Graphic Notation and Musical Graphics

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Abstract

Musical graphic notation is a written representation of music that uses none or only few of the elements of traditional staff notation.[1] Graphic notation is often an indeterminate, ambiguous type of notation whose symbols and interpretations are explained in a legend or in annotations.

Musical graphics, on the other hand, has its own aesthetic value as a visual art and does not have to be defined through its translatability into music. Like visual scores—that is, images instead of graphics—musical graphics is composed not with the intent of producing concrete music; it may, however, be translated into music.[2]

The first graphic notations and musical graphics were produced within the New York school of composers around John Cage: Morton Feldman's Projection from 1950 was the first instance of graphic notation (called graph notation), and Earle Brown's December 1952 is often deemed the first work of musical graphics (called musical graph). However, the term musical graphics, or musikalische Grafik, was coined by Roman Haubenstock-Ramati in Europe, where in the late 1950s a music-theoretical discussion began that primarily revolved around the dissolution of the concept of the work of art and the aesthetics of autonomy. Starting in the 1970s, more and more visual artists began to engage in musical graphics, and improvising performance artists developed new interpretational styles.

Other categorizations of notation specify their function. Thus, aural scores are descriptive graphic representations for music, mostly for tape, that are produced after the music has been performed, with the tape possibly having been made by means of a realization score. The latter has in common with the (prescriptive) action score that the action generating the sound is described, not the acoustic result. Thus they are prescriptive.


1 Precursors

Figural notations, precursors of graphic notation, were produced as early as around 1400. The lines are arranged in the shape of a heart, a circle, or a cross, and in addition to their decorative character, they often have the form of a puzzle canon.

Graphics on music paper, such as Moritz von Schwind’s (1804–1871) Die Katzensymphonie (The Cat Symphony, 1868),[1] were prevalent in the nineteenth century.[2] At this point in time, the score had already become autonomous as text and was available independent of the performance of the piece as an autonomous, time-independent foundation of the ideal form.

There were various attempts in the 1920s to overcome the boundaries between the art genres. At the same time, visual artists used music as a model for abstract art. In addition to Paul Klee’s graphic representation of a piece by Bach (Fugue in Red, 1921/22), in 1923, Wassily Kandinsky developed a graphic representation of music by translating the beginning of Beethoven’s Fifth Symphony into dots.[3] Bauhaus student Karl Peter Röhl drew abstract graphics on music paper as early as 1926.[4]

2 Graphic Notations and Musical Graphics after 1950

2.1 American Development

In 1950, the New York school of composers (John Cage, Morton Feldman, Earle Brown, and Christian Wolff) began developing new forms of notation. The central category of this form of notation is indeterminacy, through which the composer grants the performer improvisatory latitude.[5] Morton Feldman’s composition Projection 1 (1950) in graph (paper) notation is indetermined with respect to its pitch. Feldman does, however, prescribe three different registers and thus a framework within which the performer has to choose the pitch.

John Cage’s performance material Cartridge Music (1960) is also indetermined, as are several of the compositions in the Variations series (1958–1967), which consists of various printed transparencies that the performer can lay over one another in a new way for each performance and interpret according to Cage’s instructions. The resulting values often specify actions and not sounding results. In his Concert for Piano and Orchestra (1958), Cage assembles a compendium of different notations for the piano solo part.

Earle Brown’s December 1952 from the Folio series is regarded as the first graphic music. Instrumentation, pitch, and rhythm, as well as the reading order and turning of the page, are indetermined. By using these types of graphics, the composer Brown, who was interested in jazz, wanted to motivate the performers to improvise.[6] Whereas Brown aimed at improvisation with the spontaneous translation of the visual impression, Feldman and Cage avoided the term improvisation and demanded the detailed elaboration and planning of each performance.

In the 1950s, compositions by the New York school of composers were primarily played by David Tudor (1926–1996), one of the leading performers of contemporary music for piano. He realized the indetermined pieces by devising a playing score: he laid down all of the decisions to be made by the performer in a rehearsal phase and put them in writing.

Between 1956 and 1962, Tudor performed at the Darmstädter Ferienkurse für Neue Musik (Darmstadt New Music Summer School). Numerous European composers wrote works specifically for him. In 1959, Sylvano Bussotti wrote the following about his Five Piano Pieces for David Tudor: “The expression ‘for David Tudor’ in the title is not a dedication but almost designates an instrumentation. [...] In many cases, the acoustic event that such graphics may trigger remains in the pianist’s hands.”[7]

2.2 European Development

On the one hand, the development of graphic notation can be understood as an indication of changes in music,[8] whereby above all continuous sound processes increasingly take on more importance in the contemporary practice of composition. With the aid of graphic notation symbols, these continuous sound movements can now be fixed, whereas conventional staff notation merely symbolizes discrete pitch and tone duration.[9] On the other hand, the dissolution of discrete notation was accompanied by the abandonment of the concept of the work of art, because the frequently ambiguous and open forms no longer comply with the criteria for consolidation.

Despite the distinct pictorial nature of his graphic notation (from 1958), Anestis Logothetis (1921–1994) distinguishes it from musical graphics, which he considers a means of improvisation.[10] The symbols, associative
notations were used in the form of tablatures, notations denoting the fingerings for instruments such as lutes, instead of a tonal result such as the one specified by aural scores, action notations are verbal or graphic instructions for the performance of an action that creates a sounding result. Their similarity to movement notation becomes apparent above all in experimental musical theater, such as in compositions by Mauricio Kagel. Mikrophonie by Karlheinz Stockhausen is an example of an action notation of live electronic music. Action notations were used in the form of tablatures, notations denoting the fingerings for instruments such as lutes, musical theater, such as in compositions by Mauricio Kagel. Mikrophonie by Karlheinz Stockhausen is an example of an action notation of live electronic music. Action notations were used in the form of tablatures, notations denoting the fingerings for instruments such as lutes,
between the fifteenth and eighteenth centuries. There are also action notations in traditional staff notation, such as *sul ponticello*, which refers to placement of the bow on string instruments.
all footnotes


[2] See also Grandville, Ronde, Tarantelle, 1840 [a circular notation system with dancing stick figures], in Le Magasin pittoresque 8, no. 31 (1840): 245.


[14] Here it requires verbal instructions.


[22] Sonambiente 2006; http://www.sonambiente.net/de/06_cooperations/6M2hgb_werk.html.
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