

Reforming the *Prisca Medicina*: Libavius' Axioms of Elements and Mixture

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Trained in philosophy at Wittenberg and Jena and in medicine at Basel, Andreas Libavius was a major actor in German alchemy at the dawn of the seventeenth century. In the history of science, he is mainly known for his *Alchymia* (1606), a sophisticated textbook describing the multiple instruments, tools and operations of alchemy. Moreover, the recent research has enhanced Libavius' polemical, institutional and intellectual approach to alchemy as a field of knowledge.¹ In the same way as the Swiss physician and theologian Thomas Erastus (1524–1583), Libavius was an effortless adversary of the Paracelsian philosophy, which he accused of subverting the Aristotelian natural philosophy, Galenic medicine, and medieval alchemy. He described the Paracelsian “pseudo-chymistry” as a heterogeneous and contradictory current with a confused terminology, which is unfit to provide a clear and homogeneous knowledge. In Libavius' view, alchemy should be institutionalized at the university through its inclusion in the curriculum based on Aristotle's rhetoric, logic and natural philosophy.

As Bruce Moran has shown, Libavius attempted to legitimize the doctrinal tradition studied in universities by organizing knowledge with clear boundaries between each discipline.² In his *Alchemia* of 1597, alchemy is presented as a didactic discipline and a demonstrative science, whose principles and axioms need to be determined.³ Following Aristotle's argumentation and logic, *chymia* is considered as a specific field of knowledge studying nature according to definite principles. However, Libavius also applied this scheme to medicine as an art and a body of

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- 1 See Bruce T. Moran, *Andreas Libavius and the Transformation of Alchemy: Separating Chemical Cultures with Polemical Fire*, Sagamore Beach 2007; Owen Hannaway, *The Chemist and the Word: The Didactic Origins of Chemistry*, Baltimore 1975; William R. Newman, *Atoms and Alchemy: Chymistry and the Experimental Origins of the Scientific Revolution*, Chicago 2006, pp. 66–84; Peter J. Forshaw, “‘Paradoxes, Absurdities, and Madness’: Conflict over Alchemy, Magic and Medicine in the Works of Andreas Libavius and Heinrich Khunrath”, in: *Early Science and Medicine* 13 (2008), pp. 53–81.
 - 2 Bruce T. Moran, “Axioms, Essences, and Mostly Clean Hands: Preparing to Teach Chemistry with Libavius and Aristotle”, in: *Science & Education* 15 (2006), pp. 173–187.
 - 3 Moran, “Axioms”, pp. 173–187; idem, “Eloquence in the Marketplace: Erudition and Pragmatic Humanism in the Restoration of *Chymia*”, in: *Osiris* 29 (2014), pp. 49–62; idem, “Andreas Libavius and the Art of *Chymia*: Words, Works, Precepts and Social Practices”, in: *Bridging Traditions: Alchemy, Chemistry and Paracelsian Practices in the Early Modern Era*, ed. Karen Hunger Parshall, Michael T. Walton and Bruce T. Moran, Kirksville 2015, pp. 59–78.

knowledge.⁴ At the institutional level, the medical discipline follows “axiomatic” precepts which the physician applies in his practice for making a diagnosis. Though this definition of medicine as theory and practice based on natural philosophy was already established by the medical tradition, Libavius placed it in a didactic framework suitable to his own programmatic view on the organization of knowledge. In this perspective, he developed medical axioms concerning the notions of elements, qualities and temperament, which he strove to rehabilitate from the attacks of Paracelsian physicians. To this purpose, Libavius’ argumentation operates on multiple plans including the tradition established by Hippocrates, Galen and Aristotle, some medieval alchemical texts mostly attributed to Arnald of Villanova and Ramon Lull, as well as the Scriptures. Moreover, Libavius relied on the Paracelsian notion of *tria prima* (Salt, Sulfur and Mercury) as components of bodies, and on Renaissance medical debates on the existence of a celestial principle within the body.⁵ With this multifarious subtext, he sought to debunk the Paracelsian medical philosophy while replacing its religious scope in a framework faithful to the tradition.

This chapter aims to show that Libavius’ medical axioms, physiological theory and appeal to the Scriptures make him a proponent of an alternative view on the “ancient medicine” (*prisca medicina*) promoted by Paracelsian physicians. Among the latter, the Danish physician Petrus Severinus (1540–1602) considered *prisca medicina* as the ancient medicine grounded on a genealogy starting from Hippocrates and leading up to Paracelsus.⁶ According to Severinus, this ancient medical knowledge has been spoiled by Aristotelian and Galenic mistakes and needs to be recovered through a doctrinal reform founded on the Paracelsian philosophy, and on the broader current of *prisca sapientia*—the Renaissance project of restoring the Christian Platonic wisdom. Though Severinus’ view on *prisca medicina* was shared by numerous Paracelsian physicians, the restoration of ancient medicine could also be urged against such a Paracelsian-Platonic framework. As Martin Mulsow has pointed out, late Renaissance glorification of ancient knowledge took multiple forms featuring diverse protagonists and goals in various cul-

4 On the classification of alchemy and medicine as disciplines, see Jean-Marc Mandosio, “La place de l’alchimie dans les classifications des sciences et des arts à la Renaissance”, in: *Chrysopoeia* 4 (1990–1991), pp. 199–282; Ian Maclean, *Logic, Signs and Nature in the Renaissance: The Case of Learned Medicine*, Cambridge 2002, pp. 66–100.

5 Bruce T. Moran, “The Less Well-Known Libavius: Spirits, Powers, and Metaphors in the Practice of Knowing Nature”, in: *Chymists and Chymistry: Studies in the History of Alchemy and Early Modern Chemistry*, ed. Lawrence M. Principe, Sagamore Beach 2007, pp. 13–24.

6 Jole Shackelford, *A Philosophical Path for Paracelsian Medicine: The Ideas, Intellectual Context, and Influence of Petrus Severinus (1540/2–1602)*, Copenhagen 2004, p. 145–152; idem, “The Chemical Hippocrates: Paracelsian and Hippocratic Theory in Petrus Severinus’ Medical Philosophy”, in: *Reinventing Hippocrates*, ed. David Cantor, Aldershot 2002, pp. 59–88; Hiro Hirai, *Le concept de semence dans les théories de la matière à la Renaissance, de Marsile Ficin à Pierre Gassendi*, Turnhout 2005, pp. 217–265.

tural contexts.⁷ For this reason, genealogies of wisdom could exclude or include Aristotelian philosophy, depending on their aim of removing or integrating the philosophical tradition in their project. In this regard, Libavius represents the latter position through his claim to return to the sources of Galen and Aristotle as authorities continued by medieval alchemists and subsequently subverted by Paracelsus and his disciples. In this manner, Libavius' medical theory aims to offer a competing view on *prisca medicina* which articulates medical axioms about elements and temperament with medieval alchemy and Renaissance accounts on the body's celestial nature.⁸

In what follows, I first examine the axiomatic approach to medicine as an art and academic discipline which Libavius proposed in the *Schediasmata medica and philosophica* [*Medical and Philosophical Sketches*] (1596). Then, I consider the doctrinal content of his medical axioms concerning elements, mixture and temperament as expounded in the *Novus medicina veterum tam Hippocratica quam Hermetica tractatus* [*New Treatise on the Hippocratic and Hermetic Medicine of the Ancients*] (1599).⁹ In light of these treatises, I shall reconstruct Libavius' medical theory by stressing its didactic, alchemical and religious scope.

1 The Axiomatic Principles of Medicine

In 1596, Libavius published the *Schediasmata* against the *Responsio apologetica* of Henning Rennemann (1567–1646), a German philosopher trained at Helmstedt, who at that time was college dean in Erfurt and would later become college rector in Hildesheim.¹⁰ Rennemann's treatise seeks to defend Ramist philosophy against the attacks of Philip Scherb (1553–1605), physician at Altdorf.¹¹ To his criticism of Aristotelian philosophy, Rennemann joins that of Galenic medicine, and suggests that Ramism and Paracelsianism share the same project of reforming the antiquated university model. In the epilogue of his *Responsio*, he advises Scherb,

7 Martin Mulso, "Ambiguities of the *Prisca Sapientia* in Late Renaissance Humanism", in: *Journal of the History of Ideas* 65 (2004), pp. 1–13. See also Hiro Hirai, "Prisca Theologia and Neoplatonic Reading of Hippocrates in Fernel, Cardano and Gemma", in: *Cornelius Gemma: Cosmology, Medicine, and Natural Philosophy in Renaissance Louvain*, ed. Hiro Hirai, Rome 2008, pp. 91–104.

8 On Libavius as a figure of "chemical compromise", see Allen G. Debus, *Science, Medicine, and Society in the Renaissance: Essays to Honor Walter Pagel*, London 1972, pp. 151–165.

9 Andreas Libavius, *Schediasmata medica et philosophica, ad Henningum Rennemannum Philosophum M. apud Erfurdenses*, Frankfurt 1596; Idem, *Novus de medicina veterum tam Hippocratica, quam Hermetica tractatus*, Frankfurt 1599.

10 Henning Rennemann, *Responsio apologetica, ad dissertationem pro philosophica peripatetica adversus Ramistas*, Frankfurt 1595. On Rennemann, see Ernst Landsberg, "Rennemann, Henning", in: *Allgemeine Deutsche Biographie*, vol. 28, Munich/Leipzig 1889, p. 225.

11 Philip Scherb, *Dissertatio pro philosophia peripatetica, adversus Ramistas*, Altdorf 1590. On Scherb, see Sascha Salatowsky, "Scherb, Philip", in: *Encyclopedia of Renaissance Philosophy*, ed. Marco Sgarbi, Cham 2015. doi: 10.1007/978-3-319-02848-4_334-1. On the conflict between Rennemann and Scherb, see Kay Zenker, *Denkfreiheit: Libertas philosophandi in der deutschen Aufklärung*, Hamburg 2013, pp. 38–42.

as a Galenist physician, to concentrate his efforts on Paracelsianism rather than Ramism, because it represents a much more dangerous threat to the tradition, as testify the fruitful cures of the Paracelsian physician Johann Gramann in Erfurt. Rennemann ironically adds that Scherb should team up with the only opponent to this current, the confident, yet unsuccessful, Libavius.¹² In reaction to this provocation, Libavius wrote “sketches” (*schediasmata*) in support of his fellow Scherb, and more broadly, of the Aristotelian philosophy and Galenic medicine.¹³ Each of the *schediasmata* refutes a specific question or paragraph addressed in the *Responsio*, and further elaborates on the foundations of medicine, logic and physics.¹⁴

Beyond its polemical stake, the *Schediasmata* also aim to underline Libavius’ own *ethos* as a chymist physician trained in the disciplines of the *trivium*: grammar, rhetoric and logic.¹⁵ From his university training at Wittenberg and Jena to his profession as schoolmaster in Rothenburg and Coburg, Libavius always considered the teaching of the *trivium* indispensable, for which he relied on both Melanchthon and Ramus. As Joseph Freedman has shown, the German “trivial” schools were then promoting a “Philippo-Ramist” program in the course of their university-preparatory training.¹⁶ While the Ramist philosophy provides a useful method for the preparatory teaching of the *trivium*, the Philippist logic and rhetoric are the basis for learning Aristotelian natural philosophy.¹⁷ Libavius adopts this didactic framework in his *Schediasmata*, which are conceived as harangues advocating the indispensable character of the mastery of *trivium* for the understanding of natural philosophy. He seeks to demonstrate the organization of knowledge by syllogisms based on universal premises following Aristotle’s *Posterior Analytics* as well as Ramus’ Socratic method of *elenchus*, namely the logical

12 Rennemann, *Responsio*, p. 309.

13 On Ramist logic in the Renaissance, esp. in Libavius and Rennemann, see Peter Mack, *A History of Renaissance Rhetoric, 1380–1620*, Oxford 2011, pp. 136–165; Walter J. Ong, *Ramus: Method and the Decay of Dialogue, From the Art of Discourse to the Art of Reason*, Cambridge/London 1958; Joseph S. Freedman, “The Diffusion of the Writings of Petrus Ramus in Central Europe, c. 1570–c. 1630”, in: *Renaissance Quarterly* 46 (1993), pp. 98–152; Howard Hotson, *Commonplace Learning: Ramism and Its German Ramifications, 1543–1630*, Oxford 2007.

14 On Libavius’ polemic with Rennemann, see Moran, *Andreas Libavius*, pp. 11–30; Idem “Axioms”, pp. 173–187.

15 See Richard W. Serjeantson, “Proof and Persuasion”, in: *The Cambridge History of Science. Volume 3: Early Modern Science*, ed. Katharine Park and Lorraine Daston, Cambridge 2008, pp. 132–175; Bert Roest, “Rhetoric of Innovation and Recourse to Tradition in Humanist Pedagogical Discourse”, in: *Medieval and Renaissance Humanism: Rhetoric, Representation, and Reform*, ed. Stephen Gersh and Bert Roest, Leiden/Boston 2003, pp. 115–148.

16 Freedman, “The Diffusion”, pp. 98–152.

17 Sachiko Kusukawa, *The Transformation of Natural Philosophy: The Case of Philip Melanchthon*, Cambridge 1995; Günter Frank, “Philipp Melanchthon (1497–1560): Reformer and Philosopher”, in: *Philosophers of the Renaissance*, ed. Paul Richard Blum, Washington 2010, pp. 148–162; Idem, *Philipp Melanchthon: Der Reformator zwischen Glauben und Wissen. Ein Handbuch*, Berlin/Boston 2017; Dino Bellucci, *Science de la nature et Réformation: la physique au service de la Réforme dans l’enseignement de Philipp Mélancthon*, Rome 1998.

refutation of an argument by syllogism.¹⁸ Moreover, he considers his definition of medical art as a passage from axiomatic precepts to the physician's *praxis* following the Ramist philosophy.¹⁹ This scheme supports his definition of medicine as a theoretical and practical discipline involving other fields of knowledge such as physics and alchemy.

Following the "Hermetic" filiation of *prisca medicina*, Libavius first mentions the roots of ancient medicine in Egypt, Palestine and Chaldea, allegedly familiar with alchemy.²⁰ He nonetheless considers Hippocrates as the father of medicine as a discipline, which Galen supplemented with his own medical experience. For this reason, Libavius presents himself as a supporter of Galenism, to which he adds the precepts of his experience concerning "new" diseases—e. g. syphilis—and alchemical preparations.²¹ In his view, the foundations of medicine are built on medical axioms and theorems as the premise of an effective diagnosis in practice. "True medicine", Libavius explains, is composed of well-arranged principles observed by long experience and sharp judgement. In this regard, the "form" of health and disease is axiomatic and requires to be extracted from a homogeneous "multitude" according to Hippocratic and Galenic commentaries.²² Such a principle of homogeneity is inspired by Aristotle's *Posterior Analytics* on the homogeneity of discourse, and further illustrated by an alchemical metaphor. The axioms are indeed extracted from experience just like essences are alchemically separated from their homogeneous substrate.

According to Libavius, Hippocrates and Galen established the axioms of medicine and its proper end: health. The ultimate objective of medicine, he claims, is the conservation of health, which is achieved by repelling diseases with the assistance of *natura medicatrix*.²³ To cure the patient, the physician needs to iden-

18 Moran, *Andreas Libavius*, p. 21; Hannaway, *The Chemist*, p. 134–142.

19 Libavius, *Schediasmata*, p. 57: "Obtundet te Ramus tuus vi θεωρίας καὶ πράξεως, quae non sunt dissentanea, sed alterum alteri subordinatum."

20 Libavius, *Schediasmata*, pp. 14–17. See Nancy G. Siraisi, "In Search of the Origins of Medicine: Egyptian Wisdom and Some Renaissance Physicians", in: *Generation and Degeneration: Tropes of Reproduction in Literature and History from Antiquity Through Early Modern Europe*, ed. Valeria Finucci and Kevin Brownlee, Durham 2001, pp. 235–261; Eadem, *History, Medicine, and the Traditions of Renaissance Learning*, Ann Arbor 2007.

21 Libavius, *Schediasmata*, p. 16: "[...] possimusque beneficio artis vel ipsius Galeni censores esse liberales, haud aegrè ferimus, artem ipsam nominari Galenicam, nosque Galeni sectatores, modò non habeamur pro mancipiis Galeni, sed pro his qui eadem via modoque artis incedunt [...]. Et illa noua artis vsu, non autem praeceptis, libenter addimus priscis, quo pacto et de nouis tum morbis tum medicinis, et praeparatione harum chymica à multis praeclare est factitatum."

22 Ibid, p. 23: "Vera medicina principiis constat his, quae ad benè medendum sunt composita, atque longa experientiâ et acri iudicio spectata, siue sanitatem spectes, siue morbos et remedia. Eorum forma est axiomatica, multitudine homogenea ita contexta, ut requirit vera ratio, quanquam ex commentariis Hippocraticis et Galenicis laboriosius sint excerptenda." See Moran, "Axioms", pp. 173–187.

23 Libavius, *Schediasmata*, p. 49: "Sed fortassis Galenus noster tibi sordet. Hippocrates ait, medicinae propositum esse sanare. At huius finis et perfectio ultima est sanitas. [...] Vulgò

tify the cause of the disease by applying medical precepts or “principles” to the patient’s case. For this reason, making a correct diagnosis requires the theoretical knowledge of nature, namely physics. As the “study of natural things”, physics is involved in many other fields such as arithmetic (numbers), geometry (quantities), and music (sounds and harmonies).²⁴ In the case of medicine, physics is needed for the contemplation of the causes and effects of natural things, as a starting point for the study of health and disease.²⁵ Consequently, the physician applies natural theorems to his *praxis* in order to preserve health or to bring back afflicted bodies to health.²⁶ However, Libavius nuances that a skillful empirical physician might grasp, through observation, the precepts of medical art according to the rules converging with “true reason”.²⁷ Such an enlightened “empiric” would then follow medical axioms and endorse a finer philosophy than Paracelsianism. Within the medical practice, alchemy plays the role of an ancillary field for pharmaceutical purpose. Libavius nevertheless specifies that alchemical pharmacy only serves to therapy, so that medicine cannot be reduced to the art of distilling “quintessence”, a notion I will discuss in the last section of this paper.²⁸

Libavius does not fail to emphasize that the therapeutic objective of medicine is enhanced by Paracelsus and his disciples. Yet Paracelsian pathology, like Rennemann’s “empirical” approach to medicine, advocates that the knowledge of health is not necessary to repel disease.²⁹ For Libavius, this contradicts the definition of the state of health as resulting from the “temperament”, namely the proportion of elements and their qualities. As an imbalance of the primary qualities, illness is cured by a “contrary” remedy whose temperament is opposite to that of the patient. Contrastingly, the Paracelsian system considers disease as a local and autonomous process of alchemical nature rather than a qualitative imbalance. For Libavius, such a view is improper to establish medicine as an art based on logical

notum est: quod aegrotorum salus in medendo summa lex esse debeat. Paracelsus adeo non insaniuit, ut negârit, sanationem facere medicum. [...] medicum non tam morbos et aduersa alia depellere, quam naturam iuuare seruareque, ut ita morbos potius in fine priore habeat, sanitatem verò in ultimo.”

24 Libavius, *Schediasmata*, p. 71.

25 Ibid., p. 55: “Ego dixerim, Physicum contemplari de natura, ut se habet caussis, effectis, adiunctis naturalibus: et eatenus etiam attingere, de sanitate et morbo. At medicum [...] laborare in sana conseruanda, afflictia verò iuuanda et ad sanitatem adducenda. [...] medici autem etiam porro ad sanitatem seu constitutionem secundum naturam praecepta ponere etiam vbi non est morbus, quod fieri sine sanitatis praeceptis et noticia non potest. Ita commune quid habent medici et Physici.”

26 Ibid., pp. 71–72: “Sanè tu etiam nobis videris tantum practicam medicinam fingere. Vbi verò Theoremata? medicina id ad praxin transfert, quod in praeceptis habet. Hoc si est in rebus Physicis, euenit. Non enim per se res physicas contemplatur medicina, sed in illis salubritatem aut vires ad hanc facientes, siue conseruanda sit sanitas, siue restituenda.”

27 Ibid., p. 65: “Fieri tamen potest, vt etiam Empiricus paulo attentior longo vsu tandem incurrat in easdem obseruationes et regulas artis, atque tandem arripiat etiam praecepta sua, congrua quodammodo rationi verae.”

28 Ibid., pp. 179–181.

29 Rennemann, *Responsio*, p. 262.

axioms, as it proposes “boorish”, “random” and “inexperienced” treatments.³⁰ For this reason, Libavius considers Paracelsus and his disciples as quacks peddling superstitious remedies in the example of the *panacea Assylyvana* of Georg am Wald (1554–1616).³¹ He previously condemned, in his *Neoparacelsica* (1594), the Bavarian healer’s universal cure, which was advertised as a secret preparation and became a commercial success in Germany.³²

As Libavius explains in the *Schediasmata*, the physician cures illness by identifying the patient’s temperament or *krasis*, and by seeking a “contrary organic disposition”.³³ According to Galen, such temperament is the product of the “mixture” of elements and primary qualities, in reference to Hippocrates’ *On the Nature of Man* and Aristotle’s *On Generation and Corruption*. While Libavius fully endorses the Galenic definition of the temperament, he still has to justify its compatibility with his alchemical views. As this question is not at the center of the *Schediasmata*, I shall explore it in light of another polemical treatise of Libavius.

2 Axioms of Elements and Mixtures

In his *Novus de medicina veterum... tractatus* (1599), Libavius develops his medical theory of elements, qualities and temperament. This treatise is a critical response to the *Apologia chymica* (1597) of the Italian physician Giuseppe Micheli (Michelius), who accuses him of destroying alchemy because of his inexperience in practical operations.³⁴ Established in Middelburg in the Dutch Republic, Michelius was a reformed Paracelsian scholar from Lucca in Tuscany. His *Apologia* mostly criticizes the content of some letters that Libavius published in *Rerum chymicarum... liber primus* (1595). In this context, Libavius’ main goal, in *Novus de medicina veterum... tracta-*

30 Libavius, *Schediasmata*, p. 54–55: “Si enim non; ars non est, quamquam rusticus fortassis tam benè disputet citra artem, ac Logicus cum arte. Vis nos artificiosè mederi; non fortuitò, non casu, non imperitè et inscienter? Ex arte promenda axiomata. Hic nulla est sanatio sine sanitatis et cognitione et scopo.”

31 Ibid., p. 65: “Apparuit item qui se nobilem profitetur circumgestans non tantum panaceam Assylyuanam, sed et superstitionem specie religiosum, cum praeter imposturas, etiam magicas, nihil capiat.”

32 On Georg am Wald, see Wolf-Dieter Müller-Jahncke, “Georg am Wald (1554–1616): Arzt und Unternehmer”, in: *Analecta Paracelsica: Studien zum Nachleben Theophrast von Hohenheims im deutschen Kulturgebiet der frühen Neuzeit*, ed. Joachim Telle, Stuttgart 1994, pp. 213–304; Alisha Rankin, “Empirics, Physicians, and Wonder Drugs in Early Modern Germany: The Case of the *Panacea Amwaldina*”, in: *Early Science and Medicine* 14 (2009), pp. 680–710; Moran, *Andreas Libavius*, pp. 127–130.

33 Ibid., p. 67: “Non ita volumus remedia opposita morbis, ut primis, seu elementaribus, seu simplicibus et nudis qualitatibus contrarium contrario καθόλου sanescat, sed si morbus est in Crasi, quae non unam qualitatem nudam, sed totam facultatem et substantiam secum fert, Crasi aduersante cum curamus, si in organo, organicam dispositionem contrariam inquirimus, atque ita de disiunctis.”

34 Josephus Michelius, *Apologia chymica, adversus invectivas Andreae Libavii calumnias*, Middelburg 1597. On the quarrel between Libavius and Michelius, see Moran, *Andreas Libavius*, pp. 43–49; Didier Kahn, *Alchimie et paracelsisme en France à la fin de la Renaissance (1567–1625)*, Geneva 2007, pp. 354–357.

tus, is to respond to Michelius' "calumnies" and to dismantle his argument by railing against his lack of qualification in grammar, logic, rhetoric, physics, medicine and alchemy. This treatise is followed by an extensive commentary on alchemical operations attributed to the medieval physicians Ramon Lull and Arnald of Villanova.³⁵ Although the title "New Treatise on Hippocratic and Hermetic Ancient Medicine" connotes the Paracelsian enterprise of uncovering the *prisca medicina*, the purpose of Libavius is somewhat different. He seeks to drown the Paracelsian system in the tradition by showing the historical compatibility between medieval alchemy and the authority of Galen and Aristotle. Libavius' sources include some collections of medieval alchemical texts such as the *Rosarium philosophorum* and *De alchemia*, among others.³⁶ Furthermore, the therapeutic application of Libavius' philosophy is presented in the treatise attached to the *Novus de medicina veterum... tractatus*, commenting on recipes attributed to Lull and Villanova.³⁷

The first part of the treatise, entitled "De alchymia", contains forty-five "remarks" (*notae*) on Michelius' alchemy, while the second part, "De medicina", includes twenty-seven "points" (*puncta*) on his medical theory. Throughout the treatise, Libavius blames Paracelsus for usurping the "true" alchemy, for corrupting alchemical art by using symbolic names, and for misunderstanding the analogy between macrocosm and microcosm. At the same time, he rebuts Michelius' accusations of plagiarizing Thomas Erastus in his polemic against Severinus.³⁸ According to Libavius, the fact that he himself shares the objections of Erastus is hardly surprising given that "the speech of truth is simple and uniform".³⁹ In addition, Libavius requites his Paracelsian opponents the accusation of imitating Severinus' *Idea medicinae philosophicae* (1571), a major treatise for the diffusion of Paracelsianism in the late sixteenth century. In this manner, he distinguishes Paracelsus and Severinus from their disciples, whom he considers as pale followers reciting the precepts of Paracelsus without really understanding them.

35 On the alchemical works attributed to Lull and Villanova, see Michela Pereira, "L'Alchimista come medico perfetto nel *Testamentum pseudolulliano*", in: *Alchimia e medicina nel Medioevo*, ed. Chiara Crisciani and Agostino Paravicini Bagliani, Florence 2003, pp. 77–109; eadem, "Maestro di segreti o caposcuola contestato? Presenza di Arnaldo da Villanova e di temi della medicina arnaldiana in alcuni testi alchemici pseudo-lulliani", in: *Actes de la 'II Trobada Internacional d'Estudis Sobre Arnau de Vilanova'*, ed. Josep Perarnau, Barcelona 2005, pp. 381–412; Antoine Calvet, *Les oeuvres alchimiques attribuées à Arnald de Villeneuve : grand oeuvre, médecine et prophétie au Moyen-Âge*, Paris-Milan 2011.

36 S.n., *Rosarium philosophorum. Secunda pars alchimiae de lapide philosophico vero modo praeparando, continens exactam eius scientiae progressionem*, Frankfurt 1550; Geber, *In hoc volumine de alchemia continentur haec*, Nuremberg 1541.

37 Andreas Libavius, *Medicinae hermeticae artificibus catholicae ad hominis sanitatem tuendam aduersamque valetudinem profligandam [...] Expositio fidelis*, Frankfurt 1599.

38 On Erastus, see Charles Gunnoe, *Thomas Erastus and the Palatinate: A Renaissance Physician in the Second Reformation*, Leiden 2011, pp. 263–338; Jole Shackelford, "Early Reception of Paracelsian Theory: Severinus and Erastus", in: *The Sixteenth Century Journal* 26 (1995), pp. 123–135; Newman, *Atoms*, pp. 45–65.

39 Libavius, *Novus*, pp. 48–49. See Michelius, *Apologia*, pp. 40–42.

3 Reuniting Elements and Qualities with the *Tria Prima*

Libavius first strives to defend the notion of primary qualities against the attacks of Michelius, who reduces them to “vain shadows of bodies” following the Platonic formula.⁴⁰ From the Paracelsian viewpoint presented in Severinus’ *Idea*, the fertile properties of seeds (*dynameis*), from which derive the *tria prima*, are distinct from the sterile qualities of the elements (*relollacea*), which are downgraded to simple material “rudiments”.⁴¹ On that basis, the Paracelsian philosophers dissociate the figure of Hippocrates from Galen and his followers by asserting that the founder of medicine never stated the existence of four elements and qualities, but affirmed that the body’s juices were endowed with a seminal power. To this claim, Libavius responds that the primary qualities related to the elements are attested in humors and other “juices”. As “reasons” and “virtues” of bodies, primary qualities give a determined status to the elements and interact by action and passion during their mixture.⁴² Since they provide the body’s properties and participate in their formation during mixture, there is no reason to replace them by the Paracelsian seminal powers. As Libavius recalls, medieval alchemists acknowledge the four qualities and elements. For instance, Bernardus Trevisanus advocates four efficient qualities, while Ricardus Anglicus stresses the role of primary qualities in the composition of Sulphur and the constitution of diseases.⁴³

As Libavius explains, it is Paracelsus and the supporters of his “utopia” like Michelius and Severinus who claim the anteriority of the three principles to the elements in the composition of bodies. Libavius nonetheless remarks that, in the (apocryphal) treatise *De pestilitate* [*On Pestilence*], Paracelsus acknowledges that the elements precede the *tria prima* in the order of divine creation.⁴⁴ Libavius then tries to overcome this inconsistency in Paracelsus’ works by taking the example of *De primis tribus essentiis* [*On the Three First Essences*].⁴⁵ In this treatise, Paracel-

40 Michelius, *Apologia*, p. 42. On Libavius’ endorsement of the four qualities, see Forshaw, “Paradoxes”, pp. 53–81.

41 Hirai, *Le concept*, pp. 217–265.

42 Libavius, *Novus*, p. 75: “[...] cur vanas appellat qualitates, quas et Chymici veteres, quos praedicat, agnouerunt [...]? Si error est, qualitates agnoscere, non minus is Paracelsitis debetur quam Platonis. Sed nec vanum est id, quod tantas ad agendum patiendumque vires obtinet. Frigore certe calor expugnatur, siccitate humor.”

43 Bernardus Trevisanus, *De chymico miraculo, quod Lapidem Philosophiae appellant*, Basel 1583, p. 27; Ricardus Anglicus, *Correctorium alchemiae*, in: Geber, *De alchemia*, Nuremberg 1541, pp. 288–294. On Bernardus Trevisanus, see Didier Kahn, “Recherche sur le livre attribué au prétendu Bernard le Trévisan (fin du XV^e siècle)”, in: *Alchimia e medicina*, ed. Chiara Crisciani and Agostino Paravicini Bagliani, Florence 2003, pp. 265–336. On Ricardus Anglicus, see Joachim Telle, “Ricardus Anglicus”, in: *Die Deutsche Literatur des Mittelalters: Verfasserlexicon*, ed. Karl Ruh, Berlin 1992, vol. 8, pp. 38–41.

44 Libavius, *Novus*, p. 123: “Sed Chymici veteres omnes Mercurio elementa priora faciunt, et Bernhardus ait, in principio chaos ceratum [sic] est, ex quo fiebant quatuor elementa, et ex his bestiae (quod et Paracelsus in lib. de pestilitate repetit) item sicut omnia semina sunt ex quatuor elementis, ita et sulphur et Mercurius, etc. Ita scilicet consentiunt Chymici Paracelsici inter se, et cum veteribus Chymicis.” See Paracelsus, *Bücher und Schriften*, Basel 1589, vol. 3, p. 30.

45 Paracelsus, *Bücher und Schriften*, Basel 1589, vol. 3, pp. 15–23.

sus affirms the resolution of elements into *tria prima* in reference to the ancient distinction between “common” and “prior” elements.⁴⁶ Without adhering to the primacy of the three principles, Libavius agrees on the distinction between pure elements in their natural place and the elements composing the bodies, in accordance with Aristotelian physics. In the same way, he defines the first compounds of elements as *elementata* holding an essence of great strength.⁴⁷ Libavius most likely takes this notion from his alchemical sources. For example, the *Rosarium philosophorum* defines the element (*elementum*) as the first body subject to composition, but states that earth, water, air and fire are not pure and simple elements, as they are mingled into an “elemented” part (*elementatum*).⁴⁸ In the same way, Ricardus Anglicus’ *Correctorium alchemiae* distinguishes common elements from the four elements endowed with qualities, which are specific to the nature of “elemented” things.⁴⁹ More broadly, the notion of *elementatum* refers to the Platonic medieval tradition transmitted by William of Conches in *De philosophia mundi* (ca. 1129). This current defines “elemented” bodies as elemental entities perceptible in the physical world, contrarily to pure *elementa*, only accessible in thought.⁵⁰ Their formation succeeds to the biblical chaos, from the creation of elements to that of organic bodies. Such explanation overlaps the medical account of the body’s division into “anhomeomerous” or organic parts, “homeomerous” parts (homologues of the *elementata*), and elements.

According to Libavius, the notion of *elementatum* implies that the first compounds enclose an essence corresponding to the Paracelsian three principles,

46 Libavius, *Novus*, p. 123: “Paracelsus vulgaria elementa iterum resoluit in elementa, quod fortasse sic aestimaret ex veterum sententia nullum elementum circa nos in nostro loco esse purum, hoc est, omnia vicissim composita esse ex elementis prioribus. In lib. de essentiis tribus, quicquid ex elementis productum est ex tribus esse putat, quae principia vocat.”

47 Libavius, *Novus*, p. 42: “[...] Elementatum ex elementis tanquam membris constat. Id Paracelsitae, maximeque Seuerinus iudicant in se comprehendere essentiam ex principiis, (quae tria fingunt, Sulphur scilicet, salem, et mercurium) ortam: In hac separanda laborare Chymicum, quanquam Seuerinus neget possibilem esse separationem totalem et longe aliam habeat Chymiam, quam Michelius.”

48 S.n., *Rosarium*, f. g2 v. On the *Rosarium philosophorum*, Antoine Calvet, “Étude d’un texte alchimique latin du xiv^e siècle: le *Rosarius philosophorum* attribué au médecin Arnaud de Villeeneuve (ob. 1311)”, in: *Early Science and Medicine* 11 (2006), pp. 162–206; Joachim Telle, “Remarques sur le *Rosarium philosophorum* (1550) avec une liste sélective d’ouvrages sur l’alchimie médiévale”, in: *Chrysopoia* 5 (1992–1996), pp. 265–319; Giuliana Camilli, “Il *Rosarius philosophorum* attribuito ad Arnaldo da Villanova nella tradizione alchemica del trecento”, in: *Attes de la I Trobada Internacional d’Estudis Sobre Arnau de Vilanova*, ed. Josep Perarnau, Barcelona 1995, vol. 2, pp. 175–208.

49 Ricardus Anglicus, *Correctorium*, p. 302.

50 See Theodor Silverstein, “*Elementatum*: Its Appearance Among the Twelfth-Century Cosmognosts”, *Mediaeval Studies* 16 (1954), pp. 156–162; Idem, “Guillaume de Conches and the Elements: Homiomeria and Organica”, *Mediaeval Studies* 26 (1964), pp. 363–367; Danielle Jacquart, “*Minima* in Twelfth-Century Medical Texts from Salerno”, in: *Late Medieval and Early Modern Corpuscular Matter Theories*, ed. Christoph Lüthy, John E. Murdoch and William R. Newman, Leiden 2001, pp. 39–56; Dorothy Elford, “William of Conches”, in: *A History of Twelfth-Century Western Philosophy*, ed. Peter Dronke, Cambridge 1988, pp. 308–327.

which alchemists attempt to separate. Therefore, he insists on the conventional character of the distinction between impure elements and pure alchemical principles. The distinction between the “elemental part” designating the residues resulting from the separation, and the “essence” related to the *tria prima* only concerns the alchemical art.⁵¹ As Libavius explains, the *tria prima* are principles only by analogy, because the principles of art differ from those of nature. Consequently, the *tria prima* are “pure” in the context of the *magisterium*, but in nature, they correspond to “elemented” bodies.⁵² For Libavius, it is the Paracelsians who misunderstand the symbolic dimension of the terms “principles” and “essences” that the ancient alchemists used in their art.⁵³ From this, Libavius concludes that the three principles pertain to Aristotelian physics, hence obeying to the axioms of elements and mixture. For this reason, he attributes a qualitative constitution to the *tria prima*: Mercury is cold-moist and composed of water, Sulphur is hot and composed of fire and air, and Salt is hot-dry and composed of earth.⁵⁴ Moreover, the sensory properties of the *tria prima*, for instance the thick and liquid texture of Sulphur, come from their secondary qualities.⁵⁵

It still remains for Libavius to explain the origin of the alchemical properties contained in the *tria prima*, which he defines as first elemental bodies (*elementata*). In his view, God created, mingled and tempered these compounds by infusing into them an “efficient and prolific” seminal power. The material in which this seminal force has been infused is nonetheless elemental and comes from the pri-

51 Libavius, *Novus*, p. 42: “Ego re perpensa video, has assertiones posse in Chymia ita ferri, vt institutum eius artis proprium, relatumque, neutiquam autem vniuersales toti Philosophiae naturali esse. Nam in separatione partis potissimae in qua et vis maxima est, sordes quaedam et veluti recrementa abiectanea inueniuntur. Haec pro artis propria consideratione vocantur partes elementariae. Pura vero natura ex his fecibus elicita essentiae nomen sustinet. At si haec ad Physicam vniuersalem accommodare velis, non habebunt locum.”

52 Ibid., pp. 118–119: “Si pro mercurio ponas aquam, pro sulphure aëream igneamque partem quanquam haec etiam aquae forma latere possit, pro sale, terram: ita enim plerique exponunt; sed tamen diuersimodè in arte, et extra artem, cum in arte signent elaborata ad purum extra artem vero impura: non absurdus est syllogismus, ita tamen, vt vox OMNIA non extendatur vltra composita corpora, et elementata.”

53 Ibid., pp. 47–48: “Quod autem attinet ista tria, patior quidem Chymicos intra artis suae septa manentes ita symbolice loqui. Sed si vniuersalem Physicam spectes et ista succumbent mistionum Elementorumque axiomatis. Ita Michelius per mercurium intelligit aquam; per Sulphur, oleum; per salem, terram.”

54 Libavius, *Novus*, p. 45: “Ita Michelius in resolutione opii Mercurio huius ascribit frigiditatem. [...] Cum qua necessario est humiditas. Dicitur enim aqua essentialis esse. Sulphur, oleum et aëream igneamque partem nominant. Calidum ergo. Sal terra est, et simul calidus siccus.”

55 Ibid., p. 119: “Oleum, seu sulphur coagulatur ex liquido. Ipso Michelio teste necesse est, duos humores in eo fuisse, liquidum, et crassum. Crassum vero secundarum qualitatum è mitione est: et indicat idem flamma, quae simplicem ignem, aërem, aquam, terram, aut si ita volunt, omnino simplex principium nonprehendit. [...] Nec elementa Chymica sunt vltima compositionis. Sunt enim duntaxat artis, et ex analogia nomen acceperunt.”

mordial “viscous silt” composed of water and earth.⁵⁶ The divine nature of the seminal force is thus limited to the episode of Creation, when it was introduced into the elemental compounds by the divine breath in order to be subsequently immanent in them.⁵⁷ After the divine creation, the transformations occurring in all bodies follow the laws of Aristotelian physics. Their seminal property is involved in the constitution of beings to operate the physiological functions and the alchemical properties.

Having stated the elemental composition of bodies and their seminal properties, Libavius moves on to discuss the medical implications of his theory for the body’s temperament.

4 The *Krasis* of the Living Body

To introduce his interpretation of temperament, Libavius first reacts to Micheliu’s denial of the notion of temperament (*krasis*) as a mixture resulting from the union of elements achieved by a substantial form.⁵⁸ Against this view, he recalls that the *krasis* is to be understood in two ways, first as an elemental mixture, and second, as the “form of the mixt” related to the seminal principle.⁵⁹ He refers this description to the *Rosarium*, reporting mixture according to the Aristotelian formula of “union of altered miscibles”.⁶⁰ The “first elements” are the “material principles” of things, as agent and patient “miscibles” through their qualities.⁶¹ The process of mixture ensures their composition into a single entity endowed with matter

56 Ibid., p. 120: “Terram autem quam? Illam, quae erat ante species distinctas. Certum autem est, eam fuisse tunc rude elementum, et ancipitem ad omnes species, quas postea diuino iussu produxit, materiam. Haec sunt vltima elementa [...]. Videmus item etiamnum, hodiè ex aqua et terra fieri limum viscidum, et hunc conglutinari, aut concrecere in lapidem. Si hic resoluitur in vltima; non in mercurium, sulphur et salem, nisi haec sint elementorum Symbola, sed in elementa vulgata soluetur.”

57 Ibid., p. 48: “Non fugit nos, autorem creaturae initio miscuisse contemperasseque ista prima et postea efficaciam prolificam seminariamque inspirasse. Sed tamen eius rei vestigia videmus in ruditer compositis, in imperfecte mistis, in resolutionibus, in nutritione et augmentatione, in vita inter Elementa. Nemo est, quin intelligat hominis corpus ex semine et sanguine agente interno principio ad similitudinem generantis, post primum Adamum effectum esse. At oraculum diuinum dicit, ex terra creatum, et terram esse, et in terram reuersurum. Conspirat itaque haec nostra Physica cum sacris literis, quae nihil sciunt de mercurio, nec de sale et sulphure.”

58 Micheliu, *Apologia*, pp. 84–94.

59 Libavius, *Novus*, p. 38–39: “Ego soleo dupliciter de crasi loqui. Intelligo enim interdum primarum qualitatuum conspirationem, qua aliquid calidum, humidum, frigidum, siccum, etc. dicitur: interdum formam misti, quâ mistum est, licet substantiam habeat non ex concursu elementorum, qualis fit, [...] sed ex seminaria propagatione instituta in elementis et ex materia vniuersi à Creatore, vt [...], quod tamen postea tum elementis conseruatur, tum mistis. Esse autem in illa materia elementa, si argumento nutritionis et generationis non credunt, credant saltem oraculo diuino, quod testatur hominis corpus ex terra factum in terram reuersurum.”

60 *Rosarium*, f. o3 v.

61 Libavius, *Novus*, p. 104: “Aristoteles mitionem appellat mistilium alteratorum vnionem, quasi sit elementorum (ita vocantur principia materialia siue prima omnium sint elementa, siue certi generis) agentium et patientium mutuo (haec enim sunt mistilia) per qualitates seu

and form. As Libavius explains, the resulting *krasis* is also a substance associated to the form of the compound, derived from the seeds introduced into the water-earth primordial dyad during the divine creation.⁶² Infused by God, these “seminal reasons” are propagated in the body’s seed with the divine blessing to be fruitful and multiply.⁶³ Within the human body, they act in blood and the seed for the perpetuation of species, and operate through its “substantial innate heat”.

Libavius’ account of *krasis* merges different sources, overall Aristotle’s *Meteorology* and Renaissance medical philosophy, in order to debunk the flourishing Paracelsian interpretations of the body’s transformations in relation to the *Genesis*.⁶⁴ On the one hand, he takes up Aristotle’s account of homogeneous bodies as first compounds of elements made of water and earth. As Aristotle explains in the *Meteorology*, such bodies include the “homeomerous” body parts (skin, bones, veins, muscles, etc.) and metals, both subject to coagulation. On that basis, Libavius draws a parallel between the alchemical transformation of metals and the physiological processes of the human body, in continuity with the recurrent medical analogies in medieval alchemy.⁶⁵ Upon this framework, the alchemist’s material can be considered as endowed with a temperament and experiencing processes of generation, nutrition and digestion in the same way as the human body. On the other hand, Libavius’ interpretation of *krasis* follows Renaissance medical theories of temperament, in particular that of the French physician Jean Fernel (1497–1558). In his *Universa medicina* (1567), Fernel relates the living body’s temperament to a vital principle of ethereal nature, the “innate heat” inserted in the body’s elemental mixture, following a Platonic interpretation of Galen.⁶⁶

vires pugnaces compositio ad vnum quiddam simulare tota substantia, et viribus. Talis vnio est misionis modus et forma.”

- 62 Ibid., p. 100: “Vbi vero iam illa mirifica crasis? Intelligitur facta esse in institutione naturae, et postea cum illis principiis semper propagari, ita tamen, vt quia indiuisa est comes generationis mistorum, et se accommodat ad cuiusque speciem et naturam intimam ; non sit absurda per eam explicatio.”
- 63 Ibid., p. 107: “Sane ita Deus ex elementis constituit mista, iisque inseuit seminarias rationes, iuxta quas vnumquodque produceret suum semen et gigneret simile, sicut in animalibus vox oraculi iubet ea crescere et multiplicari. Illae rationes seminariae in ea parte sunt, quam Chymici essentiam vocant, [...] calidum innatum substantialem [...]. Haec doctrina nec Aristoteli nec Galeno repugnat quanquam explicatione egeat, et collatione.” See *Genesis* 1:28.
- 64 On the Paracelsian accounts of *Genesis*, see Michael T. Walton, *Genesis and the Chemical Philosophy: True Christian Science in the Sixteenth and Seventeenth Centuries*, New York 2011; Didier Kahn, “L’interprétation alchimique de la Genèse chez Joseph Du Chesne dans le contexte de ses doctrines alchimiques et cosmologiques”, in: *Scientiae et artes: Die Vermittlung alten und neuen Wissens in Literatur, Kunst und Musik*, ed. Barbara Mahlmann-Bauer, vol. 2, Wiesbaden 2004, pp. 641–692.
- 65 See Chiara Crisciani, “Il corpo nella tradizione alchemica: Teorie, similitudini, immagini”, in: *Micrologus* 1 (1993), pp. 189–233; Barbara Obrist, “Les rapports d’analogie entre philosophie et alchimie médiévales” in: *Alchimie et philosophie à la Renaissance*, ed. Jean-Claude Margolin and Sylvain Matton, Paris, 1993, pp. 43–64.
- 66 See Hiro Hirai, *Medical Humanism and Natural Philosophy: Renaissance Debates on Matter, Life and the Soul*, Leiden 2011, pp. 46–79.

In the same way as Fernel, Libavius considers the *krasis* as a union of elements crowned by a supra-elemental form of divine origin. For the body's functioning, it runs through the innate heat and operates physiological functions like reproduction, growth and nutrition.

Building on Fernel's view on innate heat, Libavius further anchors his interpretation of the body's *krasis* in medieval alchemy by relating it to the notion of quintessence. In medieval alchemy, quintessence relates to a spiritual nature within the body, which is intermediate with the soul, as theorized in the *Testamentum* attributed to Ramon Lull in the fourteenth century.⁶⁷ To this conception of quintessence, John of Rupescissa (c.1310–c.1370), in *De consideratione quintae essentiae* [*Consideration on the Fifth Essence*], added a pharmacological dimension.⁶⁸ From Rupescissa, Libavius takes up the celestial origin of the quintessence, which is nonetheless enclosed in the elements and associated with the body's vital principle.⁶⁹ He further links the notion of quintessence to the distinction between *elementum*, *elementatum* and *quinta essentia* developed in the *Rosarium*.⁷⁰ Accordingly, the quintessence is a body subsisting by itself, which is distinct in nature from elements and "elemented" bodies. For this reason, quintessence is devoid of any cause of corruption but can be extracted from elemental bodies. As Libavius explains, such a definition of quintessence takes root in the natural alchemy of the ancients, which was continued by medieval authors. The latter, he insists, were aware that the alchemical terminology is restricted to a practical context and relates only by analogy to natural philosophy.⁷¹

With this explanation of innate heat, quintessence and elements, Libavius aims to endorse the Galenic notion of temperament by showing its coherence with medieval alchemy and the Scriptures, while absorbing the theory of seeds developed by Paracelsus and his disciples.⁷²

67 Michela Pereira, "Heavens on Earth: From the Tabula Smaragdina to the Alchemical Fifth Essence", in: *Early Science and Medicine* 5 (2000), pp. 131–144.

68 On Rupescissa, see Leah DeVun, *Prophecy, Alchemy, and the End of Time: John of Rupescissa in the Late Middle Ages*, New York 2014; Robert Halleux, "Les ouvrages alchimiques de Jean de Rupescissa", in: *Histoire littéraire de la France*, ed. Académie des Inscriptions et Belles Lettres, Paris 1981, vol. 41, pp. 242–277; Robert P. Multhauf, "John of Rupescissa and the Origin of Medical Chemistry", in: *Isis* 45 (1954), pp. 359–367.

69 de Rupescissa I., *De consideratione quintae essentiae rerum*, Basel 1561, pp. 15–21.

70 *Rosarium*, f. g2 v.

71 Libavius, *Novus*, p. 43: "Nam et veteres mentionem faciunt mysterii seu arcani, magisterii, quintae essentiae, et similium. Sed in sua arte permanserunt, nec nisi analogia quadam ad explicationes naturales, quatenus arti inseruirent suae, accommodarunt."

72 *Ibid.*, p. 80: "Haec Paracelsici quidem corruerunt, sed Galenici sciunt ab Aristotele, Galeno caeterisque eadem scribi de [...] calidi innati substantia, vnde postea dependent tertiae [...] qualitates viresque quarum motus non est elementalis. [...] Sed rectius semineo tribuitur principio, nec tam est aliena ab elementis, quin in eis conseruetur, imo initio creationis etiam ex iisdem sit concinnata, accedente diuina virtute in eis instituta. [...] Haec et similia non sunt aliena à Galenica doctrina, sed eiusdem partim manifesta praecepta, partim consectaria, quae tamen illustrari altius ex Theologia repetitis causis possunt."

5 Conclusion

Libavius expounds the institutional nature of his medical project according to a logical approach. His Filippo-Ramist training leads him to renew the demarcation of medicine with alchemy while insisting on the continuity of knowledge from the *trivium* to theology. Within a Galenic and Aristotelian framework, his argumentation emphasizes the role of divine intervention in the constitution of bodies in a similar way as Renaissance Platonic medical interpretations enhancing the divine nature of life and its principles. Nonetheless, Libavius' explanation of temperament is not anchored in the Platonic scheme of *prisca sapientia*, but in an alternative hermeneutic emphasizing the role of logic, nature and divine providence at all levels of knowledge. In this perspective, Libavius seeks to limit the body's divine part to the episode of Creation, whereas Platonic physicians, either Galenist like Fernel or Paracelsian like Severinus, exalt the body's celestial imprint. With his own interpretation, Libavius thus works to naturalize and institutionalize alchemical medicine by using the "divine oracle" as a theological evidence for a reformed *prisca medicina*.

Bibliography

Sources

- Bernardus Trevisanus, *De chymico miraculo, quod Lapidem Philosophiae appellant*, Basel 1583.
- Libavius, Andreas, *Schediasmata medica et philosophica, ad Henningum Rennemannum Philosophum M. apud Erfurdenses*, Frankfurt 1596.
- , *Novus de medicina veterum tam Hippocratica, quam Hermetica tractatus*, Frankfurt 1599.
- , *Medicinae hermeticae artificibus catholicae ad hominis sanitatem tuendam aduersamque valetudinem profligandam...Expositio fidelis*, Frankfurt 1599.
- Michelius, Iosephus, *Apologia chymica aduersus inuectiuas Andreae Libauii calumnias*, Middelburg 1597.
- Paracelsus, *Bücher und Schriften*. Ed. Johannes Huser, Basel 1589, vol. 3.
- Rennemann, Henning, *Responsio apologetica ad dissertationem pro philosophia peripatetica aduersus Ramistas*, Frankfurt 1595.
- Ricardus, Anglicus, *Correctorium alchemiae*, in: Geber, *De alchemia*, Nuremberg 1541, pp. 272–308.
- S.n., *Rosarium philosophorum. Secunda pars alchimiae de lapide philosophico vero modo praeparando, continens exactam eius scientiae progressionem*, Frankfurt, 1550.
- de Rupescissa Iohannes, *De consideratione quintae essentiae rerum*, Basel 1561.
- Scherb, Philip, *Dissertatio pro philosophia peripatetica, aduersus Ramistas*, Altdorf 1590.

Literature

- Bellucci, Dino, *Science de la nature et Réformation : la physique au service de la Réforme dans l'enseignement de Philippe Mélancton*, Geneva 1998.
- Calvet, Antoine, "Etude d'un texte alchimique latin du XIV^e siècle : le *Rosarium philosophorum* attribué au médecin Arnaud de Villeneuve (ob. 1311)", in: *Early Science and Medicine* 11 (2006), pp. 162–206.

- , *Les oeuvres alchimiques attribuées à Arnaud de Villeneuve : grand oeuvre, médecine et prophétie au Moyen-Âge*, Paris-Milan 2011.
- Camilli, Giuliana, “Il Rosarius philosophorum attribuito ad Arnaldo da Villanova nella tradizione alchemica del trecento”, in: *Actes de la I Trobada Internacional d’Estudis Sobre Arnau de Vilanova*, ed. Josep Perarnau, Barcelona 1995, vol. 2, pp. 175–208.
- Crisciani, Chiara, “Il corpo nella tradizione alchemica: Teorie, similitudini, immagini”, in: *Micrologus* 1 (1993), pp. 189–233.
- Debus, Allen G., *Science, Medicine, and Society in the Renaissance: Essays to Honor Walter Pagel*, London 1972.
- DeVun, Leah, *Prophecy, Alchemy, and the End of Time: John of Rupecissa in the Late Middle Ages*, New York 2014.
- Elford, Dorothy, “William of Conches”, in: *A History of Twelfth-Century Western Philosophy*, ed. Peter Dronke, Cambridge 1988, pp. 308–327.
- Forshaw, Peter J., “Paradoxes, Absurdities, and Madness’: Conflict over Alchemy, Magic and Medicine in the Works of Andreas Libavius and Heinrich Khunrath”, in: *Early Science and Medicine* 13 (2008), pp. 53–81.
- Frank, Günter, *Philipp Melanchthon: Der Reformator zwischen Glauben und Wissen. Ein Handbuch*, Berlin/Boston 2017.
- , “Philipp Melanchthon (1497–1560): Reformer and Philosopher”, in: *Philosophers of the Renaissance*, ed. Paul R. Blum, Washington DC 2010, pp. 148–162.
- Freedman, Joseph S., “The Diffusion of the Writings of Petrus Ramus in Central Europe, c.1570–c.1630”, in: *Renaissance Quarterly* 46 (1993), pp. 98–152.
- Gunnoe, Charles, *Thomas Erastus and the Palatinate: A Renaissance Physician in the Second Reformation*, Leiden 2011.
- Halleux, Robert, “Les ouvrages alchimiques de Jean de Rupescissa”, in: *Histoire littéraire de la France*, ed. Académie des Inscriptions et Belles Lettres, Paris 1981, vol. 41, pp. 242–277.
- Hannaway, Owen, *The Chemist and the Word: The Didactic Origins of Chemistry*, Baltimore 1975.
- Hirai, Hiro, *Le concept de semence dans les théories de la matière à la Renaissance, de Marsile Ficin à Pierre Gassendi*, Turnhout 2005.
- , “Prisca Theologia and Neoplatonic Reading of Hippocrates in Fernel, Cardano and Gemma”, in: *Cornelius Gemma: Cosmology, Medicine, and Natural Philosophy in Renaissance Louvain*, ed. Hiro Hirai, Rome 2008, pp. 91–104.
- , *Medical Humanism and Natural Philosophy: Renaissance Debates on Matter, Life and the Soul*, Leiden 2011.
- Hotson, Howard, *Commonplace Learning: Ramism and its German Ramifications (1543–1630)*, Oxford 2007.
- Jacquart, Danielle, “Minima in Twelfth-Century Medical Texts from Salerno”, in: *Late Medieval and Early Modern Corpuscular Matter Theories*, ed. Christoph Lüthy, John E. Murdoch and William R. Newman, Leiden 2001, pp. 39–56.
- Kahn, Didier, “Recherche sur le livre attribué au prétendu Bernard le Trévisan (fin du XV^e siècle)”, in: *Alchimia e medicina*, ed. Chiara Crisciani and Agostino Paravicini Bagliani, Florence 2003, pp. 265–336.
- , “L’interprétation alchimique de la Genèse chez Joseph Du Chesne dans le contexte de ses doctrines alchimiques et cosmologiques”, in: *Scientiae et artes: Die Vermittlung alten und neuen Wissens in Literatur, Kunst und Musik*, ed. Barbara Mahlmann-Bauer, vol. 2, Wiesbaden 2004, pp. 641–692.

- , *Alchimie et paracelsisme en France à la fin de la Renaissance (1567–1625)*, Geneva 2007.
- Kusukawa, Sachiko, *The Transformation of Natural Philosophy: The Case of Philip Melancthon*, Cambridge 1995.
- Landsberg, Ernst, “Rennemann, Henning”, in: *Allgemeine Deutsche Biographie*, vol. 28, Munich/Leipzig 1889, p. 225.
- Mack, Peter, *A History of Renaissance Rhetoric, 1380–1620*, Oxford 2011.
- Maclean, Ian, *Logic, Signs and Nature in the Renaissance: The Case of Learned Medicine*, Cambridge 2002.
- Mandosio, Jean-Marc, “La place de l’alchimie dans la classification des sciences et des arts à la Renaissance”, in: *Chrysopoeia* 4 (1990–1991), pp. 199–282.
- Moran, Bruce T., “Axioms, Essences and Mostly Clean Hands: Preparing to Teach Chemistry with Libavius and Aristotle”, in: *Science and Education* 15 (2006), pp. 173–187.
- , *Andreas Libavius and the Transformation of Alchemy: Separating Chemical Cultures with Polemical Fire*, Sagamore Beach 2007.
- , “The Less Well-Known Libavius: Spirits, Powers, and Metaphors in the Practice of Knowing Nature”, in: *Chymists and Chymistry: Studies in the History of Alchemy and Early Modern Chemistry*, ed. Lawrence M. Principe, Sagamore Beach 2007, pp. 13–24.
- , “Eloquence in the Marketplace: Erudition and Pragmatic Humanism in the Restoration of Chymia”, in: *Osiris* 29 (2014), pp. 49–62.
- , “Andreas Libavius and the Art of Chymia: Words, Works, Precepts and Social Practices”, in: *Bridging Traditions: Alchemy, Chemistry and Paracelsian Practices in the Early Modern Era*, ed. Karen Hunger Parshall, Michael t. Walton and Bruce T. Moran, Kirksville 2015, pp. 59–78.
- Müller-Jahncke, Wolf-Dieter, “Georg am Wald (1554–1616): Arzt und Unternehmer”, in: *Analecta Paracelsica: Studien zum Nachleben Theophrast von Hohenheims im deutschen Kulturgebiet der frühen Neuzeit*, ed. Joachim Telle, Stuttgart 1994, pp. 213–304.
- Mulsow, Martin, “Ambiguities of the *Prisca Sapientia* in Late Renaissance Humanism”, in: *Journal of the History of Ideas* 65 (2004), pp. 1–13.
- Multhauf, Robert P., “John of Rupescissa and the Origin of Medical Chemistry”, in: *Isis* 45 (1954), pp. 359–367.
- Newman, William R., *Atoms and Alchemy: Chymistry and the Experimental Origins of the Scientific Revolution*, Chicago 2006.
- Obrist, Barbara, “Les rapports d’analogie entre philosophie et alchimie médiévales” in: *Alchimie et philosophie à la Renaissance*, ed. Jean-Claude Margolin and Sylvain Matton, Paris, 1993, pp. 43–64.
- Ong, Walter, *Ramus, Method and the Decay of Dialogue: From the Art of Discourse to the Art of Reason*, Chicago 1958.
- Pereira, Michela, “Heavens on Earth. From the *Tabula Smaragdina* to the Alchemical Fifth Essence”, in: *Early Science and Medicine* 5 (2000), pp. 131–144.
- , “L’Alchimista come medico perfetto nel *Testamentum pseudolulliano*”, in: *Alchimia e medicina nel Medioevo*, ed. Chiara Crisciani and Agostino Paravicini Bagliani, Florence 2003, pp. 77–109.
- , “Maestro di segreti o caposcuola contestato? Presenza di Arnaldo da Villanova e di temi della medicina arnaldiana in alcuni testi alchemici pseudo-lulliani”, in: *Actes de la ‘II Trobada Internacional d’Estudis Sobre Arnau de Vilanova’*, ed. Josep Perrarnau, Barcelona 2005, pp. 381–412.
- Pettegree, Andrew, *Reformation and the Culture of Persuasion*, Cambridge 2005.

- Rankin, Alisha, "Empirics, Physicians, and Wonder Drugs in Early Modern Germany: The Case of the *Panacea Amwaldina*", in: *Early Science and Medicine* 14 (2009), pp. 680–710.
- Roest, Bert, "Rhetoric of Innovation and Recourse to Tradition in Humanist Pedagogical Discourse", in: *Medieval and Renaissance Humanism: Rhetoric, Representation and Reform*, ed. Stephen Gersh and Bert Roest, Leiden-Boston 2003, pp. 115–148.
- Salatowsky, Sascha, "Scherb, Philip", in: *Encyclopedia of Renaissance Philosophy*, ed. Marco Sgarbi, Cham 2015. doi: 10.1007/978-3-319-02848-4_334-1.
- Serjeantson, Richard W., "Proof and Persuasion", in: *The Cambridge History of Science*, ed. Katharine Park and Lorraine Daston, Cambridge 2008, pp. 132–175.
- Shackelford, Jole, "Early Reception of Paracelsian Theory: Severinus and Erastus", in: *The Sixteenth Century Journal* 26 (1995), pp. 123–135.
- , "The Chemical Hippocrates: Paracelsian and Hippocratic Theory in Petrus Severinus' Medical Philosophy", in: *Reinventing Hippocrates*, ed. David Cantor, Aldershot 2002, pp. 59–88.
- , *A Philosophical Path for Paracelsian Medicine: The Ideas, Intellectual Context, and Influence of Petrus Severinus (1540/2–1602)*, Copenhagen 2004.
- Silverstein, Theodor, "Elementatum: Its Appearance Among the Twelfth-Century Cosmogonists", *Mediaeval Studies* 16 (1954), pp. 156–162.
- , "Guillaume de Conches and the Elements: Homiomeria and Organica", *Mediaeval Studies* 26 (1964), pp. 363–367.
- Siraisi, Nancy G., "In Search of the Origins of Medicine: Egyptian Wisdom and Some Renaissance Physicians", in: *Generation and Degeneration: Tropes of Reproduction in Literature and History from Antiquity to Early Modern Europe*, ed. Valeria Finucci and Kevin Brownlee, Durham-London 2001, pp. 235–261.
- , *History, Medicine and the Traditions of Renaissance Learning*, Ann Arbor 2007.
- Szulakowska, Ursula, *The Sacrificial Body and the Day of Doom: Alchemy and Apocalyptic Discourse in the Protestant Reformation*, Leiden 2006.
- Telle, Joachim, "Remarques sur le *Rosarium philosophorum* (1550), avec une liste sélective d'ouvrages sur l'alchimie médiévale", in: *Chrysopoeia* 5 (1992–1996), pp. 265–319.
- , "Ricardus Anglicus", in: *Die Deutsche Literatur des Mittelalters: Verfasserlexicon*, ed. Karl Ruh, Berlin 1992, vol. 8, pp. 38–41.
- Walton, Michael T., *Genesis and the Chemical Philosophy: True Christian Science in the Sixteenth and Seventeenth Centuries*, New York 2011.
- Zenker, Kay, *Denkfreiheit: Libertas philosophandi in der deutschen Aufklärung*, Hamburg 2013.