Marcin Kromer (1512–89) played a significant role in the Jagiellonian administration and diplomacy, in addition to being a prominent historian. His ecclesiastical career, parallel to that as a humanist and writer, reached a peak when he was elected bishop of Warmia in 1579. Musicae elementa is his only surviving music treatise. It contains two complementary sections: De musica plana liber prior, published by Hieronymus Vietor in Kraków in 1532, is preserved in a unique and heavily damaged copy (Kórnik, Biblioteka Kórnicka, Cim.O.308); the second part, entitled De musica figurata liber posterior, was printed by Vietor and attached to the second and third editions of Sebastianus Felstinesis’ Opusculum musices noviter congestum ([Kraków] 1534, 1539).

Previously considered as two independent texts, the two parts of Musicae elementa have been joined for the first time by Elżbieta Witkowska-Zaremba in a new critical edition, with translation into Polish and commentary, available also for non-Polish speakers thanks to Calvin M. Bower’s English translation. The book is published in the series Monumenta Musicae in Polonia, under the auspices of the Instytut Sztuki Polskiej Akademii Nauk.

The structure of the volume is straightforward, and the contents are easy to find. At the beginning of the book, Witkowska-Zaremba offers a complete bibliography; the secondary literature section is especially valuable for non-Polish speakers like myself, because it draws also from Polish musicological and historical studies, regrettably little known in other parts of Europe. In the introduction, Witkowska-Zaremba presents the life and works of Marcin Kromer, the sources of Musicae elementa and the state of research into the treatise. She then addresses the question of Kromer’s musical skills, before moving to a summarised description of the treatise’s contents. A brief explanation of the editorial principles introduces the edition of the Latin text of Musicae elementa, which is placed alongside its Polish and English translations. Diagrams and xylographic musical examples from Vietor’s editions are faithfully reproduced and transcribed. Unusual vocabulary and difficult-to-grasp points of the text are discussed in the commentary, where the reader can also find useful references to additional literature and loci paralleli. An index of names and technical terms concludes the volume.

From fol. B1 onwards, the outer margins of the Kórnik copy – the only extant exemplar of the Liber prior – suffered substantial damage. The deterioration compelled Witkowska-Zaremba to carry out a delicate philological operation, reconstructing a
considerable portion of the treatise through conjectural emendations.

After due examination of the lacunae, one concludes that Witkowska-Zaremba’s philological work is highly respectable: most of the time she proposes integrations that successfully fulfill the logical and grammatical requirements of the incomplete text. Thanks to this thorough job, she achieves a significant level of readability. From a methodological point of view, however, the critical editing would demand a clearer justification of each \textit{ope ingenii} solution. Consider, for instance, the following example, in which I support my emendations by adopting a strategy of comparison and the principle, as stated by Lorenzo Valla, of the equal ‘\textit{numerus litterarum in menda et emendatione}’: ‘\textit{6 characters lacuna} itaque tonus est, qui D-sol<-re> \textit{7 characters lacuna}>, \textit{laetam habet modulation<em ab> initioque statim rursum evolat, <circ>a la versetur}’ (I, IV 43; the indications of the size of the lacunae are mine). Witkowska-Zaremba’s emendations (‘-re’, ‘em ab’) are agreeable, but the two readings that remained unsolved could also be reconstructed by comparison with parallel passages (I, IV 54; I, IV 62) and by moving forward the first comma: ‘\textit{Primus<in> D-sol<-re desinens> laetam habet modulation<em>’. I suggest that ‘in’ is an omission pre-dating the damage, while ‘Primus’ and ‘desinens’ have been chosen because they perfectly fill the two lacunae in terms of the number of letters (6 and 7 respectively); it goes without saying that ‘desinens’ could be substituted with synonyms, conjugated in the singular present participle, of about the same length.

In the event of a reprint, the editor should correct or justify some discrepancies between the musical examples of \textit{Liber posterior} and their transcriptions (e.g. Ex. 2, \textit{vox media}, bar 9, n. 1: \textit{b} for \textit{a}; Ex. 5b, \textit{vox media}, bar 4, n. 6: \textit{f} for \textit{d}). Witkowska-Zaremba argues (Commentary, p. 86) that in Ex. 2 \textit{vox gravis} the pointed circle must be interpreted thus: \textit{1 brevis = 3 semibreves = 6 minimae}. This is certainly the case, but one should go one step further: the pointed circle is probably just a misprint, and it should have been replaced, at least in the transcription, with a simple circle (i.e. perfect tempus with minor prolation).

In addition to this, one wonders why the editor did not include a transcription of the three-part composition hidden in the xylographic frontispiece (see Example 1).

These flaws notwithstanding, the present edition provides good access to the theoretical work of Kromer and gives us the opportunity to address some questions concerning Kromer’s singularities and the way the present edition sheds light on them.

metic, were maintained continuously from the last quarter of the fifteenth century onwards. The essential textbook was Johannes de Muris’ *Musica speculativa*, in the fifteenth and sixteenth centuries, at least six de Muris manuscripts were copied in Kraków or owned by people associated with the Jagiellonian University: Berlin, Staatsbibliothek, Preußischer Kulturbesitz lat. qu. 175, Kraków, Biblioteka Jagiellońska 546, 568, 1927, 1865, 3295.

Traces of the actual university teaching may be found in the great majority of de Muris’ manuscripts, which provide an introductory *accessus*, extensive marginal glosses and commentaries simulating the structure and mirroring the contents of the lessons, and also in other sources, such as Munich, Bayerische Staatsbibliothek Cod. ms. 752, fols. 1–38, a fair copy of lectures given by Erasmus Heritius, who taught in Kraków between 1494 and 1498, tellingly entitled *Musica speculativa* and dated 1498. Even if it remains unclear where they were actually given – Kraków, Tübingen or Vienna – the lectures in the Munich manuscript probably reflect Heritius’ usual teaching habits, which combine de Muris’ tradition with a strong geometrical influence.

In Kraków, studies on music theory grew even beyond institutional commitments, but they were always referable to the local academics. In the fifteenth century, the Faculty of Arts *decanus* Albertus de Opatow owned two theoretical manuscripts: Kraków, Biblioteka Jagiellońska 1859 is a collection of teaching texts copied almost entirely by Albertus himself in 1447, among which there is a singular version, the ninth, of the *Traditio Hollandrinii* (*TH*), a group of fifteenth- and sixteenth-century pedagogical treatises on plainchant sharing fragmentary quotations from a lost theoretical work by the fourteenth-century lecturer at the University of Prague Johannes Hollandrinus, while Kraków, Biblioteka Jagiellońska 1965 is an eleventh-century anthology (*Hucbaldus, De harmonica institutione, Berno Augiensis, De musica and Tonarius, Musica and Scholica enchiriadis*) which Albertus bought when he attended doctoral courses at the universities of Padua and Bologna during the Fifties.

The scholar known as Szydłowita, author of the first Polish music treatise, *Musica*, preserved in Gniezno, Archiwum Katedralne 200, flourished during the second half of the fifteenth century. He is widely assumed to be one and the same as Johannes de Szydlov, *magister artium* at the Jagiellonian University in 1471 and copyist of the above-mentioned Ms. Berlin, Staatsbibliothek lat. qu. 175. Szydłowita’s *Musica* is considered one of the most faithful reflexes of the original teaching of Hollandrinus. After Szydłowita, the vitality of Hollandrinian teaching is proved by the early sixteenth-century Ms. Wrocław, Biblioteka Ossolińskich 2297/1, transmitting *TH XII*.

Parallel to academic classes, private lessons in music theory and practice were given in the city, even by students of the university, such as Martinus de Crosno, who taught composition using Ornithoparchus’ *Musicae active micrologus* in 1539 on his own.

It is not until the first quarter of the sixteenth century that one can observe the flourishing of a Kraków non-institutional school of music theory. The circulation of lecturers in Central European universities

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3 Cf. Elżbieta Witkowska-Zaremba, *Musica Muris i nurt spekulatywny w muzykografii średniowiecznej* [Musica Muris and speculative trend in the medieval musicography], Warszaw 1992 (= Studia Copernicana 32), pp. 147–164.


and the eastward spread of German music theory printing played a dominant role in catalysing the Polish milieu. The premises of Gaffurio’s *Practica musice*, re-interpreted by Ornithoparchus, Burchardus and the theorists associated with Cologne University (Cochlaeus, Bogentantz, Wollick, Schanpecher), were substantially adopted by a group of practising musicians and former students in Kraków: Monetarius, Marcus Plocensis, and Sebastianus Felstinentensis.

Another branch of the Polish school opted for a more humanistic approach: Libanus and Gallinius dwelt more on the mythological and historical aspects of the discipline. Libanus taught Greek in Kraków, but he managed German music theory perfectly well, having been a student in Cologne before 1501. Even a cursory look through his *De musicae laudibus* reveals a number of latent or explicit quotations from Cicero, Virgil, Diogenes Laertius, Plutarch (via Philelfus’ *Convivia mediolanensis*), Boethius, etc.

From a formal point of view, Kromer’s *Musicae elementa* is similar to works from the more pragmatic stream of the Polish school. Its summary is drawn from an already simplified Gaffurian exposition of the subject, with addenda. *Liber prior* is quite conventional in terms of the major subdivisions (partition of music genres, notes, intervals, tones), but it lacks such crucial areas as solmisation and hexachord mutation, division of the monochord and *musica ficta*. The *Liber posterior*, instead, features an additional chapter on *proportiones* (II, VII): this chapter condenses the fourth book of Gaffurio’s *Practica*, a practical solution that was usually adopted also by theorists active in German-speaking lands.

Speaking of style and strategies of argumentation, Witkowska-Zaremba hits the mark by writing that, even if the musical circles of the Jagellonian University were quite prone to citing and naming Gaffurio, Ornithoparchus and Cochlaeus, Kromer appears to be remarkably autonomous in his exposition (Introduction, p. xlii): he opts for a pragmatic-oriented argumentation, refusing to linger on theoretical definitions, and strictly avoids explicit borrowings from previous or contemporary *auctoritates*. Musicologists familiar with medieval and Renaissance music theory soon become accustomed to the remarkable dearth of originality to some treatises, in which cento techniques are extremely common. In this respect, *Musicae elementa* seems a highly nonconformist text, especially if one compares it to Monetarius’ *Epitoma* (Kraków 1515) or Felstinentensis’ *Opusculum* ([Kraków] 1524). For example, Witkowska-Zaremba discusses in the introduction (p. xlviii) the definitions of *proportio* given by Monetarius (fol. F2r: ‘Proportio, ut refert Euclides, est duarum quandocumque sit eiusdem <generis> quantitatum certa alterius ad alteram habitud’ and Kromer (II, VII 102: ‘Proportio est cum diversis numeris eiusdem speciei notae sibi mutuo respondent’). One easily acknowledges that, whereas Monetarius repeats a general and abstract statement by Euclid – actually taken from Gaffurio’s *Practica* – Kromer addresses the practical, notational (‘eiusdem speciei notae’) and aural (‘mutuo respondent’) aspects.

Also peculiar to Kromer are some unusual lexical choices: *connexio* (= *ligatura*) is only fleetingly evoked by Stephan Roth, *praescriptum* (= *tactus*) is definitely a *hapax legomenon*, and by the metonym *characters* Kromer means what Ornithoparchus calls the *signa minus principales* (fol. F2v), i.e. the symbols for repetition, *congruentia vocum, extra mensuram* duration, sharp, flat and editorial emendations.

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Yet stylistic peculiarities do not prevent us from searching for shared features hidden between the lines. The following quasi-random and rough observations show, on the one hand, the general correctness of Witkowska-Zaremba’s analysis of loci paralleli, on the other one, the prospects for deepening and widening her suggestions.

The first praefatio will be the starting point for this analysis. In the commentary (p. 79), Witkowska-Zaremba refers to the Italian humanist Rhodiginus as a well-known author among German and Polish music theorists, when she glosses the expression musica organica. I have made a comparison between Rhodiginus’ Antiquae lectiones (Venice 1516, fol. 228), Ornithoparchus’ Musicae active micrologus (Leipzig 1517, fol. A3v–A4r) and Musicae elementa I 2. Similar quotations in Felstienensis and other theorists are irrelevant, because they repeat verbatim Ornithoparchus’ words. Rhodiginus: ‘Et mundanam quidem ex caelorum concentu inenarrabili deprehensam astruxere, necnon ex elementorum nexu mutuo subtilitatis immensae. […] Quam vero organicam nuncupant, eam iam ad instrumenta spectat, quae varietatis summæ pro ingeniorum captu artifex excogitavit’. Ornithoparchus: ‘Est igitur musica mundana harmonia syderum motu atque sperarum impulsu causata. Hanc ex caelorum concentu, elementorum nexu, atque temporum varietate deprehensam astruxere, necnon ex elementorum nexu mutuo subtilitatis immensae. […] Quam vero organicam nuncupant, eam iam ad instrumenta spectat, quae varietatis summæ pro ingeniorum captu artifex excogitavit’. Ornithoparchus: ‘Est igitur musica mundana harmonia syderum motu atque sperarum impulsu causata. Hanc ex caelorum concentu, elementorum nexu, atque temporum varietate deprehensam astruxere, necnon ex elementorum nexu mutuo subtilitatis immensae. […] Quam vero organicam nuncupant, eam iam ad instrumenta spectat, quae varietatis summæ pro ingeniorum captu artifex excogitavit’. Ornithoparchus: ‘Est igitur musica mundana harmonia syderum motu atque sperarum impulsu causata. Hanc ex caelorum concentu, elementorum nexu, atque temporum varietate deprehensam astruxere, necnon ex elementorum nexu mutuo subtilitatis immensae. […] Quam vero organicam nuncupant, eam iam ad instrumenta spectat, quae varietatis summæ pro ingeniorum captu artifex excogitavit’.

A far more glaring sign of dependency consists of the diagrams in Musicae elementa. I will focus on the first one (I, II 14), labelled by Kromer ‘Typus clavium’. Its central column accommodates the Guidonian letter notation, from gamma to ee, grouped by aspect (capitales, minutae, geminatae), height (graves, acutae) and function (finales, affinales); on the right, there are the seven deductiones of the diatonic genre, parallel to the litterae, and two series of numbers, ‘1 3 5 7’ and ‘2 4 6 8’, referring to the authentic (odd numbers) and plagal modes (even numbers). The purpose of this diagram is to establish an unequivocal match (clavis) between littera and syllaba, and to assist the memorisation of basic modal functions. Kromer’s ‘Typus clavium’ ultimately stems from a famous table by Gaffurio (Practica musice, fol. a2v), but only slightly different diagrams are used by Adam von Fulda, Wöllick, Ornithoparchus and Cochlaeus. In any case, one can outline a genealogy of the diagrams even through minimal dissimilarities: Kromer’s nomenclature (graves, finales, affinales, acutae) and numerical series likely come from Ornithoparchus’ table (fol. A6v), possibly indirectly, via an unidentified source.

The third chapter of Liber prior (I, III) addresses the modi (= intervals), and shows clear affinities with many other music the-
ory treatises of the fifteenth and sixteenth centuries due to a broader tendency towards homologation and uniformity, but it conveys one irreducible singularity: among the modi, in fact, Kromer cites also the dissonances in addition to the perfect and imperfect consonances and the fourth, and he makes no distinctions between the two categories. Moreover, he recognises that tritonus and hemidiatonicus occur in practice. Similar assertions can be found in Hollandsan sources (TH II 3, 126–128 et passim), in which dissonances are labelled modi inusitati, but nowhere in the entire TH can one single out a version mentioning also the hemidiapason, as Kromer does (although he incorrectly describes it as an augmented octave). A reasonable hypothesis is that Kromer was influenced by Wollick (Enchiridion, Paris 1512, fol. c6r–c7r) or Cochlaeus (Musica, Cologne 1507, fol. Br–B2r), because they both list all the consonances and dissonances from the unison to the diminished octave, while the latter admits the use of semidiapente and semidiapason (as diminished octave).

Witkowska-Zaremba is right in relating Kromer’s discussion of plainchant modality (I, IV) primarily to the Hollandsan tradition (pp. xliv–xlv). The pattern informing the Polish theorist’s explanation (identification of finalis and repercussa, melodic example of ambitus, display of reciting tones and differentiae for psalms, canticles, introits and responsory verses) matches the usual structure of Hollandsan sources, yet it seems hard to identify the TH version actually read by Kromer.

In the Liber posterior, Kromer deals with mensural signs. His quite common palette, only summarily described by Witkowska-Zaremba in the introduction (p. xlvii), is remarkable for mentioning two signs that prescribe perfection at all mensural levels: the two concentric circles with the point of prolatio maior, and the pointed circle with the cypher 3 (II, IV 75). The latter can be found also in Ornithoparchus and Listenius; the former is far less attested and appears only in the treatises of Adam von Fulda and Wollick.10

Such signs are purely theoretical and at odds with practice, as opposed to the actual translation of mensural signs into performative prescriptions through tactus interpretation, a theme discussed by Kromer in the chapter on praescriptum (II, VI). The core question concerns the tactus of the cut circle and the cut semicircle. Kromer calls unambiguously for a semibrevis tactus for all perfect mensurations, except for O2, which requires brevis tactus (despite their mention as proper mensural signs in II, IV, here Kromer glosses over the problematic O3 and C3 signs: they would normally require brevis tactus, but their cyphers were usually interpreted as tripla or sesquialtera proportions). In his view, the cut circle – with or without cypher 2 – demands a semibrevis tactus ‘celerius’, whereas the cut semicircle and C2 require a brevis tactus. Therefore, the Polish theorist’s option seems deeply rooted in the early German tradition of Adam von Fulda and Anonymous 12,11 being unconcerned with the tacit – and so alarming for the members of the Cologne school and others – contradiction between the tactus of cut signs (br. tactus for cut semicircle, sbr. tactus for cut circle).

Lastly, reading Kromer’s Musicae elementa is valuable in order to address some long-standing questions that Witkowska-Zaremba’s introduction and commentary do not develop because, one may think, they are still under the scrutiny of scholars. Nonetheless, I think it is crucial to address those questions in order to inscribe Kromer within an historical framework. Due


to space constraints, the present review will evoke two issues only.

In the praefatio to the second part, Kromer warns the reader: ‘Quae superiori libro diximus non solum illa quidem ad planam musicam spectant, verum etiam ad figuratum. Haec enim illius adminicululis, ceu tibicinibus, sustentatur. Quare cantum figuratum modulaturo in recenti memoria habenda sunt quae diximus omnia’. This statement is far less predictable than it might seem. The annoyance at sacred and de arte polyphony expressed by many theorists, humanists and reformers during the fifteenth and the early sixteenth century, such as Johannes Gallicus, Erasmus and Savonarola, made even the theoretical discourse about musica figurata a sensitive issue: critics believed that genre of music to be undermining religious fervour and moral integrity, and therefore inappropriate to the liturgy or devotion. Music theorists tend to avoid or disguise the justification of their writings on mensural polyphony: from Gaffurio to Felstinensis, prologues do not address basic questions, such as whether mensural polyphony is worth studying and singing or is suitable for the liturgy, and what the relationship is between de arte polyphony and plainchant. By affirming that the former is rooted in the latter, Kromer is not simply stating a pedagogical principle – even questionable in some respects – but is getting the message across that mensural polyphony is a legitimate ramification of plainchant, and that it carries within itself all the qualities that make Gregorian chant the one and essential means of the liturgy and devotion. Compared to the wall of silence erected by contemporary theorists, his claim is exceptional in conveying that mensural polyphonic music is as respectable as plainchant and worth studying.

The second question regards the purpose of the treatise. In the dedication to Nicolaus Lutomirsky and in the final exhortation, Kromer reveals his anticipated readership to have been those ‘studiosi adolescences’ (Dedicatio 8) whom he admonishes to do more practical exercise rather than pondering theoretical principles, because ‘exercitatio sine praeceptis magis confert quam praecepta sine exercitatione’ (Exhortatio 130). However, textbooks of Renaissance music theory were not intended for students, but for teachers of parish, collegiate and cathedral schools, who gave lessons using the treatise as a model and an aide-mémoire. Acknowledging purposes and targets helps us explain some apparent inconsistencies in music treatises and reveals the structural function of diagrams and examples. For instance, the prima facie inadequacy of Kromer’s discourse on perfectio, imperfectio and alteratio (II, IV 76–80) is overridden by the ensuing musical composition (Ex. 3), in which he implicitly shows where these mensural phenomena occur and how they are governed by counterpoint. Sometimes, however, examples and diagrams not only display more than the actual implementation of what was previously prescribed, but they also cover arguments that the author does not address at all, allowing masters and pupils to infer them on their own: such is the case of counterpoint rules, an essential feature of music education that Kromer never deals with specifically, but that can be gathered from the illustrations. In this respect, Musicae elementa is an interesting case study on Renaissance music pedagogy to be carried out through the evaluation of the gap between verbal regulation (cogent and apodictic) and the simulation of practice (unrestrained and problematic).

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