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Musical Sources and Stemmatic Filiation: A Tool for Editing Music

JAMES GRIER

Ever since the philologist Karl Lachmann, in the last century, announced the startling results of his investigations into the texts of the New Testament and the Classical Latin poet Lucretius, textual critics have sought to apply his principle of common error to establish the genealogical relationships of the sources of a wide variety of texts.[1] Lachmann's method arose from the problem of dealing with a text that was central to the fabric of Western Civilization, the New Testament. In its witnesses, as in those of all texts, he found three types of readings: good readings, places where the witnesses offered variant reasonable readings, and clear scribal errors. (The following discussion naturally pertains to both printed and manuscript sources. To avoid cumbersome locutions like scribal/typographical, or scribe/typesetter/engraver, I have chosen to use "scribe" or "scribal" to stand for the various possibilities.) The

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[1] On the New Testament see Karl Lachmann, "Rechenschaft über seine Ausgabe des Neuen Testaments," *Theologische Studien und Kritiken* III (1830), 817–45 (repr. in *Kleinere Schriften von Karl Lachmann,* II, *Kleinere Schriften zur Classischen Philologie von Karl Lachmann,* ed. J. Vahlen [Berlin, 1876], 250–72), and Lachmann's prefaces to each volume of the edition prepared with the assistance of Philip Buttmann, *Nouum Testamentum Graece et Latine,* 2 vols. (Berlin, 1842–50); on Lucretius see the preface to his celebrated edition, *In T. Lucretii Cari De rerum natura libros commentarius* (Berlin, 1850). On the originality of Lachmann's contributions see Sebastiano Timpanaro, *La genesi del metodo del Lachmann,* 2nd ed., corr., Biblioteca di Cultura, Saggi, V (Padua, 1985); J. Froger, *La critique des textes et son automatisation,* Initiation aux Nouveautés de la Science VII (Paris, 1968), 38–42; E. J. Kenney, *The Classical Text: Aspects of Editing in the Age of the Printed Book,* Sather Classical Lectures XLIV (Berkeley, Los Angeles and London, 1974), 105–29; and P. L. Schmidt, "Lachmann's Method: On the History of a Misunderstanding," in *The Uses of Greek and Latin: Historical Essays,* eds. A. C. Dionisotti, Anthony Grafton and Jill Kraye, Warburg Institute Surveys and Texts XVI (London, 1988), 227–36.

classification of readings in these categories depends entirely on the critic's stylistic conception of the work, a point of central importance to the responsible application of the method.

Readings of the first and third categories did not long detain Lachmann: the former were directly incorporated into his edited text, and the latter were corrected, either by introducing better readings from the manuscript tradition (*ope codicum*) or by conjectural emendation (*ope ingenii*). But the usual method of judging between readings of the second category did trouble Lachmann. Hitherto editors had decided on the basis of their interpretation of the content of the passage and the readings in question. Obviously, vastly different texts could be generated by the same set of readings through differing editorial interpretations. Lachmann, however, refused to select readings on the basis of interpretation because of the sensitivity of his text: heresy is not an accusation to be taken lightly. Hence he sought non-doctrinal criteria on which to base his decisions.

In its simplest form, the common-error method is based on the assumption that it is more economical, historically, to postulate that, when several witnesses agree in the same error, it arose from a single common ancestor. That is, the error was committed once and then copied into the descendants of that common ancestor. It is more difficult to believe that the same error could have been made by several scribes independently. Here something that seems to be taken for granted by many textual critics must be given weighty emphasis, and that is that only readings from our third category above, clear scribal errors, are useful for determining filiation.[2] The sharing of good readings, no matter how rare, simply cannot show stemmatic relationships. There is only one ultimate source for good readings, the authorial original, and all witnesses that transmit good readings are simply faithful reproductions of that original, through any number of generations. Therefore, the most that can be said about two

[2] The earliest clear statement that errors must be used to make stemmatic judgements seems to be that of Brooke Foss Westcott and Fenton John Anthony Hort, eds., *The New Testament in the Original Greek*, 2 vols. (New York, 1882; 1st ed., Cambridge and London, 1881), II, 19–72, especially 53–54. Timpanaro, *La genesi*, 58–61, and Froger, *La critique*, 42, both note the early use of the method without its express formulation. I was unable to verify Froger's assertion that Paul Lejay, in 1888, was the first to identify errors as the only evidence for filiation; he is, in any case, anticipated by Westcott and Hort. On the difficulties of positively identifying clear scribal errors see Leonard E. Boyle, O. P., "Optimist and Recensionist: 'Common Errors' or 'Common Variations'?" in *Latin Script and Letters A.D. 400–900: Festschrift Presented to Ludwig Bieler on the Occasion of his 70th Birthday*, eds. John J. O'Meara and Bernd Naumann (Leiden, 1976), 264–74; cf. James Grier, "Lachmann, Bédier and the Bipartite Stemma: Towards a Responsible Application of the Common-Error Method," *Revue d'Histoire des Textes* XVIII (1988), 274–75, 278.

witnesses that share a good reading is that they descend from the original, and that deduction is of no value in a stemmatic assessment.

Errors, on the other hand, are most likely transmitted from the source in which they first occur, which always appears below the authorial original in the stemma. And so shared error signifies, in most cases, descent from that first source, a deduction that is central to stemmatic determinations because it can distinguish the ancestry of two (or more) witnesses that agree in error against another witness or witnesses; the witnesses that agree in error descend from an ancestor in which the shared error was made, and which was unknown to the other witnesses. The advantages of the method are obvious. On the basis of a few clear scribal errors the editor can draw a genealogical table of witnesses, a *stemma codicum,* with the help of which many readings, including a good number in the troublesome second category, reasonable competing readings, can be eliminated from consideration, together with entire witnesses that can be shown to have been copied from a surviving witness; the latter process is called the *eliminatio codicum descriptorum.*

Not all problems are solved by a stemma, however. When there is an even number of branches at any division, there is the possibility that the witnesses will divide evenly between two readings from category 2. In such a case, editors must steel themselves for the selection of one or the other, exactly the dilemma that Lachmann wished to avoid. In fact, many published stemmata divide into two branches, and the French philologist Joseph Bédier initiated a debate, now nearly a century old, by accusing adherents of the common-error method of deliberately arranging their stemmata in bipartite form so that more readings would be reserved for their judgment, just the reverse of Lachmann's intention.[3]

Bédier recognized that some of the readings he used for his stemmatic assessment of the *Lai de l'Ombre* could not reasonably be construed as errors. Instead of eliminating these readings from consideration, and restricting his stemmatic evidence to category 3 readings, he showed how readings from the second category could be used selectively to construct several competing stemmata. He concluded that these reasonable competing readings arose from authorial or scribal revision, and that the most profitable method of editing the

[3] See Bédier's preface to his second edition of *Le Lai de L'Ombre par Jean Renart,* Société des Anciens Textes Français (Paris, 1913); and his further remarks in "La tradition manuscrite du Lai de l'Ombre: Réflexions sur l'art d'éditer les anciens textes," *Romania* LIV (1928), 161–96, 321–56 (repr. separately Paris, 1929 and 1970). For a discussion of the controversy, see Grier, "Lachmann, Bédier and the Bipartite Stemma," 263–78.

work would be to use the text of one witness, correcting it only where it was manifestly corrupt; that is, expunging its clear scribal errors.[4] Philologists call this procedure the "best-text" method.

Other complications affect this seemingly simple and efficient method: first among them are contamination, which is the consultation by a scribe of more than one exemplar; and conjectural emendation, whereby the scribe, unsatisfied with the reading of the exemplar, introduces a reading of his or her own invention. Furthermore, to define an error is not without difficulty. And finally, a simple fact of life is that, no matter how unlikely it is, it is possible for two scribes to make the same error independently. Hence any stemma based on textual evidence alone is built on a web of assumption and probability. It is an interpretative tool that depends on interpretation itself, starting with deciding what, exactly, constitutes an error. Errors are readings that are impossible within the stylistic conventions of the work. And defining the stylistic conventions of a work is clearly a hermeneutic task. Nevertheless, when the dangers of its possible misuse are recognized, and the editor acknowledges that, in virtually all cases, the stemma does not represent absolute, objective truth, stemmatic filiation provides a powerful tool for the cautious and scrupulous textual critic.

The stemma allows the editor to work from readings about which there is more certainty (but whose evaluation is still interpretative) to those whose value is less certain. The whole operation depends, however, on the editor's critical understanding of the work and its style. Consequently editors should not draw stemmata that eliminate complete witnesses on the basis of textual evidence alone, or divide the tradition in such a way that individual readings can be eliminated simply because a majority of the branches at any division agree. Sometimes help is available, however, in the form of physical evidence of the witnesses, or circumstantial evidence from the history and geography of the text's tradition, that can assist the editor in making firmer genealogical assessments. In fact some of Lachmann's most startling discoveries about his texts arose from just such types of evidence.

The shortcomings of the common-error method have generated several attempts at improvements since the 1920s. Dom Henri Quentin, W. W. Greg and Vinton A. Dearing, each working independently on different types of texts, attempt to eliminate any subjectivity in the classification of texts by refusing to distinguish between errors and good readings for the purpose of that classification.[5] Instead, all three

[4] Bédier, ed., *Le Lai de L'Ombre,* pp. XXVIII–XLV.

[5] Dom Henri Quentin, *Mémoire sur l'établissement du texte de la Vulgate,* Collectanea Biblica Latina VI (Rome and Paris, 1922), and *Essais de critique textuelle (ecdotique)* (Paris, 1926); W. W. Greg, *The Calculus of Variants: An Essay on Textual Criticism* (Oxford, 1927);

employ the statistical analysis of variants to determine the filiation of sources. Unfortunately such analysis is sure to be unduly influenced by the intermixture of good readings among those variants, and, as noted above, the sharing of good readings is of no consequence in stemmatic judgements.

George Kane and E. Talbot Donaldson, working together on the texts of William Langland's *Piers Plowman,* err on the other side by basing their stemmatic conclusions on readings from category 2, as defined above, reasonable competing readings, that they judge to be errors on interpretative grounds (exactly the procedural difficulty that vexed Bédier in his editorial endeavors).[6] This procedure is clearly a perversion of Lachmann's method, who sought to eliminate as many category 2 readings as possible on the basis of a stemma built upon readings from category 3, clear scribal errors. Lachmann hoped to minimize the use of interpretation in the direct selection of readings from category 2; instead, Kane and Donaldson elevate these decisions to the position of determining filiation. Consequently I condemn all four methods on theoretical grounds, the first three because they fail to accept the responsibility of determining which readings are in fact errors, and the last, even if it is the only feasible alternative when dealing with a text whose transmission and history are as complicated as *Piers Plowman,* because it fails to recognize the existence of category 2 readings and their unreliability in making stemmatic assessments.

As is clear from the preceding discussion, the major advances in the common-error method and the most famous examples of its application have all occurred in the fields of classical, biblical and medieval philology, and involved the filiation of manuscript materials. Among texts in the first two fields, the usual purpose of the method's application is to determine, as closely as possible, the text of an authorial original. This goal presupposes the existence of such an

Vinton A. Dearing, *A Manual of Textual Analysis* (Berkeley and Los Angeles, 1959), and *Principles and Practice of Textual Analysis* (Berkeley and Los Angles, 1974). Cf. Kenney, *The Classical Text,* 134–38.

[6] See the prefaces to George Kane, ed., *Piers Plowman: The Three Versions,* rev. ed., 2 vols. (London and Berkeley, 1988), especially I, *Piers Plowman: The A Version,* ed. Kane, 53–172; II, *Piers Plowman: The B Version,* eds. Kane and E. Talbot Donaldson, 16–97, 128–220; and Lee Patterson, "The Logic of Textual Criticism and the Way of Genius: The Kane-Donaldson *Piers Plowman* in Historical Perspective," in *Textual Criticism and Literary Interpretation,* ed. Jerome J. McGann (Chicago and London, 1985), 55–91. For criticisms, see Derek Pearsall, "Editing Medieval Texts: Some Developments and Some Problems," in *Textual Criticism and Literary Interpretation,* 98–106; Grier, "Lachmann, Bédier and the Bipartite Stemma," 272, 278; and Charlotte Brewer, "The Textual Principles of Kane's A Text," *Yearbook of Langland Studies* III (1989), 67–90. A balanced discussion of this method is given in Robert Adams, "Editing *Piers Plowman B:* The Imperative of an Intermittently Critical Edition," *Studies in Bibliography* XLV (1992), 31–68.

original, a text, resulting from the act of composition, that could be construed as carrying the authority of its creator. At this point of creation, the work, as an artistic entity, and the text, as its physical manifestation, are virtually identical, to the degree that the author has been able to transfer the work, in its psychological state, to its physical manifestation as a text. Once the work achieves this physical state, it is then transmitted in various ways, and along the way it sustains various accidents. The task of textual criticism, aided by the method of stemmatic filiation, is to return to that authorial state, to peel back the layers of accident and reveal the text, the physical manifestation of the work that would have been known to the author.

Clearly many musical works fit this paradigm, and the reconstruction of the composer's text is an important and worthwhile task, one in which stemmatic filiation can assist. But the nature of the musical text and the ways in which it is transmitted demand a special application of the common-error method. The musical score is a semiotic document whose meaning depends on context and convention. In such a situation, the graphic form of the text is subject to change whenever it is copied or otherwise transmitted, as each new scribe brings his or her set of conventions to the task of inscribing the text. The substance of the text, however, may remain unchanged during transmission because the scribe may have used a semiotic equivalent. Forearmed with the awareness that professional music scribes constantly evaluate the semiotic implications of the texts they are copying, editors of music can call upon the aid of the common-error method when dealing with pieces that originate in a definable compositional moment.

For a great deal of music in the Western art tradition, however, it is impossible to restrict the definition of the work to a discrete compositional moment. Composers introduce some flexibility of interpretation, in the form of performance, into the constitution of the work. Each performance creates a new reading of the work based on the performer's understanding of it. In the process of transmission, some of these characteristics might enter the text. Neither performer nor scribe, after all, feels that he or she is altering the work, only its text; and even then, in the spirit of an ongoing cooperative and collaborative dialogue between composer and performer. A witness created under these circumstances, therefore, transmits one possible text that carries no greater or lesser authority than other possible texts of the same work. No text, even the composer's, is fully authoritative. Only the act of performance carries authority, because in it the mutual creative intent of composer and performer is realized. The text carries nothing more than an enabling set of instructions.

Is there any point in incorporating witnesses of this sort into a stemmatic assessment? In the first place, how can one distinguish between an error and a variant in these witnesses? Presumably they vary, one from another, because of the processes by which they were produced and by which they incorporated variants from the performing tradition. How, then, can any reading be judged an error? The same criteria must be applied to witnesses within this type of tradition as in any tradition. Errors fall outside the stylistic norms. Here editors must even be more cautious when deciding on these norms because the very nature of the tradition, tolerating or even fostering variation as it does, widens the category of possible readings. Nevertheless, an editor sensitive to style and, especially, the context of the individual reading, can suggest some guidelines for these decisions.[7]

Even if a stemmatic assessment of such witnesses is thus possible, why bother to reconstruct, via the filiation of the witnesses, an authorial text that either does not exist (and never did) or is irrelevant as a result of the processes of transmission? The stemma, however, flows both ways. As a tool, it can eliminate readings from the perished witnesses at its top, and so assist in the reconstruction of an authorial original (should one have existed). But it can also isolate distinctive readings in surviving witnesses at the bottom of its branches. The stemma can help to identify those variants peculiar to individual witnesses and groups of witnesses, and often show when these variants entered the tradition.

This evidence illuminates not only the processes of transmission (that is, the techniques employed in the production of a particular witness) but also the musical practices that generated these distinctive variants. And it therefore opens a window onto at least some aspects of performance practice. (This evidence is always indirect, because we can never be sure to what extent a text represents actual, as opposed to ideal or virtual, performance.) Stemmatic filiation, then, provides insight into the history of a work and its transmission. It is not an autonomous method of editing: the stemma cannot determine the text in any definitive way. But it is a useful, even powerful, tool for understanding the historical descent of a work and its texts.

And so there is nothing in the theory that limits its application to music. Indeed musicologists are now applying the method to a broad

[7] See James Grier, "The Stemma of the Aquitanian Versaria," *Journal of the American Musicological Society* XLI (1988), 250–88, for an example. I develop the concept and typology of error in this repertory in a companion article, "Scribal Practices in the Aquitanian Versaria of the Twelfth Century: Towards a Typology of Error and Variant," ibid. XLV (1992), 388–400.

range of repertories across the chronological spectrum and are including printed sources in their stemmatic assessments.[8] The fundamental principles of the descent of errors, further corruption caused by the compounding of an existing error and their eradication through contamination and conjecture, are valid no matter what the medium of transmission. Printers and engravers are just as likely to fall prey to the hazards of copying, such as omissions caused by homoeoteleuton, as scribes and copyists. To be sure different processes generate different types of errors, but these do not jeopardize the validity of the method if the editor is sensitive to the idiosyncrasies of the process of transmission under consideration.

All the difficulties that confront the editor of a literary text who uses the common-error method can also confound an editor of music. Two in particular warrant mention here. First, many music sources contain several items or even groups of items. It is wise to consider the filiation of the individual pieces before proceeding to conclusions about groups of pieces or the entire source. In the twelfth-century Aquitanian uersus repertory, for example, I was able to ascertain that the song *Ex Ade uitio* descended to one of its witnesses via a route different from that taken by some of its companions in the same

[8] On the general applications of stemmata to music sources, see Georg von Dadelsen, "Über den Wert musikalischer Textkritik," in *Quellenstudien zur Musik: Wolfgang Schmieder zum 70. Geburtstag,* eds. Georg von Dadelsen and Kurt Dorfmüller (Frankfurt, London and New York, 1972), 41–45; Martin Staehelin, "Bemerkungen zum Verhältnis von Werkcharakter und Filiation in der Musik der Renaissance," in *Quellenstudien zur Musik der Renaissance,* II, *Datierung und Filiation von Musikhandschriften der Josquin-Zeit,* ed. Ludwig Finscher, Wolfenbütteler Forschungen XXVI (Wiesbaden, 1983), 199–215; and Stanley Boorman, "The Uses of Filiation in Early Music," in *Text: Transactions of the Society for Textual Scholarship* I (1984), 167–84. For a list of musicological writings concerning the application of stemmatics, see Boorman, "Limitations and Extensions of Filiation Technique," in *Music in Medieval and Early Modern Europe: Patronage, Sources and Texts,* ed. Iain Fenlon (Cambridge, 1981), 344–46. See also the essays in *Music in Medieval and Early Modern Europe* by Allan Atlas, "Conflicting Attributions in Italian Sources of the Franco-Netherlandish Chanson, *c.* 1465–*c.* 1505: A Progress Report on a New Hypothesis," 249–93, Margaret Bent, "Some Criteria for Establishing Relationships between Sources of Late-Medieval Polyphony," 295–317, and Boorman, "Limitations and Extensions," 319–46; papers in *Quellenstudien zur Musik der Renaissance,* I, *Formen und Probleme der Überlieferung mehrstimmiger Musik im Zeitalter Josquins Desprez,* ed. Ludwig Finscher, Wolfenbütteler Forschungen, VI (Munich, 1981), by Thomas Noblitt, "Textual Criticism and Selected Works Published by Petrucci," 201–44, and Boorman, "Petrucci's Type-setters and the Process of Stemmatics," 245–80; and the essays in *Datierung und Filiation* by Charles Hamm, "Interrelationships between Manuscript and Printed Sources of Polyphonic Music in the Early Sixteenth Century—An Overview," 1–13, Howard M. Brown, "In Alamire's Workshop: Notes on Scribal Practice in the Early Sixteenth Century," 15–63, Boorman, "Notational Spelling and Scribal Habit," 65–109, Noblitt, "Filiation vis-à-vis its Alternatives; Approaches to Textual Criticism," 111–27, and Reinhard Strohm, "Quellenkritische Untersuchungen an der Missa 'Caput'," 153–76.

witness.[9] The scribe of this witness, then, drew on at least two different exemplars in compiling his manuscript, and therefore it participates in at least two stemmata, one for *Ex Ade uitio* and one for the other pieces in the manuscript. This is the type of treatment accorded anthologies, of poetry for example, by philologists. The second difficulty is the question of revised editions issued by the composer him- or herself (e.g., the revisions of Bruckner, Mahler and Hindemith).[10] This situation is, of course, very familiar in literature, and, with the provision that the editor can successfully distinguish between sources particular to the various editions, it need not disrupt the procedure of classifying those sources.

In addition, an editor of music must deal with some problems that arise from its status as a performing art. Most music sources are practical, prepared for a specific performance or for the professional use of a particular musician. Hence, the first requirement, when such a source is compiled, is not utmost fidelity to the text, but the professional needs of the compiler.[11] Therefore a piece might suffer many alterations in the course of entering a practical source: simplification or omission of an inner voice; elaboration of an exposed voice; deletion, addition or substitution of a movement; transposition to a more comfortable key; replacement of one instrument with another more readily available where the source is to be used, to name a few.[12]

Again, the twelfth-century uersus provides an example. Several monophonic songs were converted to polyphony by the addition of a second voice, e.g., *Omnis curet homo*.[13] Three witnesses preserve the polyphonic version, and the added second voice is close enough in all three to show that they descended from a common ancestor. It is unlikely in the extreme that scribes who had access to this polyphonic

[9] Grier, "The Stemma," 273–76. The witness is 3549 (= Paris, Bibliothèque Nationale, fonds latin [hereafter Pa] MS 3549, fols. 149–69).

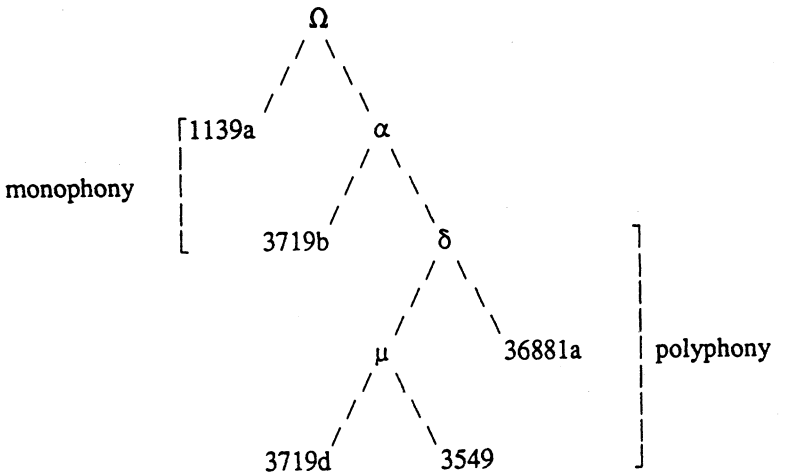
[10] Anton Bruckner: Deryck Cooke, "The Bruckner Problem Simplified," *Musical Times* CX (1969), 20–22, 142–44, 362–65, 479–82, 828; and the essays in *Bruckner Symposion "Die Fassungen": Im Rahmen des Internationalen Brucknerfestes Linz 1980,* ed. Franz Grasberger (Linz, 1981). Gustav Mahler: Donald Mitchell, *Gustav Mahler: The Wunderhorn Years, Chronicles and Commentaries* (Boulder, Col., 1976; 1st ed. London, 1975). Paul Hindemith's revisions to *Das Marienleben:* Paul Hindemith, *Das Marienleben* (Mainz, 1948), pp. III–X; and David Neumeyer, *The Music of Paul Hindemith,* Composers of the Twentieth Century (New Haven and London, 1986), 137–67.

[11] Bent, "Some Criteria," 307–10, suggests eight courses of action a music scribe might follow in the process of copying.

[12] Bent's fourth possibility, "Some Criteria," 308–09.

[13] Grier, "The Stemma," 262–67. The monophonic version is found in 3719b (= Pa 3719, fols. 23–32), and 1139a (= Pa 1139, fols. 32–39, 48–79); the three witnesses of the polyphonic version are 3719d (= Pa 3719, fols. 45–92), 3549, and 36881a (= London, British Library, Additional Manuscript [hereafter Lo] 36881, fols. 1–16).

FIGURE 1.



version would copy in its stead the monophony, and so it is fair to say that those witnesses that transmit the monophonic version did not know the common ancestor of the three polyphonic witnesses. Therefore that common ancestor, here designated manuscript δ, appears on the stemma of this piece below the witnesses of the monophonic tradition. (See Figure 1.) The addition of a second voice to this song is not, then, an error *per se;* errors are readings that are impossible on stylistic grounds. Variants of this type, however, are alternatives that appeared to be feasible, or perhaps even preferable options to the source's compiler, and as such it is often difficult to isolate them as alterations of the composer's text for the purposes of stemmatic assessment. In the case of *Omnis curet homo,* compelling stylistic evidence shows the historical priority of the monophonic version, and therefore the existence of manuscript δ, the common ancestor of the witnesses of the polyphonic version.

Scribal editorial intervention can affect the text of a work in a second, more subtle way, and one much more difficult to discern: conjectural emendation.[14] This type of activity also arises from the professional milieu in which much music-copying takes place: most, if not all, scribes, in all periods up to the present day, are trained musicians. When they confront a manifest corruption in the text from which they are copying, they are apt to replace it with another reading

[14] Bent's second and third possibilities, "Some Criteria," 307–08.

that is stylistically more feasible without necessarily restoring the composer's text. Now successful emendations, ones that accord with the work's perceived style, are invisible within the fabric of the piece. Only those alterations that move outside the stylistic boundaries of the work are discernible, and so they fall into category 3, as defined above, clear scribal errors.

The twelfth-century Aquitanian uersus provides examples of the kind of situation that could motivate scribal emendation. In *Noster cetus psallat letus,* a copying error at the beginning of a phrase eventually causes the scribe to rewrite the cadence with uncharacteristic parallel unisons.[15] A contrasting situation is presented in the prosa *Arce siderea.* Two harmonic seconds, which seem to belong to the original conception of the piece as we have it, led the scribe of one witness to alter the lower voice. Unfortunately he thereby introduced several additional harmonic seconds, and changed the lower voice from an independent line moving in contrary motion to the upper voice, to a clumsy doubling of it.[16] When these emendations fall into error, they can be used to determine filiation. When they do not, they silently enter the work's text.

In some repertories, scribes are able to make corrections, not on the basis of conjecture, but out of their knowledge of the piece. Plainsong, with respect to both literary and musical texts, is perhaps the best example of such a tradition. The Bible is the source of many of the literary texts used in plainsong, and scribes could very easily correct errors in their exemplar from their knowledge of the Bible; they might not even be aware of some corrections while making them.[17] Similar corrections, conscious or unconscious, might be effected during the copying of the melodies, certain to be well known to the scribes of music books for the liturgy, which were usually entrusted to the most learned and accomplished members of the scriptorium.[18] A passage from an eleventh-century Gloria trope demonstrates the principle. (See Example 1.)

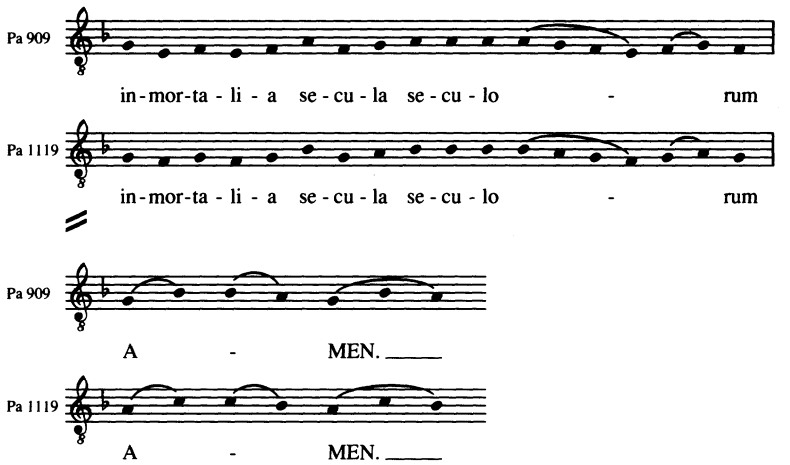
[15] Grier, "Scribal Practices," 379–83; the witness is 3719b.

[16] Grier, "Scribal Practices," 397–98; the witness is 3719d.

[17] Alejandro Enrique Planchart, "The Transmission of Medieval Chant," in *Music in Medieval and Early Modern Europe,* ed. Fenlon, 348 and n. 2.

[18] Paul Evans, *The Early Trope Repertory of Saint Martial de Limoges,* Princeton Studies in Music II (Princeton, 1970), 33–34; Alejandro Enrique Planchart, *The Repertory of Tropes at Winchester,* 2 vols. (Princeton, 1977), I, 14–16, 32–33; idem, "The Transmission," 355–57; and Margot E. Fassler, "The Office of the Cantor in Early Western Monastic Rules and Customaries: A Preliminary Investigation," *Early Music History* V (1985), 29–51, especially 44–51.

EXAMPLE 1. Gloria trope *Rex apostolorum*



Codex Pa 1119 is a direct copy of Pa 909.[19] Yet the version in Pa 909, which gives the melody a second lower, is incorrect. As Example 1 shows, the passage concludes with a cue to the *Amen* that ends the Gloria melody. All other Aquitanian sources agree with Pa 1119 in starting this *Amen* on A.[20] When the scribe of Pa 1119 reached this passage, he copied the correct version of the melody from memory, possibly without remarking the error in his exemplar. This correction removed an error that could have allowed the determination of the filiation; in other cases, scribal intervention of this sort could prevent the textual critic from identifying surviving ancestors that retain the erroneous readings. Only a close inspection of scribal procedures can permit the detection of these editorial activities.

Another type of scribal procedure, perhaps even more widespread, also disrupts the filiation of witnesses, and that is contamination, the consultation of two independent sources in the preparation of a third. This is a technical term borrowed from Roman comedy, where it describes the practice of conflating the plots of two preexisting plays in a new one.[21] Throughout the Middle Ages, those re-

[19] James Grier, "*Ecce sanctum quem deus elegit Marcialem apostolum:* Adémar de Chabannes and the Tropes for the Feast of Saint Martial," in *Beyond the Moon: Festschrift Luther Dittmer,* eds. Bryan Gillingham and Paul Merkley, Wissenschaftliche Abhandlungen LIII (Ottawa, 1990), 36–37.

[20] Other Aquitanian sources: Pa 1120, 1132, 1133, 1134, 1135, 1136, 1137, 1086, 778, and Paris, Bibliothèque Nationale, nouvelles acquisitions latines, MS 1177.

[21] The Roman comic playwright Terence uses the term in response to the critics of his method, *Andria,* 16, and *Heauton timorumenos,* 17.

sponsible for the music books of the liturgy were required to correct them when they were found to be faulty.[22] More explicit are the directions for the copying of music books issued in the mid-thirteenth century by both the Franciscan and Dominican orders.[23] Scribes are enjoined to check their copies against corrected exemplars twice (in the case of the Dominicans) and three times (in the Franciscan order). As examples of the procedure, two of the tropers executed in the scriptorium of the Abbey of Saint Martial in Limoges during the eleventh century exhibit a double derivation from two other surviving tropers, and thus attest to the fact that their respective scribes had both tropers open on the desk while copying. Codex Pa 909, written A.D. 1028–29, combines elements of Pa 1120 and 1121.[24] In the next generation, Pa 1119, written between A.D. 1050 and 1063, was copied from Pa 1120 and 909.[25]

The usual result of contamination is the replacement of clear errors with reasonable readings that are not necessarily authorial, just as is the case with conjectural emendation.[26] In fact, readings that arose from emendation or contamination are, in many cases, indistinguishable to the editor. Nevertheless, it is unlikely in the extreme that all characteristic errors would have been removed through scribal editing, and so the filiation of such witnesses is not beyond the realm of possibility. Such is the case with the ancestry of Pa 1119, as shown above. Its scribe was able to correct at least one error in its exemplar, Pa 909, on the basis of his knowledge of the melody, but its derivation

[22] See, for example, the eleventh-century customary of Cluny, *Liber tramitis aeui Odilonis abbatis,* 2.26, ed. Peter Dinter, Corpus Consuetudinum Monasticarum X (Siegburg, 1980), 239; the twelfth-century customary of the abbey of Saint Victor in Paris, *Liber ordinis sancti Victoris parisiensis,* 19, ed. Luc Jocqué and Louis Milis, Corpus Christianorum Continuatio Mediaeualis LXI (Turnhout, 1984), 81–82; and the thirteenth-century regulation for the Dominican order, Humbert of Romans, *Instructiones magistri Humberti de officiis ordinis,* 8, ed. Joachim Joseph Berthier, *Opera de uita regulari,* 2 vols. (Rome, 1888–89), II, 238. See also Fassler, "The Office of the Cantor," 46–51.

[23] S. J. P. van Dijk, O. F. M., *Sources of the Modern Roman Liturgy,* 2 vols., Studia et Documenta Franciscana, 1–2 (Leiden, 1963), I, 110–20; Dominican rule printed I, 118; Franciscan rule II, 361–62. See also Michel Huglo, "Règlement du XIIIe siècle pour la transcription des livres notés," in *Festschrift Bruno Stäblein,* ed. Martin Ruhnke (Kassel, 1967), 121–33.

[24] Grier, "*Ecce sanctum,*" 54–57.

[25] On its derivation from Pa 1120, see Heinrich Husmann, *Tropen- und Sequenzenhandschriften,* Répertoire International des Sources Musicales, B 5^1 (Munich, 1964), 129; on its relation to Pa 909, see Grier, "*Ecce sanctum,*" 36–37.

[26] P. Collomp, *La critique des textes,* Publications de la Faculté des Lettres de l'Université de Strasbourg, Initiation Méthode VI (Paris, 1931), 105–19; Giorgio Pasquali, *Storia della tradizione e critica del testo,* 2nd ed. (Florence, 1952), 146–83; Martin L. West, *Textual Criticism and Editorial Technique Applicable to Greek and Latin Texts* (Stuttgart, 1973), 35–47; and Sten Eklund, "On Errors and Contamination," *Kungl. Humanistiska Vetenskaps-Samfundet i Uppsala, Årsbok* (1975–76), 73–83.

from Pa 909 is attested by other evidence. The Aquitanian uersus repertory of the twelfth century also shows signs of at least limited conjectural emendation on the part of its scribes, although I am very doubtful that contamination is present, and yet enough distinctive errors remain to suggest a filiation of the witnesses.[27]

The preceding paragraphs would appear to place significant obstacles in the way of determining the filiation of witnesses with any degree of certainty. Two types of evidence, however, can greatly facilitate the work, if used critically. Editors of vocal music have available to them the transmission of the literary text. If it is demonstrable that literary and musical text circulated together, then errors in the literary text are useful for indicating the filiation of the witnesses. The criteria for judging errors in literary texts are much better established than those applicable to music. Such evidence is essential for the stemma that I suggest for the Aquitanian uersaria, and also for my assessment of scribal procedures in these codices.[28] It is quite possible, however, that the literary text could descend by a different route from that taken by the musical text, and perhaps the best example of this mixed type of transmission would be plainsong, with its biblical texts, as discussed above. Critics, therefore, must judge whether this evidence is admissible, and their criteria will be the historical position of the witnesses, and the circumstances under which they were produced.

Occasionally documentary evidence can illuminate the stemmatic filiation. For example, until recently the most authoritative editions of Mozart's *Linz* Symphony, K. 425, were based on a set of parts that Mozart sold to the Fürstenberg court at Donaueschingen.[29] Cliff Eisen shows that this set was copied from a faulty score of the work.[30] The use of a score, as opposed to a set of parts, for the exemplar is guaranteed by three passages in which readings from one part have entered another. In movement 1, bar 264, the second horn gives the reading of the first trumpet; the second violin in 3:22 gives C–B, which replicates the reading of the viola part (D–C, but, in alto clef, so that it lies in exactly the same position on the staff); and the first

[27] Grier, "The Stemma"; on the presence of emendation, see idem, "Scribal Practices," 397–98.

[28] Grier, "The Stemma," especially 257, where I discuss the applicability of evidence from the literary text; and "Scribal Practices," 375–77, on copying procedures in the literary text.

[29] Donaueschingen, Fürstlich Fürstenbergische Hofbibliothek, MSS S.B. 2/9.

[30] Cliff Eisen, "New Light on Mozart's 'Linz' Symphony, K. 425," *Journal of the Royal Musical Association* CXIII (1988), 81–96.

horn, in 4:365–66, presents the reading of the first trumpet.[31] In each case, the copyist's eye slipped down to the wrong part in the score, and so these are errors of intrusion.[32] These corruptions could not have arisen had the copyist been working from parts.

That the exemplar transmitted errors is verified by the agreement in error of two pairs of parts. At 3:24, both horn parts agree in an error on the first note; and at 4:384, both bassoon parts share an error on the second note. Because each pair of parts contains a significant amount of independent writing, the copyist would not have been able to copy one part from another (e.g., second horn from first horn). Each part, then, was copied in turn from the score; because it is extremely unlikely that the copyist would have made the same error twice independently when producing the pairs of parts, the two shared errors could only have entered the parts from the score. That score, therefore, could not have been Mozart's autograph, and so is at least one generation removed from it. Another set of parts exists, however, copied in the main by Joseph Richard Estlinger, who copied many works for the Mozart family between 1752 and the mid-1780s.[33] Eisen coordinates the documentary evidence of correspondence between Wolfgang and his father, and paper types in the Salzburg parts to show that this set derives directly from the autograph, and therefore carries equal stemmatic weight to the Donaueschingen parts.

With all these reservations in mind the editor can then proceed to the actual business of drawing a stemma.[34] First a word on two troublesome technical terms is in order: separative and conjunctive errors.

[31] Eisen, "New Light," Table 1, p. 83, gives the errors found in the Donaueschingen parts.

[32] On errors of intrusion, see Grier, "Scribal Practices," 377–79, 396–97.

[33] Salzburg, Internationale Stiftung Mozarteum, MSS Rara 425/1; see Eisen, "New Light," 84–85. On Estlinger's relationship with the Mozart family, see Eisen, "The Mozarts' Salzburg Copyists: Aspects of Attribution, Chronology, Text, Style, and Performance Practice," in *Mozart Studies*, ed. Cliff Eisen (Oxford, 1991), 259–65, and the Appendix, 300–07, where the authentic Salzburg copies of works by Leopold and Wolfgang Mozart are listed.

[34] The following discussion draws on these works: Paul Maas, *Textkritik*, 4th ed. (Leipzig, 1960), 5–9, 26–30; Collomp, *La critique des textes*, 33–81; Pasquali, *Storia della tradizione e critica del testo*, 3–12; James Willis, *Latin Textual Criticism*, Illinois Studies in Language and Literature LXI (Urbana, Chicago, and London, 1972), 13–32; West, *Textual Criticism and Editorial Technique*, 31–47; Kenney, *The Classical Text*, 130–42; Alberto Blecua, *Manual de crítica textual*, Literatura y Sociedad XXXIII (Madrid, 1983), 47–122; and L. D. Reynolds and N. G. Wilson, *Scribes and Scholars: A Guide to the Transmission of Greek and Latin Literature*, 3rd ed. (Oxford, 1991), 211–16. For a theoretical discussion in a musical context, see Georg Feder, *Musikphilologie: Eine Einführung in die musikalische Textkritik, Hermeneutik und Editionstechnik*, Die Musikwissenschaft: Einführungen in Gegenstand, Methoden und Ergebnisse ihrer Disziplinen (Darmstadt, 1987), 61–67.

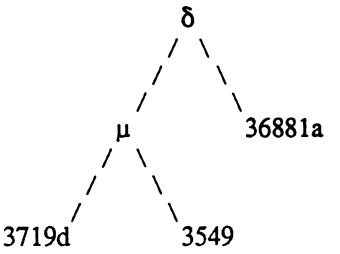
Two witnesses of the Aquitanian uersus *Omnis curet homo* agree in transmitting parallel motion between the two voices at a cadence, which, on stylistic grounds, I take to be an error.[35] This agreement, then, marks this error as conjunctive; that is, it is most likely that the two scribes simply copied it from a common ancestor, and less probable that both made the same error independently. Therefore, we can posit a common ancestor from which these two witnesses descend. Meanwhile, a third witness, 36881a, carries the correct reading, which it could only have copied from a witness above the common ancestor of 3719d and 3549, because all witnesses below that ancestor carry the conjunctive error common to 3719d and 3549. (See Figure 2.) Therefore, a conjunctive error is one in which two (or more) witnesses agree, and it constitutes evidence of the parallel descent of those witnesses from a single common ancestor in which the error was originally committed.

At the same time, the error in 3719d and 3549 is also a separative error, because the correct witness, 36881a, could not have been copied from either of the erroneous witnesses, or their common ancestor. That is, if the scribe of 36881a were copying from any of these three witnesses, it would be impossible for him to derive the correct reading that 36881a transmits from any of them. Therefore none of 3719d, 3549 or manuscript μ (the common ancestor of 3719d and 3549) could be an ancestor of 36881a. A separative error, then, shows that a particular ancestry is impossible. Other separative errors in 36881a demonstrate that it could not be an ancestor of either 3719d or 3549 (and therefore also of manuscript μ), and so we posit the stemma given in Figure 2. Conjunctive and separative errors are, as a group, called significative errors.

Furthermore each type of significative error must demonstrate specific characteristics. A separative error must not be susceptible to conjectural emendation or correction through contamination. That is, for the error shared by 3719d and 3549 (and therefore their ancestor, manuscript μ) to be considered a separative error, it must be unlikely that the scribe of 36881a could have restored the correct reading through conjecture or consultation of another exemplar. Otherwise it is possible that 36881a descended from one of these three witnesses. Conjunctive errors, on the other hand, are unlikely to be made independently. The error that links 3719d and 3549 is so distinctive (music from the bottom voice is copied into the upper voice so that the voices move in parallel thirds) that is is improbable that each scribe could have committed it independently. If they could have made the error separately, it would carry no conjunctive force.

[35] Grier, "The Stemma," 265–66; the two witnesses are 3719d and 3549.

FIGURE 2.



An important corollary to this discussion, taken up in more detail below, is that the absence of either type of error does not permit any stemmatic deduction. For example, if 36881a contained no separative error that would prevent it from being the ancestor of 3719d and 3549, it would not necessarily follow that it was, in fact, their ancestor. As I demonstrate below, much more concrete evidence is required to prove such a relationship.

In stemmata, including those given above, Greek letters denote witnesses that no longer exist. Capital Ω is used to indicate the archetype, the latest witness from which all extant witnesses descended.[36] In many cases, of course, the archetype survives, either in the form of the composer's autograph or some such similarly authoritative source. Here, the editor should designate it by its ordinary siglum. Only perished sources should be allocated Greek letters. Other lost witnesses are indicated by lowercase Greek letters, such as manuscripts δ and μ in the stemma given above. These are hyparchetypes because only some of the surviving witnesses descend from them.

Here it is useful to restate that only clear scribal errors should be used in establishing stemmatic relationships. As discussed above, editors will place readings in that category on the basis of stylistic criteria. They should publish the selection of errors used to determine the stemma, with a detailed explanation of their reasoning, for scholarly scrutiny. It is especially important that editors make clear the distinction between the firm errors on which they base the stemma and reasonable competing readings, those in category 2. Readings in category 2 could be errors, but, more important, they are conceivable readings within the stylistic context of the piece under consideration, whereas category 3 readings are not conceivable. How many significative errors will suffice to establish the relationship of two witnesses? The answer is directly related to the length of the piece. Naturally the greater the number, the more certain the relationship, but in shorter

[36] Michael D. Reeve, "Archetypes," *Sileno* XI (1985), 193–201.

pieces even a single significative error can indicate the relationship. Finally I cannot lay enough stress on the fact that errors, not good readings, are the only evidence admissible in stemmatic discussions.

Let us begin with the relationships that can be determined on the basis of textual evidence alone. Above I mentioned that such a stemma should not eliminate any complete witness, or any reading because of the agreement of a majority of the branches at any particular division. The reason for this restriction is that both types of elimination depend on the absence of evidence, the *argumentum ex silentio*.[37] The usual requirement for the elimination of a witness (*eliminatio codicum descriptorum*) is that it contain all of the errors of its exemplar plus one or more unique errors. (See Figure 3.) B contains all the errors present in A, and some of its own. These unique errors are separative and so prevent the hypothesis that A was copied from B. On the other hand the hypothesis that B was copied from A depends not so much on the presence of separative errors in B as on the absence of separative errors in A. The same problem vexes the division of the stemma into more than two branches. (See Figure 4.) CDE all contain separative errors against one another. The only evidence of their parallel descent from Ω, however, is the absence of a conjunctive error that would establish the presence of a common ancestor below Ω known to only two of the witnesses. In this stemma, the agreement of any of CD, DE or CE eliminates the reading of the third witness on purely numerical grounds. In the preceding stemma (Figure 3), the entire witness B is eliminated because it is copied from a surviving witness.

In both cases the elimination is consequent to the absence of evidence, and here the distinction between readings in categories 2 and 3, reasonable competing readings and clear scribal errors, respectively, is of the utmost importance. The absence of clear scribal errors in either case, a separative error in A in the first stemma and a conjunctive error that links any pair of witnesses in the second stemma, does not prove conclusively the stemmata that we have proposed above. Nevertheless, some would say that witness B, above, is a *codex inutilis:* it contains no good readings not found in A, and a few more

[37] On the *eliminatio codicum descriptorum,* see Humphrey Palmer, *The Logic of Gospel Criticism* (London, Melbourne, Toronto and New York, 1968), 67–75, and "Proving Uniqueness in a Pedigree of Manuscripts," in *La pratique des ordinateurs dans la critique des textes: Paris 29–31 mars 1978,* Colloques Internationaux du Centre National de la Recherche Scientifique, 579 (Paris: Éditions du Centre National de la Recherche Scientifique, 1979), 185–89. On multipartite stemmata, see Blecua, *Manual de crítica textual,* 74–77, and Eklund, "On Errors and Contamination," 82 and n. 16. See also Grier, "Lachmann, Bédier and the Bipartite Stemma."

FIGURE 3.

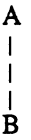
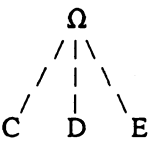


FIGURE 4.



corruptions of its own.[38] Even if it were not a direct copy of A, it contributes nothing to the text's tradition that cannot be obtained from A. A similar argument could be advanced about the multipartite stemma. If no conjunctive error attests to the existence of a hyparchetype, one could assume that all shared readings are good, and should therefore ascend to the archetype. The dangers of accepting either a multipartite division of the stemma or the *eliminatio codicum descriptorum* will emerge from the following examples.

In the first, there are three surviving witnesses. (See Figure 5.) In the first instance the tripartite stemma is correct, but the scribes of AB chanced to err in exactly the same way independently. Editors would posit stemma 2) and eliminate the readings of B when AC agree and those of A when BC agree. All these readings would be eliminated were the correct filiation ascertainable. In the second instance, however, the bipartite stemma is correct, but the scribe of α committed no clear scribal error. Consequently most editors would choose stemma 1) and eliminate the reading of the third witness in the event of the agreement of any pair. Hence, where the scribe of α erred, but the resulting reading is reasonable, that erroneous reading will ascend to the archetype on stemmatic grounds because of the absence of a firm conjunctive error in AB that would indicate the presence of a hyparchetype.

The same danger is to be found in the second example, where two witnesses have survived. (See Figure 6.) In the first instance stemma 1) is correct but the scribe of B corrected some of the obvious errors in

[38] The term was coined by Sebastiano Timpanaro; see "*Recentiores* e *deteriores*, *codices descripti* e *codices inutiles*," *Filologia e Critica* X (1985), 164–92, especially 187–88.

FIGURE 5.

FIGURE 6.

A. Editors would choose stemma 2) and eliminate no readings. In the second instance the bipartite stemma is correct, but the scribe of A committed no clear scribal errors, while B's scribe did. Stemma 1) would present itself as the correct filiation and B would be eliminated. Again the scribe of A might have erred but in erring produced reasonable readings where B retained the correct readings. The acceptance of stemma 1) will elevate the mistakes of scribe A to the archetype and condemn all of B's readings, good, reasonable and bad.

In both the false multipartite stemma and the false elimination of witness B, readings from category 2 are potentially mishandled. Among those that ascend to the archetype in either case, there might well be some errors, and those which are eliminated could include some correct readings. These threats to the common-error method are so great that editors should never propose, on the basis of textual evidence alone, the elimination of a witness or the division of a stemma into more than two branches. This solution does not guarantee that all correct category 2 readings will reach the archetype, but it does ensure that they will not be eliminated arbitrarily by a potentially false stemma.

Therefore a stemma based on textual evidence alone will be bipartite in all its divisions and no source will be eliminated as a *descriptus*. Obviously this stemma does not depict the genealogical relationship of the sources; rather it charts the descent of the piece to various hyparchetypes whence it was transmitted to the surviving sources.

Philologists use the term *stemma textuum* instead of *stemma codicum* for a stemma based on this type of evidence.

The filiation of the twelfth-century Aquitanian uersaria provides illustrations of the procedure. First, the stemma of the uersus *Veri solis radius* shows how conjunctive errors demonstrate the relationships between witnesses.[39] Two errors in the poetic text are shared by 3719a, 3719d and 3549, and so they descend from a witness, in which the errors were made, unknown to 36881a, which transmits the correct reading in each case.[40] (See Figure 7.) Furthermore copying errors in both the literary and musical text are shared by 3719d and 3549, in passages where 3719a gives the correct reading in agreement with 36881a. Two deductions follow: first that 3719d and 3549 descend from a common ancestor unknown to 3719a, which could only have copied the correct readings from a source above the common ancestor of 3719d and 3549 on the stemma; and second that agreement in good readings, as between 3719a and 36881a here, proves nothing about common descent. (See Figure 8.) Errors that are shared by two or more witnesses against another witness or witnesses permit the establishment of the filiation given above.

Evidence other than conjunctive error can determine filiation, as the stemma of the twelfth-century Aquitanian uersus *Omnis curet homo* shows.[41] As I pointed out above, the presence of a polyphonic version in 3719d, 3549 and 36881a distinguishes them from the other two witnesses, and indicates that they descend from a common ancestor unknown to either 1139a or 3719b. That ancestor is the hyparchetype δ, which therefore contained the polyphonic version that occurs in its three extant descendants. (See Figure 9). Furthermore, 3719d and 3549 agree in a conjunctive error, mentioned above: the use of parallel motion at a cadence. This agreement guarantees that they descend from a hyparchetype unknown to 36881a, manuscript μ. (See Figure 10.) In each case, the sharing of distinguishing readings indicates the existence of a hyparchetype. Manuscript 36881a preserves the correct reading at the cadence, and therefore that reading was present in manuscript δ. Manuscripts 3719d and 3549 could only have copied the conjunctive error that links them from an intermediate source, in which the error occurred, that was unknown to 36881a: manuscript μ. All three extant witnesses ultimately derived their polyphonic versions from the same source, manuscript δ, which, in turn, was unknown to the other two witnesses, 1139a and 3719b.

[39] Grier, "The Stemma," 258–62; in the sigla below, 3719a = Pa 3719, fols. 15–22.
[40] Grier, "The Stemma," 260; and "Scribal Practices," 377.
[41] Grier, "The Stemma," 262–67.

FIGURE 7.

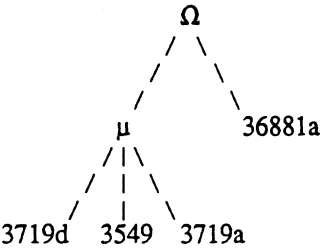


FIGURE 8.

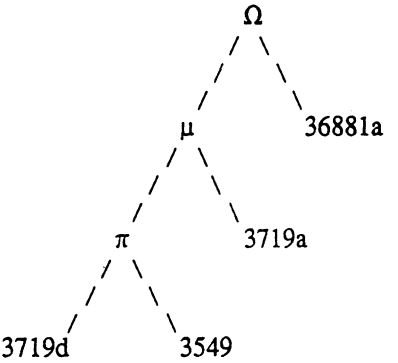


FIGURE 9.

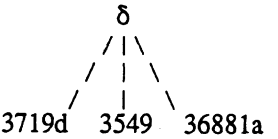
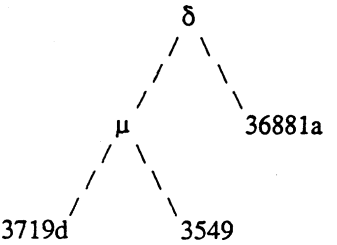


FIGURE 10.



No clear conjunctive error associates either of these two witnesses with the polyphonic versions, but the treatment of embellishment and melodic sequence in 3719b shows very close similarities with the three polyphonic versions. Therefore, I judge it to descend from an ancestor that was also known to them, manuscript α. (See Figure 11.) In two cases, then, readings that are not clear errors can nevertheless show shared descent. Copies of manuscript α evince treatment of melodic sequence not found in 1139a, and the polyphonic version, which originated in δ, distinguishes the three witnesses that transmit it from the two monophonic witnesses.

Where the absence of conjunctive error does not permit the grouping of witnesses in a bipartite arrangement, the editor should not resort to a multipartite division, as the stemma of *Ex Ade uitio* shows.[42] A firm conjunctive error in the text associates 1139 and 3719a against 3549. This is the error, mentioned above, that shows that this song descended to 3549 via a different route from that which other uersus, such as *Omnis curet homo* and *Veri solis radius,* followed. (See Figure 12.) No conjunctive errors allows 3719b, however, to be linked with any other witness. According to the strictest stemmatic theory, then, a tripartite division should be posited immediately below the archetype. (See Figure 13.) As mentioned above, the absence of error does not prove descent. The danger of accepting this stemma is that any agreement between 3719b and any other witness automatically places that reading in the archetype. Because this filiation is not proved, it is possible that some of these agreements might be category 2 readings, reasonable readings, that are in fact errors. This potentially false stemma, then, could elevate some errors to the status of archetypal readings. Therefore, this stemma, with its unproved tripartite division immediately below the archetype, must not be accepted. What should be done about readings in 3719b? Any readings that agree with any of the other three witnesses are of no weight in reconstructing the hyparchetype Ω or the archetype Γ. All unique readings in 3719b are reserved to the final stage of *examinatio.*

In some cases, a true multipartite division is ascertainable, but never on the grounds of textual evidence alone. Historical, geographical and physical testimony from the witnesses themselves can show multiple parallel descent that can be suggested by textual evidence,

[42] Grier, "The Stemma," 273–76. In the following stemma I use Ω for the hyparchetype because it is the same witness as the archetype of the stemma of the central tradition of Aquitanian uersaria, as found in the stemmata of *Omnis curet homo* and *Veri solis radius.* Uppercase Greek letters, like Γ in this stemma, denote relationships outside the central stemma.

FIGURE 11.

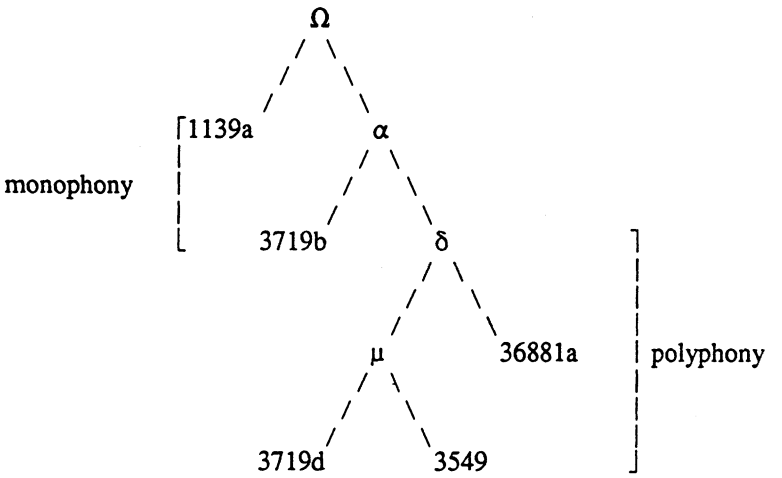
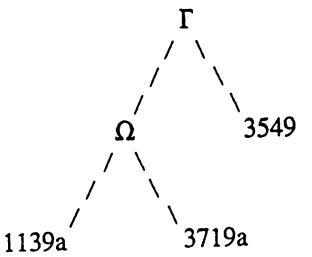


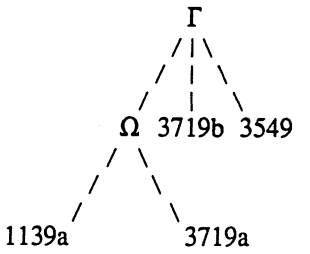
FIGURE 12.



but not proved.[43] It is important to see the relationship between textual and historical evidence here: only in those cases where the state of the text indicates a multipartite division, can historical evidence be used to confirm or reject that division. A case in point is the stemma of *Ex Ade uitio,* discussed above, where 3719b seems to have no place. Unfortunately, no evidence from the manuscript is forthcoming that would affirm its position on the stemma, and so its readings contribute nothing to the stemmatic assessment of the text.

[43] M. D. Reeve, "Stemmatic Method: 'Qualcosa che non funziona'?" in *The Role of the Book in Medieval Culture: Proceedings of the Oxford International Symposium 26 September–1 October 1982,* 2 vols., ed. Peter Ganz, Bibliologia: Elementa ad Librorum Studia Pertinentia I (Turnhout, 1986), 59–61, 63–64, gives examples of verifiable multipartite stemmata from classical literature.

FIGURE 13.



Historical evidence can also assist in the detection of *codices descripti,* copies of extant witnesses.[44] A striking example is offered by two of the eleventh-century tropers from Saint Martial de Limoges. As I mentioned above, Pa 1119, compiled ca A.D. 1050–63, is a direct copy, a *codex descriptus* of parts of Pa 909 written by Adémar de Chabannes in A.D. 1028–29.[45] Adémar replaced portions of Pa 909 with newly copied material that transmits the apostolic liturgy for the feast of Saint Martial. One of the parts so replaced is a single quaternio from the libellus of proper tropes, the central contents of which are the troped items for the Mass of Saint Martial (fols. 41–48). Because this gathering had to fit into an existing context, Adémar was obliged to ensure that the final piece in the gathering meshed smoothly with the beginning of the next gathering.

In fact that gathering begins with the word *mortis,* which occurs midway through an Introit trope for the Mass of Assumption. When Adémar reached the last line of his replacement gathering there remained just slightly too little text for the available room. First he greatly elongated the *n* of *ascendit,* which precedes *mortis,* and then, to justify the right margin, he wrote *mortis.* Thus the transition from the end of Adémar's replacement gathering to the beginning of the gathering from the original layer that follows presents an intentional dittography (i.e., something that should be written once is written twice). This dittography is then repeated in the version of the Assumption trope (*Quia naturam*) that appears in Pa 1119 (fol. 69r). The music scribe was aware of the problem, because he wrote the musical setting of *mortis* only once, above its first presentation. This corruption could

[44] Timpanaro, "*Recentiores* e *deteriores,*" 165–69; Jean Irigoin, "Accidents matériels et critique des texts," *Revue d' Histoire des Textes* XVI (1986), 1–36; and Michael D. Reeve, "*Eliminatio codicum descriptorum:* A Methodological Problem," in *Editing Greek and Latin Texts,* ed. John N. Grant, Conference on Editorial Problems, no. 23: 1987 (New York, 1989), 1–35.

[45] Grier, "*Ecce sanctum,*" 35–37.

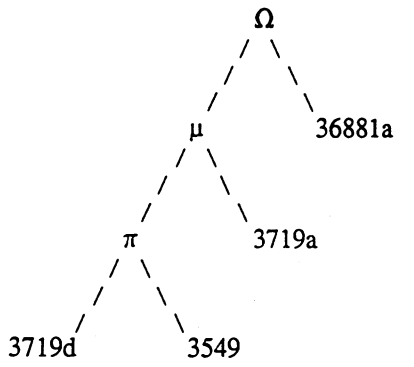
only have entered Pa 1119 from Pa 909, and so we have firm evidence of direct copying from the latter to the former.[46]

In the strictest application of the common-error method to editing, this relationship should eliminate Pa 1119 from consideration in the establishment of any texts that can be shown to have been copied into it from Pa 909. We note above, however, that it contains at least one important emendation (in the Gloria trope for the Mass of Saint Martial) that corrects an error in Pa 909. This situation is typical of the transmission of music sources. Music scribes are, by and large, professional musicians who create their sources for professional, practical purposes. Therefore, they continually subject the texts they are copying to critical scrutiny, not with any text-critical aim in mind other than the production of a useful copy. This procedure does not guarantee that scribes will not err, but it does result in sources that contain well-considered readings that might not return the text to a compositional original (if such a thing ever existed) but constitute significant improvements over the errors in an exemplar.

The stemma, once determined, allows the texts, both musical and literary, of the hyparchetypes and archetypes to be reconstructed. That of *Veri solis radius* will demonstrate the procedure. (See Figure 14.) The agreement of 36881a with any of the other three extant witnesses guarantees the reading of Ω and eliminates any variant readings. For example, if 36881a and 3719d agree against the other two witnesses, that agreement gives the reading of Ω, μ and π, and the reading or readings of 3719a and 3549 are eliminated. If 36881a disagrees with all of 3719a, 3719d and 3549, then its reading must be compared with that of μ to determine which was more likely to have been in Ω. This is the stage of *examinatio* in the terminology of classical textual criticism. Similar elimination or *examinatio* will determine the reading of μ and π, as necessary. The process of *examinatio,* wherein two or more readings of identical stemmatic weight are judged in

[46] Similar evidence enabled Margaret Bent to show that the fifteenth-century codex Trent, Museo Provinciale d'Arte, Castello del Buon Consiglio, MS 90 was copied from Trent, Museo Diocesano, MS BL (commonly known as Trent 93), and that, in the manuscript tradition of Machaut's works, manuscript B (Paris, Bibliothèque Nationale, fonds français, MS 1585) was copied from manuscript Vg (New York, Wildenstein Galleries, no shelfmark; *olim* private collection of the Marquis de Vogüé), and that portions of manuscript E (Paris, Bibliothèque Nationale, fonds français, MS 9221) were copied from B. On the Trent codices, see *Fifteenth-Century Liturgical Music,* II, *Four Anonymous Masses,* ed. Bent, Early English Church Music XXII (London, 1979), pp. x–xi, 180–83; and "Trent 93 and Trent 90: Johannes Wiser at Work," in *I codici musicali trentini a cento anni dalla loro riscoperta: Atti del Convegno Laurence Feininger, la musicologia come missione,* eds. Nino Pirrotta and Danilo Curti (Trent, 1986), 84–111; and, on the Machaut tradition, "The Machaut Manuscripts *Vg, B* and *E*," *Musica Disciplina* XXXVII (1983), 53–82.

FIGURE 14.



36881a + 3719d or 3549	=	Ω and μ and π.
36881a + 3719a	=	Ω and μ.
3719a + 3719d or 3549	=	μ and π.
3719d + 3549	=	π.

order to select the readings of a hyparchetype or the archetype, is the very stuff of editing. Critical knowledge of the text, the sources, their transmission and the style of the composer is essential even at the seemingly mechanical stage of stemmatic determination.

Stemmatophiles will note that the arrangement of this stemma (a very common one, indeed), with a single witness (here 36881a) on one side, is tantamount to proposing 36881a as the best witness, a procedure that is often represented as the opposite of the common-error method. In the "best-witness" method, an editor selects one witness as the best (for such reasons as, it is the oldest extant witness, or, in the opinion of the editor, it preserves the least corrupt version of the text), which is then followed in all details except where it is manifestly corrupt. There the editor has recourse to the other witnesses or conjectural emendation to establish the text. In the sample stemma given here, 36881a is virtually the best witness because all its readings ascend to the archetype except where 3719a, 3719d and 3549 all disagree with it. Even then, these three agree in at least one error against 36881a, an error that descended to them from μ and in fact establishes the existence of μ, and so the corresponding reading of 36881a here again ascends to the archetype. Moreover, the worst status that any reading of 36881a can achieve is to compete with the reading of μ for elevation to the archetype. Therefore 36881a, unless it contains

many unique and obvious corruptions, will contribute more readings to the archetype than any other witness and so is virtually the best witness.

Of course the most carefully constructed stemma can collapse like a card house through the effects of contamination or conjectural emendation, as mentioned above. Accordingly the editor should carefully assess and discuss in a commentary whether it is possible that either factor is present in the tradition. This is by no means an easy task, and it will require detailed knowledge of the transmission of the repertory. Was the text of such importance that a scribe would have consulted more than one exemplar, or was it unlikely that a scribe would have access to more than one? Are there instances of relatively easily correctable errors that have not been emended, or places where one scribal error has generated further corruption? Or, on the other hand, did the scribe or publisher work in an environment where emendation was tolerated or even encouraged? In general both contamination and conjectural emendation tend to replace errors with correct or at least reasonable readings, and are therefore difficult to detect. Nevertheless, in a piece of any length, it is extremely unlikely that all significative errors will be removed through contamination or emendation and so the editor must be careful to note instances where sources agree in some but not all such errors. Above all, sensitivity for the circumstances of transmission will guide the editor in this hazardous area.

In the traditional application of the common-error method, the text of the archetype, which is thus reconstructed by a combination of *eliminatio* and *examinatio,* is then, itself, examined to determine whether readings that are unlikely to have been in the authorial original remain. The editor then subjects any such readings to emendation in order to arrive at the final edited text. The exact use that music editors will make of this procedure depends entirely on the nature of the piece's transmission. Some editors will decide that such a thing as a composer's original text existed and that it is worth reconstructing as far as the extant evidence will permit.[47] Lothar Hoffmann-Erbrecht followed this procedure in his edition of the psalm motets of Thomas Stoltzer, which he claims to be the first edition of music to do so. He created individual stemmata for several of the pieces, and used them to determine the text of the archetype, which then became the point of departure for the final edited text.[48]

[47] Bent, "Some Criteria," 311–13.

[48] Thomas Stoltzer, *Ausgewählte Werke* II, *Sämtliche Psalmmotetten,* ed. Lothar Hoffmann-Erbrecht, Das Erbe Deutscher Musik LXVI (Frankfurt, 1969), stemmata on

In other cases, the text of the archetype contributes not so much to the establishment of the final edited text as it does to the illumination of the history of the text's transmission. For example, through my own stemmatic assessment of the twelfth-century Aquitanian uersaria, I was able to identify and isolate substantive variants in the musical text that were added by the individual scribes of the repertory.[49] The identification of these variants led, in turn, to an appreciation of the scribes' active participation in the dynamic processes by which the repertory was transmitted and disseminated. In two studies of the late fifteenth-century chanson, Allan W. Atlas used stemmatic filiation to illuminate the historical circumstances under which that repertory was transmitted, and to associate variants in the tradition with conflicting attributions in the sources that carry the variants.[50] Sometimes substantive variants can be localized and used to discern regional traditions. The motet repertory of Josquin des Prez gives two examples: Lothar Hoffmann-Erbrecht identifies a German tradition of the piece *Domine, ne in furore tuo arguas me,* separate from that transmitted in Italy and stemming from Petrucci's print; and similar findings about the transmission of *Aue Maria . . . uirgo serena* are presented by Thomas Noblitt.[51] Such conclusions illuminate not only the reception of these works in various geographical regions, but also lead to deductions about individual scribal and performing practices in those areas.[52]

The common-error method and its creation, the stemma, do not constitute a mechanical procedure that results in the automated production of the final edited text. The stemma is, rather, a tool that can illustrate relationships between witnesses, illuminate the processes of transmission by which those witnesses were created, and provide guidance in sorting through the competing readings that make up the work's tradition. It is only as good, however, as the readings on which it is based, and a faulty stemmatic conclusion can do irreparable

174–82; see, on the chronological priority of his edition, Hoffmann-Erbrecht, "Problems in the Interdependence of Josquin Sources," in *Josquin des Prez: Proceedings of the International Josquin Festival-Conference Held at the Juilliard School at Lincoln Center in New York City, 21–25 June 1971,* eds. Edward E. Lowinsky and Bonnie J. Blackburn (London, 1976), 288–89.

[49] Grier, "The Stemma," and "Scribal Practices."

[50] Allan Atlas, *The Cappella Giulia Chansonnier (Rome, Biblioteca Apostolica Vaticana, C. G. XIII.27),* 2 vols., Wissenschaftliche Abhandlungen XXVII (Brooklyn, 1975–76), especially I, 233–58; and "Conflicting Attributions."

[51] Hoffmann-Erbrecht, "Problems in the Interdependence of Josquin Sources," 291–92; and Noblitt, "Textual Criticism," 208, 234–35. See also Winfried Kirsch, "Josquin's Motets in the German Tradition," in *Josquin des Prez,* eds. Lowinsky and Blackburn, 261–78.

[52] Boorman, "The Uses of Filiation," 176–78.

damage to the edition it is supposed to help. Nevertheless, the diligent, cautious and conscientious editor will find the stemma a very powerful tool in the preparation of an edition that is based on a truly critical appraisal of the work and its sources.

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