

Music, Magic, and Humanism in Late Sixteenth-Century Venice: Fabio Paolini and the Heritage of Ficino, Vicentino, and Zarlino

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‘Have you guessed the riddle yet?’ the Hatter said, turning to Alice again.
‘No, I give it up,’ Alice replied: ‘what’s the answer?’
‘I haven’t the slightest idea,’ said the Hatter.
‘Nor I,’ said the March Hare.
Alice sighed wearily. ‘I think you might do something better with the time,’ she said, ‘than waste it in asking riddles that have no answers.’¹

Riddles come in all shapes and sizes, and are posed for all kinds of reasons. Sometimes they are supposed to be funny, such as those in the Exeter Book.² But sometimes riddles are meant in deadly earnest. The deliberate employment of ambiguous language, so characteristic of the riddle, was considered by many Renaissance readers to have been a distinctive feature of the texts associated with the ‘Ancient Theology’, that tradition of religious revelation stretching from the mythical Egyptian king-prophet-priest Hermes Trismegistus to Orpheus, Pythagoras, Plato, and the later Platonists, and running in a parallel stream to the revelation to the Hebrews recorded in the Bible. ‘It was the custom of the Ancient Theologians’, explains Marsilio Ficino in his commentary on Plato’s *Symposium*, ‘to cover over their holy and pure secrets with obscure and figurative language, lest they be polluted by the profane and impure.’³ Giovanni Pico della Mirandola wrote that sphynxes were carved on ancient Egyptian temples as a reminder that the priests kept their mysteries inviolate by casting them in the form of riddles.⁴ Texts associated with the Ancient Theology thus required detailed and patient explication for the layers of occult meaning to be laid bare to view.

One particularly elaborate expression of the desire to uncover the hidden meanings in the writings associated with the Ancient Theology is *Hebdomades* (whose title might be translated as ‘The Book of Sevens’), by the Venetian humanist Fabio Paolini (c. 1535-1605), public professor of Greek at St. Mark’s library in Venice and founding

* For Bruce Trethowan, in memory of days in Venice.

¹ Lewis Carroll, *Alice’s Adventures in Wonderland* (London, 1865), chapter 7.

² Bernard J. Muir, *The Exeter Anthology of Old English Poetry: An Edition of Exeter Dean and Chapter Ms. 3501* (Exeter, 2000).

³ Marsilio Ficino, *De amore* IV.2, ed. in *Über die Liebe oder Platons Gastmahl*, Latin text ed. Raymond Marcel, German trans. Karl Paul Hasse; comm. Paul Richard Blum (Hamburg, 1994), 98: ‘Mos enim erat veterum theologorum sacra ipsorum puraque arcana, ne a prophanis et impuris polluerentur, figurarum umbraculis tegere.’

⁴ Giovanni Pico della Mirandola, *De hominis dignitate*, in *De hominis dignitate Heptaplus De Ente et Uno e scritti vari*, ed. Eugenio Garin (Florence, 1942), 156: ‘Aegyptiorum templis insculptæ Sphinges, hoc admonebant ut mystica dogmata per ænigmatum nodos a profana multitudine inviolata custodirentur.’

member of the Accademia degli Uranici.⁵ This work is ostensibly a commentary on a single line from the *Aeneid* (VI.646), in which Vergil describes Orpheus singing to the sound of the seven-stringed lyre: ‘Obloquitur numeris septem discrimina vocum’ (‘He accompanies himself in numbers to seven different pitches’). Vergil’s description is not entirely clear, and suggests a number of questions: what precisely does he mean with the unusual word ‘obloquitur’ (literally, ‘speak across’)? What exactly are the ‘numeri’: numbers, rhythms, metres, musical proportions? What are the seven ‘differences of voices’ (‘septem discrimina vocum’)? In short, Paolini found in this line a riddle on a grand scale. Accordingly, he set out to explore the mythological and theological aspects of the figure of Orpheus, as well as to investigate the manifold occult significances of the number seven. The work, which began life as a series of orations given before the Accademia degli Uranici, is arranged into seven books of seven orations each. The individual chapters give the impression that Paolini responded along the way to the reactions and objections of his audience, and the work thus has a certain spontaneous and dialectical quality.

Amongst the topics that Paolini treats in the *Hebdomades* is music theory. Although Paolini was not a professional musician, he was on good terms with the leading music theorist in Venice, Gioseffo Zarlino; at one point in the *Hebdomades* he describes riding to lunch in a gondola with Zarlino, Bernardino Parthenio, Fabrizio Cecchoni, and Lorenzo Massa.⁶ But riding in a boat with Zarlino is not quite the same thing as understanding his music theory; the purpose of the present paper is thus to investigate just how much music theory Paolini actually knew, and what this can tell us about learned interest in ancient music in academic circles in late *cinquecento* Italy in the wake of such distinguished thinkers as Ficino, Vicentino, and Zarlino. We will discover that Paolini’s writings on music show a considerable, if patchy, knowledge of theory. But besides their shortcomings, they are important for a number of reasons: firstly, he was familiar with several Greek sources otherwise little known by other music theorists; secondly, he had a deep knowledge of Ficino’s natural magic; and thirdly, because the reception of his work was long and varied.

⁵ For a general introduction, see Michele Maylender, *Storia delle accademie d’Italia* (Bologna, 1926–30), vol. 5, 412–13; Daniel Pickering Walker, *Spiritual and Demonic Magic, from Ficino to Campanella* (London, 1958), 126–44; Paul Oskar Kristeller, review of Walker, *Spiritual and Demonic Magic*, in *Speculum* 36 (1961), 515–17; Iain Fenlon, ‘Zarlino and the Accademia Venetiana’, in *Italian Academies of the Sixteenth Century*, ed. David S. Chambers and François Quiviger (London, 1995), 79–90; Cesare Vasoli, ‘Il tema musicale e architettonico della “Harmonia mundi” da Francesco Giorgio Veneto all’Accademia degli Uranici e a Gioseffo Zarlino’, in *Musica e Storia* 6 (1998), 193–210; Salvatore Radaelli, ‘L’Accademia degli Uranici: la musica delle accademie veneziane’, in *Musica e Storia* 6 (1998), 327–48; Inga Mai Groote, *Musik in italienischen Akademien: Studien zur institutionellen Musikpflege 1543–1666*, *Analecta Musicologica* 39 (Laaber, 2007). Marino Zorzi, *La Libreria di San Marco: Libri, lettori, società nell’Venezia dei Dogi* (Milan, 1987), 460 n. 229, notes that Venice, Museo Correr Cod. Gradenigo 30 (=181) records Paolini and Lombardo Amulio as the public professors at the Biblioteca Marciana.

⁶ *Fabii Paulini Vtinensis philosophi, Et Graecas literas Venetijs profitentis, Hebdomades, sive Septem de Septenario libri, habiti in Vranicorum Academia in vnius Vergilij versus explicatione* (Venice, 1589), 274: ‘Et vt aliquem ex recentioribus addamus, Aloysius Mocenicus Princeps sapientissimus, idemque praclarissimus septem annis felicissimè hanc Venetiarum rexit Rempubicam & septuagenarius decessit, quam rem elegantissimè attigit Laurentius Massa huius R. P. à secretis, vir summa eruditione, & in re literaria iudicio, in ea, quam habuit in eius funere oratione, quam licet ipse, cum abessem ab hac Ciuitate, praesens non audierim, quæ tamen est hominis humanitas, & mea cum illo coniunctio, legendam nuper mihi tradidit, cum, apud communem quendam amicum, in cymba ueherer cum illo pransurus, & cum duobus huius ciuitatis luminibus Iosepho Zarlino Mathematico praestantissimo, & Bernardino Parthenio Poeta celeberrimo, necnon Fabritio Cechono Iurisconsulto, atque Philosopho.’ Abbreviations are generally expanded silently; when citing Paolini I use italics to indicate his sources as precisely as possible.

Fabio Paolini

Fabio Paolini was born in about 1535 at Udine, the son of the noted lawyer Alessandro Paolini.⁷ After learning Latin and Greek from Bernardino Partenio at Venice, he studied medicine and philosophy at Padua. There he also attended the lectures of the humanists Antonio Riccobono and Francesco Robortello, who did more than anyone else in the sixteenth century to promote Aristotle's *Poetics*. Paolini's knowledge of Robortello's commentary on the *Poetics* is evident in the *Hebdomades*.⁸ Combining his interest in medicine with his skill as a humanist, he went so far as to learn Arabic in order to read the works of the medieval physicians who had written in that language. Later he would edit an expanded edition of Giovanni Argenterio's commentaries on Galen, and a reworking of Vesalius' work on anatomy.⁹ After graduating, Paolini set his sights on a career in the church, and he competed for the benefice of the Piovanato di Tricesimo when it was resigned by Polidoro de Georgiis. When Paolini lost the vote to Paolo Bizanzio, bishop of Cattaro, he contested the legitimacy of the ballot before a secular court. To punish Paolini for stirring up this litigation, he was placed in the prison of the papal nuncio, Lorenzo Campeggi, until the senator Giustiniano urged his release in about 1580. Some time later, Paolini was appointed as one of the seven public professors of rhetoric and poetry at Venice, succeeding Marc Antoine de Muret. In 1586 Paolini lectured on book I of Cicero's *De oratore*.¹⁰ His commentary on this work, not yet published, came into the hands of Joseph Justus Scaliger, who slammed it in a polemic published under the pseudonym Ivone Villiomaro dell'Aremorica.¹¹ Paolini replied with a counterblast (also pseudonymous), in which he already gives some indication of his interest in the mystical significance of the number seven.¹²

It was at about that time that Paolini was involved in the foundation of a new literary and philosophical academy at Venice, the Accademia degli Uranici. Vincenzo Longo paid for the academy's premises, but until the works were finished, Longo often

⁷ Gian-Giuseppe Liruti, *Notizie delle vite ed opere scritte da' letterati del Friuli*, 3 vols. (Venice, 1760-80) vol. 3, 352-73; Michele Battaglia, *Delle accademie veneziane. Dissertazione storica* (Venice, 1826), 27.

⁸ Paolini, *Hebdomades*, 72: '...facile apparet citharam idem fuisse cum lyra, vel non omnino dissimile instrumentum. sed ex eodem genere harmoniæ conflatum, quam nostram sententiam valde confirmat Iulius Pollux, qui ait, λυρωδὸς, μιθαριστὰς, καὶ κίθαρωδὸς idem significare, & verba inde deducta λυρίζειν, κιθαρίζειν, βαρβιτίζειν. quam rem etiam annotavit Robortellus in eius commentarijs in Poeticam Aristotelis, vbi ait *cithararisticè eadem est, quæ lyricè* [Francisco Robortello, *In librum Aristotelis De arte poetica explanationes* (Florence, 1553), 9]. The references from Julius Pollux are also borrowed from Robortello, whom Paolini mentions again on p. 39.

⁹ *Ioannis Argenterii Castellonovensis Pedemontii, philosophi ac medici præstantissimi, Operum in tres tomos divisorum; Volumen primum [-tertium]. Tres in Artem medicam Galeni commentarios complectens. Quibus Græcus Galeni contextus additus & loci multi ab Argenterio, vel omiſsi, vel prætermiſsi suis sedibus restituti. Necnon singulorum librorum per tabulas æconomia per Fabium Paulinum Vtinensem Philosophum, & Græcarum litterarum apud Ven. pub. professeſ. Cum indice Sententiarum, rerumque, notabilium cum copioso, tum miro ordine, & alphabetica serie disposito.* 3 vols. (Venice, 1592); *Andree Vesalii Anatomia: Addita nunc postremo etiam Antiquorum Anatome* (Venice, [1604]).

¹⁰ M. Antonii Maioragii, *Commentarius in dialogum, seu lib. primum de Oratore ad Q. fratrem M. Tullij Ciceronis. Nuper adeo in eloquentiæ studiosorum gratiam, accurata Io. Petri Ayroldi Marcellini Mediolanensis, Medici ac Philosophi Veneti, opera atque industria in lucem prolatus. Cum Indice rerum & verborum, per quàm copioso* [vol. 2: *In eundem M. Tullij Ciceronis, dialogi de Oratore Librum Primum Fabii Paulini Vtinensis scholia*] (Venice, 1587).

¹¹ *Yuonis Villiomari Aremorici In locos controuersos Roberti Titii animaduersorum liber* (Paris, 1586).

¹² [Fabio Paolini], *Responsio ad epistolam calumniatoris, sub nomine Yuonis Villiomari Aremorici scriptam in Fabium Paulinum Vtinensem. Auctore Chianeo Oligenio* (Venice, 1587), 7: 'Sed iam satis de Numero Septem, quem cum tu toties inculces, ac repetas, futile apparet homini non hebeti, quantum sibi ex huius numeri laudatione contraxerit inuidiam Paulinus, & unde diutius tota, & fortasse adiuta emergat hæc vituperatio.'

hosted its meetings in his house.¹³ As Paolini explains in the dedication of the *Hebdomades*, it was decided that each member of the academy would share some specimen of their expertise. On 10 June 1587 the Observant friar Faustino Tasso, a member of the community of San Francesco della Vigna, gave an oration on the highest good; in the printed version of this work he mentioned that there had been meetings of the academy before this event. Four weeks later, Isidoro Rotta, also a brother at San Francesco della Vigna, gave an oration before the academy on the dignity of the human person.¹⁴ Both Tasso and Rotta were interested in mystical systems of thought: Tasso in Christian Cabbala, Rotta in Hermeticism.¹⁵ In 1588, Giovanni Mario Verdizotti gave an oration before the academy on poetic narration.¹⁶ The year 1588 also saw performances of two plays written or translated by members of the academy: Sophocles' *Electra*, translated by the aristocrat Erasmo da Valvasone, and the new play *Almeone* by Vincenzo Giusti.¹⁷ In the early days of the academy, there was a discussion at Paolini's house on the question whether fire should be counted as an element.¹⁸ In 1589, Eustachio Rudi, later professor of medicine at Padua, gave an oration in which he discussed whether the seat of the soul should rightly thought to be in the brain, the heart, or the liver.¹⁹ The orations given before the academy also included current events; Muzio Sforza gave an oration discussing the wisdom of the pipe-dream of Sixtus V to mount a campaign and recover the Holy Sepulchre from the Turks.²⁰ The Accademia degli Uranici was in existence until at least 1599, when Pietro Cresci presented before its members a detailed exegesis of a sonnet in praise of Valchiusa.²¹

¹³ Paolini, *Hebdomades*, 120: '...de quo præclarè Abbas Tritemius in epistola ad Germanum de Ganay, cuius volumen epistolarum superioribus diebus mihi præbuit legendum præclarissimus & nobilissimus vir Vicentius Longus, cui nostra plurimum debet Academia, quòd domi illius multo dies, dum hic proprio aere pararetur locus commorata, & humanissimè accepta est...' Maylender, *Storia*, vol. 5, 413, suggested that the meetings of the academy were held at San Francesco della Vigna, but this is merely a guess based on the fact that Rotta and Tasso were members of this community.

¹⁴ *Oratione della felicità, e del sommo bene, del R. P. Faustino Tasso de minori osseruanti, da lui composta, e pubblicamente recitata in Vinetia nell'accademia d'Uranici il giorno decimo du giugno l'anno 1587, al serenissimo principe Pasqual Cicogna et illust. Signoria di Vinetia* (Venice, 1587); Isidoro Rotta, *Oratione della grandezza dell'huomo, del P. F. Isidoro Rotta venitiano de Minori Osseruanti, da lui composta, e pubblicamente recitata in Vinetia nell'Accademia de gli Vranici, l'ottauo giorno di luglio l'anno 1587* (Venice, 1587). See also *Delle Rime Toscane dell'eccell.^{mo} giuriconsulto et antichissimo poeta il Sig. Cino Sigibaldi da Pistoia, raccolte da diuersi luoghi, e date in luce dal R. P. Faustino Tasso de Minori Osseruanti* (Venice, 1589). Radaelli, 'L'Accademia degli Uranici', 331, notes that the copy of Tasso's *Oratione* in the Biblioteca Marciana has an annotation stating that it was 'recitata nell'Accademia degli Uranici dinanzi ad Doge Pasqual Cicogna e alla Signoria di Venetia.'

¹⁵ François Secret, *Les Kabbalistes chrétiens de la Renaissance* (Paris, 1964), 246, 269; Radaelli, 'L'Accademia degli Uranici', 334-35.

¹⁶ Giovanni Mario Verdizotti, *Breve discorso intorno alla narratione poetica fatto nell'Accademia degli Vranici: dal quale si comprende la misteriosa forma dell'antico uso del ben poetare nell'heroico componimento* (Venice, 1588).

¹⁷ *Elettra tragedia di Sofocle, fatta volgare dall'illustre signor Erasmo delli signori di Valvasone, Academico Vranico* (Venice, 1588); *Almeone tragedia nova di M. Vincenzo Giusti da Vdine Academico Vranico* (Venice, 1588).

¹⁸ Paolini, *Hebdomades*, 119: '...multi arbitrantur ignem inter elementa desiderari; de cuius opinionis auctoribus multa præclarè superioribus mensibus disputauit domi meæ, cum adhuc in incunabulis esset Academia Augustinus Michaelius Academicus.'

¹⁹ Paolini, *Hebdomades*, 117: 'Eadem in tribus partibus potissimum residere existimatur in cerebro, in corde, in hepate, de quo paucis ante diebus eruditissimè disputauit ex hoc ipso superiore loco Eustachius Rudius Academicus.'

²⁰ *Oratione del Sig. Mutio Sforza alla Santità di N. Sig. Sisto V fatta da lui nel tempo, che uscì grido, ch'esso Pontefice Mass. voleua ricoverare il S. Sepolcro dal Turco per danari, recitata da lui Academico nell' Accademia degli Vranici in Vinetia, in Tre orationi del S. Mutio Sforza fatte da lui in diversi tempi, intorno a diversi soggetti come nella fronte di ciascheduna si legge* (Venice, 1590); Radaelli, 'L'Accademia degli Uranici', 332-33.

²¹ *Discorso, ouero lettione di Pietro Cresci Anconitano, sopra un sonetto in lode del celebre luogo di Valchiusa: Recitata da lui nell'Accademia de gli Vranici in Venetia, oue con nuouii pensieri si tratta dell'eccellenza del Verso; & del Sonetto, & della miseria de' Poeti si discorre* (Ferrara, 1599). The existence of this work shows that the Accademia degli Uranici

Two of Paolini's works bear an indication of his membership of the academy: a lament on the death of Bianca, wife of Carlo Ruzinio, a member of the academy (1588);²² and the *Hebdomades* (1589). The title page of the *Hebdomades* proudly announces Paolini's new position as professor of Greek at St. Mark's library, a post he had inherited that year upon the death of his old teacher Partenio, along with a lectureship in Latin to the College of the Notaries. Since Paolini's expertise lay in ancient letters, the exposition of the verse 'Obloquitur numeris septem discrimina vocum' was to be his contribution to the encyclopaedic investigations of the academy. In a certain sense, Paolini, like the Mad Hatter, set himself the task of answering a riddle without a real answer. However, Paolini's exegesis of Vergil's line from the *Aeneid* serves as a pretext to set out his programme of number mysticism and operative magic, in which music plays a not inconsiderable role. He was motivated in this task by the same kind of syncretic urge as Ficino, and he legitimized his interest in the Ancient Theology by emphasizing its similarities with Christianity, and basing many of his arguments on the premise of an historical relationship between them. Indeed, Paolini went as far as to claim that all those who predicted the coming of Christ, such as Vergil, could justly be considered Christians.²³ It may be imagined that Paolini's orations will have provoked the excited interest at least of the friars Tasso and Rotta.

Paolini's Writings on Music

Most of what Paolini has to say about music relates either to antiquity or to a kind of modern music quite different in conception and form from late sixteenth-century polyphony. He gives detailed accounts of the classical myths relating to the role played by such figures as Apollo and Orpheus in the invention of music and the seven-stringed lyre. But when he comes to speak of recent music, it is generally in negative terms. Paolini thus represents a later example of the kind of humanist critique of modern music that Rob Wegman found in the late fifteenth and early sixteenth centuries.²⁴ Modern music, Paolini lamented, had fallen to such a level of depravity that it was no longer morally uplifting, but had become positively harmful to the morals of the young and of women. Paolini mentions Plato's aversion to many-stringed ('panharmonic') instruments that could play in many tones, which 'in our time are greatly esteemed and valued, and which everyone embraces eagerly.' (He was probably thinking of the chromatic and microtonal compositions of the late sixteenth-century mannerists and the instruments

was in existence for longer than suspected by Liruti, Maylender, Walker, or Radaelli, who placed the end of the academy in 1593 or thereabouts.

²² *In obitum præclariss. Blançæ Ruziniæ clarissimi viri Caroli Ruzinii uxoris; Amaryllis Fabii Paulini Vtinensis, philosophi, & Vranici Academici* (Venice, 1588).

²³ Paolini, *Hebdomades*, 363-364: 'Vt autem nostram hæc interpretatio fidem acquirat, & auctoritatem, nec in nubibus, & per inania videatur esse captata, cum Maro nunquam hæc somniare, nedum cogitare potuisse, velut auersus à nostra fide, iudicetur, præter hæc, duo nobis quasi fundamenta sunt probanda, antequam ad ipsius septenarij my-[364]steria aggrediamur explicanda, primum quòd Maro Christianam potuerit doctrinam tenere, & hæc diuina cogitare, & enunciare vel prudenter, vel etiam nesciens, vt Cayphas mysteria, deinde quòd Orpheus fuerit Theologus etiam Christianus. Christianos autem intelligo eos quoque qui aduenturum Christum crederent, antequam venisset.'

²⁴ Rob C. Wegman, *The Crisis of Music in Early Modern Europe 1470-1530* (London and New York, 2005).

made to perform them.)²⁵ Rather than exciting the mind to virtue, the music of such instruments stifles the moral sense, and ‘excites and inflames the mind only to softness and to the basest kind of lasciviousness, which ruins the mind.’²⁶ Paolini shared Vicentino’s conviction that modern music had to conform more closely to the perfection of ancient music if it ever wanted to recover its much-vaunted effects. Most people had become so impressed by musical novelties in recent times that they had quite forgotten the beauty of ancient music, and those recent hearers privileged to hear ancient music performed from the sources as they were discovered and deciphered usually found the effect ridiculous rather than moving.²⁷ The key to creating a perfect kind of music, Paolini promised, was to make it harmonize as closely as possible with the celestial harmony, as Orpheus did. Some modern musicians, he concedes, are so skilful that they can bring about astonishing effects, but if they only knew how to harness the power of celestial music they might be able to rival the astonishing powers of Orpheus—something which none had yet managed to do.²⁸

Paolini’s most detailed account of music comes in the opening chapter of the second book of the *Hebdomades* (transcribed and annotated below in the appendix). Paolini begins this chapter by arguing that the figure of Orpheus is the most perfect example of the musician. The ancients expressed this conviction in the mythological stories in which Orpheus was described as son of Apollo and one of the Muses (either Calliope or Polymnia—the sources disagree). For Apollo’s priority over music, Paolini cited both Ovid and the *Orphic hymn to Apollo*. He also noted that the Athenians considered cicadas to be sacred to Apollo; those who wanted to declare themselves as votaries of this god would wear golden cicadas in their hair.

Next Paolini discussed the significance of the seven strings struck by Orpheus, the *septem discrimina vocum* of Vergil’s line. As Paolini notes, there are seven intervals

²⁵ See Thomas Drescher and Martin Kirnbauer (ed.), *Chromatische und enharmonische Musik und Musikinstrumente des 16. und 17. Jahrhunderts. Beiträge zu einem Kolloquium der Schola Cantorum Basiliensis, Hochschule für Alte Musik Basel, und des Musikwissenschaftlichen Instituts der Universität Basel am 9. April 2002* [= *Schweizer Jahrbuch für Musikwissenschaft* 22 (2002)].

²⁶ Paolini, *Hebdomades*, 92: ‘Quæ vtinam genera Musicæ nostra hac deprauata tempestate non adeo vsurparentur ab omnibus, ex quo factum est, vt Musica nullo amplius sit animis adiumento, sed in damnum, & perniciem adolescentium, & etiam mulierum sit conuersa. Nam omnia, quæ à Platone, & Aristotile [*sic*] improbantur instrumenta polychorda, scilicet παρὰ μύρια hac nostra tempestate maximo sunt loco, & precio, omnesque illa cupidè amplectuntur. Quæ tantum absunt vt prosint, & animos ad aliquod virtutis genus impellant, vt eorum etiam sint pessima perniciæ, & omnium virtutum semina, atque igniculos, si quæ in animis adolescentium resident, reprimant, sopiant, & penitus demum extinguant, ad mollitiemque tantum, & libidinem pessimam animorum corruptelam excitent, & inflamment...

²⁷ Paolini, *Hebdomades*, 188: ‘Nicolaus Vicentinus Musicus, qui Italico sermone scripsit de Musica non inductè hæc Orphei miracula tanquam vera videtur afferre, cum dicat, de illis, & alijs huiusmodi intelligens. *Ma perche ne i nostri [tempi] non si vede fare da Musici quelli effetti, che scriuono gli Autori anticamente farsi, che viene dalla troppa abbondanza, & frequenza della Musica, che buono paiono, nientedimanco non mouono tanto, come faceuano nel principio, che furono ritrouate, perche la nouità della cosa, benchè sia poca, dà molto più ammiratione* [Nicola Vicentino, *Lantica musica ridotta alla moderna pratica* (Rome, 1555), fol. 6v]. quæ quidem causa, atque ratio, quòd non eam vim habet Musica nostro tempore, quo primis illis, non videtur aliena, imò valde accommodata, nam videmus idem in omnibus rebus euenire, vt nobis exemplo sunt contagiosi quoque morbi, qui initijs sunt longè asperiores, vsuque deinde mollescunt, viresque amittunt, & medicamentis discunt cedere, quæ nulla principio admittunt.’ Just after the passage cited by Paolini, Vicentino writes: ‘...ne nostri tempi per la comparatione delle compositioni antiche, e anchor delli sonatori, si uede, che cantandole, ò sonandole muoueno à riso, & ne loro tempi erano tenute bonissime...’

²⁸ Paolini, *Hebdomades*, 221: ‘Tertius gradus erit sonorum omnium, & harmoniæ, in quo, quo quisque perfectius miscabit sonos, & temperabit harmoniam, eo maior cælitus conceitui vis tradetur, qua in re perfectissimum omnium fuisse Orpheum iudicamus, & hinc factum, vt propter admixtionis suæ excellentiam tantam sibi vim cælitus vendicaret; quod si nostrates quoque Musici scirent efficere, non minora præstarent, cum uideamus quosdam pro suæ perfectionis gradibus miranda effecisse, neminem verò Orpheo præstitisse maiora.’ Cf. Vasoli, ‘Il tema musicale e architettonico della “Harmonia mundi”’, 205.

in the octave, and this pattern is repeated successively in two higher octaves to form the Greater Perfect System of Greek harmonics. Paolini's exposition of the way in which the notes of one octave correspond to those in another octave (the ninth to the second, the tenth to the third, and so on) is borrowed from Marsilio Ficino's *Compendium in Timaeum*, though Paolini is a little careless with the citation; where Ficino had pointed out that the fourteenth corresponds to the seventh and the fifteenth to the octave, Paolini misses out one of these correspondences (probably by homeoteleuton) and states that the fifteenth corresponds to the seventh. This is the kind of error that a practising musician would never make, and suggests that Paolini simply copied a string of words rather than understanding or following Ficino's argument. Of course it may be that this mistake was introduced by the typesetter, but a number of errors of this kind in this chapter suggest that Paolini's grasp of the technicalities of music theory was a little loose.

Paolini's expertise in Greek literature allowed him to identify quotations embedded in long-familiar Latin musical authorities. For example, Boethius (*De institutione musicae* I.20) notes that the Greeks used to refer to Zeus as *hypate*, the same word they used for the highest string on the lyre. Paolini is apparently the first Renaissance author to have identified Boethius' source (*Odyssey* I.81). In fact Boethius' *De institutione musicae* is one theoretical source with which Paolini was particularly well acquainted; but of course, this was an ancient source and on this account interesting to him. It is from Boethius that Paolini adapts his account of the Greek names for the strings of the lyre. Paolini also notes that while the Greeks used the seven vowels to indicate the seven degrees of the octave species, the medieval Latin theorists, having fewer vowels at their disposal, were restricted to the six syllables of the hexachord. Paolini explains the discrepancy between the five vowels in Latin and the six pitches of the hexachord by reference to the *Recanetum de musica aurea* of Stefano Vanneo (1533), who explained that the vowel *a* is used twice (*fa, la*) because of its pre-eminence amongst the vowels.²⁹ For the seven pitches of the octave species they used the first seven letters of the alphabet, preceded by the seventh letter, to which they assigned the Greek letter Γ in deference to the superiority and temporal precedence of the Greeks in music theory. As explained by Vicentino (whom Paolini names explicitly as his source), theorists before Guido of Arezzo applied these letter-names to the notes that Guido later designated by the familiar solmization syllables. Again from Vanneo, Paolini borrows the explanation of the application of the six notes of the hexachord to the positions on the Guidonian hand. However, one detail in his adaptation of Vanneo's account is telling. Vanneo has the rather inelegant phrase: 'although repeated several times, and they laid down twenty positions' ('quamuis pluries iteratae vigintiq; posuere positiones'), in other words, there are twenty notes on the Guidonian hand, from Γ-*ut* to *e-la*. Paolini evidently got snagged on the abbreviated word 'vigintique' and amended it incorrectly to 'vigintiquinque' (twenty-five). This error too suggests a lack of practical knowledge of even quite basic musical theory on Paolini's part.

It seems that when Paolini was preparing this chapter, he paid particular attention to those chapters in the works of musical writers in which the Vergilian verse 'Obloquitur numeris septem discrimina vocum' was quoted. One such example comes from Vanneo. Once the twenty pitches are assigned their equivalents in the natural, soft, and hard

²⁹ Stefano Vanneo, *Recanetum de musica aurea* (Rome, 1533), I.13, fol. 12v.

hexachords (Γ-ut, A-re, B-mi, C-fa ut, D-sol re, and so on), there are found to be forty-two pitch-names. Vanneo (*Recanetum* I.12) suggested that it had been decided at some stage to multiply the six pitches of the hexachord by seven, 'so that the whole body of music might be perfect, and that musicians might more easily sing higher and lower.' Vanneo saw numerical significance in the forty-two pitches (6×7), and in his explication of this point he quoted the line 'Obloquitur numeris septem discrimina vocum'. This of course was too good for Paolini to pass by, and he cites the entire passage. The line 'Obloquitur numeris' had also been cited by the late-antique author Fulgentius (*Mythologies* III.9), who thought that Vergil's 'seven differences of pitch' ('septem discrimina vocum') was a veiled reference to the seven 'parts' of music in ancient theory (*genera, diastemata, systemata, phthongoi, tonoi, metabolae, melopoeae*). Of course Paolini wanted to quote this passage as well, though his citation is not unproblematic. The word *melopoeas* had become corrupted in the manuscript transmission as *melumpaeas* or *melampoeas*, and in some sixteenth-century editions this word is marked with daggers to indicate the textual difficulty.³⁰ Paolini correctly identifies and corrects the problem ('for that word [*melumpæas*] does not have any meaning in music'), but when citing Fulgentius' list of seven 'parts' of music he accidentally forgets *metabolae*, and his magical list of seven items is reduced to a sorry six. However, this fault is again redeemed to a degree by Paolini's knowledge of the Greek sources. He notes that the same taxonomy of seven parts of music used by Fulgentius had also been promoted by Aristoxenus and Alypius. Moreover, he mentions that Zarlino had lent him the work of both authors in manuscript. (The manuscript in question was perhaps Venice, Biblioteca Marciana, Ms. gr. app. VI. 3, which contains Alypius' *Isagoge* and Aristoxenus' *Elementa harmonica*. These treatises are also in Marciana Ms gr. 322, but this manuscript was part of the bequest of Bessarion and thus already in the possession of the Marciana in the sixteenth century. Elsewhere Paolini also mentions having read a manuscript of Briennius at Zarlino's house.)³¹ Next, Paolini cites Phornutus' opinion that all ancient music unfolded from a basic seven intervals, but the reference is not drawn directly from Phornutus, but indirectly through Giovanni Pierio Valeriano's *Hieroglyphica* (1556).³²

Paolini's account of the excellence of the octave (the compass of *seven* intervals) and of the intervals within the octave may be based on the chapter on the octave in Fogliano's *De musica theorica* (1529), in which the famous line from Vergil is cited.³³ In any case, Paolini's list of consonant intervals encompassed within the octave is clearly drawn from Zarlino, though Zarlino's list itself is apparently based on another passage from Fogliano. These apparent echoes of Fogliano reflect the esteem for his work in Zarlino's circle. The Accademia Venetiana, in which Zarlino himself participated, planned to publish Italian translations of the music treatises of Fogliano and Jacques

³⁰ See for example C. Iulii Hygini Augusti liberti *Fabularum liber... liber I. F. Fulgentii Placiadis episcopi Carthaginensis Mythologiarum Libri III*, ed. Jacob Micyllus (Basel, 1549), 146.

³¹ Paolini, *Hebdomades*, 174-75: 'Alij Musici propius ad nostri Poetae sensum [175] harmoniam hanc coelestem accommodarunt, septem enim globis Planetarum, septem lyræ chordas respondere voluerunt, à quibus etiam acceptas contendunt. de qua re multa eleganter disputat Emanuel Briennius lib. 1. de Musica, quem nuper apud Zarlinum manuscriptum legi, qui etiam Nicomachus huius opinionis acerrimum defensorem citat in Enchiridio harmonices, & alij omnes ferè Græci, vt etiam Cyrus Georgius Pachymerius, quem ego manuscriptum domi habeo.'

³² Giovanni Pierio Valeriano, *Hieroglyphica sive De sacris Aegyptiorum literis commentarii* (Basel, 1556), Mm3v.

³³ Lodovico Fogliano, *De musica theorica* (Venice, 1529), fol. 16v.

Lefèvre d'Étaples, and Fogliano enjoyed great personal esteem in the Serenissima for his deep knowledge of Greek music theory.³⁴

Paolini's account of the modes follows ancient rather than medieval usage, relying on Ptolemy (*Harmonics* II.4.50-51) and his expositor Boethius (*De institutione musica* IV.15). Consequently, Paolini omits the hypomixolydian mode, giving a system of seven modes, not eight. Following Vanneo (*Recanetum* I.44), Paolini notes that the distinct identity of each of the modes is determined by the position of the two semitones. However, he makes an error in transcribing from Vanneo, again betraying a lack of technical understanding. Vanneo says that the interval of the octave is created by adding a *diapente* to a *diatessarou*; Paolini erroneously states that the octave is created by adding a *diapente* to a *diapason*, which is evident nonsense. However, when recapitulating the same point, this time drawing on Vicentino (*Lantica musica* I.11), Paolini states correctly that the octave is made from the combination of *diapente* and *diatessarou*.

Paolini finds yet other examples of the importance of the number seven in musical theory. He mentions that Vicentino (*Lantica musica* I.5) had spoken of the seven rules of the hand, or even of seven hands. The harmonic comma is divided into seven parts. According to Plutarch (*On music* 4.1134a-b; cf. Pollux, *Onomasticon* IV.66), the aulic nomos invented by Clonas had seven species. He cites a passage from Martianus Capella (*De nuptiis* IX.970) on the seven kinds of rhythm and poetic feet. And finally, he mentions that according to Zarlino, the modern method of tuning the monochord involved dividing the string a number of times into seven parts; Paolini thus deftly manages to co-opt Zarlino, whose harmonic theory is based so firmly on the importance of the number six (the *senario*), into the ranks of those who promoted the importance of the number seven.

Paolini then moves on to his next point. With the phrase 'obloquitur voces' ('he accompanies the voices'), Vergil meant to indicate that music is essentially and naturally mimetic. From Ficino's *De vita*, Paolini borrows the notion that music imitates human gestures, actions, and motions. But the most beautiful kind of imitation of which music is capable is the imitation of the human voice and discourse. (This is the most beautiful kind exactly because it is the most difficult; and according to Plato, what is beautiful is always hard.) Tibullus and Cornelius Gallus (*recte* Maximianus) describe the fingers of the lyre-player as eloquent, and the lyre itself as garrulous. In his commentary on Vergil, Servius examined the word *obloquitur*, which literally means 'to talk along with (or even *against*) someone else.' Vergil's choice of a word that suggests speech to characterize the sound of an instrument says much about his conception of the power of instrumental music to imitate discourse. Paolini rounds off this chapter with a summary:

Therefore this shall be the meaning of the verse for the present, and its sense in today's exegesis: Orpheus, the perfect musician, tempers the sounds of his lyre-strings in such a way that when he plays the lyre he imitates whatever he will, especially speech, such that he seems not to play so much as to speak, but in numbers, that is, in musical rhythms. We shall speak of this later if time allows; otherwise it will be adjourned to another day.³⁵

³⁴ Fenlon, 'Zarlino and the Accademia Venetiana', 84-87. It is not known if Paolini was also associated with the Accademia Venetiana.

³⁵ Paolini, *Hebdomades*, 64 (text given below in appendix).

We can only speculate whether the speech-like character of Orpheus' song to the lyre as envisaged by Paolini found a sympathetic hearing amongst the professional musicians of his day.

Paolini displays his knowledge of music theory (or at least of the discourse of music in ancient ethical writings) in a number of other places in the *Hebdomades*. Discussing ancient attitudes towards the purpose of music, Paolini notes that Aristotle suggested that music served first of all to instruct and to purge the morals; and besides that to provide diversion (*Politics* VIII.1341b). According to Zarlino, people do not generally learn music in order to perfect their intellect, but because music is an honourable pastime, conducive to a 'good and virtuous *habitus*.'³⁶ Elsewhere, Paolini relates how the ancients described the octave (the sum compass of *seven* diatonic intervals) as the most perfect interval, and that Zarlino had described how all other intervals derive from this one.³⁷ This passage suggests that Paolini had a certain familiarity with some technical aspects of ancient music theory, such as the difference between conjunct and disjunct tetrachords.³⁸ He also cites Aristoxenus as evidence that the *magadis* was the same thing as the plectrum of the lyre.³⁹ However, in his fixation with the number seven, Paolini sometimes misuses his authorities (such as Ficino's *Compendium in Timaeum*) by pulling off cheap arithmetical tricks to explain away the difference between the seven intervals in the octave and the nine Muses.⁴⁰

Besides his knowledge of technical music theory (however shaky) and the ancient discourse of the ethical power of music, Paolini was also interested in the mystical and magical power of music, and accordingly he draws directly on the musical magic of Marsilio Ficino. For example, he writes that the power of Orpheus' song derived from seven sources: 'firstly from musical sounds and the power of harmony; next from that of song; thirdly from that of astrology; fourthly from numbers or figures; fifthly from a

³⁶ Zarlino, *Le istituzioni harmoniche* (Venice, 1558), 8: '...colui il quale impara la Musica, non solo l'impara per acquistar la perfezione dell'intelletto; ma per potere, quando cessa dalle cure & negocij si del corpo, come dell'animo; cioè quando è in ocio, & fuori delle cottidiane occupationi, passare il tempo, & tratteneri virtuosamente... Il qual fine non solo è degno di laude & honesto, ma è il vero fine... Si debbe adunque imparar la Musica, non come necessaria: ma come liberale & honesta; accioche col suo mezo possiamo peruenire ad vn'habito buono & virtuoso, che ne conduca nella via de buoni costumi; facendone caminar ad altre scienze più vtili, & più necessarie; & ne faccia trappassare il tempo virtuosamente: & questo debbe essere la principale, o vltima intentione, che dire la vogliamo.'

³⁷ Zarlino, *Le istituzioni harmoniche*, 105: 'E vero, che non mancano quelli, che per le autorità addute de i Poeti vogliono intendere le Sette consonanze diuerse, contenute nella Diapason, che sono l'Vnisono, il Semiditono, il Ditono, la Diapente, l'Essachordo minore, il maggiore, & essa Diapason....'

³⁸ Paolini, *Hebdomades*, 101-2: 'Demonstrat præterea in hoc versu, quo genere concentus vteretur Orpheus, nempe omnium perfectissimo, qui dicitur διαπασών, quod Latine sonat ex omnibus, quam Musici ob præstantiam appellant passim Regiam Symphoniam, & consonantiarum Reginam Ἀρχισυμφωνίαν, seu Ἀρχοφωνίαν, [102] à cuius diuisione omnes alias oriri consonantias, & interualla demonstrat Zarlino præstantissimus vir in sua Musica, omnium esse causam, atque mensuram, qui maximè lyræ septichordi conuenit, quia etiam in ipso sunt septem tantum interualli sonorum, & quemadmodum in septichordi lyra octonarius etiam numerus continetur, nam constat ex duobus tetrachordis, quæ per συνάφην in media chorda coniunguntur, vt si quarta chorda idest media bis pulsetur, quodammodo eadat octochordum: sic in diapason octo sunt voces, & septem tantum comprehuntur interuallis.'

³⁹ Paolini, *Hebdomades*, 73: 'Præterea pectis idem esse dicitur cum magadi, quemadmodum testatur Menechmus, & Aristoxenus Musicus, licet alij differre dicant.'

⁴⁰ Paolini, *Hebdomades*, 146-47: 'Ea autem ratione, hic Musæ nouem positæ pro septem, qua nouem illi orbes Coeli, & globi septenario comprehenduntur, in quibus ipsæ etiam Musæ à Poetis, à Platone etiam, & Martiano Capella dicuntur-[147]tur residere, nam ex illis fieri dicunt symphoniam diapason, quam constare diximus, & fieri ex septem distinctis interuallis sonis, quæ etiam ipsa diapason horum declarat coniunctionem numerorum, nam ipsa cum sit ex septem interuallis, conflatur tamen ex quatuor, & quinque, nempe ex diatessaron, & diapente consonantijs, vt veteres omnes Musici docent, quod declarat Ficinus in Timæum, vbi admonet neminem turbari debere, quòd dicat hanc fieri ex diatessaron, & diapente, quæ faciunt nouem, cum diapason octo tantum habeat sonos septem interualla, sex tonos, dicit enim in compositione consonantiarum coniungi sonos propter septenarij terminum, quem præterire non licet...'

natural force or prerogative; sixthly from magic or enchantment; seventh from a mixture of power, from the aforementioned, either singly or in combination, from many or even from them all.⁴¹ While Paolini's taxonomy might be a little messy, it says much about his fascination for the occult powers of music. In the second chapter of the third book, he argues that the human person is a perfect compound of soul and body, in the same way as the *diapason* in music is a compound of *diapente* and *diatessaron*. This leads him to an exploration of the numerical significance of the number four, much of which is drawn from Ficino's *Compendium in Timaeum*. He makes much of the fact that there are four elements that correspond to the four bodily humours, and these in turn create the four physical complexions. Macrobius notes that there are four dimensions to bodies (the point, line, surface, and solid). Ficino noted that there are four limits in nature: substance, quantity, quality, and motion (*Compendium in Timaeum* XX). Paolini also writes, relying again on Ficino (*Compendium in Timaeum* XXII), that there are four principles in metaphysics: the seminal power, the power of growth, the adult form, and the composite. (Paolini has made another bad error here, giving the four principles of *physica*; the four principles of *metaphysica* are essence, being, potentiality, and act [*essentia, esse, virtus, actio*], as Ficino states quite clearly.) From these examples, Paolini argues that it is therefore clear that our physical constitution, based squarely on the number four, is built on the same principles as the natural world.⁴²

Paolini also annexes Ficino's theory of divine inspiration. From Ficino's introduction (*argumentum*) to Plato's *Ion*, he borrows a series of correspondences between the planetary intelligences and the Muses through whom inspiration descends to the poet and his audience; for a fuller exposition of this theory, he refers his hearers and readers to Zarlino's *Istitutioni* (II.29) and Macrobius' *Commentary on Cicero's Dream of Scipio*.⁴³ Perhaps one of the most interesting aspects of Paolini's work is the fact that

⁴¹ Paolini, *Hebdomades*, 189: '... primum Musici soni, & harmoniæ vi, deinde cantus, tertio Astrologiæ, quarto numeris, seu figuris, quinto vi, seu prærogatiua naturali, sexto Magia, siue fascino, septimo admixtionis potestate, hisque vel singulis, vel coniuictis, tum multis tum etiam omnibus.'

⁴² Paolini, *Hebdomades*, 114-15 ('Ex animæ, & corporis coniunctione tanquam ex diapente, & diatessaron in Musica effici diapason; & primum animam efficere diatessaron, corpus diapente ostenditur, item contra, & prima affertur de humana Musica versus explicatio'): 'Primum igitur Humanæ harmoniæ genus constituitur ex animæ, & corporis coniunctione, altera enim diatessaron efficit, altera diapente, quæ duæ symphoniam constituunt diapason, idest vniuersam hominis Musicam ex septem discrepantibus constitutam vocibus, atque numeris, de quibus in hoc versu loquitur Maro *Obloquitur numeris spetem discrimina vocum*. hinc septenarius, qui conficit diapason appellatur à Philosophis rationalis fabricæ numerus. Diapente igitur fit ex qua-[115]tuor; Hic porrò numerus corpori maximè conuenit, nam primum ex quattuor conflatur elementis, vt omnibus exploratum est, quorum vicem gerunt, vicariamque operam in humano corpore quattuor humores sanguis, pituita, atra bilis, & flaua, quattuor item (ut aiunt) complexiones, & quattuor effectus, vt nonnulli volunt, *quattuor sunt* (vt ait Ficinus) *apud Metaphysicum elementa, seminaria naturæ virtus, pullulatio naturalis, adulta forma, atque compositum* [Ficino, *Compendium in Timaeum* XXII, in *Diuus Plato* [i.e., *Platonis Opera*, trans. Ficino; and Ficino, *Theologia Platonica*] ([Venice], 1491), fol. 244v]... quattuor terminis circumscribitur corpus, auctore Macrobio, puncto, linea, superficie, soliditate [Macrobius, *Comm. in Somnium Scipionis* I.6.35], item quattuor naturæ terminis, quos statuit in Timæo Marsilius cap. 20. *substantia, quantitate, qualitate, motu* [Ficino, *Compendium in Timaeum* XX, fol. 244v], solusque hic numerus verè solidus dici potest, & debet, vt mathematicis rationibus, si locus esset, comprobare facile possemus... Quod etiam facile apparet ex ipso mundano corpore, ad cuius exemplar, vt habemus ex Platone, nostrum confictum est, nam in illo quoque quattuor esse elementa volunt Platonici, & Pythagorici Geometrica, musicaque ratione coniuncta, vt numquam possint pugnare, vt apud nos videmus vsu uenire, de qua re multa Mars. in Timæum.'

⁴³ Paolini, *Hebdomades*, 148: 'Quam nostram de his Musis sententiam ex Hesiodo valde comprobatur Marsilius Ficinus in Ionem Platonis, vbi probat furorem Poeticum ab ipsis Musis proficisci, sic enim ait suis singulas Musas spheris accommodans. *Calliope musa vox est ex omnibus resultans spherarum vocibus, Vrania Cæli stelliferi per dignitatem sic dicta. Polymnia Saturni propter memoriam rerum antiquarum, quam Saturnus exhibet, & siccam, frigidamque complexionem, Terpsichore Iuppiter, salutifer enim Choro hominum, Clio Martis propter gloriæ [sc. gloriæ] cupiditatem, Melpomene Solis, quia totius Mundi temperatio est, Erato Veneris propter amorem, Euterpe Mercurij propter honestam in*

he is one of the few sixteenth-century writers consciously to adopt Ficino's theory of magically efficacious planetary music. Although Paolini explicitly disavows dangerous demonic magic as something forbidden by the church, his entire conception of magic was influenced by Trithemius, Cornelius Agrippa, and Paracelsus, and is thus somewhat blacker than Ficino's spiritual magic.⁴⁴ Whether this actually meant that Paolini was an active practitioner of magic (whether natural or demonic) is difficult to decide; Cesare Vasoli for one has warned against assuming too much.⁴⁵ Although Paolini was aware of Copernicus' radical rearrangement of the sun and the planets (albeit only through his reading of Francesco Barozzi rather than by direct acquaintance with *De revolutionibus*), it made no discernible difference to his conception of planetary influences.⁴⁶

The operating principles of Paolini's musical magic are the following: that the heavens move according to a kind of harmony; that the lyre of Orpheus was constructed to imitate the harmony of the heavens; and that everything in the sublunary world is subject to the influences of the stars and planets.⁴⁷ Accordingly, Paolini asserts that the magical operant must create a kind of music which combines the qualities of the various heavenly bodies whose influences he wishes to attract. This section comprises a cento of passages from the third book of Ficino's *De vita*, and includes a passage in which Ficino compares the skilful combination of heavenly influences to the mixing of compound medicines like theriac. (The confection of theriac and other semi-toxic remedies from snake venom was a subject with which Paolini would occupy himself more fully in 1604.)⁴⁸ When sounds are correctly chosen according to the norm of the stars and combined, the result will possess something of the power of the stars by participation, just like the sound of a stringed instrument reflected off a wall. 'This power', Paolini contends, 'called down from heaven, can immediately influence and calm the mind, can impel and move it to anger, then calm and tame it, just as the common stories tell of Timotheus, that he immediately incited Alexander to arms, and then, changing his tune, called him back from them.'⁴⁹

grauibus rebus delectationem, Thalia Lunæ propter viriditatem eius humore rebus exhibitam [Ficino, *Argumentum in Ionem*, in *Diuus Plato*, 60r], quarum omnium ordinem si quis velit subiecta figura quasi ea, quæ oculis cernuntur, & ipsa manu contingi possunt, agnoscere, legat Zarlinum in secunda parte Institutionum, c. 29. sed maximè omnium hanc rem ostendit Macrobius, qui lib. 2. c. 3. in somnium Scipionis citato ipso etiam Hesiodo, sic ait: *Theologi quoque nouem Musas octo spherarum musicos cantus, & vnâ maximam concinentiam, quæ constat ex omnibus esse uoluerè ...*

⁴⁴ A fuller discussion of Paolini's adaptations of Ficino's musical ideas from *De vita* may be found in Walker, *Spiritual and Demonic Magic*, 126-44.

⁴⁵ Vasoli, 'Il tema musicale e architettonico della "Harmonia mundi"', 205.

⁴⁶ Paolini, *Hebdomades*, 175: '...maximum enim est inter Astrologos, & Philosophos veteres discrimen in planetarum ordine, hisque quatuor potissimum primis, aliter enim locabat Metrodorus, & Crates, aliter Democritus, aliter Alpetragius, aliter Aegyptij, & Plato, aliter Aristoteles, aliter Aristarchus Samius, & Nicolaus Copernicus, de quorum omnium opinionibus Barroccius [sic] in 1. Cosmographiæ [Francesco Barozzi, *Cosmographia in quatuor libros distributa* (Venice, 1585), 9]'

⁴⁷ Paolini, *Hebdomades*, 190: 'primumque hoc erit, quod paulo ante comprobauimus, quòd cælum mouetur harmonia, & potissimum ipsi planetæ, ad quorum concentus imitationem constructam fuisse lyram diximus. secundum, quòd omnia inferiora subiecta sunt planetis, atque à stellis, vim accipiunt.'

⁴⁸ Fabio Paolini, *De viperis in trochiscorum apparatu pro theriaca adhibendis: disputatio. Ad præclarissimum virum Hieronymum Donatum Patritium Venetum* (Venice, 1604); see also the reply by Giovanni Maria Zonca, *Pro excellentissimo philosophorum ac medicorum Veneto collegio apologia de viperis in trochiscorum apparatu nuper ab eo reiectis, aduersus Fabii Paulini, Vtinensis medici ac philosophi, disputationem* (Venice, 1605).

⁴⁹ Paolini, *Hebdomades*, 197-98: 'Hæc autem præparatio fit per harmoniam, cum enim cælum moueatur harmonia, harmonica fit ratione constitutum, & harmonicis motibus, atque sonis omnia conficiat, meritò non homines solum, sed omnia inferiora, quæ illis parent, harmonica ratione ad illa capienda præparantur. Quare quemadmodum ex certa herbarum, & uaporum compositione confecta conflatur communis quedam forma, uelut harmonia siderum muneribus, & quasi dote ornata [Ficino, *De vita* III.21, ed. in *Three Books on Life*, ed. and trans. Carol V. Kaske and John R. Clark

Paolini borrowed Ficino's instructions for identifying the kind of music that was magically most efficacious; his reception of Ficino's musical magic seems to be mediated in part by his reading of the Venetian Franciscan Francesco Zorzi, as Cesare Vasoli has pointed out.⁵⁰ This theory was based on the premise that music possesses innate mimetic capacities that can instantly excite the kinds of emotions expressed in the music in performer and hearer alike. First of all the magical operant must therefore identify what kind of powers and effects belong to each star, planet, or planetary aspect. These were thus to be integrated into sounds and words (as bearers of meaning), paying particular attention to include the kinds of words and meanings corresponding to a particular heavenly body whose power the operant wished to attract, and to avoid those inimical to that star, planet, or celestial event. Next, the magical operant was to observe and imitate the kinds of music, speech, dances, habits, and activities spontaneously produced by those people naturally believed to stand under the influence of a particular planet, and again to combine these with texts bearing appropriate significations. Most importantly, the operant was to make his or her *spiritus* conform as closely as possible to the influences of particular heavenly bodies or events, for the *spiritus* attracted into the singer the powers of whatever star or planet it corresponded to, 'either according to its signification, or even according to the imaginations of the affects.' Paolini even reproduces Ficino's unusual assertion that while Jupiter, Venus, and Mercury all possess pleasant, melodious voices and are guided by the Sun, the most musical planet, Mars and Saturn by contrast have not melodies but simply harsh voices.⁵¹ Paolini was one of the few sixteenth-century writers—apart from the astrologer Johannes Rosenbach and the magician Heinrich Cornelius Agrippa—to adopt this detail of Ficino's astrological

(Binghamton, 1989), 356], ut in *Theriaca*. quæ mirificam habere uim existimatur aduersus aduentantem senectutem, atque uenenum tribus in ea ad idem pariter consentientibus uirtutibus, cælesti scilicet per artificium opportuna admixtionis accersita, altera item cælesti, sed partibus eius naturaliter insita, tertia demum elementalī [Ficino, *De uita* III.12, 302]. sic ex tonis primo quidem ad siderum normam delectis, deinde ad eorum exemplar, & conuenientiam inter se compositis, communis quasi quædam harmoniæ forma colligitur, & in ea cælestis etiam uis suboritur, cœ-[198]lesti illa huic similiter temperatę respondentī harmonię, quod naturaliter contingere uolunt è Cælo Iamblicus, atque Plotinus non secus ac ex cithara neruis reboatans sive tremor, vel ex opposito pariete respondet Echo [Ficino, *De uita* III.21, 360]. quæ quidem uirtus cœlitus deuocata mox possit animos flectere, delinire, ad iram impellere, & mouere, rursusque sedare, & cohibere, ut de Timotheo constat Alexandrum ad arma subito incitare, eundemque mutato concentu reuocante.'

⁵⁰ Vasoli, 'Il tema musicale e architettonico,' 204-5.

⁵¹ Paolini, *Hebdomades*, 199-200: 'Tres autem dicunt Astrologi esse regulas cognoscendi conuenientiam tonorum cum sideribus teste Ficino. prima est indagare, quas in se uires, quosue ex se effectus quælibet habeat stella, sidus, & aspectus, quę ferant, quę auferant, atque in sonis, & uerborum significationibus hæc inserere, reijcere quę auferunt, & detestari, probare uerò quę ferant. Secunda considerare, quę stella, cui loco, vel rei, vel homini maxime dominetur, deinde observare qualibus passim sonis atque cantibus illi homines utantur, & ex quo genere harmonię quælibet à natura res sit constituta id est qua proportione, & quomodo, ut ipse similes quasdam musicus adhibeat, vnà cum significationibus, quę sideribus eisdem studet exponere. Tertia animadvertere situs, aspectusque stellarum quotidianos, atque sub his explorare ad quales potissimum sermones, cantus, motus, saltus, mores, actus incitari homines, & res singulæ, ad quos effectus soleant, ut similia pro uirili in cantibus adhibeat, & imitetur cælo simili placituris, similemque suscepturis influxum. [200] nam sonus quemadmodum & cantus, est omnium potentissimus imitator, qui omnia humana imitatur, & adeo uehementer, ut ad ea agenda tum cantantem, tum audientem impellat. Eadem quoque uirtute quando cælestia imitatur, hinc quidem spiritum nostrum, resque alias ad cælestem [influxum], inde uerò influxum ad spiritum prouocat mirifice [Ficino, *De uita* III.21, 356-358], & cuiuscunque stellę responderint, vel secundum eius significationem, tum etiam secundum imaginationes affectum, uirtutem trahit in cantantem. Quatuor autem planetę in Musica concentus regunt Apollo, Iuppiter, Venus, & Mercurius, sed à primo id est Apolline tota Musica dependet, quare illi quoque est tributa. Reliqui uerò tres quatenus cum illo concordant Musici sunt, & uoces habent solum non cantus. Hos igitur quatuor sibi concilians Musicus, & congruus adhibens concentibus eorum sonos efficit, ut cum eorum more opportunè canendo, & sonando clamet, respondeant protinus, vel instar Echo, vel sicut uisionum in cithara tremat, quoties vibratur altera chorda eodem temperata concentu [Ficino, *De uita* III.21, 360].'

music theory.⁵² After dozens of pages of dense prose bristling with classical citations, Paolini summarized his music theory as follows:

But at length, having laid the foundations of our proposed question, let us proceed to the matter at hand; for this reason then we say that Orpheus drew rocks and woods; since he was an excellent astrologer as well as an excellent musician, and had a perfect command of both arts, he tempered and combined the sounds so appropriately that he imitated the harmony of the heavenly stars as best he could, and brought his music to such a state that he attracted every one of them towards himself, and called down influences and power that allowed him to draw them towards him through compulsion, and to tame them.⁵³

The Reception of Paolini's Work

Paolini's work was quite widely received. Roberto Titi (1590), a friend of Paolini, referred his readers to the *Hebdomades* to discover why the shepherd's pipe has seven holes.⁵⁴ Antonio Rizzardi (1591) quoted the *Hebdomades* many times in his commentary on the ancient myths, in which he sought, with perhaps even more ambition than Paolini, to uncover the teachings of the Ancient Theology in the stories of the gods handed down from antiquity, to identify the characteristics of the language of Adam, and to reveal the riddling mysteries of alchemical imagery.⁵⁵ In his book on bells, Angelo Rocca cited a story related in Paolini's *Hebdomades* about a magical bell in the town of Velilla de Ebro, Zaragoza, which allegedly rang itself whenever any danger threatened Christendom.⁵⁶

⁵² Johannes Rosenbach (ab Indagine), *Chiromantia* (Strasbourg, 1531), 11: 'Saturnus tardam dat [voce], atque obstreperam. Mars stridentem. Iupiter sonoram, resonantem, & lenem. Venus enervatam, mollem, foeminiuiram, suauem. Idem faciunt So, & [sc. Sol, &] Mercurius.' Heinrich Cornelius Agrippa, *De occulta philosophia libri tres* (Cologne, 1535), 158 (II.26).

⁵³ Paolini, *Hebdomades*, 200-1: 'Sed tandem iactis fundamentis questionis propositae ad rem nostram accedamus, hac igitur ratione dicimus potuisse Orpheum saxa, & silvas trahere, quod cum esset optimus [201] Astrologus, idemque Musicus utramque perfectissime callens artem, ita opportunè temperaret, & misceret sonos, vt caelestium siderum, quam optimè ipse intellexeret, imitaretur harmoniam, & eam ad hanc ita prouocaret, vt eorum omnem in se traheret, ac deuocaret influxum, atque vim, qua fretus quæcunque vellet, pulsando traheret, ac deliniret. Vel dicendum, quod cum optimè noscet, qua proportione, & quo concentu vnumquodque esset à natura compositum, cuique stellæ pareret, essetque subiectum, musicales rationes eisdem accommodans, & stellis earum ad motum alliceret inanima per vim stellarum, quam in illis latentem externa hac harmonia, quasi produceret... Vel etiam, ea de causa id factum possumus dicere, quod animam Mundi à summo illo Opifice harmonicis numeris compositam, excitaret harmonia, qua valde illa delectatur, adeo vt cum illa in omnibus insit rebus, & vigeat, vt Platonici omnes volunt, & Plinius videtur confirmare...'

⁵⁴ M. Aurelii Olympii Nemesiani Carthaginensis. *T. Calphurnii Siculi Bucolica. Nuper à situ, & squallore vindicata, Nouisque Commentarijs exposita Opera, ac studio Roberti Titti Burgensis* (Florence, 1590), 116: 'cur autem fistula septem cannis compingeretur, doctam, atque abstrusam rationem affert summus amicus meus, idemque vir, si quis alius eruditissimus Fabius Paulinus in suo illo preclaro opere, quod *Hebdomades* inscripsit...'

⁵⁵ *Commentariorum symbolicorum tomus secundus Antonio Ricciardo Brixiano auctore. In quo explicantur arcana pene infinita Ad mysticam naturalem, & occultam rerum significationem attinentia. Quae nempe de abstrusione omnium prima Adamica lingua: Tum de antiquissima Aegyptiorum, caeterarumque Gentium Orphica Philosophia: Item ex Sacrosancta veteri Mosaica, & Prophetica, nec non Coelesti noua Christiana Apostolica, & Sanctorum patrum Euangelica Theologia, deprompta sunt. Praeterea etiam Celeberrimorum vatum figmentis, ac denique secretissimis Chimistarum inuolucris conteguntur. Quae nunc primum in lucem edita sunt, instructaque duplici Indice tam significantium vocum omnium, quam ex illis significatarum* (Venice, 1591), fols. 24r, 63v, 75v, 77r-79r, 80v, 81v, 95r, 96v, 107r-v, 158r, 299r.

⁵⁶ Angelo Rocca, *De campanis commentarius* (Rome, 1612), 63-64: 'De spontaneo eiusdem Campanae sonitu admirando faciunt mentionem Scriptores item alij, hoc est, Pe-[64]trus Gregorius Tholosanus To. I. de Republica lib. 12. cap. 13. num. 25. Hieronymus Curita, magnus Historicus Regni Aragonum lib. 10. cap. 93. & lib. 14. cap. 27. ad calcem. Fabius Paulinus libro quarto Hebdomadum cap. 7. Rocca is citing Paolini, *Hebdomades*, 215: 'Sensu quoque carentia quaedam sortita sunt priuilegia, vt campana illa in Hispania in oppido Vililla (quam miraculorum campanam ob id appellant)

Pietro Andrea Canoniero reprinted more than twenty pages from the *Hebdomades* in his commentary on Hippocrates (1618), considering this work most useful for an adequate understanding of both medicine and politics: 'Physicians often call the seventh day the day of bad omen and of death, since on that day patients sometimes die; likewise politicians consider the same day to be that of a bad end, because on that day leaders are sometimes accustomed to die, as Fabio Paolini also says.'⁵⁷ The Jesuit physician Juan de Pineda (1609) made use of Paolini's explorations of numerology in the *Hebdomades* when commenting on the various stages of pregnancy and embryology.⁵⁸ For Joseph du Chesne (1608), Paolini was one of 'des Medecins les plus celebres de nostre siècle.'⁵⁹ The *Hebdomades* was cited by the Jesuit Théophile Raynaud in his massive treatise on natural theology (1622).⁶⁰ Gabriel Naudé, in his account of scholars suspected of dabbling in magic (1653), mentioned Paolini amongst those who attempted to harmonize the Orpheus myth with Christianity.⁶¹ Cardinal Giovanni Bona recommended Paolini's exposition of the mystical meaning of music to the readers of his treatise on the psalms (1663).⁶² And as late as 1725, the Spanish Jesuit Diego de Quadros praised Paolini in his commentary on the book of Revelation, for providing the fullest exploration of the various significances of the number seven, which plays such an important role in John's apocalyptic vision.⁶³

Yet not everyone was equally enthusiastic about Paolini's work. In his *Disquisitionum magicarum libri sex* (1599-1600), the Jesuit Martín del Río, professor of theology at Leuven, was quite critical of Platonic number mysticism.⁶⁴ One of the

que per se pulsatur cum aliquid mali est Christianę Reipublicę euenturum.' Paolini's source is probably Leonardo Vairo, *De fascino libri tres* (Paris, 1583), 193.

⁵⁷ Petri Andrea Canonherii patritii Romani philosophiæ medicinæ ac sacrę theologiæ doctoris In septem Aphorismorum Hippocratis libros, Medicæ, Politicæ, Morales, ac Theologicæ Interpretationes. Volumen primum. Materias Politicas complectens (Antwerp, 1618), 844: 'Sicut medici diem septimum mali augurij & exitus nonnumquam esse affirmant, quia in eo ægroti aliquando moriuntur: sic politici eundem diem esse mali exitus considerarunt, quia in eo principes aliquando mori consueverunt, vt enim Fabius Paulinus...' He then (844-46) cites Paolini, *Hebdomades*, 281-283. See also 745-46: 'Sicut numerus septenarius apud medicos est maximi mysterij, vt in eorum libris legitur: Sic apud politicos virtutum omnium mysteria complectitur, vt prolixè prosequitur Fabius Paulinus cuius doctrinam vt ad rem [746] politicam facientem, hic ponimus.' Following this introduction, on 747-57, Canoniero cites the entirety of *Hebdomades* V.5 (257-77).

⁵⁸ Juan de Pineda, *De rebus Salomonis regis* (Lyons, 1609), 34, 42.

⁵⁹ Joseph du Chesne, *La peste recogne et combatue, Auec les plus exquis & souverains remedes empruntez de l'vne & de l'autre Medecine* (Paris, 1608), 55-56; cf. Joseph du Chesne, *Pestis Alexiacus, sive Luis Pestiferę fuga* (Paris, 1608), 51-52.

⁶⁰ Théophile Raynaud, *Theologia naturalis, sive entis increati et creati, intra supremam abstractionem, ex Nature lumine inuestigatio; ubi scalæ a visibili creatura ad deum, seorsim editæ, nunc suo loco restitutæ* (Lyons, 1665), vol. 5, 16: 'Et copiosè etiam, Fabius Paulinus lib. 7. hebdom. cap. 7 ostendens omnes antiquos, hanc allegoricam Theologiam adamasse.'

⁶¹ Gabriel Naudé, *Apologie pour tous les grands personnages qui ont esté faussement soupçonnez de magie* (The Hague, 1653), 172-73: '... beaucoup de Docteurs Catholiques ont esté en opinion qu'elle pouvoit grandement servir pour refuter la religion des Anciens & confirmer [173]tion du Christianisme, entre lesquels ont esté S. Augustin, Eusebe, Marsile Ficin, Picus, Mosellanus, Fabius Paulinus, & le docte Theologien Steuchus, Eugubinus [sic] qui a poursuivi & recherché curieusement le rapport & paralles [sic] que l'on pouvoit faire entre la doctrine de Moysse & celle de cet Orphée, qu'il dit avoir esté le premier Philosophe & Theologien des Grecs...'

⁶² Giovanni Bona, *De divina psalmodia, eiusque causis, mysterijs, et disciplinis, Deque varijs Ritibus omnium Ecclesiarum in psallendis Diuinis Officijs, tractatus historicus, symbolicus, asceticus. Sive psallentis ecclesię harmonia* (Paris, 1663), 415.

⁶³ Diego Martín de Quadros, *Palæstra biblica, sive Enchiridion neotericorum pro sacris codicibus rite tractandis, et difficultatibus Scripturę Sacrę scholasticè discutiendis. Tomus primus* (Madrid, 1725), 308: '... non verò determinatos, sed pro more scripturarum indefinitos quoque ad numerum, eo quod septenarius numerus in scripturis multitudinem significet, vt passim tradunt interprete, & copiosius Fabius Paulinus in libro, quem scripsit de septenario.'

⁶⁴ Further on Martín del Río, see the introduction to *Martin Del Río: Investigations into Magic*, ed. and trans. Peter G. Maxwell-Stuart (Manchester, 2000); Juan J. Martos, 'La edición de los fragmentos trágicos de Ennio de Martín del Río', in *Humanistica Lovaniensia* 55 (2006), 161-82.

questions del Río investigated was whether there is any magical force inherent in arithmetical or musical numbers. He denied this, and regretfully admitted that the Pythagoreans and the Platonists ‘stank’ with such superstitions. By contrast, del Río’s own conclusion was simple and direct: ‘Number, *qua* number, contains no physical power of operation, either natural or supernatural.’⁶⁵ While working on the second edition of his work (1603), del Río encountered Paolini’s *Hebdomades*, and to his revisions he added several pages of patient criticism of Paolini’s work. According to del Río, Paolini’s Platonizing explorations of the power of the number seven exceeded the bounds of Catholic orthodoxy, and he warned his readers to guard against being infected by Paolini’s unbounded and dangerous superstition. Del Río noted the link between music and mathematics in this mystical world-view: the same kinds of powers that poets falsely attributed to music were attributed by the Platonists to number.⁶⁶ Del Río was also careful to distinguish between regular music and whispered magical spells; the former has natural power, while the latter draw their power from demons.⁶⁷ According to del Río, Paolini would have done better for himself and his readers, after presenting all this material, to have applied an ‘antidote from the apothecary of Catholic theology.’⁶⁸ Del Río also criticized Paolini for particular points, such as bending Vicentino’s words to make them sound as though they were intended to apply to the fabulous effects attributed to the music of Orpheus and Amphion rather than to the real effects of music recorded by the ancients.⁶⁹ Perhaps most fatally, del Río attacked the physical and philosophical basis of Paolini’s musical magic:

How could the stars possess such power to bring about effects, that they should make a musical sound that can bring about all these things through its command, even when acting on things so different in species and genus as the wind, rivers, mountains, woods, rocks, and demons? How is it possible that the same sound of one lyre could attract such different things? It is no use to resort to sympathies and antipathies, for these do not flow down from the stars, are not rained down from the celestial orbs, but are the

⁶⁵ Martín Antonio del Río, *Disquisitionum magicarum libri sex*, 3 vols. (Leuven, 1599-1600), vol. 1, 48 (lib. I, cap. IIII, q. 2, ‘An numeris arithmetiis aut musicis magica vis vlla insit?’): ‘Patres Orthodoxi passim de numerorum connexionione multa philosophantur: ijdem tamen dumtaxat in hac proportione & connexionione numerali diuina quaedam mysteria contemplabantur, nec vllam vim naturalem vel Magicam numeris ipsis, qua tales, tribuebant. Pythagoræi verò & Platonici, putidè superstitioni hac in re fuerunt. Sit Conclusio, Numerus, quâ numerus est, nullam neque naturalem, neque supernaturalem vim operandi physicam continet.’

⁶⁶ Martín Antonio del Río, *Disquisitionum magicarum libri sex*, 3 vols. (Mainz, 1603) vol. 1, 33-34: ‘Videndum etiam ne quid vanæ superstitionis haurias ex libro Fabii Paulini. *De numero Septenario*: nam quæ ille, non tam ex sua, quàm Platoniorum sententia, plurima retulit, ea Catholicæ Theologiæ parum sunt consentanea, vt quod illi musicis numeris Magicam vim satis apertè tribuerunt. Nam quæ de vi musices commenti poëtæ, illa Platonici in Numerorum, qua numeri, virtutem transtulerunt. [34] Scripserant de Orphei musicâ, illam dæmonibus, animantibus brutis, saxis, arboribus imperasse.’ All subsequent references to this work are to this edition.

⁶⁷ Del Río, *Disquisitionum magicarum libri sex*, vol. 1, 34: ‘Inprimis arbitror, distinguendum inter modos musicos, & susurros magicos, seu mala carmina: his nullam vim inesse naturalem, sed dæmonem ex pacto serpentes soporare, vrnas diffringere, & quæ talia facere: illis vim physicam inesse. Vt verò intelligamus, quæ & quanta insit, rursus distinguendum inter ea, quæ sensu prædita, & quæ sensus expertia. nam nihil dubito animalia sensu auditus prædita, musicis modis capi posse, & eatenus admiserim quæ de miris musices effectibus adferunt prædicti poëtæ, & vt ipse ait, *senilem recitant fabulam* Martianus Capella *lib. de Musica*. Nam quod Fabius Paullinus [*sic*] ea vult vltèrius obtinere, non credo...’

⁶⁸ Del Río, *Disquisitionum magicarum libri sex*, vol. 1, 35: ‘Prudenter hoc & cautè, sibi: melius etiam aliis cauisset, si postquam poëtarum illa & Platoniorum deliria, tam diligenter & calidè aliquot capitibus proposuerat; censuram singulis seu antidotum ex Catholicæ Theologiæ apotheca apposuisset, ne phaleratis illis dictis minùs eruditi decipiantur.’

⁶⁹ Del Río, *Disquisitionum magicarum libri sex*, vol. 1, 35: ‘Primum, c. 5. citat poëtæ, & quos citauit scriptores Ethnicos; quibus quatenus credendum, non repeto. Nec Nicolai Vicentini musici verba pertinent ad fabulosa illa de Amphione & Orphee; sed ad veros affectus, quos veteres memorarunt.’

consequence of the differences between things and specific forms.⁷⁰

Del Río did not simply dismiss Paolini's ideas out of hand, but tried to show that the philosophical reasons he had adduced for them were insufficient.

One part of Paolini's book that del Río found particularly objectionable was the passage (*Hebdomades* IV.6) in which he likened the desirable combination of sounds to a favourable combination of drugs in a complex medicine. Del Río found the idea of medicines prepared according to astrological principles inherently problematic; was the druggist to pick the herbs at the right moment, or mix them at the right moment, or perhaps both? If he were to wait for precisely the right time, then the entire Platonic year would have passed, and the natural power of the herbs would have dispersed long before. And what if an unforeseen contrary quality descended at the same time as the desired quality? In short, del Río considered the notion of astrologically propitious medicine a 'Platonic chimera', a figment of the imagination.⁷¹ Del Río also rejected Paolini's instructions on attracting and combining propitious powers by music, which he had borrowed from Ficino, as 'a kind of vain cover or wrapping for illicit magic.'⁷² And besides, he tutted, it is simply ridiculous, unworthy of a philosopher, to believe that things devoid of sense could be moved by a voice singing.⁷³

Del Río then set about systematically demolishing each of the seven reasons that Paolini had adduced to explain the miraculous effect of Orpheus' song. 1) Paolini's assertion that Orpheus' song gained its power from the heavens was based on two false premises: firstly, it is contingent on the existence of a world soul pervading all things, structured according to harmonic numbers; secondly, it presupposes that the heavens are animated. Both these assertions had been denied by the theologians.⁷⁴ 2) Del Río denied Paolini's assertion that song is endowed with force both by virtue of its sound, and also through the occult force residing within the words. Rather, he ought to have

⁷⁰ Del Río, *Disquisitionum magicarum libri sex*, vol. 1, 35-36: 'Quæ potest esse tanta vis efficacæ [36] siderum, vt in res adeò differentes specie ac genere; ventos, fluuios, montes, siluas, saxa, dæmones; musicum sonum faciant efficaciter hæc omnia imperio quodam operantem? quo pacto idem sonus vnus citharæ tam diuersa potuit attrahere? frustra confugas ad sympathias & antipathias: nam hæ non defluunt ex sideribus, non depluuntur ab orbibus cœlestibus, sed ipas rerum differentias & specificas formas consequuntur.'

⁷¹ Del Río, *Disquisitionum magicarum libri sex*, vol. 1, 37: 'In quibus verbis congeriem quandam video falsarum suppositionum. I. Quod per astrologicas obseruationes vult theriacam & cetera medicamenta componi & admisceri, quæro quo tempore pharmacopæo sit astrorum iste situs considerandus? an herbarum legendarum, an miscendarum, an vtroque? si vtroque, annus Platonicus ille magnus est expectandus, & interea virtus herbarum emarcescet. Si legendarum; atqui quando miscébuntur, fors erit influxus contrarius: si miscendarum; non vno die, sed sæpe multis hæc commistio fit, deinde qui fieri potest, vt cum tanta sit diuersitas, imò & contrariæ quandoque qualitates herbarum miscendarum, vnus & idem cœli influxus vno tempore, idem tribuat singulis quod singula requirunt, & quod conueniat vniuersis? Item communis illa forma, est chymæra tantum Platonica, & quoddam ens rationis, nusquam subsistens vel existens: vt etiam prima illa vis cœlestis dependens à certa dierum, & mensium, & annorum obseruatione superstitiosa.'

⁷² Del Río, *Disquisitionum magicarum libri sex*, vol. 1, 38: 'Hactenus illi: quæ omnia nos, vt futilia & magiæ vetitæ quædam tegmina & inuolucra, reiecimur capite 3. quæst. 1. & capite 4. quæst. 1.'

⁷³ Del Río, *Disquisitionum magicarum libri sex*, vol. 1, 38: '...quoad res sensus expertes, cantu aut voce mouendas, vt docui, ridicula, & indigna philosophis est censenda.'

⁷⁴ Del Río, *Disquisitionum magicarum libri sex*, vol. 1, 38: 'Primus est id fieri potuisse vi ipsa musices cœlorum, vt dixi, influxum eiciente, deducente attrahente.] Hic modus nititur duabus falsis hypothesibus: scilicet, esse quandam communem mundi animam, harmonicis numeris compositam, res singulas peruadentem, quæ musico concentu delectetur. item cælum & sidera esse animata anima rationis compote, & quæ ira cocitetur, & voluptate sonora demulceatur. Quæ cuncta à Theologis improbari, ipsemet Paullinus [sic] fatetur.'

ascribed any such powers to demonic agency.⁷⁵ 3) Paolini attributed part of the power of Orpheus' song to astrological observation, in which Ptolemy and Albumazar had placed great stock. According to del Río, he should rather have attributed the magical effects that arise from astrology to illicit and demonic magic, lest any of his readers be deceived into thinking that they arose from natural magic.⁷⁶ 4) Paolini asserted that proportions between numbers have a similar power to figures in the heavens (that is, constellations and aspects); he ought to have known that such pursuits were both baseless and forbidden by the church.⁷⁷ 5) Paolini asserted that Orpheus' power was due in part to unusual powers invested in him alone. But, del Río objects, Paolini mixes the true and the false; the musical miracles recounted by the poets were consistent with those recorded in the Scriptures; and effects brought about by divine miracle are indistinguishable from those effected by natural forces.⁷⁸ 6) Paolini's positing of an artificial and natural mixture of elements was superfluous to the needs of his argument.⁷⁹ 7) Finally, Paolini attributed to Orpheus a magical power to enchant and attract. Although Plotinus asserted that this could occur, del Río denied it. He also denied the suggestion that the imagination could operate over a distance. Such powers would lead to a problem of causation, in which events arise from first causes rather than secondary ones, as they ordinarily do in nature.⁸⁰

While it may be tempting to see del Río's critique as a proto-modern rejection of magical thinking, this would be mistaken. Del Río believed as firmly as Paolini did that magic was possible, and that it could have remarkable effects (his next chapter describes the effects of the *tarantella*). However, he considered that Paolini threw disparate and incompatible notions into the same bag, and that this confusion could potentially lead readers into believing that the magical effects of Orpheus' music might have arisen from

⁷⁵ Del Río, *Disquisitionum magicarum libri sex*, vol. 1, 38: 'Secundus est, hac virtute præditum esse cantum, non soni tantum ratione, sed ex occulta quoque vi verborum, qua celestem illam vim detrahi de superna sede posse censent; & confirmant prodigii plenius verborum aliis effectibus quæ omnia prudenter Paullinus ex Theologorum præscripto ad dæmonum fraudes referenda non diffitetur fol. 204. & 206.'

⁷⁶ Del Río, *Disquisitionum magicarum libri sex*, vol. 1, 38: 'Tertius est dependens ex illa astrologica obseruatione; cui Ptolomæus, & Albumazar, & similes plurimum tribuere: hunc quoque Paullinus fol. 207. Magicæ annumerat; addere debuit, illicitæ & dæmoniæ, ne quis de naturali accipiat.'

⁷⁷ Del Río, *Disquisitionum magicarum libri sex*, vol. 1, 38-39: 'Quartus inde petitur, quòd proportiones numerorum vim habeant similem figuris: figurarum verò certis lineis & punctis conformatarum. admiranda sit efficacia: & quia lyra Orphei, ad cœlestis lyræ figuram [39] fuerit conformata. Sed hanc rationem, & Platoniorum de figurarum virtute deliramentum, meritò Paullinus, cum Theologis, nugas & somnia esse credit, & addit Concilii ac Pontificum decretis esse prohibitum huiusmodi studium. Ego refutaui d. q 1. c. 4.'

⁷⁸ Del Río, *Disquisitionum magicarum libri sex*, vol. 1, 39: 'Quintus modus, est petitus à vi quadam eximia naturæ, qua id soli Orptheo, vel cum paucis, erat concessum; per quandam sympathiæ rationem illi cum rebus omnibus, per quasdam indiuiduas condiciones ad hoc aptas, inditam: vt videmus rebus innumeris à natura quasdam virtutes mirificas insitas, quarum plurima exempla idem accumulât Paullinus à fol. 210. sed miscet vera falsis, comperta incompertis; iis quæ in S. S. legimus, quæ apud poetas leguntur; & quæ diuino facta miraculo, iis quæ naturali vi perficiuntur.'

⁷⁹ Del Río, *Disquisitionum magicarum libri sex*, vol. 1, 39: 'Sextus modus tradit admixtionem artificiosam & naturalem elementorum. Verum hæc etsi mirifica quandoque perficiat, in quæstione tamen, de qua nunc agimus, est superflua.'

⁸⁰ Del Río, *Disquisitionum magicarum libri sex*, vol. 1, 39: 'Septimus est vis attractiua quædam fascinatrix seu magica: quam cum Plotinus d. libro 4. fieri velit, vel ex occultis quibusdam qualitatibus rerum, vel figuris, vel cantu, vel desiderio seu imaginatione; secundum & tertium modum iam reieciimus: quartum quoque, qua tribuit imaginationi virtutem efficacem in longè ab imaginante distantia: sed & primum refutaui, ostendens nullam dari posse physicam qualitatem occultam, quæ in tam diuersæ speciei, imò & generis res simul eodem modo queat operari, cum id eam sit necesse facere per modum causæ, non primæ seu vniuersalis, sed secundariæ & particularis. Nec enim vlla qualitas inest singularis vlli res singulari, qua singularis est, quin ad dispositiones indiuiduas pertineat, & ab ipsis dimanet; & proinde non nisi effectum particularem & sibi proportionatum potest producere.'

innocent, natural causes rather than from their true source, the deceptive allurements of demons.

Over time, Paolini's stocks would fall lower still. Michiel Boudewyns (1666) noted that Paolini chronicled the silly lies that the poets told about the musical force possessed by the Platonic numbers.⁸¹ In the preface to the libretto of an *opéra-ballet* performed at the Royal Academy of Music in Paris on 9 May 1737, Jean-Jacques Le Franc, Marquis de Pompignan (1709-84), derided Paolini's attempts to explicate the myths of Orpheus and Amphion: 'What an example of the weakness and extravagance of human reasoning!'⁸²

Conclusion

Paolini's treatment of music, while it did not earn universal applause, is nevertheless interesting and important for a number of reasons. Firstly it shows that music—whether theoretical or sounded—played an important role in the early Italian academies, a point that has been amply documented by Iain Fenlon, Inga Mai Groote, Salvatore Radaelli, Cesare Vasoli, and others. It also shows a certain ambivalence or even hostility in academic circles towards modern music, which was considered by some as morally enervating, in favour of an ideal of ancient music. Yet it is also clear in the *Hebdomades* that while Paolini had great enthusiasm for ancient (and theoretical) music, he did not possess a perfect grasp of the technical details of music theory, despite his posturing. Although Paolini was not one to wear his erudition lightly in his explication of Vergil's 'riddle', there was not always much genuine erudition to be worn, at least in the matter of music theory. But despite such criticisms, some credit must also be given to Paolini for his familiarity with some sources of Greek music theory—Plutarch, Alypius, Aristoxenus, and Briennius—which were not very well known at the time, and for pointing out the Greek sources for a number of commonplaces familiar in Latin theorists like Boethius. Paolini's work is also interesting for the unusual perspective it gives on the preferred linguistic medium of technical discussion. Two of the authors on whom Paolini drew heavily (Zarlino and Vicentino) were steeped in the Greek and Latin sources, but wrote in Italian. At many points Paolini translates their Italian prose into Latin; the increasing tendency through the sixteenth century to use the vernacular languages for technical discussions was thus certainly not complete, nor was it a one-way street. And finally, Paolini's *Hebdomades* gives important evidence for the reception of Ficino's astrological Orphic singing. The opposition to Paolini's work, especially the systematic criticism of del Río, provides an important perspective on the wide variety

⁸¹ Michiel Boudewyns, *Ventilabrum medico-theologicum quo omnes casus, tum medicos, cum ægros, aliosque concernentes eventilantur* (Antwerp, 1666), 31: '...Fabius Paulinus refert, quod Poëtæ ex numeris Platonis etiam Musicæ vim quandam, & efficaciam inesse commenti sint, & vnique in particulari suam virtutem cum laude accommodant.'

⁸² *Le triomphe de l'harmonie, ballet héroïque, représenté pour la première fois, par l'Académie royale de musique; Le Jeudy neuvième May 1737* (Paris, 1737), v-vj: 'Fabius Paulinus, dit le P. de Brun, en parlant de la fable d'Orphée & d'Amphion, s'est imaginé qu'on pouvoit bien la prendre à la lettre, & l'expli- [vj] quer phisiquement par les principes des Platoniciens. Il en fit l'essay, & prouva son raisonnement par sept raisons qu'il croyoit bien concluantes. Quel exemple de la foiblesse & de l'extravagance du raisonnement humain!' Cf. [Pierre de Brun], *Histoire critique des pratiques superstitieuses, Qui ont séduit les Peuples, & embarrassé les Scavans* (Rouen and Paris, 1702), 191-92. This passage from the preface to the libretto was cited in the review of the performance in the *Mercure de France* (1737), 1187-88; according to the review, the performance was not a great hit, and the preface was taken rather badly: 'on a beaucoup moins critiqué l'Ouvrage que la Préface, et que d'ailleurs il n'est pas trop chargé d'action...' Le Franc's text was set to music by François Grenet.

of opinion existing in early modern Europe over the reality, power, and means of supernatural agency, and of the supernatural qualities with which music was invested both in myth and in the writings of Renaissance music theorists.

Paolini's sprawling, prolix attempt to solve the riddle of Vergil's puzzling description of the singer Orpheus thus provides a fascinating window into the variety of attitudes towards music—mythical, ancient, and modern—in humanist circles in the wake of such important authorities as Ficino, Vicentino, and Zarlino, at precisely the moment when academic discussions over the relationship between ancient and modern music were on the point of giving birth to something quite new.

Appendix: Fabio Paolini, *Hebdomades*, 58-65 (II.1)

Probatur Musicum sub Orphei persona rectè intelligi. Tria mysteria Musicæ à Poeta significata in versu demonstratur, nempe septem vocum varietatem, septem partium diuisionem, sermonisque imitationem, et versus explicatio affertur.

Sciendum igitur, quod Musica sub Orphei persona significatur, constat enim Orpheum omnium fuisse μουσικώτατον, idest perfectissimum Musicum,¹ vt omnes testantur libri Poetarum, omnes sub-[59]scribunt huic testimonio historiæ, deinde quia à nonnullis creditur filius fuisse Apollinis, et Calliopes, siue (vt alij malunt) Apollinis, et Polyhymniæ: Apollo autem parens Musicæ dicitur, Musarumque princeps, eiusque primus fuisse inuentor perhibetur, vnde apud Ouidium in *Metamorphoseis* cum Daphne gloriatur

— *per me concordant carmina neruis.*²

Et ei ipsemet Orpheus præcipuè Musicam tribuit in eius hymno,

— σὺ δὲ πάντα πόλον κιθάρη πολυκρέκτω
Ἄρμῳζεις, ὅτε μὲν νεάτης ἐπὶ τέρματα βαίνων,
Ἄλλ' ὅτε δ' αὖθ' ὑπάτην, ποτὲ δώριον εἰς διάκοσμον.

Id est

*Tu totum Citharæ concordas voce sonoræ
Phœbe Polum nunc percurrens confinia netes,
Nunc hypatem rursus, concentus doricus vt sit.*³

Quare sacræ illi erant Cicadæ, quod maximè omnium est animal μουσικώτατον, et veteres illi Athenienses (vt scribit Thucydides) eas in capillis aureas gestabant, vt se sub Apollinis tutela esse declararent.⁴

Tangit autem in hoc versu triplex Musicæ mysterium Poeta, primum cum ait, *Septem discrimina vocum.*⁵ Nam apud Musicos vocum discrimen, atque varietas vltra septimum gradum non potest, non enim amplius augentur, aut multiplicentur, sed *octauus* sonus *mira quadam ratione similitudinis ad primum* ex æquo delabitur, *nonus ad secundum*, et illius modo *dissonat, decimus ad tertium, et consonat* veluti *tertius, XI ad quartum, XII ad quintum, XIII ad sextum, XV ad septimum [sic] reedit*, et sic in reliquis,⁶ nam bis geminant voces

¹ Cf. Athenaeus, *Deipnosophistæ* XIV.632c, ed. and trans. Charles B. Gulick, 7 vols. (London, 1927-41), vol. 6, 410-13: 'τὸ δ' ὅλον ἔοικεν ἡ παλαιὰ τῶν Ἑλλήνων σοφία τῇ μουσικῇ μάλιστ' εἶναι δεδομένη. καὶ διὰ τοῦτο τῶν μὲν θεῶν Ἀπόλλωνα, τῶν δὲ ἡμιθέων Ὀρφέα μουσικώτατον καὶ σοφώτατον ἔκρινον' ('Taking it all together, it is plain that the ancient 'wisdom' of the Greeks was given over especially to music. For this reason they regarded Apollo, among the gods, and Orpheus, among the demigods, as most musical and most wise.')

² Ovid, *Metamorphoses* I.518.

³ Ps.-Orpheus, *Hymn* 34.16-18, in *Orphica*, ed. Eugenius Abel (Leipzig, 1885), 77. The Latin translation that follows is apparently by Paolini.

⁴ Thucydides, *History* I.6.3.

⁵ Vergil, *Aeneid* VI.646.

⁶ M. Ficino, *Compendium in Timaeum* XXXII, in Diuus Plato, fol. 248v: 'Quam quidem coniugationem propterea secutus / ut arbitrator / est trepander [sic], quia multiplicatio uocum manifeste inter se discrepantium ad sonum usque septimum augetur. Octauus autem iam mira quadam similitudine reedit ad primum / quemadmodum & ratio dupla per quam creatur / restituit minorem quem superat numerum: dum eundem excedit eodem. Nonus reuertitur ad secundum: & dissonat ut secundus. Decimus ad tertium: & consonat sicut tertius. Vndecimus ad quartum. Duodecimus ad quintum. Ad sextum tertiusdecimus. Sed quartusdecimus reedit ad septimum. Denique quintusdecimus ad octauum: & cum octauo simul ad primum.' Cf. Zarlino, *Le istituzioni*, 105: 'Et però con giudicio (come hò detto) esse lettere da Guidone furono replicate, & non variate: perche conobbe, che l'Ottava chorda era simile di voce alla prima, la Nona alla seconda, la Decima alla terza, & le altre per ordine.'

recentiores, cum 22 ponant chordas.⁷ Hi autem sunt, quos Græci φθόγγους vocant, et propria habent apud illos nomina, Latinis etiam Musicis nota, atque recepta. Nam primus dicitur ob præstantiam ὑπάτη hypate, hoc enim vocabulum ὑπατος quandam præ se fert imo maximam dignitatem, et grauitatem, vnde ab Homero frequenter tribuitur Ioui, vt

Ἦ πάτερ ἡμέτερε, Κρονίδη, ὕπατε κρειόντων.⁸

Et Romani Consulem isto nomine appellabant, quasi supre- [60] mum, et principem omnium magistratum.⁹ Nam (vt ait præclare Plutarchus) τὸ ἄνω, καὶ τὸ πρῶτον [ὑπατον] οἱ παλαιοὶ προσηγόρευον [*sc.* προσηγόρευον] id est quod supra est, et primum hypatum veteres appellabant.¹⁰ *Secunda* ab hac corda, vel chordæ sonus dicitur ob vicinitatem παρυπάτη *parhypate*, vltima dicitur νήτη *nete*, quasi νεάτη, idest vltima, proxima huic dicitur παραμήτη, *quasi iuxta netem*, media ex re ipsa dicitur μέση *mese*, *tertia* à prima dicitur ὑπερμεση, quia sit supra mediam, quæ alio nomine appellatur λίχανος, qui *digitus est index*, sic dicta, quod in pulsando reperiebatur hic ipse index ad hanc chordam, *tertia* verò à postrema dicitur παραμέση, *paramese*, quia sit iuxta mediam, et his nominibus tam chordæ, quàm ipsarum soni appellantur.¹¹ Quare apud veteres per septem vocales significatam fuisse nonnulli tradunt Musicam, quas etiam nonnulli ex Græcis totidem Musicæ vocibus accommodant. Et *vox ipsa septem patitur qualitates, acutam, grauem, circumflexam, densam, tenuem, longam, breuem.*¹² Et nostri recentiores Musici, cum septem, vt Græci, non habeant vocales, septem adhibuerunt consonantes (quamquam non neglexere hanc quoque vocalium rationem, in suis enim illis notulis omnes Latinas adhibuere, vt videmus in VT RE MI FA SOL LA, quæ vocalis A bis repetita est ob literæ principatum, et excellentiam, quam rem vt pulcherrimam annotauit Vanneus cap. 13.)¹³ Septem verò consonantes adhibitæ sunt primæ in serie Alphabetica, sed septimam ob præstantiam numeri primi loco collocarunt, adhibito etiam Græco nomine Gamma, vt scilicet se Græcorum vestigijs inhærere, et primas illis tanquam artis inuentoribus deferre declararent.¹⁴ His ante Guidonem (vt scribit Nicolaus Vicentinus)

⁷ *Practica musice Franchini Gafori Laudensis* (Milan, 1496), A1v-2r: 'Verum ecclesiastici nostri Guidonis huiusmodi traditionem quam manum vocant: in graue: acutum [A2r] et superacutum distingunt: vt viginti ac duarum chordularum lineis et interuallis seu spacijs alternatim inscriptarum.'

⁸ Homer, *Odyssey* I.81.

⁹ Boethius, *De institutione musicæ* I.20, ed. Gottfried Friedlein (Leipzig, 1867), 206: 'Inque his quæ gravissima quidem erat, vocata est hypate quasi maior atque honorabilior, unde Iovem etiam hypaton vocant. Consulem quoque eodem nuncupant nomine propter excellentiam dignitatis.'

¹⁰ Plutarch, *Platonic questions* 9.1007F, in *Plutarch's Moralia*, ed. and trans. Frank Cole Babbitt, W. C. Hembold, and F. H. Sandbach, 16 vols. (London, 1927-2004) vol. 13.1, 90-92. The Latin translation is apparently Paolini's own. The omission of the important word ὑπατον (the point of the entire citation) and the mistake προσηγόρευον for προσηγόρευον betray poor typesetting and proofreading.

¹¹ Boethius, *De institutione musicæ*, ed. Friedlein, 206 (I.20): 'Parhypate vero secunda quasi iuxta hypaten posita et collocata. Lichanos tertia idcirco, quoniam lichanos digitus dicitur, quem nos indicem vocamus. Græcus a lingendo lichanon appellat. Et quoniam in canendo ad eam chordam, quæ erat tertia ab hypate index digitus, qui est lichanos, inueniebatur, idcirco ipsa quoque lichanos appellata est. Quarta dicitur mese, quoniam inter VII semper est media. Quinta est paramese, quasi iuxta mediam conlocata. Septima autem dicitur nete, quasi neate id est inferior, inter quam neten et paramesen sexta quæ est, vocatur paranete, quasi iuxta neten locata. Paramese vero, quoniam tertia est a nete, eodem quoque vocabulo trite nuncupatur...'

¹² Giovanni Pierio Valeriano, *Hieroglyphica sive De sacris Aegyptiorum literis commentarii* (Basel, 1556), Mm3v ('De literis septem'): 'Et Phurnutus ex ueterum dictatis obseruat, septem esse diuersos tonos, quibus olim tota modulatio constaret. Vox uerò ipsa septem patitur qualitates, acutam, grauem, circumflexam, densam, tenuem, longam, breuem.'

¹³ Vanneo, *Recanetum* I.13, fol. 12v: 'Denique nec te prætereat, singulis his musicalibus Syllabis, singulas inesse uocales, perinde ac in grammaticis et syllabis et dictionibus, quæ saltem sine unica uocali, proferri nequeunt. Nec te moueat, quod quum quinque sint uocales, musicales uero syllabæ sex, A, quippe uocalis, duas occupat sedes, uidelicet Fa et La...'

¹⁴ Vicentino, *Lantica musica*, fol. 7v: '[...] per honorare l'Inuentori antecedenti, uolse dar l'honore à Greci primieramente; & incominciò à scrivere la prima lettera dell'ordine della Mano per uno Gamma Greco, congiungendo la sillaba ut.

vtebantur veteres illi pro his, quas nunc adhibent notulas, VT RE MI FA SOL LA.¹⁵ Has porrò literas septem in manus locis triplici ordine distinxerunt, et septem graues, septem acutas, septem superacutas constituerunt, licet solum sex dicat Vanneus esse superacutas cap. 11. lib. 1¹⁶ vbi de his etiam loquitur: *Musici ergo in manus locis [61] septem dumtaxat in specie literas, videlicet A B C D E F, et G, quamuis pluries iteratæ vigintiquinque posuere positiones. Notandum in specie dixisse, cum plures in numero sint, reiteratæ verò eædam habentur, vt patet in Calendario, vbi septem his literis enumeratis reiterantur.*¹⁷ Ijdem recentiores, ne ab hoc septenarij mysterio recederent, cum voces tantum sex inuenissent, nempe vt re mi fa sol la (quas primus Guido Monachus teste Nicolao Vicentino in sua Musica ex hymno D. Ioannis excogitauit primas uersuum priorum accipiens syllabas, binas scilicet ex singulis, qui etiam has coniungens cum literis illis, manum quam vocant, instituit, et multa alia excogitauit)¹⁸ septies tamen easdem repetendas censuerunt, vt præclarè demonstrat Vanneus cap. 12. lib. 1. post multa de his notulis ait: *Quas quidem sex voces, vt his totum Musices corpus perficeretur, ac etiam facilius Musici, acutius, grauiusque cantarent, statutum est septies reiterari, vt vniuersam percurrenti manum patet. His denique reiterationibus 42 voces in numero, haud in specie generantur, in linea scilicet 21, totidemque in spatio. Nota enim superius dixisse in numero, non in specie; quoniam, vt superius annotatum easdem plures esse quis ignorat? Vnde Mantuanus Homerus huius ingenuæ artis non ignarus cecinit*

*Obloquitur numeris septem discrimina vocum.*¹⁹

Alterum quoque in his verbis mysterium attingitur de partibus ipsius Musicæ, quæ sunt septem, à Fulgentio quoque annotatum, qui in 3. Mythologiæ sic ait: *Habet igitur Musica partes septem idest genera, diastemata, systemata, phthongos, tonos, melopœas, vnde etiam Vergilius in 6. ait:*

Necnon Threicius longa cum veste sacerdos

*Obloquitur numeris septem discrimina vocum.*²⁰

In quo notandum, quòd legere oportet Melopœas, non Melampœas, vt corruptè legitur, nam id verbum nihil in Musicis significat: Hanc verò Musicæ partitionem accepit ab Aristoxeno in 2. de Musica, eandem adhibuit Alipius Musicus in sua [62] Isagoge, quos ambos nuper mihi præclarissimus in hac arte vir Zarlinus Græcos legendos præbuit, sed Alipius quamuis easdem ponat partes, ordinem tamen mutat, nam primo loco ponit phthongos, secundo diastemata, tertio genera, quæ ab Aristoxeno primo loco

con il detto Gamma, & scrisse Gamma ut.

¹⁵ Vicentino, *Lantica musica*, fol. 7v: '...et diroui delle sette lettere, che furno, A. B. C. D. E. F. G. usate dagli antecessori del Padre Guido, con il modo di cantare da A. à B. un tono, et da B. à C. il semitono, et da C. à D. faceuano il grado del tono, et da D. à E. un tono, et da E. à F. un semitono, et da F. à G. il tono, do modo che sempre con queste sette lettere ascendenti et discendenti, secondo ch'erano scritte, così faceuano gradi et salti di tal maniera, ch'era difficilissimo impararle; & innanzi che imparasseno il canto fermo, consumauano dieci anni.'

¹⁶ Vanneo, *Recanetum*, fol. 11v: 'Quæ graues dicuntur, sunt septem. Quæ acutæ, totidem. At superacutæ, sex...'

¹⁷ Vanneo, *Recanetum*, fol. 9r.

¹⁸ Vicentino, *Lantica musica*, fol. 7v: '...cantando l'hymno di S. Giovanni, à caso gli occorse alla mente di pigliare le prime sillabe delli primi uersi del detto hymno. Vt queant laxis, pigliò la prima sillaba ut. Resonare fibris, & poi re. e congiunse ut. re. Mira gestorum, disse poi, ut. re. mi. Famuli tuorum, & aggiuntoui fa. compose ut. re. mi. fa & segui poi, Solue polluti, ut. re. mi. fa. sol. & l'ultimo, Labij reatum sancte Ioannes, & concludse con il la. &...fece ogni studio, di ritrouare un'ordine et regola facile al Discepolo: onde si pensò di formare una mano, e sopra le linee delle congiuntioni di quella, scriuer queste sei sillabe, ut. re. mi. fa. sol. la...Congiunse poi le lettere A. B. C. D. E. F. G. à queste sillabe ut. re. mi. fa. sol. la...'

¹⁹ Vanneo, *Recanetum*, fol. 12r.

²⁰ Fulgentius, *Mythologies* III.9, in Fabius Planciades Fulgentius, *Opera*, ed. Rudolph Helm (Leipzig, 1898), 75-76.

considerantur.²¹ Eandem diuisionem vsurpauit Martianus Capella lib. 9. sed ipse quoque mutat ordinem, nam quartum locum truibuit generi, sic enim ait: *Harmonia habet partes disputationis septem, primum de sonis, secundum de spatijs, tertium de systematis, quartum de genere, quintum de tonis, sextum de commutationibus, septimum de modulatione, quam Melopœam vocamus.*²² Et Phornutus annotauit ex veterum Musica septem esse tonos, quibus olim tota modulatio constaret,²³ de quibus multa Ptolomæus in secundo de Musica, et ita disputat, vt dicat natura, neque plures neque pauciores esse posse, quàm septem, et tota ipsa Musica videtur septenario constare,²⁴ nam septenarij proportio est valde Musici (vt præclare ostendit Zarlino) practici præsertim, septem faciunt elementa contrapuncti secundam, tertiam, quartam, quintam, sextam, septimam, octauam, vnisonum enim tollunt,²⁵ et Guido Aretinus, qui Musicam hanc recentiore primus excoluit (vt supra dictum est) tria fecit septenaria chordarum in Musica, nempe XXI, quæ cum ipsa consonantia diapason faciunt XXII, cum XVI, tantum essent veteres, idemque easdem in septem hexachordos partitus est, idem singulis tetrachordis veterum unam coniunxit deductionem, singulisque binas addidit chordas à parte grauiori, vt uim numeri seruarent septenarij, nam quatuor, et tria sunt septem. In eadem Musica principatum detulerunt eo consonantiæ, quæ vim septem continet,²⁶ et ob excellentiam, quod omnibus dominetur, appellarunt διαπασῶν, in eaque septem consonantias ponunt, unisonum, semiditonum, ditonum, diapente, hexachordum minus, et maius, et ipsam diapason, in quo numero quidam diatessaron locant [63] sublato vnisono, quod non consonans putant.²⁷ Eidem septem partes tribuere tonos tres maiores, duos minores, et duos semitonios maiores; Eiusdem veteres (vt Boethius Ptolomæum secutus in 4. de Musica) septem modos faciunt *hypodorium, hypophrygium, hypolydium, dorium,*

²¹ Alypius, *Isagoge* 2, in *Musici scriptores Græci*, ed. Karl Jahn (Leipzig, 1895), 367; Aristoxenus, *Elements of Harmony* II.19.

²² Martianus Capella, *De nuptiis Philologiae et Mercurii*, ed. Ulrich Friedrich Kopp (Frankfurt, 1836), 734 (IX.938); ed. James Willis (Leipzig, 1983), 734; Kopp and Willis read *Harmonica*, while Paolini follows the attested, but less good, reading *Harmonia*, as seen for example in *Isidori Hispalensis episcopi Originum libri viginti ex antiquitate eruti. Et Martiani Capellæ De nuptiis Philologiae & Mercurij Libri nouem*, ed. Bonaventura Vulcanius (Basel, 1577), 212.

²³ Giovanni Pierio Valeriano, *Hieroglyphica sive De sacris Aegyptiorum literis commentarii* (Basel, 1556), Mm3v ('De literis septem').

²⁴ Ptolemy, *Harmonics* II.19; Engl. trans. in Jon Solomon (Leiden, 2000), 85-87.

²⁵ Zarlino, *Le istituzioni harmoniche*, 150-51: 'Seguendo adunque il costume delli Pratici diremo, che gli Elementi semplici, ouero (come dicono) le Specie semplici del Contrapunto siono [sc. siano] sette, & non piu; lassando fuori lo Vnisono: percioche non è ne consonanza, ne Interuallo; come al suo luogo uederemo; si come è la Seconda, la Terza, la Quarta, la Quinta, la [151] Sesta, la Settima, & la Ottaua...'

²⁶ Paolini's source may be *Ludovici Foliani Mutinensis de musica theorica* (Venice, 1529), fol. 17r-v: 'Et si forte quæras, unde est, quod solius consonantię diapason soni, unum fere & eundem uidentur resonare [sc. resonare] sonum? Respondetur quod huius causa est, ut opinor, unitatis prædominium in eius constitutione, quod [17v] in cæteris non contingit consonantiis... Sunt igitur saltem quo ad sensum: septem tantum consonantiæ: unde poeta doctissime cecinit sexto æneidos: quum dixit: Necnon threicius longa cum ueste sacerdos: obloquitur numeris septem discrimina uocum: quod puto esse intelligendum de septem consonantiis: modo præexposito...'

²⁷ Zarlino, *Le istituzioni harmoniche*, 105: 'Et nel libro Sesto della Eneida toccò tal numero dicendo; *Nec non threicius Vates, & longa cum ueste sacerdos, Obloquitur numeris septem discrimina uocum.* Similmente Ouidio nel secondo libro delle Trasformazioni disse; *Dispar septenis fistula cannis.* Et però con giudicio (come hò detto) esse lettere da Guidone furono replicate, & non variate: perche conobbe, che l'Ottava chorda era simile di voce alla prima, la Nona alla seconda, la Decima alla terza, & le altre per ordine. E uero, che non mancano quelli, che per le autorità addute de i Poeti vogliono intendere le Sette consonanze diuerse, contenute nella Diapason, che sono l'Vnisono, il Semiditono, il Ditono, la Diapente, l'Essachordo minore, il maggiore, & essa Diapason; Et altri anco, che intendono il simigliante, lassando fuori l'Vnisono, perche non è consonanza propriamente detta (come uederemo al suo luogo) ponendoui la Diatessaron...'. Cf. Fogliano, *De musica theorica*, fol. 16v: '...supra diapason non uidetur dari: saltem quo ad sensum: noua consonantia: sed fit consonantiarum repetitio: quæ septem numero sunt: uidelicet: Semidytonus: Dytonus: Diatessaron: Diapente: Hexachordum minus: Hexachordum maius: et Diapason: quod autem septem tantum sint consonantiæ: quarum maxima est diapason: ad quam tota: quo ad iudicium sensus: terminatur consonantiarum diuersitas...'

phrygium, lydium, mixolydium.²⁸ Eiusdem septem species faciunt vt Ptolomeus lib. 2. cap. 4.²⁹ Has enumerat Stephanus Vanneus auctor Recaneti de Musica, lib. 1. c. 44. deinde addit, *His septem denique speciebus diapason dispositis notandum quippe est, quod si quis ulterius progredi affectat, has septem diapason species dumtaxat inueniet, eodem ordine, processuque iteratas, vt in calce præcedentis capituli annotatur*.³⁰ In eo autem capite dixerat: *Diapason cum octo habeat voces, septem tamen habet species compositionum promiscuas, et diuersas, quæ inter ipsas differunt, iuxta variationem duorum semitoniorum varijs in locis, quemadmodum etiam sunt eiusdem speciei diuersitates, vt puta diapason [Vanneo: diapente], et diatessaron, quibus perfectis denuo easdem, eodemque nomine reiterabis, perinde ac reiterantur hebdomadæ dies, vbi tamen semel septem prius enumeraueris dies*.³¹ De his etiam Nicolaus Vicentinus lib. 3. et 5. appellatque octauas. Qui etiam facit tres species quartæ, et quatuor quintæ, quæ sunt diatessaron, et diapente, ex quibus conficitur diapason, adeo vt in septenarium illæ quoque coniunctæ delabantur,³² idem quoque, vt omnino septenarij mysterium in sua Musica retineat, ac sequatur, septem facit Musicas manus, siue regulas manus, in quibus septem literas, quas superius connumerauimus adhibet, de quibus vide lib. 1 Practicæ.³³ Comma musicum diuidunt in septem partes,³⁴ et Plutarchus de Musica νόμους ἀλοδικούς idest nomos Tibicinum à Clona inuentos septem dicit fuisse Apothetum, Elegos, Commarchium, Schoeniona, Cepiona, Deium, Trimeles, septem etiam nomos Citharædicos multo ante à Terpandro dicit institutos, nempe Bœotium, Aeolium, Trocheum, acutum, Cepionem, Terpandrium, Tetraœdium,³⁵ et [64] Martianus Capella in libro de Musica, septem constituit numeri genera: sic enim ait, *Verum numeri genera sunt septem, primum de temporibus, secundum de enumeratione verborum, quæ in numerum cadere non possunt, quæ rhymoides idest similia numeris iudicantur, quæque tribus vocabulis discernuntur, quæ sunt ἔνρυθμον, ἄρυθμον, ῥυθμοιδῆς, tertium de pedibus, quartum de eorum genere, quintum quod agogen rhythmicam nominamus idest quo genere numerus, modique ducantur, sextum de conuersionibus, vltimum ῥυθμοποιῖα, idest quemadmodum procreatio numeri possit effingi*.³⁶ Idem paulo post pedum differentias dicit esse septem, quas quia confusius

²⁸ Boethius, *De institutione musica*, ed. Friedlein, 342 (IV.15).

²⁹ Ptolemy, *Harmonics* II.4.50-51.

³⁰ Vanneo, *Recanetum*, fol. 28v (I.44).

³¹ Vanneo, *Recanetum*, fol. 27v (I.43).

³² Vicentino, *Lantica musica*, fol. 5v (I.11) ('Delle sette spetie della Diapason'): 'Le spetie della Diapason sono sette delle quali tre se nè formano dalle tre spetie del Diatessaron disotto poste, & quattro dalle quattro spetie, della Diapente disotto poste, la prima in ordine secondo Boetio nel Cap. XIII. del Libro quarto della Musica. sarà composta della prima diatessaron posta sotto l'ultima Diapente, la seconda, della seconda Diatessaron posta sotto la penultima Diapente, la terza, dell'ultima Diatessaron posta sotto l'antepenultima Diapente, & così tre spetie si generano; Laltre quattro dalle quattro spetie della quinte poste disotto alle Diatessaron si formano in questo modo. La prima Diapente posta sotto l'ultima Diatessaron fa la quarta spetie delle Diapason. La seconda sotto la penultima fa la quinta. La terza sotto la prima fa la sesta. La quarta pur sotto la prima diatessaron fa la settima, & ultima spetie, dalle quali si formano gli otto toni, come nel seguente Cap. uedrai.'

³³ Vicentino, *Lantica musica*, fols. 11r-13v (I.5) ('Dichiaratione della Mano signata con li segni che dimostrano le spetie delli tre generi, con sette regole della Mano, ouero sette Mani').

³⁴ *Francisci Salinæ Burgensis Abbatis Sancti Pancratii de Rocca Scalegna in regno Neapolitano, et in Academia Salmanticensi Musicæ Professoris, de Musica libri Septem* (Salamanca, 1577), 152: 'Et cum in septem partes æque proportionales Commata diuidantur...' On the division of the comma into seven parts, see also pp. 143, 149-50.

³⁵ Ps.-Plutarch, *On music* 4.1132D; ed. in *Plutarch's Moralia*, ed. and trans. Babbitt et al., vol. 14, 360. Franchinus Gaffurius, *Theorica musice Franchini Gafuri Laudensis* (Milan, 1492), fol. A1r, lists the species of citharoidic *nomoi* as given by Plutarch, but he inadvertently omitted the last (τετραοιδιον).

³⁶ Martianus Capella, *De nuptiis*, ed. Kopp, 753-54 (IX.970); cf. the edition of Adolph Dick (Leipzig, 1925), 517-18, which reads 'secundum de enumeratione temporum, quæ in numerum cadere possunt.' Unlike Martianus, Paolini gives Greek words in Greek letters.

prosecutus est, non numero, Idem mox de dactylico genere ait, *Atque hi quidem in dactylico genere ponentur rythmi incompositi, ac compositi, qui VII numero omnes erunt.*³⁷ Zarlinus denique ad temperanda recentiorum instrumenta, vt contineant diatonicum diatonum in omnibus hoc numero septem procedendum docet, et alia multa præclarè, quæ qui vult velit vberius degustare, eius de Musica libros perlegat, quibus summam lucem huic arti attulit, satis enim multa mihi videntur allata ad hanc rem probandam.³⁸

Tertium denique Musicæ mysterium in hoc versu enunciat Vergilius, cum ait: *Obloquitur voces*, nam perfectæ Musicæ est vocem humanam imitari. Musica enim ferè tota est imitatio, quemadmodum etiam Poetica, vt noster Plato confirmat multis in locis, vt in 2. de legibus, vbi ait, οὐκοῦν μουσικὴν γε πᾶσαν φάμεν εἰκαστικὴν, καὶ μιμητικὴν; idest nonne igitur dicimus Musicam totam esse ad effingendum, et imitandum peridoneam?³⁹ *Imitatur autem gestus, actus, et motus hominis,*⁴⁰ sed pulcherrima eius imitatio est imitari vocem, et orationem τὴν διάλεκτον; est autem pulcherrimum, quia difficillimum, vel contra, omnia enim pulchra difficilia, vt sæpius Plato confirmat in libris de Rep. et in Cratylo τὰ καλὰ τῶ ὄντι χαλεπὰ idest pulchra verè difficilia.⁴¹ Quare Tibullus cum vellet artem lyræ

*At postquam fuerant digiti cum voce locuti.*⁴²

Ibi enim Apollinem inducit cum lyra accinentem in somnio, de qua paulo ante dixerat,

Artis opus raræ fulgens testudine, & auro

*Pendebat læua garrula parte lyræ.*⁴³

qua etiam loquendi formula loqui digitis scilicet pro pulsare lyram optimè, & perfectissima ratione vsus est etiam Cornelius Gallus, qui ait,

Docta loqui digitis, et carmina fingere docta,

*Et responsuram sollicitare lyram.*⁴⁴

alibique idem Tibullus appellat vocales chordas lyræ Apollinis, quia scilicet vocem redderent ferè ἔναρθρον, articulatam ipso pulsante

Nunc te vocales impellere pollice chordas,

*Nunc precor ad laudes flectere verba meas.*⁴⁵

qua etiam notione, atque sensu dixit Horatius vocalem Orpheum,

Vnde vocalem temere insecutæ

³⁷ Martianus Capella, *De nuptiis*, ed. Kopp, 761 (IX.983).

³⁸ Zarlino, *Le istituzioni*, 129: 'Ancorache si potrebbe incominciare sopra quali chorde, che si volesse: ma faremo questo, per seguir la maggior parte di coloro, che accordano gli istrumenti moderni: ...conciosia che se dal detto Tuono leuaremo il minore, che sarà lo I B, et la quantità delle noue parti, senza dubbio, reterà il Coma, contenuto dalla proportione Sesquiottantesima; il quale diuideremo in sette parti equali... [The letters in the following discussion refer to his diagram of the monochord.] Pigliaremo hora la a B, che con la M B contiene la Diapente più acuta di due settime parti equali del detto Coma; & diuiso che haueremo il Coma R B et M B in sette parti equali... A questa chorda ritrouaremo la corrispondente nel graue in proportione dupla; accioche possiamo vdiere perfettamente la Diapason; il che haueremo fatto, quando dopo multiplicato, et preposto il Coma alla E B, & diuiso in sette parti equali, pigliaremo le quattro poste nell'acuto: ... preponeremo alla L B il Coma, diuiso come gli altri in sette interualli, & lassato il più acuto, prenderemo solamente li Sei posti nel graue; & dalla e B haueremo il proposito. A questa ritrouaremo la corrispondente in proportione Dupla, in questo modo; diuideremo il Coma preposto alla D B in sette parti...'

³⁹ Plato, *Laws* II.668a; see also the difficult (possibly corrupt) passage in *Cratylus* 86a.

⁴⁰ Ficino, *De vita* III.21, 358: '[Cantus] enim intentiones affectionesque animi imitatur et verba, refert quoque gestus motusque et actus hominum atque mores.'

⁴¹ Plato, *Republic* IV.497d; cf. *Cratylus* 384b: 'χαλεπὰ τὰ καλὰ ἔστιν ὅπη ἔχει μαθεῖν.'

⁴² Tibullus, *Elegies* III.4.41.

⁴³ Tibullus, *Elegies* III.4.37-38.

⁴⁴ Maximianus, *Elegies* V.17-18.

⁴⁵ Tibullus, *Elegies* II.5.3.

*Orphea sylvæ.*⁴⁶

Quod semper ferè vsurpatur à Poetis, cum perfecti soni musici laudes volunt extollere id etiam Seruius annotavit, qui sic ait: *Dicendo Obloquitur, chordarum expressit laudem, quas dicit verbis locutas.*⁴⁷ Hic erit igitur huius versus in præsentî, & hodierna interpretatione sensus, Orpheus idest perfectissimus Musicus lyre chordarum sonos ita contemperat, vt in pulsanda lyra quoduis exquisitissimè imitetur, sed potissimum orationem, vt non sonare, sed loqui videatur, numeris autem, idest rhythmis musicis, de quibus postea dicetur, si temporis angustia concedent, sin minus in aliam reijcientur diem.

Abstract

This paper examines the musical chapters in the *Hebdomades* (1589), an encyclopedic commentary by the humanist Fabio Paolini on a single line of Vergil (*Aeneid* VI.646: 'Obloquitur numeris septem discrimina vocum'). This book, originally given as a series of lectures before the Accademia degli Uranici in Venice, shows that Paolini, though not a professional musician, had read a variety of musical writers, such as Boethius, Vanneo, Vicentino, and his friend Zarlino, as well as the philosopher Marsilio Ficino, whose works also include discussions of musical matters. As a professional Hellenist, Paolini was better acquainted with the surviving Greek musical writings than most music theorists, and he gives valuable information about Greek manuscripts owned by Zarlino. However, the *Hebdomades* also show that Paolini's practical understanding of music theory was a little shaky. Furthermore, his comments betray a distinct humanist disdain for the music of his own time. Paolini's work thus gives a good indication of the enthusiasm for music (or at least the ideal of ancient music) amongst non-musicians in Italian academies in the bloom of late humanism, but also the limits of non-professional speculation. The essay also examines the reception of Paolini's work (especially by Martín del Río SJ), and includes an annotated edition of the relevant chapter of the *Hebdomades*.

⁴⁶ Horace, *Odes* I.12.7-8.

⁴⁷ Servius, *Commentary on the Aeneid*, at *Aeneid* VI.646; ed. Georg Thilo and Hermann Hagen (Leipzig, 1878-1902), vol. 3, 90.