impossible to cross over. In Russian original and translated texts of the time, one of the main features of Heavenly description was also the presence of divine smells or “aromas”. Russian hagiographic texts of the time contain episodes of the divine presence in the lives of saints expressed by a pleasant scent. It was a mark of nearness of God and/or Heaven. The focus of this report is on the details of these concepts in comparison with European ideas.

Kate Luce Mulry (Bakersfield), “‘It nourisheth the Child in the Womb’: Chocolate and colonization in 17th-century Jamaica.” In the wake of the English conquest of Jamaica in 1655, English medical writers projected various colonial fantasies onto chocolate, a substance relatively new to English consumers. Among the benefits of chocolate was its perceived benefit to women’s health, particularly their reproductive health. Cocoa, when properly prepared, was a “deep red tincture” and – because of its color – was assumed to nourish the blood. Writers concerned with Jamaica’s uncertain status in the empire touted the cultivation and consumption of chocolate as a means of transforming Jamaica from a place widely associated with death into a populous, settled, and prosperous colony. This paper addresses the role of physicians in touting chocolate as a commodity ideally suited to colonizing Jamaica, and examines their contested visions of which women – free or enslaved – would perform the myriad labors they described.

Charlie Huenemann (Utah), “Enlightened pleasures.” In the 17th century, a wealth of commodities from around the world surged into the Netherlands. Along with it came the philosophical problem of assessing the role of pleasure in a well-lived life. Calvinist theologies (as well as Erasmian sensibilities) urged that no spiritual good can come of worldly pursuits. But these repressive views were bound to fade in an age of growing wealth and cosmopolitanism. After an introduction to the problem of pleasure as dramatised in Jacob Cats’ poem *Selfstryt*, this presentation will examine what was perhaps the most progressive view toward enlightened pleasures of the 17th century: Namely, the view of Spinoza, whose account of cheerfulness (*hilaritas*) described the life of a *lieffhebber*, or the Dutch version of an enlightened and cosmopolitan connoisseur of worldly goods. Spinoza’s model human being is one who delights in the great variety of pleasures available in a world of global commerce.

Thursday 1:30-3:15, PS 5: “Humanism and Dialectics (I).”

Francesca Masiero (UCL), “Sharing education within and beyond the classroom in the Veneto (1405-1509).” Humanist teachers in the Veneto designed a new curriculum to educate both noble and humble students between the late Middle Ages and the early Renaissance. Teachers dealt with pupils from different social backgrounds in the footsteps of two influential *magistri artis grammaticae*: Guarino Guarini (1374-1460) and Vittorino da Feltrè (1378-1446). Education was closely intertwined with politics. The first *abbaco* teachers designed a scientific curriculum which included arithmetic, geometry, astrology and natural science, impacted on the intellectual upbringing of the new ruling class. The Republic of Venice ruled over several cities scattered along the lagoon and on the mainland and extended its dominion to the Mediterranean and Eastern coasts. Itinerant *magistri*, by moving across these territories, created a network of teachers who actively collaborated to establish cultural and political connections in urban centres not only within the Veneto but also in other Italian and European cities.

Karine (Nantes), “Castigare Pliny: The Concept of error and the renewal of natural philosophy in 16th-century Spanish scientific thought.” In Spanish Golden Age philosophy, the discussions on the work of Pliny became not only a field of literary criticism, but also a science of discovering errors in corrupted and mutilated ancient texts. It has been recently argued that the concept of error began to define the academic self in the transition from Medieval to Renaissance erudite culture. In Golden Age Spain, the scholarly debates around the work of Pliny contributed to the formation of a Republic of Letters. This study aims to demonstrate to what extent the erudite practice of debunking errors could determine the renovation of scientific methods. It also aims to understand to what extent errors in terminology affected the different manners in which Pliny's thought was understood. This will allow us to explore the limits of the concept of error, understood from a philological perspective, through the religious and philosophical ambivalence towards the presence of Pliny among impious authors now considered as precursors of modern atheism, such as Epicurus and Lucretius.

Daniel Špelda (Masaryk), “The uses of natural philosophy in the quarrel of the ancients and the moderns.” I want to address the evaluation of natural philosophy/science in the *querelle des anciens et des modernes* at the turn of the 17th and 18th centuries. Proponents of both Moderns and Ancients often recalled natural philosophy and used it to support their own agenda. The representatives of the Moderns, of course, often mentioned modern discoveries as obvious proofs of the intellectual superiority of the present age. The representatives of the Ancients, in general, recognized the achievements of modern natural philosophy, but at the same time asserted a) that the new discoveries had been known to the ancient authors; b) that the Moderns could achieve their discoveries only thanks to the work of the Ancients; c) that the Moderns had achieved their discoveries because they had had the advantage of time which had given them more empirical data; d) therefore, if the Ancients had lived today, they would have been at least as good, and probably better, than e. g. Descartes. In this way, the Quarrel relativized the superiority of the Moderns and contributed to the formation of a more sophisticated concept of scientific progress.

Thursday 3:45-5:30, PS 1: “Perspective as Practice: Sites of Optical Knowledge.”

Sven Dupré: This session is connected to a book about the development of optics and perspective between the fifteenth and seventeenth centuries, which will be published in Brepols's 'Techne: Knowledge, Technique and Material Culture' series in 2019. Our point of departure is the recognition of the plurality of meanings of perspective. The ways in which optical knowledge was used by different groups in different places (such as the anatomist's dissection table, the goldsmith's workshop, and the astronomer's observatory) defined the meanings of Renaissance perspective. Most interestingly, sites such as the theatre and the garden were home to practices of perspective which have remained on the margin, or even completely invisible, in the historiographies of optics and perspective.

Tawrin Baker (Pennsylvania), “Visual theory and the anatomy theater.” In the early modern period, medical students, university professors of various disciplines, and the general public were exposed to visual theory during at least some public dissections of the eye performed at anatomy theaters. Topics related to vision at these events include the philosophy of visual perception, accounts of light and color, discussions of the controversy over intromission versus extramission, and the rudiments of perspectiva or the science of optics. Andreas Vesalius, Hieronymus Fabricius ab Aquapendente, Johannes Kepler and others factor into this narrative. The humanistic recovery of Galen's works, debates over method, the (largely successful) struggle for anatomists to increase their professional status, and interdisciplinary work spurred on by competition at universities provide context.

Jaime Cuenca (Deusto), “‘Il luogo per il Prencipe’: Court theater as a political site of perspective.” Theatre became a privileged site for experimenting with perspective during the 16th and 17th centuries. At the same time, the perspectival stage was also instrumental in exhibiting and formulating political power in the dawn of absolutism. As formulated by Nicola Sabbattini in 1638, the view on the perspectival scenery was perfect only from the seat of the prince (*‘il luogo per il Prencipe’*). Highlighting the political significance of this kind of seating distribution has become a commonplace among scholars when dealing with the role of perspective in early modern courts. However, little attention has been paid to how exactly the point of view of the perspectival stage was conflated with the seat for the prince. This paper will focus on this specific convergence of etiquette and optics that took more than a century.

Juliet Odgers (Newcastle), “The Optical order of John Evelyn's microcosmic garden.” To his contemporaries, John Evelyn's (1620-1706) reputation rested largely on his expertise in gardening. He wrote on the topic and his garden at Sayes Court in Deptford. This paper concerns one small enclosure at Sayes Court, the ‘dial garden’, examining its spatial structures in dialogue with Evelyn's writings on perspective and astrology. Turning to the dial garden, curiously, we find that Evelyn ignored some of his own directions on perspectival ordering. I suggest that Evelyn's concern with optics relates not only to the view of the ‘spectator’ but also to the geometry of the ‘celestial light’ that falls across the dial-like face of the garden and this accounts for seemingly aberrational alignments and elongations of the little enclosure.

Georges Farhat (Toronto), “Towards a contribution of early modern landscape design to the historiography of perspective.” If studied within the design techniques it informed, early-modern perspective turns out to have been more closely entangled with optics than has hitherto been acknowledged. Looking in particular into French seventeenth-century designed landscapes, this paper will present select aspects of sociotechnical and territorial appropriations of perspective that were inseparable from optics. I will show, with a few examples, how workshops, worksites, and treatises pertaining to different disciplines were blended in design to shape perspective as a constructive modality of geometrical optics. My argument rests on a methodology that articulates fieldwork and survey with evidence from manorial accounts and institutional controversies along with the study of design drawings.

Thursday 3:45-5:30, PS 2: “Aristotelian Trajectories (II).”

Daria Drozdova (Moscow), “Archimedean tradition and Giambattista Riccioli’s experiments with falling bodies.” The discussion about falling bodies was an important element of early modern critique of Aristotelian doctrine of motion. Starting from the 16th century a number of mathematicians and natural philosophers in Italy tried to understand, do heavier bodies fall faster than bodies that are lighter, and which factors do influence on the free fall? During the discussion, two different techniques were applied in order to give an answer: real experiments with different sets of bodies (Coresio, Baliani, Renieri, Cabeo, Riccioli) and thought experiment (Benedetti, Galileo, Borelli). Benedetti and Galileo were also representatives of a renewed Archimedean mechanical tradition which made the speed of free fall depend on the difference between the specific weight of the body and that of the medium. In my presentation I’m going to investigate how this tradition influenced Giambattista Riccioli’s experiments with falling bodies performed in Bologna in 1640-1650. I argue that some details of ingenious experimental design elaborated by Riccioli reveal that he wasn’t fully aware of hydrostatic meaning of some parameters he included into consideration.

Jan Čížek (Ostrava), “Johann Heinrich Alsted’s Physica Mosaica: A Cul-de-sac of early modern natural philosophy?” Some early modern scholars believed that the Scripture provided more certain knowledge than all secular authorities (namely Aristotle) or the investigation of nature as such. In my paper, I will present a case-study of Mosaic philosophy proposed by a Reformed encyclopaedist, Johann Heinrich Alsted (1588–1638) who tried to rebuild the whole of philosophy on a Mosaic basis. I will argue, however, that Alsted’s spectacular conception was a cul-de-sac. Although in his early works on this topic, Alsted declares as his primary aim to prove the harmony and equality between various traditions of natural philosophy, namely between the Mosaic and Peripatetic approach, and despite the fact that his biblical encyclopaedia of 1625 was intended to be built on a basis of a literary reading of Bible, he has never truly abandoned the Aristotelian framework of his physics; what is more, in his mature *Encyclopaedia septem tomis distincta* of 1630, he eventually (to a striking extent) openly preferred Aristotle to other natural-philosophical traditions including the Mosaic physics.

W.R. Laird (Carleton), “Renaissance mechanics and the search for causes.” The history of renaissance mechanics has usually been seen as a contest between the dynamical traditions of the Aristotelian *Mechanica* and Jordanus on the one hand, and the statical tradition of Archimedes on the other, a contest resolved only by Galileo’s unification of statics and dynamics. In this paper, I shall argue that the contest was more between the causal and physical mechanics of Aristotle and Jordanus and the purely formal mechanics of Archimedes. All sixteenth-century mechanical theorists, I contend, were searching both for the real, natural causes of mechanical effects and for the mathematical rigour to establish from those causes a demonstrative science of machines. To this end, I shall look at the mechanical works of Niccolò Tartaglia, Francesco Maurolico, and Guidobaldo dal Monte to show how they each drew from the various ancient and medieval traditions of mechanics in their attempts to found such a causal and mathematical science. Although Galileo’s achievement is beyond the scope of this paper, I shall suggest at the end how his mechanics was the culmination of the work of his sixteenth-century predecessors.

Thursday 3:45-5:30, PS 3: “Practicing Reading, Making Knowledge 1300-1650.”

Raz Chen-Morris: Late medieval Europe through the early modern period witnessed crucial changes in the status of the written page and in how people, and especially scholars, read it. The needs of scholastic learning, the advent of the printing press, confessional debates and the promises of the new science challenged and remolded acts of reading and the way they shaped the acquisition and production of knowledge. This panel will address certain of the issues involved in these changes: the new cognitive tools developed to arrange and produce scholastic texts; the discord between reading and new modes of knowledge in early modern astronomy and natural philosophy; and the complex role of the printed book as a guide in a spiritual itinerary in search of alchemical knowledge.

Ayelet Even Ezra (Jerusalem), “Diagramming while reading: West and East.” The reading habits of high-medieval and early modern scholars included heavily glossing and marking the texts they have read. One of the most peculiar and eye-catching forms of these annotations is the phenomenon of converting bits and pieces of the text into simple diagrams, or adding new information by way of such diagrams. My paper will discuss the habit of 14th and 15th century readers in Western Europe and in Byzantium to gloss the margins of logical, legal, philosophical and medical textbooks – both manuscripts and early prints - with multiple such tree diagrams, employing visualization to enhance understanding, manipulate the text, understating its organizing principles and imposing new ones.

Magdalena Luszczynska (Jerusalem), “Philosophical enigma retold and illustrated: Reading of an alchemical text in early modern Europe.” This paper will examine how various opinions on what alchemy stands for informed distinct readings of an alchemical text, each of which was reflected in a different style of pictorial representation. I will examine two readings of Michael Sendivogius’s highly allegorized treatise *Philosophical Enigma* (1604). On the one hand, I will analyze Sendivogius’s colleague, Michael Maier. In his *Symbols of the Golden Table*, he presents the Enigma as the epitome of Sendivogius’s writings, thus portrays Sendivogius as the recipient of the divine instruction, heir of the sacred tradition, and the forbearer of the millennial times. On the other hand, stands Andreas Ortelius’ chemical commentary on Sendivogian treatises. Ortelius does not ascribe special status to the Enigma but takes it to be a part of Sendivogius’s natural philosophy.

Raz Chen-Morris (Jerusalem), “Acts of non-reading and the production of knowledge.” The critique of bookish learning was a commonplace in early modern intellectual culture. Humanists, as well as, natural philosophers, alchemists as well as astrologers all rejected books in favor non-mediated experience of the human and the natural world. Yet, these sentiments did not exclude an active engagement with texts to fashion a complex persona of early modern reader struggling to overcome books in order to capture reality as is. This paper will focus on a specific mode of engaging with texts through an active gesture of non-reading. Following certain instances of non-reading by Johannes Kepler, Galileo Galilei and René Descartes I will point to how they calculatedly construed this tension between reading, commenting and writing books on the one hand and "seeing with my own eyes" mode of knowing on the other, only to attempt at creating a new mode of producing knowledge.

Thursday 3:45-5:30, PS 4: “Humanism and Dialectics (II).”

Raphaël Sandoz (Geneva), “Extinct sciences and prospective disciplines in early modern classifications of knowledge.” A renewed interest in “classifications of human knowledge” is clearly perceptible at the end of the sixteenth century, from Petrus Ramus’ revised organisation of the liberal arts in his “*Tabula Artium*” (1576) to Francis Bacon’s “*Distribution of Human Knowledge*” (1623). A glance at the disciplines listed in those maps reveals many sciences now extinct, such as Dee’s “hydragogy” or Alsted’s “hexilogia”. Such sciences are at least not likely to be misconstrued with extant disciplines, unlike fields bearing more familiar names, whose identities were often substantially different in the early modern world. Furthermore, it appears that several fields of knowledge, while mentioned in these classifications, did not exist at all at that time: they were merely prospective sciences. That is to say, early modern classifications of human knowledge were not primarily devised to reflect the actual state of the disciplinary landscape: they also played an important heuristic role in identifying new scholarly territories to be explored.

Adam Fix (Minnesota), “What exactly was the early modern science of music?” From antiquity to the seventeenth century, music was inseparable from the sciences. Nevertheless, while historians today agree that music played an important role in early sciences, what this role was, why music was important, and what happened to music during the seventeenth-century scientific revolution have proven difficult to pin down. In my talk, I suggest that this is because the subject itself is difficult to pin down. The history of science is, of course, a discipline demarcated by modern notions of “science” that scarcely existed for most of the history it purports to study. Musical science, however, is doubly problematic, for our understanding of “music” is a modern invention and equally anachronistic when projected onto the past. I aim to cut through this confusion and establish clear and consistent terminology for the interdisciplinary historical study of musical science.

Idan Sherer (Haifa), “Joseph ha-Kohen (c.1496-c.1575): Humanist historiography and military history.” The extent of the effect that humanist historiography had on Jewish perceptions in Italy remains debatable. One of the most prominent attempts to create a historical work that displayed several of the main characteristics of humanist historiography was Joseph ha-Kohen’s *Chronicles of the Kings of France and the Ottoman Empire*, written in Hebrew and first published in 1554. On the one hand, Joseph ha-Kohen is highly interested in the monumental clash between the Ottoman Empire and Christian Europe. On the other hand, ha-Kohen’s *Chronicles* also incorporate literary methods and subject matter that most of his humanist contemporaries would have perceived as inappropriate for historical writing. As I would like to demonstrate, Joseph ha-Kohen produced an extraordinary and unprecedented work of historiographical and secular significance, while carefully attempting to allow his target audience to engage his work with as little conscientious burden as possible.

Thursday 3:45-5:30, Roundtable Discussion: “Teaching Demons.”

Richard Raiswell: Supernatural subjects come with exciting pedagogical opportunities. Certainly, they capture the imaginations of undergraduate students and generate enthusiasm for topics in intellectual history. As such, they serve as spurs for the development of creative discussions and projects that complicate the triumphalist paradigm of the scientific revolution. But in drawing attention to what are often seen as intellectual byways and dead ends, they more effectively historicise the process through which the world was—and came to be—viewed and comprehended. Teaching students about beings such as demons and witches, examining arguments about how transvection or lycanthropy occurred, allows us challenge the easy dichotomies that students bring into the classroom, and encourage them to think critically about the ways in which epistemologies evolve and realities are constructed.