# dissertations

## Michael Bruce Collins—*The performance of coloration, sesquialtera, and hemiolia (1450-1750)*

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*Arthur Hills*

Modes of musical thought are shaped as surely by the symbolism of notation as conceptual thought is shaped by the symbolism of written language. An understanding of any musical style, therefore, depends on a study of its notation. Since notational forms, like language patterns, persist well beyond the moment of their most functional application, the study of a given notation requires a consideration of the notational conventions that preceded it. Mr. Collins is right to seek solutions to some of the more obscure 17th-century practices in the system of notation that was brought to a high degree of perfection in the 15th and 16th centuries. That his dissertation cuts across the traditional concepts of Renaissance and Baroque is indeed laudatory. Such an orientation, however, implies a shift of method, cutting likewise across traditional research methods. The weaknesses of Mr. Collins's work are due primarily to a failure to fashion an adequate method.

Mr. Collins has investigated the performance of triplet figures from 1450 to 1750, and therefore has considered not only "colored" (that is, black) notation but also sesquialtera proportion, and the manner in which both black notes and sesquialtera produce the effect known as hemiolia.[1] He sticks perhaps too closely to his topic. Some of his conclusions might have been clarified by investigating also the performance of more complex proportions—how to perform five or seven notes against two, for example.

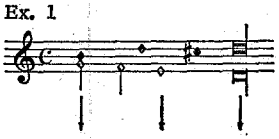
As is well known, a performance from part-books was regulated and kept together by the beating of a tactus. Obviously then, the theorists insisted that all notes, blackened or otherwise, had to be understood in relation to their position in the tactus. A performer had to adapt the symbols he was reading to the beat he was watching. Two types of beat were employed. First, when triple meter appeared in all the parts, an unequal tactus was used—a long downstroke for the first two units of the meter, and a short upstroke for the

third unit. Second, when one or more of the parts was in binary meter, an equal tactus was used—the downstroke and upstroke of equal duration. The unequal tactus was used only when all parts moved in triple meter, either by mensural sign, or by black notes. Otherwise, the equal tactus prevailed, and black notes, sesquialtera proportion, or any other unequal proportion occurring in a single part, had to be reconciled somehow to that tactus. Mr. Collins has arrayed an impressive list of theorists across the 300 years of his topic who discuss the precise effect of this reconciliation.

Black notes appearing in one voice-part of imperfect time, minor prolation were adapted to the tactus in various ways. If the black notes filled out but one or two tactus, either alla breve (¢) or alla semibreve (C), the longer black note was diminished by a quarter of its value, and the shorter note, by half of its value. In such cases, ¢ ▪ ♦ and C ♦ ♩ could be resolved in modern notation as: ¢ 𝅗𝅥. 𝅗𝅥 and C 𝅗𝅥. ♩ (the ♩ is, of course, a blackened minim which becomes, when halved, a semiminim, or quarter-note in modern transcription). The theorists frequently described this resolution as an example of the ternary effect blackening had on the binary measure. The longer black note was reduced to a perfect note (that is, a dotted note) one rhythmic level down. The black breve became a perfect semibreve; the black semibreve, a perfect minim. So, just as black notes in one of the perfect mensurations caused imperfection of the larger notes, black notes in an imperfect mensuration caused perfection of the larger notes. Once the larger note, in the latter case, had become perfect at the next lower rhythmic level, the smaller value that accompanied it took whatever time remained to complete the tactus, and lost, therefore, half of its value. Groups of black notes that extended beyond a tactus or two, however, usually meant sesquialtera proportion. Only if the longer groups fell clearly in twos did dupla proportion result (reduction in value by half).

A special problem arises in connection with cadential figures of this common type (the arrows show the downstrokes of the tactus):

Ex. 1



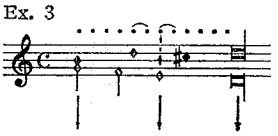
Both Martin Agricola (*Musica Figuralis Deudsch,* 1532) and Loys Bourgeois (*Le Droict Chemin de Musique . . .* , 1550) write out figures which show the performance resolution:

Ex. 2

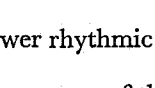
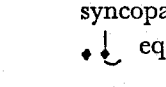
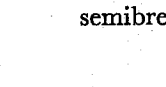
Encouraged by the clear evidence of these two northern theorists, Mr. Collins applies their reasoning to the interpretation of a large group of Italian theorists of the 16th and 17th centuries. No Italian, however, writes out a resolution. Instead, the southern theorists instruct the performer to watch the downstroke of the tactus, letting it evenly divide the second of the three black semibreves. In other words, as Collins correctly observes, the figure is to be thought of as:  . By adapting the resolutions of Agricola and Bourgeois to the Italians, however, Collins reasons that the black minims thus produced must be considered as minor values associated with major ones (the semibreves). Further, he reasons that these minor values should not be reduced, and that they are therefore equivalent to white minims:  . Finally, since color can cause dupla proportion when black notes are paired, Collins treats the outside black semibreves as dupla, and reduces them likewise to minims:  . In this way he brings the Italians into conformity with Agricola and Bourgeois, and a French-German performance practice is imposed on the South.

The Italian theorists must not be forced into the northern straitjacket. They do not write out resolutions, and indeed it would be difficult to write a resolution of a real triplet in terms of the notation they knew. Only by proportional sign or black notes could a triplet be suggested in the binary meters. The squarer northern resolution is easily expressed by the notation, so that Agricola and Bourgeois simply show the same passage written in black notes and then in white equivalents. On the other hand, what the Italians have to say, Mr. Collins's arguments notwithstanding, can be understood perfectly well to mean real triplet performance. The downstroke of the tactus will divide the second black semibreve just as evenly in a triplet resolution as it does in Example 2 (the dots in Example 3 show the alignment of the binary and ternary elements in terms of their common twelve-part factor):

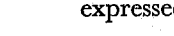
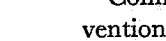
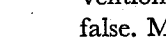
Ex. 3



Collins has reasoned wrongly in any case. He is safe enough in dividing the second black semibreve into two black minims,  , but to assume that the resulting minims lose none of their value follows only if they are filling out the perfection of a larger, imperfected value (filling out, in this case, the imperfected semibreves). Otherwise the minims, adapted to a binary meter, must

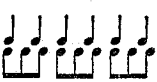
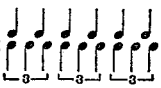
lose half their value, completing the semibreves which have become perfect at the next lower rhythmic level:  . The latter is an unlikely resolution for many reasons, one of the more important being the short-long rhythmic syncopation that results. We may more easily assume then that each group of  equals a perfect semibreve in sesquialtera proportion to the binary semibreves of the accompanying parts. The rhythm:  could then be expressed as:  in white notes.

Collins also argues that the northern resolution best observes the conventions of 16th-century suspension treatment. This argument is equally false. Minim suspension preparations are standard, whether the minims are in sesquialtera proportion or not. The important rule regarding suspensions requires that the dissonance should not be of longer duration than the preparation. A triplet performance gives both the preparation and the dissonance equal length—the length of a sesquialtered minim (see Example 3).

By starting with the theory that three black minims (  ) must be resolved to fit the tactus in one of these three ways:  , or  , Collins falls into one of his few problematical translations. The issue, however, is crucial. He translates Zarlino (Collins, p. 87) as saying on the subject of sesquialtera proportion: "... within the tactus there are contained three long or short notes—which there are—of which two are put on the downstroke, and one on the upstroke . . ." (*Le istitutioni harmoniche . . .*, 1562). Zarlino, in fact, says that one puts two notes during the downstroke (*due si pongono della Positione*) and one *in* the upstroke (*uno nella Levatione*). Zarlino has simply pointed out that the third note of the triplet falls in the course of the upstroke. Furthermore, Zarlino says that there will be three long *or* short notes (depending of course on the note-value involved). He does not suggest a combination of long and short notes. Lusitano (*Introdutione facilissima . . .*, 1553) has a similar explanation for the performance of three-note groups, and he too uses the preposition *nella*. Lusitano makes his point even more clearly in discussing other proportions. For example, when a proportion of nine notes must be sung against the tactus, five come during the downstroke and four in the upstroke. A nonuplet works out precisely this way. Lusitano is not describing a quintuplet followed by a group of four notes. Banchieri (*Cartella musicale . . .*, 1614) instructs the singer to perform three black minims with hesitation or perplexity (*titubatione*), an admirable description of performing three against two. Collins manages to see this as a description of a solid, square, unhesitating  figure.

In accepting Agricola, Bourgeois, and a whole group of German theorists[2] who give explicit instructions for performing three black minims as two short notes and a long one, Collins has not noticed that he is dealing with a well-

defined, national school—and a school peripheral to the Italian mainstream. The Italian theorists did not engage in verbal circumlocutions merely to confound 20th-century musicology. They were concerned with a different performance practice.

Collins documents a practice of considerable significance for the transcription of some German and French music of the late 16th century and the 17th century. By reference, however, to an illustration in Mattheson (*Kleine General-Bass-Schule . . .*, 1735) and to a description of *figura corta* in Printz (*Musica modulatoria vocalis . . .*, 1678), both of which show combinations of two short notes and a long one for black triplets, Collins concludes that this type of resolution applies also to much of the music of J. S. Bach. In some cases it may. Collins himself becomes cautious at this point, however, and suggests that the musical context should determine the resolution. But then, curiously, he wants to resolve the triplet voice-pair of the *Orgelbüchlein* chorale prelude, *In dulci jubilo*, into this rhythm: ♩ ♫. Bach owed as much to his Italian as to his German or French predecessors, and the tranquil, fluid motion of *In dulci jubilo* seems especially close to his Italian side. "Italian style" is real triplets against duplets. Therefore, precisely on the grounds of musical context, one may conclude that Bach wanted the conflict of these rhythms:  . Today we would write it as:  .

The enormous and often careful work that Mr. Collins has expended on this dissertation makes it especially regrettable that he has failed to collate the theorists with more discretion or to interpret them with more impartiality. Considering the pre-eminence of Italian music during the 16th and 17th centuries, it would have been more reasonable to use Italian theorists to understand the Germans. To attempt the reverse is folly. Mr. Collins, however, goes further and rewrites a piece published in 1645 by the Italian, Zanetti, according to definitions given in 1703 by the Frenchman, Brossard, and in 1732 by the German, J. G. Walther (Collins, pp. 222–224). Likewise he accepts variant musical sources too uncritically. He is content if a variant supports his hypotheses. He does not ask whether variants represent some real adaptation to a foreign performance practice, whether they represent idiomatic adjustments to a new performance medium, or any similar questions. Instead, he extricates himself from problems by clever but generally faulty reasoning. The theorists can be taken at face value with better, more plausible results.

The type of dissertation attempted here has tremendous potential. Certainly, to understand the confused notation of the 17th century, we are going to have to rely heavily on 16th-century practices and on good common sense. Unfortunately, however, even the definitive work on performing 17th-century triplets is still to be written. Mr. Collins is in a better position than most to write it. He would need only to refine somewhat his method.

*FOOTNOTES*

[1] The principal arguments of Mr. Collins's dissertation may be consulted in two articles: "The performance of sesquialtera and hemiolia in the 16th century", *JAMS* 17:5–28 (Spring 1964), and "The performance of triplets in the 17th and 18th centuries", *JAMS* 19:281–328 (Fall 1966).

[2] These theorists include Finck, 1556; Quitschreiber, 1607; Vulpius, 1608; Beringer, 1610; Elsmann, 1619; Gengenbach, 1626; Hase, 1657; and Trümper, 1668.

## REPLY TO ARTHUR HILLS

*Michael Collins*

Mr. Hills's main criticism of my work is aimed at my "failure to fashion an adequate method". It seems to me that there is a great deal of talk about method lately; but certainly no matter how airtight the researcher's method, it is no substitute for his having investigated all sources, finally choosing those relevant to the subject. This has been my "method", and the virtually complete list of 16th-, 17th-, and 18th-century theorists consulted can really not be listed. I chose those who seemed to be talking about real practice rather than abstract mathematical theory. Mr. Hills has turned up no new sources to contradict my theory; instead, he has attacked it on the rather dubious grounds of national styles.

We shall for the moment leave aside the 17th-century German theorists of the conservative camp who so clearly call for resolutions of three black minims (𝅗𝅥 𝅗𝅥 𝅗𝅥) into binary figures (𝅗𝅥 𝅗𝅥 𝅗𝅥). In the 16th century there were no national styles in the sense that Mr. Hills claims. There were different genres, such as madrigal, mass, motet, and chanson, and there was an *international* style—that of the Netherlanders. They developed the polyphonic style about which the Italians discourse; they brought it to Italy and they were employed there to write and perform this music in the great churches and courts of Italy. The Italian theorists I quote are speaking of the notation and the music of these Netherlanders. Aron cites Obrecht, Josquin, and Isaac as his masters and acquaintances in Florence; Zarlino cites Willaert, his teacher, Ockeghem, Josquin, de Rore, and Mouton. Tigrini is beholden, as are they all, to Gafurio, whose treatise is not about Italian music, and to Tinctoris, Aron, and Lusitano (a Portuguese theorist); he cites Josquin as well as Palestrina. Zacconi cites the theorists Zarlino and Heyden among others, and most of his examples are drawn from Ockeghem, Obrecht, Isaac, Josquin, and Mouton.

Now the first theorists to write out resolutions of sesquialtera and hemiolia were Agricola (1532) and Bourgeois (1550), both of them perhaps somewhat removed from the center of musical culture. The former, however, quotes Gafurio, the latter Heyden, Frosch, and Listenius. They do not make reference to tactus in regard to their resolutions. The later 17th-century German theorists, perhaps stemming from the great influence of the Netherlander