

Pérez Fernández, José María

## Article

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# ***The Spirit of Trafficke:* Paper, Semiotics and Finance**

José María Pérez Fernández  
*University of Granada*

## ABSTRACT

This essay will provide a necessarily brief and preliminary survey of certain phenomena involved in the early modern dematerialization of economic exchanges through an approach to Gerard Malynes' *Lex Mercatoria* (1622). A comprehensive treatise on international maritime law, trade practices, accounting methods, and above all an essay on financial instruments, Malynes' work constitutes an excellent case study for the way in which these relatively new phenomena were accounted for in the early seventeenth century, when many of the methods and practices that were originally conceived and developed many years before in the Italian Peninsula had already become global. My essay will focus on how Malynes built not just upon long-standing and well-established practices, but also upon a doctrinal tradition represented by authors such as Luca Pacioli, and how he turned to concepts from other disciplines and practices to make sense of paper-based semiotic artefacts like the bill of exchange, whose power to convey a significant amount of value on a "small peece of paper of some two fingers broad" he described as "the Spirit or Facultie of the Soule of Trafficke and Commerce". As he explained their nature and function, Malynes resorted to the vocabularies of disciplines like rhetoric, theology, and natural philosophy – including geometry, anatomy and what today we would call anthropology – to legitimise these financial semiotic artefacts and explain their performative power. The result was a combination of pre-existing discourse on money and finance with new ways of accounting for ever more sophisticated and innovative practices which situated them as part of a universal epistemology for the codification and administration of information and knowledge in finance and trade.

## Introduction: from Pacioli to Malynes, from Venice to London

This essay will outline a blueprint for a first approach to a series of concepts employed in early modern attempts to rationalise and legitimise practices and instruments in trade and finance. It will identify and situate the most relevant milestones in a road map of sorts for further critical research into the subject, and will do so by examining two primary sources: Luca Pacioli's Italian *Somma di arithmetica, geometria, proporzioni e proporzionalità* (Venice: Paganinus de Paganinis, 1494, ISTC il00315000) and Gerald Malynes's English *Consuetudo, vel Lex Mercatoria* (London: Adam Islip, 1622).<sup>1</sup> It will trace the path that goes between these two different treatises, published in two different cities – Venice and London – and periods – the late fifteenth and early seventeenth centuries. By contemplating them as representative moments and locations within the long cultural histories of accounting methods and of credit I seek to show how these authors resorted to the discourses of apparently unrelated disciplines such as philosophy and theology to account for the innovative methods in the administration of information and data management which were required for the generation, codification and circulation of value and credit in the conduct of international trade. I will include an approach to the semiotic nature of the documents involved in these processes, and to the fundamental role of paper as their material medium. These commercial and financial practices were established upon three epistemological principles, which they shared with the legal framework and the contractual culture within which they emerged: (1) *consuetudo* or custom, (2) semiotics, and (3) authority. My essay will look into different aspects of these three components through a survey of the vocabulary employed to describe and eventually to legitimise the generation, representation, and exchange of financial value.<sup>2</sup>

<sup>1</sup> The full title of Malynes's work is *Consuetudo, vel lex mercatoria, or The ancient law-merchant. Diuided into three parts: according to the essentiall parts of trafficke. Necessarye for all statesmen, iudges, magistrates, temporall and ciuile lawyers, mint-men, merchants, marriners, and all others negotiatin in all places of the world* (USTC 3010630)

<sup>2</sup> This essay is part of a long-term research project which is wider in scope. Some of my

## From *fantasia* to script and cypher: the semiotic alchemy of double-entry bookkeeping

As is well known, Luca Pacioli was not just an expert mathematician and the editor of a Latin version of Euclid's *Elements*: he also compiled what we might call the first systematic and comprehensive treatise on double-entry bookkeeping – a well-established method whose practice had in fact long preceded him. In his *Summa* he established what he considered the three main pillars for the conduct of trade (*“tre cose massime sono opportune a chi vuole con debita diligenza mercantare”*, Pacioli, 198v):

1. Cash (or an equivalent) and credit (*qua* trustworthiness): *“la pecunia numerata e ogni altra faculta sostanziale”* and *“lo credito fedelmente seruato”*.
2. Good bookkeeping and mathematics: the merchant must be *“buon ragioniere: e pronto computista”*.
3. The merchant must also exercise method and system in recording transactions, which for Pacioli means using double-entry bookkeeping: – *“con bello ordine tutte le sue facende debitamente disponga”*, which is impossible to achieve *“senza debito ordine di scritture”*.

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results have already been published, and current work in progress should yield more detailed insights in future publications. Some of my recent publications on this and related topics include: “Notes for a Communicative History of Early Modern Paper: Giovanni Antonio Tagliente's Handbooks”, in Livia Faggioni, Mauro Mussolin (eds.), *La Carta e il Mediterraneo: Produzione, Commercio, Comunicazione*, Fabriano, 2022, pp. 147-167; “Paper in Motion: Communication, Knowledge, and Power. Methods and Case Studies for an Interdisciplinary Approach”, in *CROMOHS*, no. 23, 2020, pp. 81-112, <https://doi.org/10.36253/cromohs-12025>; “Introduction: Information and the Early Modern Economy of Knowledge”, in José María Pérez Fernández and Giovanni Tarantino (eds.), with Matteo Calcagni, *Paper in Motion: Information and the Economy of Knowledge in the Early Modern Mediterranean*, Viterbo, 2021, pp. 21-33. Like the present article, these essays are all the result of activities organized by the PIMo COST Action, <https://www.peopleinmotion-costaction.org/>. Outside the scope of PIMo, but also part of my long-term research on these topics is a forthcoming survey on “Information, Knowledge, and Communication in the Renaissance”, to be published in *The Renaissance World*, Routledge Resources Online, <https://www.taylorfrancis.com/rrorw/?context=rrorw>, accessed on 28/04/2023.

*Credit* here is an eminently immaterial or virtual value. It is social in the first place in terms of personal reputation and credibility (“*la fede del buon mercatante*”). Cash is also social and consensual, like credit, but it also has a semiotic dimension which must perforce be inscribed in some sort of material medium. In the case of currency, this was traditionally metallic, and then gradually evolved towards paper money. The value of credit, as we shall see, can also materialize on paper documents, after it has undergone a translation of sorts from merely immaterial mutual trust onto its contractual inscription in a text that legally binds all parties under the relevant authorities. The semiotic nature of documents involved in trade and finance is inseparably coupled with skills in number and quantification, which is why a good merchant must also master the signifiers that record data and figures upon his documents. The third leg in this complex practice requires method and system in the administration of the data recorded on the books and the bills, in terms of natural language, figures, and other paralinguistic methods such as tables and different systems for the mis-en-page of the information in question. In other words, the method and system materialized not just in terms of the semantic content of the language and the quantification expressed through figures, but also in the way all this information is represented and arranged on books and bills (“*debito ordine di scrittura*”). This semiotic and graphic codification and circulation of information and value materialized in three principal types of documentary genres, the *memoriale* (memorandum), the *giornale* (journal), and the *quaderno grande* (ledger).<sup>3</sup> The vocabulary employed by Pacioli to instruct his readers on how to go about recording and arranging the information within these books is very

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<sup>3</sup> Pacioli, 200r ff. Early in 2022 our PIMo work group Paper in Motion organized a hybrid exhibition at the Archivio di Stato in Prato which sampled different types of administrative, commercial, and financial documents, <https://www.paperinmotion.org/>. It included, among several others, digital copies of some of the documentary genres described by Pacioli; see for example these cases from section three of the online catalogue, <https://www.paperinmotion.org/section-03/#toggle-id-2>, and <https://www.paperinmotion.org/section-03/#toggle-id-3>, accessed on 21/04/2023.

revealing, and as we shall see, its underlying foundations in philosophy and theology give it an air of what we might describe as the semiotic alchemy of double-entry bookkeeping.<sup>4</sup>

This is a method that goes from basic processes of cognition and memory – what we might call the pre-semiotic mental imaging of all this data before it is turned into figures and script inscribed within the system of documentary genres that constitutes the material and symbolic infrastructure of double entry bookkeeping. Accounts, says Pacioli, are nothing but the result of a process that transforms the merchant's *fantasia* through proper order (“*debito ordine*”) into data and information about the state of his business (“*la notitia de tutte sue facende*”).<sup>5</sup> But beyond the registration of mere information, profit and loss also emerge from these documents, their graphic design, and the data they cross-reference. Thus, the merchant's mental images are materialized in scripture, and their semiotic administration yields a general picture or account that represents the state of business at a given moment, both as a whole as well as in the minute details that articulate it.<sup>6</sup> This is a diegetic process that Pacioli expresses with the infinitive *narrare*.

Capital thus emerges from the cypher that rises from these sign

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<sup>4</sup> I do not have neither time nor space to discuss in detail the authors, the ideas and the phenomena that preceded Pacioli during the 13<sup>th</sup> and 14<sup>th</sup> centuries. Some of these precedents have been addressed by J. Kaye in two important books dedicated to the impact that the monetization of European society during this period had upon disciplines like theology and natural philosophy, both of which engaged in an intricate dialectic with new habits of measurement and quantification and new epistemological principles based on ideas of balance and equilibrium. See J. Kaye, *Economy and Nature in the Fourteenth Century: Money, Market Exchange, and the Emergence of Scientific Thought*, Cambridge, UK, 1999, and *A History of Balance, 1250-1375: The Emergence of a New Model of Equilibrium and its Impact on Thought*, Cambridge, UK, 2014.

<sup>5</sup> Pacioli, 206r.

<sup>6</sup> For an example of the importance of the mis-en-page when it came to the semiotic registration of information see this document from the Fugger Archive, <https://www.paperinmotion.org/paper/matthaus-schwarz-calculates-fugger-claims-towards-the-spanish-fleets-of-1557/>, accessed on 21/04/2023. This large sheet of paper (43.5 x 59.2 cm) amounts to a map in which the chief accountant of the Fugger banking company arranges, cross-references and processes data of a very diverse nature into a graphic that provides a snapshot of a large section of the bank's affairs.

systems. In the traditional account of the German sociologist Werner Sombart, modern capitalism resulted from the combination of three practices and institutions: the authority projected by the law (conducted by the state-sanctioned judiciary system, and a human infrastructure of bureaucrats, lawyers, and notaries), accountancy (conducted by expert mathematicians with sophisticated skills in all the methods involved in figures and quantification), and credit (i.e. the generation and communication of value, conducted by financial agents). In other words, and following Werner Sombart's reading, the rise of capitalism resulted from the combined action of (a) cypher in the paper-based documentary genres in finance and banking, alongside a credit entity, (b) the contractual-legal culture, and the legal entities that enforced it, and finally, (c) accounting techniques, measurement, and quantification, alongside the diegetic arrangements of the different signifiers used to represent data. To put it in blunt terms, without paper as a medium, and without the symbolic systems devised by merchants and by financiers, capitalism as we know it would not have been possible.<sup>7</sup> This tendency evolved and intensified as capitalism developed a series of ever more complex and sophisticated methods and practices, as demonstrated by Mary Poovey and her work on systems for the mediation of value during the eighteenth and the nineteenth centuries in Britain. Her research lists a series of literary genres alongside genres employed for mediating value in the credit economy. She distinguishes two types of genres (other than literary ones) which mediated value: (a) monetary genres (i.e. gold and silver coins, paper money, and forms of credit paper), and (b) various ways of writing about the market, credit, and

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<sup>7</sup> Werner Sombart, *Der modern Kapitalismus*, vol. I, *Die vorkapitalistische Wirtschaft*, Munich and Leipzig, 1916, p. 120; quoted in Lothar Müller, *White Magic: The Age of Paper*, London, 2014, p. 44; for further details see Müller, p. 45 ff. For a more recent, albeit brief, treatment of the language of mathematics and its social-semiotic dimension as part of the ideological infrastructure of capitalism see Thomas Picketty, who claims that "the statistics, historical data, and other quantitative measures presented in this book are imperfect, provisional, tentative social constructs" (Thomas Picketty, "On the Complementarity of Natural Language and Mathematical Language", in *Capital and Ideology*, trans. A. Goldhammer, Cambridge, Mass. and London, 2020, pp. 43-45, p. 43).



price (e.g. shipping lists, prices, and economic theory). She then holds that all these different genres “were not consistently differentiated from each other” during her period.<sup>8</sup>

### Credit and the law: finance and contractual culture

The practice of law and its associated contractual culture had already attracted the attention of intellectuals before Pacioli. In 1420 Jean Gerson’s *De contractibus* explained how the contract wove and legitimised civic life by creating a fiduciary framework for human communities in which mutual trust in all sorts of social and commercial exchanges is established by means of a series of documents and practices regulated by positive law and sanctioned by the authority of the state.<sup>9</sup> Several decades after Gerson, Pacioli also inscribed the methods and practices of the law within his *Summa*, more specifically in a section that he titles *De casibus societatis*, (Pacioli, 150r – 158v), and confirms the importance of written records (*scripto*) to materialize these legally binding agreements well beyond the virtual and hence potentially more volatile method of mere faith and witness (*fede, testimonio*).<sup>10</sup> Both Gerson and Pacioli therefore confirm

<sup>8</sup> Mary Poovey, *Genres of the Credit Economy. Mediating Value in Eighteenth- and Nineteenth-Century Britain*, Chicago, IL, 2008, pp. 1-4.

<sup>9</sup> For a sophisticated and detailed account of the *longue durée* in the relation between theology and the new contract culture, see W. Deckok, *Theologians and Contract Law: The Moral Transformation of the Ius Commune (ca. 1500-1650)*, Leiden and Boston, 2012. His chapter seven focuses on how contracts were meant to regulate (and eventually, legitimise) commercial and financial exchanges upon solid moral principles (“Fairness in Exchange”, pp. 507-604). The relation between Christian morality, on the one hand, and new mercantile and financial practices is also the subject of G. Todeschini’s *Franciscan Wealth: from Voluntary Poverty to Market Society*, Saint Bonaventure, NY, 2009, in particular chapter IV (“The Market as a Form of Society”, pp. 151-196). An original approach can also be found in Paolo Prodi’s *Settimo non rubare: furto e mercato nella storia dell’Occidente*, Bologna, 2009, who stresses the impact of new habits of measurement and quantification as part of the new contractual culture and therefore as inescapable preconditions for the enfranchisement of any given individual as a legitimate agent within civic life (see e.g. pp. 137-138.)

<sup>10</sup> “Si deue attendere a li patti e conuentioni che intra loro fanno per *fede* o per *testimonio* o per *scripto* o altro instrumento.” (150r, italics are mine).



the importance of the principles of *consuetudo*, i.e. custom, and consensus, and how they are inextricably attached to script and to a set of documentary genres. In combination with immaterial social trust (*credit*) they all contribute to create the contractual framework that sustained the practice of trade and finance. Paper emerges here as a textual and semiotic material space, an information arena that records the transactions (through figures, tables, graphics, and other symbolic systems) taking place in the actual physical world of the merchant. As we shall see one of the most sophisticated documentary genres used to generate and communicate financial value is the bill of exchange.<sup>11</sup>

### Finance and pragmatics: documents as speech acts

Like natural language and in general any sort of symbolic system, the efficiency of financial documents relies on their consensual nature and their performative power – hence their relation to disciplines like rhetoric and semiotics. If we think of these documents in terms of speech acts, we can divide the nature of their communicative functions into three different types: (a) locutionary (i.e. the semantic content of the documents), (b) illocutionary (i.e. the intention of the codifiers of the documents) and (c) perlocutionary (i.e. the ac-

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<sup>11</sup> For a recent account of the nature and function of bills of exchange, see F. Trivellato's *The Promise and Peril of Credit: What a Forgotten Legend about Jews and Finance Tells Us about the Making of European Commercial Society*, Princeton, NJ, 2019, pp. 1-4 and 24-30. For further technical details on the letter of exchange, see Adrian R. Bell, Chris Brooks, and Terry K. Moore, "The 'Buying and Selling of Money for Time': Foreign Exchange and Interest Rates in Medieval Europe", January 6, 2015. Discussion Paper Number ICM-2015-01, Henley Business School, University of Reading, in particular p. 5, available at SSRN: <https://dx.doi.org/10.2139/ssrn.2546003>, accessed on 06/04/2023. Our online exhibition includes several samples of different types of bills of exchange, <https://www.paperinmotion.org/section-03/#toggle-id-3>, accessed on 21/04/2023. One of them (<https://www.paperinmotion.org/paper/bill-of-exchange-with-endorsement-on-security-from-antonio-di-neve-in-montpellier-to-francesco-di-marco-datini-and-his-partners-in-barcelona/>, accessed on 21/04/2023) dates from 1410, which proves that this was a well-established practice, long before Pacioli or Malynes set about explaining their nature and functions.

tual speech act that they perform, the consequences they have in the real world, or what they bind their recipients to perform within their contractual-legal framework). The language, the paralinguistic, and the iconic information that these documents codify tend in fact to have a much greater impact than common everyday linguistic utterances. This is something that financial documents have in common with certain varieties of administrative and legal discourse employed in official records, whose wording on certain occasions tends to be of enormous momentum – for example a marriage certificate, a death sentence, or the papers that regularize a previously illegal immigrant.

Although Pacioli and Malynes did not have the vocabulary which expresses the concepts used today in disciplines like linguistics, pragmatics, or semiotics to account for this function of documents, they did acknowledge the nature of the power that turned them into fundamental instruments for the codification and communication of value in finance and trade. Malynes sets the bill of exchange as the sort of documentary genre that lies at the core of such practices.<sup>12</sup> Malynes also stresses the modesty of the materials employed for the codification of a bill of exchange in comparison with the far-reaching effect it can potentially have when it is turned into a significant carrier of value. From the moment in which this “small peece of paper of some two fingers broad” is inscribed and activated as a bill of exchange by virtue of the austere but efficient linguistic formulae inscribed on it, it becomes a powerful signifier that “doth carrie with it a Command”. He also stresses the need for linguistic protocols to perform the function expected from the document, and

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<sup>12</sup> “You may not say in the Bill, it may please you to pay, or I pray you to pay (although it were to your Master;) for *the Bill (of his high Nature) doth carrie with it a Command* without respect of persons, and most men will not vse the words (Make him good Payment) but *the fewer words the more formall*; neither is there any witnesses vnto it nor any seale, but *a small peece of paper of some two fingers broad*: and the Letter of Aduice doth declare for whose account, or to what intent or purpose the said money is taken up; which Letter of Aduice, doth accompanie the Bill of Exchange with the like inscription, with the words *De aduiso*” (Malynes, *Lex Mercatoria*, 1622, p. 394, italics are mine).

the fact that their efficiency grows in inverse proportion to their length: “the fewer words the more *formall*”, where *formall* means, according to the OED “according to recognized forms, or to the rules of art or law” (OED, *formal*, adj. 3). He also emphasises that, unlike most similar documents, bills of exchange are not enforced or regulated by law, but rather by mere *consuetudo* and *faith* among merchants (“not subject to any prescription by Law or otherwise; but merely subsisting of a reuerend Custome vsed and solemnized concerning the same”). Nor does it use any other legitimising protocols, such as witnesses or seals. The paucity of the Bill of Exchange, which intensifies the illocutionary and perlocutionary powers of the document qua speech act, is then complemented by the “letter of aduice”, which expresses in some more detail the locutionary aspect (i.e. the semantic content) of the speech act which is the Bill of Exchange as defined by Malynes.

In his chapter 12, Malynes addresses what he calls *Bille Obligatorie* and its use to convey information and value among merchants.<sup>13</sup> He again stresses the role of faith in their administration and their consensual nature, alongside the manner in which they are registered in a manuscript document: (“of his owne hand writing, or made by his seruant, and by him subscribed, without any seale or witnesse thereunto”).<sup>14</sup> The bill obligatory is therefore a *de facto* contractual document whose power does not emanate from the authority of the state, but from the combination of its semiotic protocols with the consensus and the mutual trust of those involved in its exchange and circulation. When describing the virtues and power

<sup>13</sup> *Of the Transferring or setting ouer of Billes Obligatorie, betweene Merchants and others*, pp. 98–100.

<sup>14</sup> “For the *sinceritie of plaine dealing* hath hitherto beene inuiolable, in the making of the said Billes, which euerie man of credit and reputation giueth of his owne hand writing, or made by his seruant, and by him subscribed, without any seale or witnesse thereunto; and is made payable to such as Merchant or person, or to the Bearer of the Bill, at such time or times of payment as is agreed and concluded betweene the parties, either for money or commodities lent or bought, and so declared in the said Bill, according to the forme hereafter expressed” (*Lex Mercatoria*, p. 98, italics are mine).

of these documents Malynes proclaims that they are as good as money.<sup>15</sup>

### Imaginary money: finance and the power of fiction

One of the most striking statements in Malynes' work, which at the same time reveals his awareness of the rhetorical and pragmatic—i.e., the semiotic—nature of these documents, and of the immaterial consensual ground upon which they are founded, comes in page 99 of chapter 12, which is a wonderful acknowledgement of the perlocutionary power of fiction to generate credit value and trade:

*“And herein we see and may obserue, That things which be indeed, and things which are not indeed, but taken to be indeed, may produce all one effect; and euerie man is enabled with his owne meanes and credit, to augment commerce.”*<sup>16</sup>

In the case of documents like these, their semiotic-consensual nature, and the perlocutionary power that they display is such that their relation to truth – to a referent outside its semiotic representation and the social circles throughout which they circulate – is irrelevant. Their socio-semiotic and relational nature follows paths which run parallel to credit, in both personal and financial terms, and they do generate their perlocutionary effects without an actual referent. In other words, value here has no materiality other than the paper documents that record it in combination with the entirely virtual social-semiotic networks that bring it into existence and sustain

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<sup>15</sup> “the bearer... may go to another man, and buy other commodities therewith, as if it were with readie money, the time onely considered: nay more, if he will haue readie money for these Bills, he may sell them to other merchants that are moneyed men, and abating for the interest for the time ...they shall have money at all times ... for it is properly as money paid by assignation, whereby verie great matters are compassed in the trade of merchandize ... the more commodities there are sold the lesse readie money is transported, and life in infused into trafficke and trade for the generall good” (*Lex Mercatoria*, p. 99, italics are mine).

<sup>16</sup> *Lex Mercatoria*, 1622, p. 99.

it. Throughout all these different records and paper bills there circulates what Malynes calls the *spirit of trafficke*: exchange itself, the most immaterial of all these values, which results from the complex conglomerate of signifiers, protocols, and the information they register in each of these documents. The *fictional* nature of these papers and the immaterial value which they codify also appear in revealing terms through expressions like *imaginary money*:

“The Denomination of moneys, which wee call Imaginarie, is because there is not any peculiar or proper money to be found in *Specie*, wherevpon the Exchanges are grounded, as it was in times past in many places, where some moneys were the cause to ground the price of Exchange vpon” (*Lex Mercatoria*, 1622, p. 386)<sup>17</sup>

### From cognition to representation: arithmetic and prosopopeia

There is another striking passage that evinces Malynes’ remarkable combination of the abstractions of philosophy and theology with their practical application in arithmetic, geometry, and rhetoric. This leads him to an account of the birth of cognition and language in theological, social, and anthropological terms, and of the techniques developed by individuals and human communities for their materialization. The concepts employed here include *Naturall Mother Wit*, *Vox literata & articulata*, *Logicke*, *Rhetoricke*, *Arithmetic* and *Geometrie*. Malynes uses them to take his readers on a tour that goes from certain potential capacities bestowed by God upon Creation to their development into instruments that implement the semiotic and inherently communicative nature of human communities. *Naturall*

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<sup>17</sup> On imaginary money see Luigi Einaudi’s classic essay “Teoria della moneta immaginaria nel tempo da Carlomagno alla rivoluzione francese”, in *Rivista di storia economica*, no. 1, 1936, pp. 1-35. A more recent account can be found in Jan A. Kregel, “Democratizing Money”, in the *Levy Economics Institute, Working Papers Series*, 2019, <http://dx.doi.org/10.2139/ssrn.3387582>, p. 5. The concept of *imaginary money* evokes Pacioli’s reference to the fantasia of the merchant, which as we saw above pre-exists the codification of this information by means of the semiotics of double-entry bookkeeping.

*Mother Wit* stands as an allegory of sorts for a creative natural power which applies the *forma dat esse rei* principle. This was a principle of scholasticism, also applied to Roman law (in solemnibus *forma dat esse rei*), that expresses how the formal aspects of an act are in the first place constitutive of it, but then also endow it with perlocutionary power. In other words, solemn acts are valid only if they follow formal procedures, or semiotic protocols.<sup>18</sup> Malynes is in fact invoking principles which are very similar to those formulated by Pacioli: here the allegorized voice of Geometry proposes the *unit* as “the fountaine of numbers, whereby measures are described”, system and order are then formulated in the noun *forma*, and finally its communicative-linguistic expression is what Malynes describes as “*vox literata & articulata, debito modo pronunciata*”. This leads him to conclude with his definition of *arithmetic* as “the originall and ground of all the seuen liberall Sciences or Arts, without which, non of them can subsist.”<sup>19</sup>

<sup>18</sup> This principle of Scholastic philosophy and Roman Law also has interesting links with the nature of fiction, and the ontological status of imaginary creatures and events, a fascinating topic which I do not have time to pursue here. There is also an abundant series of both primary and secondary sources that deal with it. A first approach can be found in Mario Gaetano Lombardo, *La forma che dà l'essere alle cose. Enti di ragione e bene trascendentale in Suárez, Leibniz, Kant*, Milano, 1995. For a more recent treatment of the concept of *ens rationis* see Daniel D. Novotny, *Ens rationis from Suarez to Caramuel: A Study in Scholasticism of the Baroque Era*, New York, 2013.

<sup>19</sup> “Who will denie (saith the intellectuall part of Wit) that euen as *forma dat esse rei*, so I caused dame Nature to performe her function [...] when the teeth of infants come forth orderly and conioyned by my obseruation, are they made an obiect for the tongue to play vpon? [...] without which the Grammarian cannot ascribe to himselfe, *Vox literata & articulata, debito modo pronunciata*? By which abilitie, the Caldean, Hebrew, Greeke, and Latine letters were afterwards by Arts inuented, upon which foundation Logicke was builded, whereby I caused *verum & falsum* to be distinguished, and *trueth* to be discerned [...] Poets are beholding vnto me, whose Naturall wittie facultie maketh them famous, according to the prouerbe, *Nascimur Poeta finis Oratores*. But now Art steppeth in, and claimeth the honour of Rhetoricke, as deuised by her with the helpe of the facunditie and fluencie of speech, and is called *Ornatus persuasio*, [...] yonder commeth Arithmeticke, which is the originall and ground of all the seuen liberall Sciences or Arts, without which, non of them can subsist [...] Vpon this ground of natural Arithmeticke is Geometrie builded: for the proportions of all measures drawne from vnitie, which is the fountaine of numbers, whereby measures are described, before the art of it was inuented” (*Lex Mercatoria*, pp. 491-492).

*Naturall Mother Wit* is described as a method, or an epistemology of sorts, which uses Prosopopeia to embody and quantify (that is, to represent) “all substantiall things vnder the cope of Heauen”. It does so through “her ingenious obseruation of number, weight, and measure” (*Lex Mercatoria*, p. 491). As he does with other important concepts in this passage, Malynes uses the term *prosopopeia* in a rather idiosyncratic manner. This noun in particular is remarkably rich and complex within this context, and a first approach to its multiple and subtle dimensions can be first summed up in the different definitions given by the *OED*, all of which coincide in its representational function, i.e. its standing as a signifier for an absent or imaginary referent.<sup>20</sup>

Comparing Malynes’s passage with Pacioli’s equivalent on the concept of *quantity* may help us trace the philosophical and theological pedigrees of this concept. “Quantity”, says Pacioli in his dedication to the Duke of Urbino, “is so noble and excellent that many philosophers considered it equal to substance and coeternal to it”, and then concludes that “this is why they established that nothing can exist without it in the nature of things.”<sup>21</sup> The theological roots of this concept are in the Biblical *Book of Wisdom*: “Thy Almighty hand [...] made the world of matter without form [but] thou hast ordered all things in measure and number and weight.”<sup>22</sup> This biblical reference also resonates in Malynes when he proclaims that “in things created and ingendred the Elements are numbered, proportionated, and weighed.”<sup>23</sup> But there is also a pre-Christian compo-

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<sup>20</sup> The three definitions given by the *OED* are the following:

1. A rhetorical device by which an imaginary, absent, or dead person is represented as speaking or acting; the introduction of a pretended speaker; an instance of this.
2. A figure of speech by which an inanimate or abstract thing is represented as a person, or as having personal characteristics, esp. the power to think or speak; an instance of this.
3. In extended use: a person or thing in which some quality or abstraction is embodied; the embodiment or epitome of something.

<sup>21</sup> Pacioli, 1494, dedicatory letter of the *Summa* to Guidobaldo duke of Urbino.

<sup>22</sup> *Book of Wisdom*, XI, 17, 20.

<sup>23</sup> *Lex Mercatoria*, p. 492.



nent in the genealogy of this idea, which is present above all in the work of Euclid – Pacioli’s direct source. As is well known, Pythagoreanism, Plato, Aristotle, and Neoplatonism also ascribe a constitutive role to the ideas of quantity and unity.

God’s *fiat* in creating the cosmos and then regulating it by number, weight, and measure finds an analogy in the performative power of symbols within human societies and institutions, as expressed by Malynes through the phrase “*forma dat esse rei*”. Note also that Malynes puts a special emphasis on arithmetic as the foundation of all seven liberal arts: “yonder commeth Arithmeticke, which is the originall and ground of all the seuen liberall Sciences or Arts, without which, non of them can subsist.” This is so, among other reasons, because all things created are measured: “in things created and ingendred the Elements are numbered, proportionated, and weighed”. In other words, Natural Wit used this power, closely related to “number, weight, and measure” to go a step beyond itself, i.e. beyond *nature* into *art*, and thus become the foundation of all disciplines, starting with the formal, representational, and communicative methods of speech and script, and then onwards onto a series of other gradually sophisticated *arts* – a term that covers both the epistemological principles of different disciplines of knowledge and the methods that regulate their application for the conduct of different practices. One of the main ideas that Malynes is trying to convey here is that the principles which constitute the foundation of trade and its complex financial, documentary, and accounting devices, are shared with the liberal arts. This is of course an implicit way of legitimising this particular practice or *art* – i.e. the *ars mercatoria* – by ultimately establishing it upon the epistemology that emanates from Nature and eventually from God’s plan for Creation. This is proven by the fact that numbers and measures are in fact universal: Malynes says they have also been found in the natives of America.

## Conclusion: paper and the *spirit of trafficke*

The third part of the *Lex Mercatoria* focuses on bills of exchange, or bills of credit, arguably the most semiotically sophisticated and arcane of all financial instruments. These are the terms Malynes uses to present the topic to his readers:

“Having (in the First and Second Part of this Booke) intreated of the *Bodie and Soule of Trafficke*, namely, *Commodities and Monneys*. Let us now handle the predominant part of the course of Trafficke, which is the Exchange for moneys, by Bills of Exchanges for forrain parts, compared to the *Spirit or Facultie of the Soule*. For as monays do infuse life to commodities by the meanes of Equalitie and Equitie, preuenting aduantage betweene Buyers and Sellers: so *Exchange for moneys by Bills of Exchanges* (being seated euerie where) *corroborate the Vitall Spirit of Trafficke*, directing and controlling (by iust proportions) the prices and values of commodies and money, as shall be declared.”<sup>24</sup>

Malynes presents money here as *Publica Mensura* and stresses the nature of value as a relational abstract concept – closely connected, for example, to the concept of imaginary money, as mentioned above. I would also like to stress the inherently international dimension of exchange, as noted here by Malynes: “euen as money is *Publica Mensura*, or the publike measures within the Realme betweene man and man: so is Exchange for moneys, the publike measure betweene vs and forraine countries” (*ibid.*). The fact that this international value is relational, and not grounded upon a common specific standard leads Malynes to term the different sort of currencies that make up this transnational system as *imaginaries*.<sup>25</sup> However, as Malynes acknowledges, there are factors that affect value other than this ideal perfect equivalence, such as time and distance,

<sup>24</sup> *Lex Mercatoria*, 1622, p. 377, italics are mine.

<sup>25</sup> This is also the subject of chapter III in the third part: *Of the Denomination of the Imaginarie Moneys of all Places, whereupon Exchanges are made by Bills*, p. 386 ff.

supply and demand, as well as the fact that value, once a merely instrumental concept within the quantification and exchange of credit and trade, used to bridge the gap in time and distance between different systems and locations, has now been commodified and become, as it were, an end in itself too. In other words, the *spirit of trafficke* has become a commodity itself – just like money (the *soul*), and goods (the *body*). Malynes emphasises that this sort of exchange is the international counterpart to common national public *measures*, i.e. national currencies. The marginal note to this paragraph which summarizes for his readers the contents of this section in fact describes exchange as “the publike measure of nations” (p. 383). As they do today, international credit and financial markets already defied the limits of political national sovereignty: this explains the unease provoked when a relational abstract concept like exchange value is turned into a transnational commodity whose own value fluctuates with market forces such as supply and demand, or the combination of time and distance. To make things worse, the only and alarmingly flimsy way in which this value materializes is through a combination of paper and semiotics: “This exchange is properly made by Bills, when money is deliuered simply here in England, and Bills receiued for the same, to haue the payment thereof in some other countrey beyond the Seas.”<sup>26</sup> In his attempt to make sense of the subtleties of this process, Malynes searches for a series of analogies and the use of vocabulary and concepts taken from a revealing diversity of well-established disciplines:

“Many men cannot well discern the distinction of the Spirit in sundrie matters, because man (consisting of Bodie and Soule (that) which<sup>27</sup> belongeth to the Spirit) is comprised vnder the name Soule: but if they be willing to vnderstand the necessarie distinction hereof, reason in the Theoricke Part, will demonstrate the same in the Practicke Part of this discourse of Exchanges. Saint *Paul* in the later end of his second Epistle to

<sup>26</sup> *Lex Mercatoria*, p. 383, q.v. for further details.

<sup>27</sup> *Sic* in the original.

the Thessalonians, wished a sanctification to their spirits and soules, and their bodies vntill the day of Iudgement. For albeit the Spirit of man, is rightly termed to bee the Facultie of the Soule; yet the parts of the Soule concerning Vnderstanding and Will, haue their proper relation; for that part called Vnderstanding, is seated chiefly in the Soule, as Will is in the Spirit, both to be accompanied with Knowledge. [...] The Philosophers haue made this distinction by their Chemicall obseruation: and such as place the Soule in the bloud (dispersed through all the veynes of the bodie) do also place the Will of man in the spirit, residing in the hearth of man, which the Anatomists desmonstrateth to be a little concautie, where the drops of the vitall bloud are placed in the heart, which are seared vp, and the place is shrunke in bodies which haue been poisoned. [...] To make application of this comparison betweene the Soule and Spirit, we shall find by the following discourse, that *euen as the Spirit of man is predominant ouer the Soule and Bodie in all the actions thereof, which by the bloud are quickened and preserued, euen so is the exchange for moneys by Bills of Exchanges, ouerruling the course of commodities and moneys in all places where the action of money is felt or seene, directing the same (by some due proportions) accordingly.*"<sup>28</sup>

Malynes resorts to this kind of vocabulary from the realms of theology and early modern medical science because he lacks any other sort of specialized vocabulary fit to explain what was a relatively new phenomenon, and arguably because he was also trying to legitimise the use of these documentary genres.<sup>29</sup> This is why he traced the origins and epistemological roots and explained the nature and function of these financial instruments as the result of a series of processes that were analogous to the way in which God had

<sup>28</sup> Malynes, pp. 377-378, italics are mine.

<sup>29</sup> Kaye explores in great detail the Galenic concept of balance and equilibrium, and how this organic anatomical trope was embraced by 13<sup>th</sup>- and 14<sup>th</sup>-century political theory through the concept of the body politic (see Kaye 2014, in particular his chapters 3 and 4, pp. 128-240). Malynes takes it a step further and uses it to make sense of the practices of trade, finance, and credit.

designed creation in general, and mankind in particular. There is no space in this essay to go into this in much detail, but with the promise of a longer and hopefully more exhaustive interpretation of this aspect of Malynes's text, let me just briefly conclude by stressing that Pacioli's *Summa*, and above all the *Lex Mercatoria*, are founded upon a combination of references drawn from Scripture, from Neoplatonic and Aristotelian philosophy, as well as from geometry and arithmetic. Pacioli and Malynes's attempt to legitimise and explain these financial instruments weaves into the fabric of their texts different threads and layers that include echoes from classical and humanist psychology, as well as late medieval and early modern medical science, and evoke ideas that can be found in Augustine, Petrarch, or Marsilio Ficino, and which involve concepts such as the *soul*, *understanding* and *will*, the ways in which they relate to cognitive processes, and their means of symbolic representation, i.e. their semiotic configuration and inherently communicative nature. In fact, Malynes suggests that knowledge is to the understanding and the will in human psychology what information is to money (i.e. Soul) and to bills of exchange (i.e. Spirit).