

From Neume to *Folio*: Mediaeval Influences on Earle Brown's Graphic Notation

Jane Alden

To cite this article: Jane Alden (2007) From Neume to *Folio*: Mediaeval Influences on Earle Brown's Graphic Notation, *Contemporary Music Review*, 26:3-4, 315-332, DOI: [10.1080/07494460701414140](https://doi.org/10.1080/07494460701414140)

To link to this article: <https://doi.org/10.1080/07494460701414140>



Published online: 17 Jul 2007.



Submit your article to this journal [↗](#)



Article views: 266

From Neume to *Folio*: Mediaeval Influences on Earle Brown's Graphic Notation

Jane Alden

Several notational features of pieces in Earle Brown's Folio and Twentyfive Pages, such as the use of mirrors, notation in inversion, clefless staves, and the representation of relative rather than specific durations, bear a striking similarity to techniques found in mediaeval manuscripts. This article argues that Brown's decision to remove or omit prescriptive and directly descriptive elements from his scores—and even the visual appearance of certain scores—may have roots in his study of early music. The innovative aspects of his notation are here placed in the context of the 'curious feeling' that he described 'of returning to a musical condition which prevailed in times past'.

Keywords: Earle Brown; Clefless; Mediaeval; Neume; Notation

Open any book covering the history of twentieth-century music and one is likely to find a reproduction of the sparse geometric lines of *December 1952*: a work that changed the course of the history of notation, a work without precedent. Earle Brown himself describes the set of pieces in which it is contained, entitled *Folio* (1952–1953), as a 'sequential search for a new notation' (Brown, 1961a).¹ The motivation for this search was Brown's interest in achieving a more dynamic relationship between the performer, the composer and the music. In pursuit of this goal, he began to allow performers to choose their own parameters of pitch, duration and instrumentation. Believing that the element of choice need not compromise the identity of the music itself, Brown sought to develop a notation flexible enough to accommodate a wide variety of possible realisations.

Much has been made of the ways in which Brown's notations from the early 1950s marked a radical break from notational convention. Rather less attention has been paid to the ways in which Brown may have been influenced by historical precedents. My objective here is not to dismiss the newness of his score layout but to add a further parameter of innovation—that of a conscious decision to return to the

flexibility inherent in mediaeval notational practices. I will argue that Brown's use of a notational style that does not precisely specify pitch and rhythm, notation that can be read in inversion, clefless staves, and the representation of relative rather than specific durations—all practices that can be found in mediaeval sources—may derive from his study of early music.

In 1964, Brown gave a lecture at the Darmstadt summer courses entitled *The notation and performance of new music*. Here, he expressed the hope that musicologists might put the 'new' notations into context, relative to 'the overall musical tradition' (Brown, 1964).² He believed that 'something should be said about notation and performance prior to the "standardization" we know in 19th-century music' and its bearing on his music; citing the shortcomings of his own knowledge of 'early western music', he describes this as a task for a musicologist (Brown, 1964). These invitations to scholars were cut from the version of this lecture published some twenty years later in *The Musical Quarterly*, and the topic has hitherto remained largely unexplored.³

Between 1947 and 1950, Brown studied with Roslyn Brogue Henning, a twelve-tone composer based in Cambridge, Massachusetts. With her he studied 'the compositional application of polyphony and counterpoint (from 9th-century organum through 20th century twelve-tone counterpoint)' (Brown, 1986, p. 182). That Brogue Henning was actively interested in early music is apparent from her work both as a harpsichordist and as a harpsichord restorer—she was employed in the studio of Frank Hubbard and William Dowd for a year (DeVoto, 2001). During the time Brown was studying with her, she wrote a piano quartet called *Fantasy on 'Mille Regretz'* (1949), making her the only twentieth-century composer to have continued the Renaissance tradition of writing arrangements of this hugely popular song by Josquin des Prez. Given that she was an expert in classical palaeography, Brogue Henning would have been well qualified to teach historical notation.

Through their study, it became clear to Brown that the use of notation as a way of controlling all musical parameters was a comparatively recent development. He observed that in music written before 1600, the intentions of the composer could be notated in diverse ways, and the relationship between intention and performance was quite different from what came to be 'the nineteenth-century ideal' (Brown, 1986, p. 183). He saw the ambiguous relationship between flexible notation and compositional authority in music written prior to 1600 as a topic that would interest musicologists for some time; indeed, such issues have generated much scholarship in the forty-plus years since his lecture. Brown saw the need for a historical perspective on the function of notation: not only could scholars of early notation help explain his scores, but works by twentieth-century composers might also elucidate musicological debates relating to the role of notation and compositional process in past musical practices.

Brown describes the 'unique and very beautiful nature and expressive quality' of earlier repertories, but his suggestion that 'we should hear more' of this music was, like his plea for historical context, edited out of *The Musical Quarterly* version of his

lecture (Brown, 1964). The early music revival movement was only beginning to gather steam when Brown wrote these remarks in 1964. He was clearly interested in the growing awareness of this music, but his view that it had a bearing on his own music, and that of his contemporaries, was so far ahead of his time that even in 1986, the editor of *The Musical Quarterly* took the decision to cut these remarks from the article.

In the intervening years, the impact of early music has not only been recognised in contemporary music, but has been actively sought out by composers. Similarly, the issues relating to notation have gained substantial critical attention among scholars and performers, with increasing numbers sharing Brown's mistrust of the editorial conventions that previously sought to "modernize" early notations to express them in our standard "rational" terms for purposes of analysis and performance' (Brown, 1986, p. 183). His view that this was 'an oversimplification and a misrepresentation of the sound and expressive character of musical performance as it existed between the ninth and sixteenth centuries' is now widely held, with many performing groups choosing to read from facsimiles of the original notation.⁴

I wish to propose that Brown's insights into the editorial problems involved in transcribing early music are highly relevant in helping explain the process by which he came to construct his early works. He believed that 'the imposition of standard "fixitives", such as metric durations, bar lines and precise pitch', to music written before 1600 marginalises our sensitivity to 'the aural tradition and nature of performance practice' (Brown, 1986, p. 183). Similarly, he wished his music to be free of 'the rigidity of image' that he sees as a product of the nineteenth century. Brown's exposure to the notation used in certain early sources presented him with alternative forms of musical expression that provided freedom from the constrictive system of conventional notation.

A copy of Willi Apel's classic book *The notation of polyphonic music 900–1600* remained in Brown's library until his death. Even if Brown was not concerned with the specifics of mediaeval notation, the knowledge he gained of early musical practices clearly influenced his conception of the ways in which written music might serve performers. Brown saw the music of his own time as 'closer to the older conception of "music making" than . . . to the deterministic, "heroic" ideal of music of the eighteenth and nineteenth centuries' (Brown, 1986, p. 183). Indeed, it was precisely the developments in notation that occurred during the Common Practice era—giving composers greater agency in determining the tempo, instrumentation, pitch frequency, and exact rhythmic durations—that were the parameters which Brown chose to reject.

While all musical notation is graphic, in that it involves tracing a path across a writing surface, aspects of Brown's notation evoke more directly the ideogrammic nature of early notation. A distinctive feature of early 'neumatic' notation (from the Latin *neuma*, for gesture, sign, movement of the hand) is the speed with which it can be written. The system was designed to inscribe quickly repertoires that were already known aurally (Figure 1).

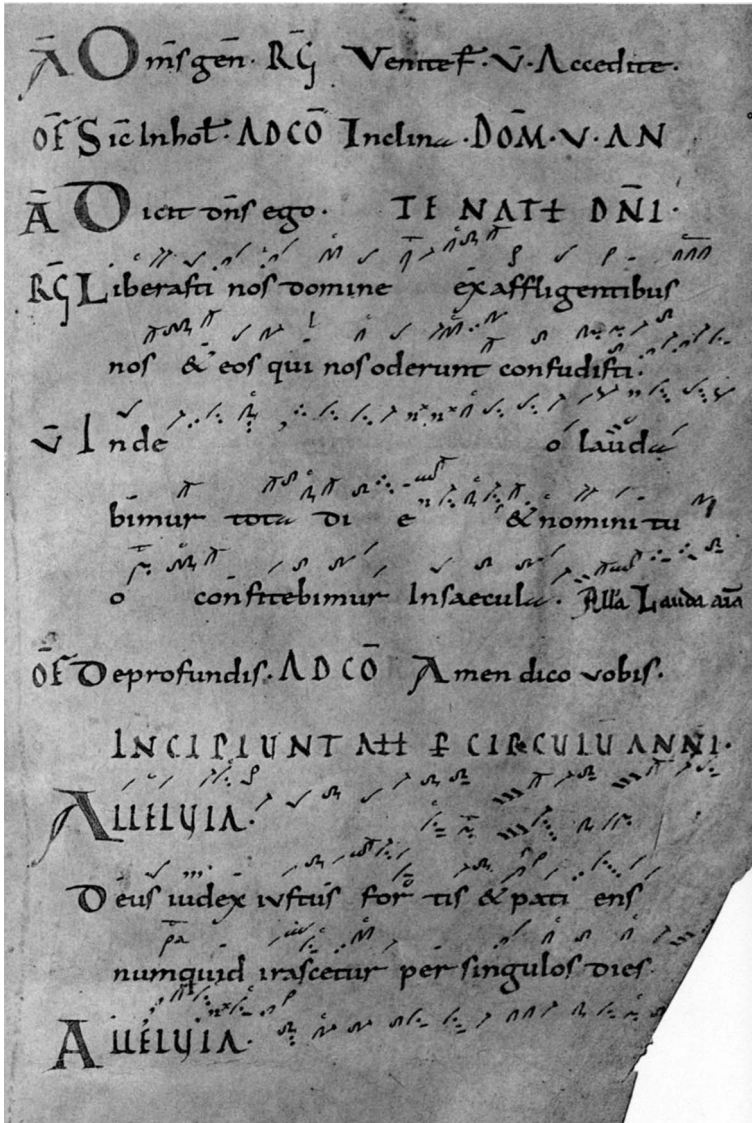


Figure 1 St Gall notation. Courtesy of the Earle Brown Music Foundation.

Brown's signature style, similarly, has been described as 'a quickness of line and gesture' (Ryan, 2000, p. 11). Describing the discarded string quartet that he wrote in Colorado in 1951 using line-drawing graphic notation, he says that he tried to write as fast as he thought, because he 'had the feeling that the whole thing was happening somewhere, but by the time I got the details down I lost the overall general conception' (Gamer & Brown, 1972, p. 12). He continues, 'it just seemed absolutely natural to invent something that looked as much as possible like the sound I wanted

when I wanted a sound that was not traditional' (Gamer & Brown, 1972, p. 14). The invention of a notation whose visual form and speed of transcription corresponded to its sonic realisation had first occurred a thousand years earlier, with the monks responsible for inscribing the chant repertory. Brown would have certainly seen examples of their work in his studies of early sources, on his own or with Brogue Henning.

It is widely known that prior to the twelfth and thirteenth centuries, precise rhythms were determined by performers, rather than by scribes or composers. In *The notation of polyphonic music*, Apel presents an example of a two-part organum from a manuscript from St Martial, Limoges (Paris, BNF lat. MS 3549) (Figure 2).



Figure 2 St Martial manuscript, taken from Apel (1942), p. 211. Courtesy of the Earle Brown Music Foundation.

Apel discusses the discrepancies between the various scholarly transcriptions of the piece. Though the rhythmic ambiguity was a source of frustration for Apel, it was exactly the possibility of multiple realisations that interested Brown. He found commonalities between his own work and the ‘rhythmic flexibility’ of early music, as well as with ‘the increase of performer involvement on a creative level’. It was on account of these aspects that he had ‘a curious feeling of returning to a musical condition which prevailed in times past’ (Brown, 1986, p. 182). Brown’s wish to situate his notational innovations within a historical context has been overshadowed by a scholarly eagerness to describe him as a revolutionary. But for him, the notational concerns of his generation were less a revolution than ‘a continuation of attempts... to find a more accurate way of transcribing... aural images in graphics’ (Brown, 1986, p. 183).

Though by the thirteenth century, the differently shaped neumes had been reduced to essentially two note values—long and breve, their relationship to each other could only be understood in context. Performers were expected to make their own judgements as to how the notes should be arranged, based on their knowledge of ‘rhythmic modes’. Apel presents various examples of music to be interpreted in this way from the ‘Notre Dame School’ (Figure 3).

In an analogous vein, Brown explains that the motivation behind *Folio* was ‘to produce graphic situations, the implications of which would involve the performer’s response as a factor leading to multiple “characteristic” relations of the piece as an audible event’ (Brown, 1961a). For Brown, the inherent ambiguity of any graphic representation was itself something to celebrate, since it provided an occasion for creativity from the composer, performer and audience. The ambiguity of interpretation is taken one step further in Brown’s *Music for ‘Trio for Five Dancers’* (June 1953), which is itself a transcription of the floor plan for a dance (rotated 90° clockwise) (Figure 4). He takes a visual plan intended to describe physical movement and transforms it into a musical score (to be performed by piano and/or other instruments). As in thirteenth-century notation, it uses only two kinds of noteheads (both stemless), implying only two durational values, both relative.⁵

Brown later subtitled *Folio* and *Four Systems* ‘experiments in notation and performance process’ (Brown, 2002, p. 41). Though the first piece, *October 1952*, still uses conventional noteheads, the spacing of the chords on the page determines their relative sounding length (Figure 5).

It is left to the performer to decide not only the overall time span of the piece, but also the rate at which he or she moves through the chords. Brown omits rests in order to produce ‘an intentional ambiguity...intended to eliminate the possibility of a metrically rational performance’ (Brown, 1961b). The spaces between the chords may be of indeterminate lengths, but part of the responsibility vested in the performer is to make this space audible in the listening experience.

Examples of Modal Notation 229

FACSIMILE 46

MS Florence, Biblioteca Medicea-Laurenziana *plut. 29.1*
(13th century)
From pages 11, 11'

Figure 3 Three-voice clausula on the syllable 'Go', from the verse *Virgo Dei*, Florence, Biblioteca Medicea-Laurenziana *plut. 29.1*, taken from Apel (1942), p. 229. Courtesy of the Earle Brown Music Foundation.

While in *October 1952* the vertical happenings take precedence over linear motion, ties are used in *November 1952* ('*Synergy*') to suggest the overlapping of voices characteristic of contrapuntal polyphony (Figure 6).

The interweaving of melodic lines is even more of a feature in the metronome mark pieces *MM-87* and *MM-135* (Figure 7).

These pieces pave the way for the overlapping linear events that characterise the 'time notation' (later called 'proportional notation', though bearing no relationship

Music for "Trio for Five Dancers"
 transcribed from floor plan spatial patterns of a dance by Carolyn Brown

even number in sequence
 count of dancers = 2 = full
 odd number = 1 = shorter

Duration = length of
 Dance

Top - of original floor plan

© Copyright 1951 by Associated Music Publishers, Inc., New York / All rights reserved, including the right of public performance for profit. / AMP/NJ264

Figure 4 Music for ‘Trio for Five Dancers’ from *Folio*. Courtesy of the Earle Brown Music Foundation.

to the use of this term in early music) that Brown used in 1953 for *Piano* (a study for *Twentyfive Pages*) (Figure 8), as well as in *Twentyfive Pages* itself and in *Four Systems* (1954).

In Brown’s ‘proportional notation’, the durations of notes are calculated from their relative size on the page (Brown, 1975).⁶ This reflects Brown’s belief that the visual representation of music is related directly, rather than symbolically, to its sounding realisation. It is this fact that helps explain the fine balance Brown achieves between exerting compositional control and allowing the performer to decide certain musical parameters. Though in *Twentyfive Pages*, the performer determines the exact durations of the notes, Brown asserts that the notes must be ‘precise relative to each other and to the eventual time value assigned to each line system’ (Brown, 1975). The

Earle Brown (Oct '52) N.Y.C.

© Copyright 1961 by Associated Music Publishers, Inc., New York / All rights reserved, including the right of public performance for profit. / AMP-1021-1

Figure 5 *October 1952* from *Folio*. Courtesy of the Earle Brown Music Foundation.

performer must assign a total duration for each system, which he then maintains for each of the subsequent systems, in order to ‘preserve the structural integrity’ of the whole.

Its flexibility notwithstanding, Brown’s notation is precise and exact in its own terms: the scores of *1953 for Piano* and *Twentyfive Pages* show a degree of specificity in their use of accidentals and ledger lines that is surprising insofar as these works are without clefs. Brown could not use clefs, or any other non-invertible symbols, since he designed the pages of both works to be completely invertible, in the sense that they can be read either way up. Why does he add chromatic inflections and ledger lines to notes which he cannot specify? Brown wrote that he sought a ‘creative collaboration’ with the performer (Brown, 1986, p. 182). The modifications implied here—raising or lowering expected pitches, suggestions of register—can be seen as evidence of their collaboration: the performer could choose the exact pitches, but Brown determined which notes are raised and which are left as written.⁷

The amount of instruction given to the performer, relative to the areas of free choice, varies considerably among these scores. Perhaps the differences relate to a

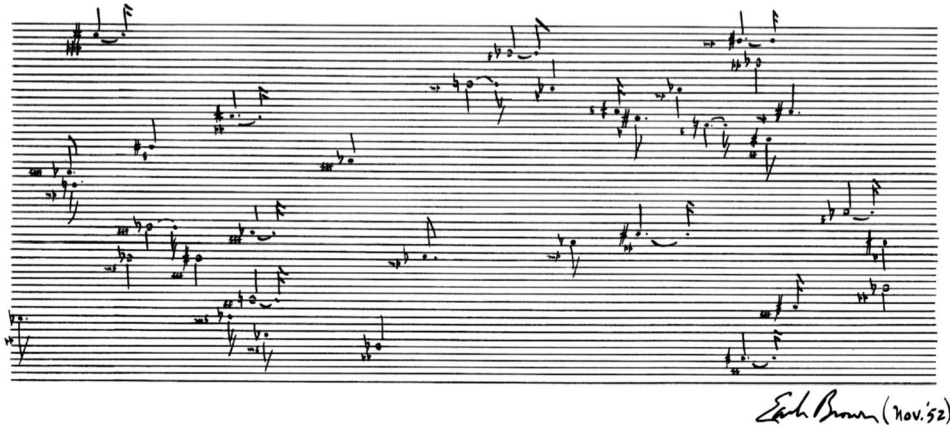


Figure 6 November 1952 ('Synergy') from *Folio*. Courtesy of the Earle Brown Music Foundation.

MM-135 March 1953

$\downarrow = 135$



© Copyright 1961 by Associated Music Publishers, Inc., New York / All rights reserved, including the right of public performance for profit. / AMP-61246

Figure 7 MM-135 from *Folio*. Courtesy of the Earle Brown Music Foundation.

broader question which Brown seems to be asking: how much information does the performer need to play a score (rather than to improvise from it)? Part of his experimentation in these scores involves the removal of elements considered—in standard practice—crucial to the musical identity of a work. The question to be asked is thus: by what means is the identity of a piece established, and in whose hands? By removing some of the expected ‘composed’ elements, Brown suggests that the identity of these works is formed by his collaborations with the performers.

The sketch for *November 1952* (‘Synergy’) (Figure 9) provides a case in point: rests were originally included in the piece, but later removed in the published version (Figure 6).

The durations of these rests were precise and exact: they included ties of surprisingly specific durations (e.g. a crotchet rest tied to a semiquaver rest). By their removal, Brown invested the performer with the power to determine the length of silences around the notes. But there was another benefit to their removal: the sense of visual space in *November 1952* (‘Synergy’) visibly increases. Space on the page is one of the defining aspects of the entire *Folio*. Rests appear in only two pieces—*MM-87* and *MM-135*—and even then only very occasionally. In removing the rests in *November 1952* (‘Synergy’), Brown brought this piece more in line with the overall identity of the set. In particular, this decision narrowed the distance between it and *December 1952*, where the space on the page is perhaps the strongest defining feature. This aspect was necessary for the piece to be able to move in several different directions at once (left-right and forward-back).

Brown’s fully invertible scores provide a graphic realisation of the compositional procedures of retrograde and inversion. Perhaps Brown was familiar with Guillaume de Machaut’s famous rondeau *Ma fin est mon commencement*, the earliest known piece to be based entirely on retrograde procedures. The visual layout is such that only two voices are notated, but the song text—underlaid for the refrain and continuing (with the other strophes) at the bottom of the folio—tells the reader that a third voice can be formed by singing the tenor in retrograde; the contratenor (the lower notated voice) works in retrograde around its own midpoint (Figure 10).

<i>Ma fin est mon commencement</i>	My end is my beginning
<i>Et mon commencement ma fin</i>	And my beginning is my end,
<i>Est teneure vraiment.</i>	And (this) holds true.
<i>Ma fin est mon commencement</i>	My end is my beginning,
<i>Mes tiers chans trois fois seulement</i>	My third voice three times only
<i>Se retrograde et ainsi fin.</i>	reverses itself and thus ends.
<i>Ma fin est mon commencement</i>	My end is my beginning
<i>Et mon commencement ma fin.</i>	And my beginning is my end.

The page layout of this song—that it can be read in more than one direction, with performance instructions written at the bottom of the page—is also found in Brown’s *Four Systems*. This piece is a further development of the notational style first developed in the *October–November–December 1952* sequence in its lack of clefs.

© Copyright 1961 by Associated Music Publishers, Inc., New York / All rights reserved, including the right of public performance for profit. / AMP-96124-7

Figure 8 1953 for Piano. Courtesy of the Earle Brown Music Foundation.

In relation to *November 1952* ('*Synergy*'), Brown indicates they 'may be considered as floating (vertically over the defined space)'. It is, again, left up to the performer to determine the relationship between these invisible clefs and the resulting pitches (Brown, 1961c). There were also historical precedents for clefless pieces: a well-known example, which has fascinated composers and theorists until the present day, is Johannes Ockeghem's canonic song *Prenez sur moy* (Figure 11).

Though only one voice is written, the song can be performed as a three-voice canon, with each voice beginning on a different pitch.⁸

Brown's choice to omit clefs was motivated by a wish to free his performers from a vertical or horizontal system of navigation—essentially from a left-to-right reading. He copied *November 1952* ('*Synergy*') on a single great staff of 50 lines. Brown created this multilinear staff by drawing in extra lines between the five-line

To be performed in any direction from any point in the defined space. [clef signs to be considered as floating]

Tempo - as fast as possible to as slow as possible - inclusive.

Attacks may be superimposed as complete, separated by infinite space; attacks may be simultaneous or sequential in any shape and direction as to which staff space; lines and spaces may be steps of a staircase moving in a given direction; the indicator the sequential possibility of all the attacks occurring at the same instant or any other expression of simultaneity.

Synergy

Nov 52 80

Figure 9 Sketch for November 1952 ('Synergy') from *Folio*. Cf. Figure 6. Courtesy of the Earle Brown Music Foundation.

staves of regular music paper (see Yaffé interview in this journal). In choosing this format, he may have been influenced by the presentation of polyphonic music in early didactic treatises. Apel provides examples of such 'primitive notation', taken from the *Musica Enchiriadis* (ninth century; he may also have been influenced by the historical use by composers of 'tabula compositoria', or erasable slates) (Schmidt, 2000, p. 200).

The function served by Brown's multilinear staff, however, was to open up 'more fields of possibility' for the performer (see Yaffé interview). The lines 'may be thought of as tracks moving in either direction (horizontally at different and variable speeds)' (Brown, 1961c). Though still using conventional modern noteheads (values ranging from semiquavers through to minims), he described the notes as 'floating in space, moving forward and backward. If they're coming toward you, it's a crescendo; if they're going away from you, a diminuendo. They can be higher or lower; it's *multi-spatial*' (see Yaffé interview).

It was in December 1952 that Brown developed to the fullest extent his interest in multidirectional reading possibilities. Here, he described how the space on the page should be approached from 'an infinitude of directions... to work (compositionally

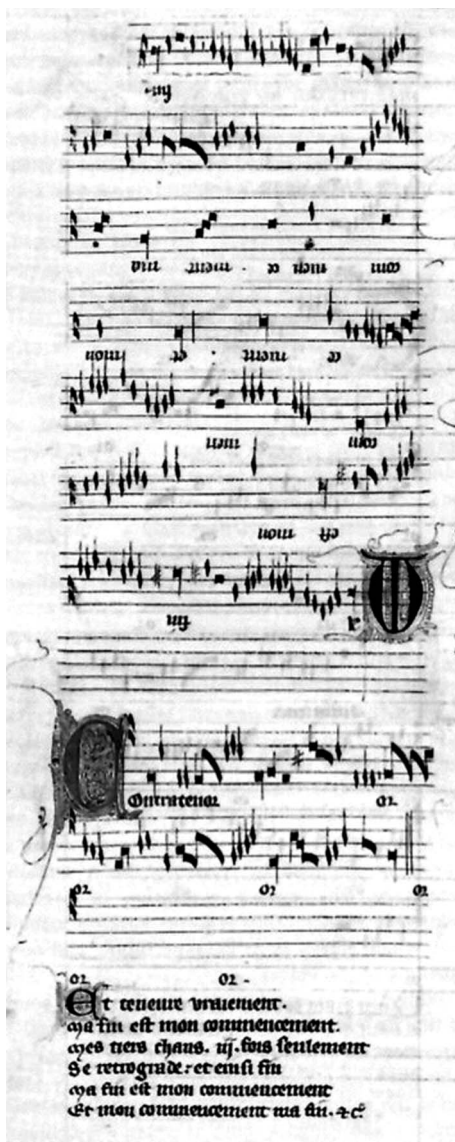


Figure 10 Guillaume de Machaut, *Ma fin est mon commencement*, from MS G, where the upside-down ‘M’ provides a visual cue for the retrograde. Courtesy of the Earle Brown Music Foundation.

and in performance) to right, left, back, forward, up, down, and all points in between’ (Brown, 1961d). Both *November 1952* (‘Synergy’) and *December 1952* can be performed ‘in any direction from any point in the defined space for any length of time’ (Brown, 1961c, d). *December 1952*, even more than *November 1952* (‘Synergy’), provides a snapshot of a dynamic space in motion.

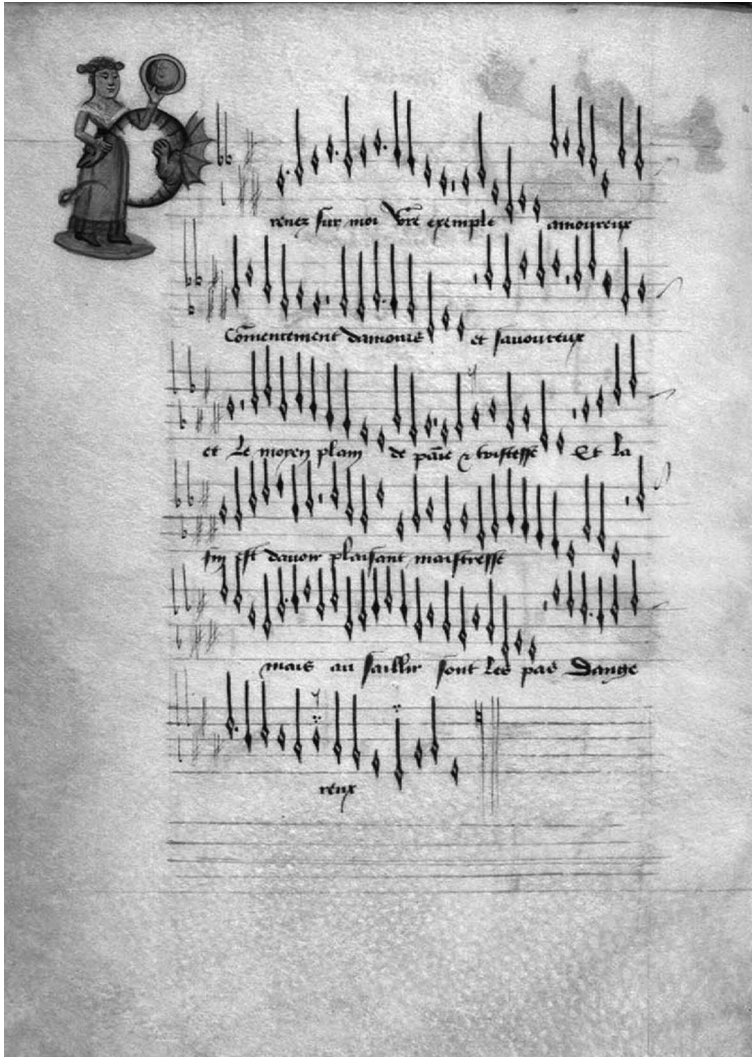


Figure 11 Johannes Ockeghem, *Prenez sur moy*, from the Copenhagen Chansonier. Courtesy of the Earle Brown Music Foundation.

The idea that the visual representation of a piece might be a crucial part of its identity has a long history. Famous examples of pieces whose uniqueness derives from their notation as much as from their music include those of the late-fourteenth-century composers Baude Cordier and Jacquemin de Senleches. Cordier's *Tout par compas* is presented (in the Chantilly Codex) on two concentric circles of musical staves, composed—as the text tells us—by a compass. This circular notation was chosen to make visual the manner in which the piece should be performed. The outer circle can be read by two voices in canon: ‘You can chase me around with glee, if in

singing you are true to me'. Senleches' song *La Harpe de Melodie* proclaims that music should be 'played, heard and seen'. This work is written in the shape of a harp, with the notes appearing on staff lines formed by the strings of the harp. The visual pictorialism of these pieces makes it clear that they were intended to be read by the eye as much as heard with the ear. Reproductions of these two works are found in a number of publications, and may well have been seen by Brown in his study of notation.

The visual aspect of Brown's *December 1952* is, similarly, an integral part of the piece.⁹ But in terms of function, its visual presentation represents only one example of a broader compositional concern: in these experimental works, Brown sought to show that the visual identity of a score could be reconciled with a flexible range of performances. Indeed, it was the strength of a work's identity on the page that allowed its parameters of interpretation to vary so widely. Brown was intrigued by the potential for multiple realisations deriving from a single notated version of a piece. He asserted that 'if I do my job well, I get back varying versions, all acceptable to me' (Ewen, 1982, p. 98).

It was his anxiety that notational developments had served to limit the contribution made by performers which led Brown to pursue different approaches to notation, some rooted in past musical practices, others of his own devising. The *Folio* collection, in particular, seems to pay homage to the mediaeval source of some of his notational decisions. Even his choice of the title, *Folio*, is reminiscent of manuscript culture: before the print era, manuscript leaves were counted by folio, not paginated, as in modern practice; pieces were copied on folios. Much mediaeval music survives on single detached leaves, much like the separate sheets of Brown's *Folio*. The word *folio* carries further associations: it is also self-referential. Deriving from the Latin *folium*, meaning leaf, the word describes, using the terminology of manuscripts and printing, the size of the pieces of cardstock on which these pieces were printed. This collection of leaves (each inscribed on only one side) is known by a title that expresses the physical identity of their material structure. It is, accordingly, an appropriate metaphor for Brown's belief that the physical form of the pieces and their notation is as intrinsic to the musical identity of the set as its sonic realisation.

Notes

- [1] See the interview with John Yaffé on 25 September 1995, elsewhere in this journal.
- [2] My thanks to the Earle Brown Music Foundation, which generously made this typescript available to me.
- [3] See the edited version of this lecture (Brown, 1986). There has been some discussion of this issue in recent years (e.g. Schmidt, 2000).
- [4] The Clerk's Group, directed by Edward Wickham, adopted this practice in their recordings of masses by Johannes Ockeghem, released on the ASV label; earlier pioneers included Thomas Binkley and the Ensemble Sequentia.
- [5] The longer note value, which resembles a whole note, is formed with two strokes (it is not circular): a saucer-shape below and a pointed stroke above. These notes are intended to become slowly inaudible, while the filled (black) notes are 'shorter'.

- [6] Brown defines 'time notation' as 'durations extended in *space* relative to *time*, rather than expressed in metric symbols as in traditional notation' (Brown, 1975).
- [7] In his study of historical notations, Brown would have learned that prior to the modern era, accidentals had only relative rather than absolute meaning: the symbols (*diesis* and *mollis*) indicated simply that a given note was to be raised or lowered. In certain circumstances, accidentals were used in a cautionary manner (where the singer might otherwise make a mistake). Brown's decision to include accidentals whose function could at most be relative may have been influenced by this historical usage.
- [8] Various solutions for this puzzling piece have been proposed; see, for example: Fallows (1992); Urquhart (1997); and van Benthem (1997).
- [9] The extent to which Brown's notational innovations grew out of, and were influenced by, contemporary developments in the visual arts, particularly the works of Piet Mondrian, Jackson Pollock and Alexander Calder, has been well documented; see, most recently, Johnson (2002). *December 1952*, in particular, has been identified with works by Mondrian (see Hitchcock, 1969, p. 247; Watkins, 1988, p. 566). In 1986, Brown himself described Jackson Pollock's work as a 'visual representation of tremendously intricate polyphony ... Pollock was the first thing I was drawn to because of the intricacy of the textures' (in an interview quoted in Dufallo, 1989, p. 109).

References

- Apel, W. (1942). *The notation of polyphonic music 900–1600*. Cambridge, MA: Medieval Academy of America.
- Brown, E. (1961a). Prefatory note. In *Folio and Four Systems*. New York: Associated Music Publishers.
- Brown, E. (1961b). Prefatory note for *October 1952*. In *Folio and Four Systems*. New York: Associated Music Publishers.
- Brown, E. (1961c). Prefatory note for *November 1952* ('Synergy'). In *Folio and Four Systems*. New York: Associated Music Publishers.
- Brown, E. (1961d). Prefatory note for *December 1952*. In *Folio and Four Systems*. New York: Associated Music Publishers.
- Brown, E. (1964). *The notation and performance of new music*. Unpublished manuscript, Earle Brown Music Foundation.
- Brown, E. (1975). Notation. In E. Brown, *Twentyfive Pages*. Toronto: Universal Editions (Canada) Ltd.
- Brown, E. (1986). The notation and performance of new music. *The Musical Quarterly*, 72, 180–201.
- Brown, E. (2002). Transformations and developments of a radical aesthetic. *Current Musicology*, 67–68, 39–57.
- DeVoto, M. (2001). Brogue (Henning), Roslyn. In S. Sadie & J. Tyrrell (Eds.), *The new Grove dictionary of music and musicians*, vol. 4 (2nd ed., p. 419). London: Macmillan.
- Dufallo, R. (Ed.) (1989). *Trackings: Composers speak with Richard Dufallo*. New York and Oxford: Oxford University Press.
- Ewen, D. (1982). *American composers: A biographical dictionary*. New York: G. P. Putnam's Sons.
- Fallows, D. (1992). *Prenez sur moy*: Ockeghem's tonal pun. *Plainsong and Medieval Music*, 1.
- Gamer, C. & Brown, E. (1972). Introduction. In B. Childs & P. Lansky (Eds.), *American Society of University Composers: Proceedings of the Fifth Annual Conference, April 1970* (pp. 8–36). New York: American Society of University Composers.
- Hitchcock, H. W. (1969). *Music in the United States: A historical introduction*. Englewood Cliffs, NJ: Prentice-Hall.

- Johnson, S. (Ed.) (2002). *The New York Schools of Music and Visual Arts*. New York and London: Routledge.
- Ryan, D. (2000). Liner notes. In *Earle Brown: Collected early works* (p. 11). New York: CRI.
- Schmidt, D. (2000). Schrift—Graphik—Bild: Zur Notation in Earle Browns *December 1952* und dem Zyklus *Folio*. [Writing—graphics—image: On the notation of Earle Brown's *December 1952* and the *Folio* cycle]. In W. Budday (Ed.), *Musiktheorie: Festschrift für Heinrich Deppert zum 65. Geburtstag* (pp. 183–207). Tutzing: Hans Schneider.
- Urquhart, P. (1997). Calculated to please the ear: Ockeghem's canonic legacy. *Tijdschrift van de Koninklijke Vereniging voor Nederlandse Muziekgeschiedenis*, 47(1–2), 72–98.
- van Benthem, J. (1997). 'Prenez sur moy vostre exemple': *Signæ*, text and cadences in Ockeghem's *Prenez sur moy* and *Missa Cuiusvis toni*. *Tijdschrift van de Koninklijke Vereniging voor Nederlandse Muziekgeschiedenis*, 47(1–2), 99–118.
- Watkins, G. (1988). *Soundings: Music in the twentieth century*. New York: Schirmer Books.