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How to Compose the White of a Page; Reflections on Boulez' *Cummings ist der Dichter*

Zusammenfassung: Während Betrachtungen über die Zeit-Kategorie in der Musik Bände füllen, ist die Kategorie des musikalischen Raumes immer noch merkwürdig wenig analysiert worden. Boulez' Komposition "Cummings ist der Dichter" kann zu solcher Analyse anregen, zumal Boulez selbst ein komplexes ästhetisches System für Raum und Zeit in der Musik des 20. Jahrhunderts entwickelt hat. Was vertont Boulez in dieser Komposition über ein Gedicht von Cummings? Sind es Worte, Verse, syntaktische Strukturen? Wie vertont man Satzzeichen oder verschieden ausgerichtete Klammern? Mehr noch: Ebenso wie Cummings das Weiße der Seite und den Vorstellungsraum des Lesers in die Dichtung einbezieht, so erschafft Boulez der Musik neue Dimensionen. Er "vertont" Räume, Gesten, Assoziationen und Dissoziationen und vollzieht beispielhaft nach, was im Leser von Cummings Gedicht evoziert werden soll.

In some of my earlier studies, I have developed a general aesthetic theory of the category of time and space in music, and used musical works of art of past centuries as paradigms for this theory[1]. Some doubts have been expressed as to whether this theory could be successfully adapted to historical "objects". With contemporary music, however, theoretical reflections on time and space have to be introduced. Whereas my reflections on an equal importance of the categories of time and space in music broke new ground concerning historical paradigms, we find many

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1   Cf. by this author *Stilisierung als kunstvermittelnder Prozeß* – Die französischen Tombeau-Stücke im 17. Jahrhundert (*Neue Heidelberger Schriften zur Musikwissenschaft* Bd. 14), Laaber 1987, "Musik als kaleidoskopischer Raum – Zeichen, Motiv, Gestus und Symbol in Johannes Ockeghems Requiem", in: *Zeichen und Struktur in der Musik der Renaissance* (Kongreßbericht der Tagung der Gesellschaft für Musikforschung Münster 1987) Bärenreiter 1989, S. 47-64, "Musikalische Zeit und Zeichen-Raum in Brochs Roman *Die Schuldlosen* und Mozarts *Don Giovanni*", in: *European Journal for Semiotic Studies* 2,4, 1990, S. 683-709 und *Ästhetik des musikalischen Raumes – Die Chansons Johannes Ockeghems* (Neue Heidelberger Schriften zur Musikwissenschaft 19), Laaber 1992.

theoretical reflections of contemporary composers on this equivalence – not only for analysis but already for the compositional process itself.

Nowadays it is also possible to experience in concerts the new importance of space in music, e.g. in Boulez' *Répons*. In New York, the listeners were placed around a chamber ensemble, which itself was placed in the middle of the hall, while some soloists were placed in the outer corners of the hall. In addition, speakers formed a circle around the auditorium. Thus the physical placement of instrumentalists and speakers, alone, in the space of the hall prevented an ordinary perception of *time*. In addition, the actual playing of the instruments and the computer-orchestrated music, which was transmitted through the speakers, were related either distinctly as separate entities, completely amalgamated, or partly superposed, etc. Thus a game of "répons", of "answers", was installed. The destruction of a successive order and the transformation of the physical direction of sound express, on a sensorial level, a new variable order for the perception of music. Boulez is one of the most articulate and most brilliant theoretical authors dealing with this new order of time and space in music. The following is a quotation from his book *Penser la musique aujourd'hui*[2]:

"Le temps possède, de même que les hauteurs, ces trois dimensions: horizontale, verticale, diagonale; la répartition procède également par points, ensembles, ensembles d'ensembles; ces organisations ne marchent pas obligatoirement de pair avec celles des hauteurs; il sert enfin de lien entre les différentes dimensions relatives aux hauteurs elles-mêmes, puisque le vertical n'est que le temps zéro de l'horizontal – progression du successif au simultané. Du fait de cette morphologie, les structures locales et les structures globales – responsables de la forme – n'obéissent pas davantage à des lois permanentes. Aussi bien existe-t-il une manière irréductiblement nouvelle de concevoir les grandes formes: homogénéité ou non de ses différentes composantes, causalité ou isolation des divers instants, fixité ou relativité dans l'ordre de succession, dans la hiérarchie du classement, virtualité ou réalité des relations formelles"[3].

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2   Editions Gallimard, 1963, series *Tel*, vol. 126, p. 26. The notion of space has been far more reflected upon by Boulez than by any other music theorist. Boulez explicitly goes beyond the notion of physical space or acoustic space. He points out that any notion of time leads to an analysis of space perception. Space projection is a precondition for the notion of duration, of the becoming of a musical process. Space is "indice de répartition du phénomène sonore" which has to be analysed further in more specific ways.

3   In my translation: "Time possesses, in as much as pitch, these three dimensions: horizontal, vertical, diagonal; the distribution is caused equally by points, ensembles, and ensembles of ensembles; these organizations are not necessarily parallel to those of the pitches; time itself serves as a link between the different dimensions connected with the pitches because the vertical is nothing but the 'zero time' of the

"Progressif" and "simultané" have the same horizon, the "temps zéro". One could add to this, from the point of view of space, an "espace zéro", silence. The new equality of time and space in contemporary compositions leads, as a consequence, to a new interchangeability, which is by no means arbitrary. The two parameters are always subjected to a tension between "progressif" and "simultané". In Boulez' words: "A ce propos, je tiens à le rappeler, il me semble indispensable de concevoir l'interchangeabilité des composantes sonores comme un phénomène structurel de base ..."[4] The interchangeability is based on two preconditions: firstly, a general thesis that music is the actualization of a preexisting potential (Boulez would call it "field") and, second, that all the secondary categories connected to time and space (e.g. colour, intensity, homophony and polyphony, tonality, etc.) are interchangeable as well. Boulez' notion of "champ", although not very developed, comes close to my notions of "extension" and "field of extension"[5] and to the theory of potentiality and actuality connected to these notions. During a process of perception, the parts of a composition become actualizations of fields of extension. In my theory of musical perception as a process[6], extensions are meant as po-

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horizontal – a progression from the successive to the simultaneous. As a result of this morphology, the local structures and the structures responsible for the form do not any longer obey permanent laws. Therefore there exists an irreversibly new way of experiencing the overall form: homogeneity or non-homogeneity of its different components, causality or isolation of its different instances, fixation or relativity in the order of its succession, and, in the hierarchy of its parts, virtuality or reality in the formal relations."

4   op. cit., p. 37. In my translation: "Concerning this matter, it is important to remember that it is indispensable to conceive the different components of sound as interchangeable. This is a basic structural phemomenon."

5   Both terms are adopted from the theory of process by Alred N. Whitehead (*Process and Reality*, revised edition Macmillan, New York, 1979). I have adopted them in my book *Stilisierung als kunstvermittelnder Prozeß* (op. cit.) and in *Ästhetik des musikalischen Raume*s (op. cit.).

6   In this theory, the classic notion of a work of art and the concepts of object and perceiving subject, are replaced by the notion of process of perception. I characterize this process (using Whitehead's term) "superjective", as a history between a perceiving subject and a "sound event", including past histories of the subject and the event. The composition as such only exists in the act of perception; it is no more nor less than a structured offer, a structured potential. As soon as the process of perception is finished, the character of this process of *one* event in time is lost. In the moment of the perception of the "oneness", a precondition for any kind of object, the object is lost. It becomes part of individual and intersubjective memory and thus part of the field of potentiality for new actualizations. As a consequence, analysis of music is itself a process. The person who analyzes is part of the process; he can ne-

tentials not yet developed, or actualized, in time and space. They are the "breeding ground" for new processes.

Whereas categories of perception and former processes of perception are principally separate, they are not differentiated as "substance" and "form" in actual acts of perception of a process. In the transition from extensions to defined space and time, durations are created. Durations are partially temporal and partially spatial. Durations are the consequence of contrast. Contrast is necessary to experience a process as one, as a unity. Its unique quality is a consequence of contrasting time and space with a diffuse field of perception. This diffuse field is formed by the feeling of our body and by instinctive conditionings, which have no specific formations of time and space and are mostly unconscious. Although the subject must concentrate on the musical event in order to experience it, it incorporates, quite literally, old perceptions and even sensuous and maybe sentimental experiences which might not have anything to do with the "work itself". Every composition offers "openings" for the integration of "foreign" elements in the ever-identical potential of the work itself. Boulez states: "Ainsi la pensée musicale saura se mouvoir dans un univers qui évoluera des objets existents aux ensembles d'objets probables"[7]. The act of composing is not an act of determination of sound objects, it is an offer for future determinations in an open series of perceptions. Unlike the situation of composing in the past, the composer has an almost overwhelming variety of possibilities for the distribution of time-space potentials at his disposal. In Boulez' words:

"Cependant le temps est apparemment venu de prospecter des espaces variables, à définitions mobiles – ayant loisir d'évoluer (par mutation ou transformation progressive) dans le cours même d'une oeuvre. Cette variabilité est liée, d'une part, à la complexité et la densité dans la structure interne, l'enchaînement, la répartition ou la superposition des phénomènes sonores ... d'autre part, au tempo général que régit la vitesse de déroulement des figures ..., liée, enfin, à la relation proportionnelle des intervalles entre eux, une fine modification d'une quantité à une autre étant d'autant plus sensible qu'elle opère dans un ordre de grandeur restreint."[8]

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ver analyze "objectively"; for music is never *his* object. This is not only true for music, but it is particularly clear in an art which is "perpetually perishing", using the characterization of Henry James for time.

7   op. cit., S. 42. "Thus musical thinking is able to move in an universe in which existing objects are transformed into potential objects."

8   op. cit., p. 94. "Indeed, time has suceeded in projecting variable spaces with 'moving' definitions which may themselves evolve (by mutation or progressive transformation) in the successive time of the piece. This variability is partly connected to the complexity and density of the internal structure, the enchainment,

Boulez developed a scheme of parallels between time and space[9]:

I. Espaces homogènes
   A. Espaces striés
      1. Coupure déterminée, fixe ou variable
         a. Modulo fixe: espaces droits
         b. Modulo variable: espaces courbes focalisés ou non-focalisés
   B. Espaces lisses
      1. dirigés
      2. non-dirigés
II. Espaces non homogènes
   Espaces lisses/striés superposés ou en alternance

(These two categories have as a counterpart "temps pulsé" and "temps amorphe")

In the following I would like to point out only some aspects of this scheme, the other aspects of which are explained in the course of the analysis. The categories "lisse" ("smooth") and "strié" ("furrowed") are connected to factors such as the degree of recognition of intervals in complicated chords. A field of chords in very wide position in fast succession and fast change of grouping of instruments is "lisse", the listener being unable to "get into" the chord. The listener is, so to speak, gliding on the surface of the chords. "Modulo" is an expression for factors of reference, e.g. 1:2 for the octave. This is but one possibility, although a classic one, for "references". Modulos can be placed "inside" a field or form the "outside" of an otherwise "non-modulated" structure. In the first case they can be responsible for symmetrical order, in the second for the direction of distribution of sound events.

These general aesthetic concepts have consequences for the detailed analysis of contemporary music. If we take, for example, a Mozart sonata as a paradigm of a "classic" object for analysis, we always find a fixed hierarchy of parameters: the development of tonality is subjected to a projected space of reference and a projected order of time, the sonata form. A third element is the expectation of a thematic process, a discourse. The projected order of time and space is never questioned in its homogeneity: space is always hierarchic and time unidirectional, both of which are interdependent. Unfortunately, to this unidirectionality corresponds a certain schematism and unidirectionality of analysis. It is only

the distribution or superposition of the sonic phenomena ..., partly to the general tempo ruling the rapidity of the development of figures ..., connected, finally, to the proportional relation of intervals, a fine modification of one quantity into another, which is all the more perceptible as it is operated in a very restricted order of size."

recently that authors such as Charles Rosen have tried to break new ground in this respect. All the more then, there is a necessity to give up the fixed perspective and pseudo-objectivity of analysis in contemporary music. Thus analysis of contemporary music could become very inspiring for other periods of music history. A practical consequence of a new variability of analysis which takes into account the process of listening is the analysis of tonal series. Although Boulez very often uses series, he is by no means a serial composer in the strict sense. The exploration and enumeration of series as such do not tell anything about the functioning of this music, even less than in works of Schoenberg, who was greatly amused by the attempts of musicologists to fix every note in serial rows. Much more important is the analysis of the structure of intervals, symmetries and asymmetries, densities, homogeneity and contrast, etc., spaces of *lisse* and *strié*, elements which are a consequence of the structure of the chosen series. The disposition of intervals, horizontally and vertically, depends on the series, but the series has no thematic significance.

Let us turn now to Boulez' composition *Cummings ist der Dichter*, composed in 1970[10]. The text of this composition is taken from a collection of poems by E. E. Cummings, *No thanks*, from 1935. In this collection, Cummings developed some new techniques in a quite extreme way, such as the splitting of syllables, parentheses as elements of time and space, etc. It is important to know Cummings' own understanding of his writings and to keep in mind that he was also a painter. Cummings deve-

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9	op. cit., p. 98.

10	This work has been analyzed already by three authors. Lawrence Morton ("Cummings ist der Dichter", *Boulez-Festschrift*, J. Häusler ed., Vienna 1985) only analyzes some details; his description is rather general. He does not deal with aspects of time and space. His analysis of the relation between text and music is merely descriptive. Morton's impressions and his analysis have no clear connection. Peter F. Stacey (*Boulez and the Modern Concept*, Aldershot Gower Publishing Company, 1987, p. 106seq.) deals mostly with questions of orchestration and is rather descriptive, too. Ivanka Stoianova's short analysis in her *Geste-texte-musique* (Paris, 1978) is much more thorough. Her book in general is a very good and far-reaching guide to contemporary music. It is one of the very few examples of a coherent approach to the concepts of text, time and music. However, even here we do not find a systematic concept of the work of art. My opinion about "what" is set into music in Boulez' work is substantially different from Stoianova's. Her analysis, although in its results illuminating, stays rather general. I will try to substantiate my results in more detail.

My analysis, as is the case in both cited works, is based on the edition of Universal Edition. I wish to thank Universal Edition for their very generous permission to reproduce the musical examples in this article.

loped his aesthetics in his *Six Nonlectures*. For him, the aim of art is to confront the reader with everything which is "hair-raising, breath-taking and poreopening". Art is a "vast and painful process of unthinking". Cummings wants to activate all our senses, not in order to undermine the intellect or call upon the unconscious, but to seize consciousness and intellect in new ways. Cummings reached this aim by setting free the gestural qualities of language and its musicality, and questioning the linear logic of language. The key word here is *process*. Whereas thinking mostly leads from a sensual and "musical" experience of language to abstractions, Cummings wants to invert this process. He leads the reader from his original understanding of words and poetry to the most elementary level of language. Art is for Cummings simply a "question of being alive". However, this aim is reached only through a process of transition, using traditional mechanisms to set up a new game with new rules. The means can be described as musicalization of language. Cummings introduces musical techniques for forming melodies in polyphonic order. The musical aspect of Cummings' poems goes far beyond that of poems by romantic authors. In romantic poetry we find many games of musical associations, and experimentations with metre and rhythm. Words are questioned in their meaning and sometimes even put into an "alogical" or asyntactical order. But Cummings goes further, questioning the projected order of time and space of a poem in a process of dissolution or breaking up of phrases, linear meanings, and even the single words themselves. He creates a new sense by graphic order on the page, and sets gestures free on both sonic and visual level. Words, syntax, grammar, rhetoric, etc. are only elements in a new space on the white of the page, where the poem becomes a sculpture.

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The power of music, which is inherent in language, is no longer set free in recitation only. It is impossible to recite the poem in a traditional way. How could one make audible parentheses, and the other syntactic signs that have a completely different function compared to traditional poems, the slight difference in the distances between mere letters, the graphic "&" as opposed to the written "and", and the capital letters in their spatial function? The only possibility would be a theatrical recitation, with sophisticated gestures replacing directional signs and spatial effects

of order on the white of the page. The body of the person reciting would have to replace plastic effects.

Cummings' poem is a potential for a theatre of language with the white of the page as its stage. This white symbolizes the inner space of experience of the reader, and a space of projection for temporal events of language as well. Parentheses and capital letters are typical crossing points where spatial effects and temporal successions meet most intensively. The direction of the parentheses is very significant. They have lost their syntactic function and acquire one of creating a spatial effect with a temporal implication. This implication becomes evident in the closing of the parentheses at places where they have no syntactic function. They merely use syntactic expectations and mechanisms in order to set temporarily one section apart from the rest. At the same time they seem to seize the horizontal space to which they open themselves and throw it "behind" the two-dimensional appearance of the poem and thus convert this plane into a space. To cite but one example, the first parenthesis after "birds" has the function of opening up the space. The created energy leads to the "gap" below in the second line which has itself the secondary effect of silence, of a temporal phenomenon as well as a spatial one. The word creates the imagination of "bird", and this bird starts to fly in the "air" of the page – an air whose invention is mentioned shortly later. The "air" is "caught" in the "U" which again creates its own space. This time the space is "above", even in the direction of the reader, and it is captured miraculously in the closing parenthesis of the fifth line. This should suffice to show the spatio-temporal techniques of the poem.

Many levels of the reader's experience are used: the pictorial evocations created by the shape of the poem on the page; the conceptual evocations created by strong and traditionally meaningful words such as "birds" and "soul"; the rhythmic and musical expectations of a succession of "verses" and their temporal consequence; the spatial imagination caused by the conversion of concepts into ideas and pictorial imagination; the game of the syntactic and of the time-space function of parentheses, and so forth. Most importantly, these elements not only create a multitude of different effects of time and space, sensorial and intellectual phenomena, etc., these elements are carefully placed and calculated in their effect. They are used so as to preclude any kind of understanding in a traditional sense. Traditional understanding is connected to intellectual abstraction, on a more elementary level to closing, to appropriation. In our poem, Cummings keeps the structure open. As soon as the reader thinks he understands, he is troubled artfully and thrown into a new "chamber" which has to be explored. The very meaning of the poem is to "invent air" for

the birds to fly, even more, to convert this air to the pneuma of the soul. It might not even be too far-fetched to evoke Pentecost as the ultimate intention of this poem. At its end, the poem calls upon a specific listening, a listening into the space created beyond the white of the page. The page becomes a string of Orpheus' Lyre. This is the very part of the poem Boulez did not set into music, only using the text until "and". That is why Boulez called the piece originally "first birds", not because he planned another part, as Morton suggested, but because of the invention of "other" birds in the poem and in its setting into music. We will come back to this point at the end of this essay.

As becomes evident after a close look at the composition, Boulez was very much aware of the temporal and spatial techniques and implications of Cummings' poem. The new dimension of the poem, in its treatment of the gestures and musical qualities of language, its use and transformation of the reader's expectations, and its "polyphonic" composition are to be found in Boulez' composition as well. The composer states in a program note of 1974: *"Cummings ist der Dichter* est une composition basée à l'origine sur les mots d'un poème. Pour mieux comprendre la disposition du texte choisi par Cummings, il semblait intéressant, non seulement de transcrire en musique le contenu poétique du texte, mais aussi de développer le sens de la disposition utilisée par le poète. Ce poème a été adapté selon les normes de cette conception."[11]

Even compared with contemporary treatments of texts in music, Boulez' setting into music of Cummings' poem is ground-breakingly original. At the same time it is very close to the poem. The most significant parallel between text and music is the creation of a kaleidoscopic space, in which the narrative, or linear succession is but one element. That is why the text is only partly developed in its succession, i.e. parallel to the succession when we read the poem. The parts of the composition are in no way a "development" of the text. The composition allows ever-new perspectives *into* a preexisting space. The language of the poem *and* the music are inscriptions into this space. What takes place is not a musical event, but a metamorphosis, or configuration. The independence of the sphere of the text is realized first in a four voice women's choir, then in a four-voice men's choir, which is directed by a second conductor.

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11   From Stoianova, *op. cit.*, p. 160. "*Cummings ist der Dichter* is a composition based originally on words of a poem. In order to create a better understanding of Cummings' disposition of his text, it seemed interesting not only to transcribe the poetical content of the text into music but also to develop a sense of the disposition as it is used by the poet. The poem has been adapted according to the laws of this conception."

This does not mean a complete separation. The second conductor is only moving in a carefully limited space, formulating temporal configurations in strict limits. I cannot agree with Stoianova that there is a different and audible order of time in the orchestra in contrast to the choir.

Although there is no successive temporal development of the text in the choir, we find a clear subdivision of the piece into three parts. One could argue that the change from women's choir to men's choir would signify another subdivision; however, this change is merely one of perspective, a rotation in space. Certainly, there is an impression of linearity, of a "new event", but it soon becomes evident that this is but a travesty of narrativity. The women's choir uses only melodic elements and whole words, and never comes back in the piece. Its potential of musical "themes" and "motives", which are basically musical gestures is transferred onto the men's choir and later onto the orchestra. At the end of the first part there is a transition to Sprechgesang. The musical elements in the choir, which have opened the way to Sprechgesang and thus to a close melting of text and music, are part of a polymorphic space in which the potential of expression of both text and music is developed. Melodic fragments, abrupt gestures, musical "phrases" which are spread over different instruments so as to destroy its linearity, melodic interval versus punctual interval, spoken sound versus sung sound, and sound and noise, are superposed, transposed and juxtaposed. The key to understanding this space's aesthetic construction is found in the principle of decentralization.

After this short survey of the text treatment in the first part of the composition, let us examine the different compositional techniques in each of the three parts. First part: Contrasting elements of choir and orchestra are increasingly mixed and freely combined between them. There is a balance between elements simultaneously presented and elements presented in contrast (up to cipher 8). Second part: Very strong opposition of elements in homophonic cuts (many general pauses and sharp vertical order in choir and orchestra). The effect is a kind of vertical axis for the first and third parts. The impression of identity and difference is very intense (up to cipher 11)[12]. Third part: Different structures are isolated on storied levels, but presented simultaneously. The formerly hermetic space is opened by means of an extremely static atmosphere. The vertical

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12   Stoianova calls this part "narrative". I think it is quite the opposite of narrative. The radical cuts ("incisif") are something like the execution by guillotine of the linear time flow. After the polymorphic surface of the first part with its only diffuse experience of fragments of time and space, time is shown here as a kind of "negative series". Stoianova erroneously equates "énumération" with "narration".

axis of part two is transformed, or transcended, into a horizontal sound axis with a tonal center in the choir.

Naturally, one could describe this structure in classic terms, as Lawrence Morton did. One could talk of "exposition" and dramatic center and "free phantasy" with Coda character, which is certainly the traditional source for our piece. But it would mean ignoring the radically new order of time and space to be found in the poem and in the composition as well.

In the first part, Boulez works with manifold means in order to efface the traces of the successive compositional stages and to prevent the listener from any kind of a feeling of direction. The effect of decentralization has another consequence: parallel to the poem's white page, Boulez creates a surface ready for musical inscriptions. In contrast to traditional music, the duration of this piece is not wrought from silence, but works from the beginning with incorporated fragments of silence. Thus the usual envelopment of sound by silence is denied; silence is not "outside", but inside. After the beginning with its homophonic blocks and precise indication of time, there is a transition to a field of "libre, très lent, régulier". In the limit of "régulier", the two conductors are relatively free in giving indications, even in giving rhythmic shapes to sounds (cf. p., 359). The conductors depend on the "régulier", but are independent in their way of formulation. They dispose at the same time of two different temporal structures. One is fixed and part of a homogenous musical space, the other variable. One could call this "diachronicity". This diachronicity is the equivalent of the melting of the different elements in choir and orchestra, and diachronicity is responsible for the integretion of silence into music. The more precisely time is fixed and formulated, the stronger the contrast of the sound to silence. Let us now take a closer look at the elements of choir and orchestra.

Ex. 1

In example 1, we find the beginning of the piece. Orchestra and choir are linked and separated at the same time. The punctuated *pizzicato*-chord is part of a triplet that finds its completion in the melodic gesture in the choir. A very significant and, in its presentation in fragmentation, traditional (that is, in the tradition of the beginning of the 20th century[13]) element is the sixth. It can be presented melodically rising and falling, but

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13   Characteristicallly, we find this interval as a vestige of romantic expression in songs of the Second Viennese School. Boulez uses the interval already as a second degree symbol.

'cummings ist der dichter'
first birds
pierre boulez
1925

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also typically split within one group of instruments. Here the sixth appears in Soprano I (f#-a) and the Alto (c'-a'). It also appears in the chord of the orchestra, but not very distinctly. The interval is used as "modulo" (cf. above) and in a kind of Leitmotiv. Another vertical element in the choir is the transition from a wide position (a^b-f#") into a major second (g'-a', the second time e^b'-f'). The transition is a temporally presented "event". Then the interval is converted to a more spatial field, a cluster (c#'-d'-e^b'-e', with addition of grace notes)[14]. Thus the vertical inscription is transformed into a horizontal field. The overall structure is homophonic, and sound blocks are interspersed with silences, but these blocks are carefully placed asymmetrically and enveloped in ornaments of trills and grace notes. These traditional elements of colour and ornament have a new function in this piece. They are used in both choir and orchestra and thrown upon both separate levels like a net of "garlands". The melodic gestures and punctuated chords are presented in almost endless variations of great inventiveness. The combinations of trills and grace notes, the melodic splittings and combinations, the presentation of identical interval combinations in the chords in different instrumental combinations, glissandi of choir and orchestra, are variations of the four basic elements: homophonic chord, melodic fragment, punctuation and cluster-field. The different elements, carefully separated initially, grow increasingly together, and become part of a polymorphous space encompassing orchestra and choir. The variations are much more spatial than temporal. In this space we can distinguish "mouvement conjoint" and "mouvement disjoint"[15]. Distance in time, difference or equality in colour, wide and narrow position of equal elements, regular or irregular pulsation of time or the combination of both (diachrony), glissando from one orchestral group to the other or intermingling of separate groups, etc., can be the basis for this distinction. Boulez is extremely aware of the psychological role of audition, calculating exactly whether the ear has the time to connect two elements or not. The two forms of movement are themselves part of a larger scheme, "répartition fixe" and "mobile" or "relief statique" and "mobile". Both are qualities of space, and time only creates the one or the other.

Until now, we have only analyzed the musical structure. Let us turn now to the relation of this structure to the presentation of the text. This

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14   Boulez never uses "clusters" as a pure colour, they are always very carefully constructed and discernible in their connection with their surrounding. For Boulez, clusters are not colours, but coloured dense intervals. Even the grace-notes are part of the interval structure presented before.

15   Boulez, *op. cit.*, p. 75.

relation can be best described as a "game". The *pizzicato*-chord as vertical boundary is dissolved in the triplet and the point like second. The sung word is "birds". The abrupt transformation of pillar into point is dissolved in the field of the cluster with trills. In connection with the word "birds", this is an almost pictorial, traditional description: a batting of a wing and a slight whirring of the air. After the fermata, again a melodic element of the choir, not as homophonic as before, is somehow broken in paraphony, following a transition into the interval of a second. The orchestra recalls the vertical axis with another *pizzicato*-chord. The word is "here". The melody is an almost traditional gesture that leads to this point: "here", accentuated by the orchestra. The separation by means of the general silence is a parallel to the silence around the "verse". But how is the parenthesis set into music? In the text, the parenthesis throws the white of the page "behind" the letters to create a three-dimensional space. The effect is intensified by the "white" below the word "birds". With these comparatively primitive means, Cummings creates the impression of vertical and horizontal in a material, visual sense. The sounding elements, which have been described above, create this effect much more intensely with their spatio-temporal means. The parenthesis as graphic hint is transformed into sound itself, the music creating its own direction.

The horizontal direction of the words "inven" and "-ting" is transposed exactly into music. The second $e^{b'}$-f' on "in" is resolved in a cluster surface, while the lower voices mark a point in m. 4, which is extended in the upper voices. While the upper voices mark the new line with a pause, the lower voices draw the syllable behind the white of the musical page. Thus it becomes clear that the word is one, but in its spatial separation is present in different lines. This effect is intensified through the dissolution of the cluster in the lower voices, as the alto 2 and alto 4 circulate around d'-e^{b}-e'. In the relationships of the sound, the identity of the word is underlined. In the poem, the word "air" is on the same horizontal line as "-ting". In the music, we find a new variation of the beginning. A melodic interval in the voices leads to a whole second, f'-g'. But it is exactly here that the succession of the text is left for the first time, the "U" being linked with "air". This is the starting point for a game of horizontal and vertical permutations and kaleidoscopic combinations. We will analyze this game only in a small section, in which the principle is that of a growing freedom of variation of each parameter[16]. The

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16   The concept of permutation is distinctly different from the concept of variation. In a
      variation, a theme or some clearly defined motives (in contemporary music, motive
      has to be taken in a very broad sense, it can mean the combination of colours, spe-

ambiguity of the text "U-)sing", the participle ending becoming a word with its own significance, lets the birds "sing". This ambiguity is intensified through the very expressive melodic line in the voices. Characteristically, the Leitmotiv-interval of the sixth appears again. The following word "here" is a parallel to m. 1. Memory plays a decisive part in the dissolution of successive time. It is memory that realizes the changed order of text and music and the reversed order of time.

The word "here" is doubled in question and answer. Its point-aspect, its pointing at, is changed by the orchestra this time. First, the strings take over the intervals of the voices, then flutes and clarinets from the strings, then the brass and afterwards the strings again. The "here" wanders through the orchestra and creates a narration without time. Here is a circle, the circle of the firmament. The way of the "motive" is clearly defined by orchestral colours and returns to voices after cipher 2. The word there is "sing", the same word from which it started for the first time. At the end of the piece, the motive-fragments will become one endless song of the birds in the flute. It is a true St. Francis' song.

Ex. 2

Although the different elements are combined and varied in the course of the first part, the text is still presented in a synchronized way in the choir. There is still no polyphony in the presentation of the text, the voices singing roughly the same text, but the successive continuity from the poem is not observed. The text undergoes a process of permutation as do the musical elements. The impression is simultaneously continuity and permutation, a globe in which every perspective is possible. Narrative variations are countered with new vertical and horizontal combinations. Seemingly identical elements appear in a different perspective and thus acquire a new meaning. In this game, memory is particularly important. Memory is served with identical material, but in new connections and

cific articulations, etc.) are developed in a temporal succession. The development does not have to be directed towards an aim in increasing complexity (as it was the case in classical music), but at least the primary factor is a line in time. In permutations, the spatial arrangement is the decisive factor. Temporal developments are but secondary; they are sometimes carefully avoided. This is the case in this piece. The concept of permutation has transformation as its counterpart, in opposition to development. Transformation represents an identical space with changing perspectives. Development changes the space through the temporal development of the elements which form this very space.

positions, in flowing or static movement, and played by different instru-
ments, etc. There is a suggestion of a coherent space without unidirectio-
nal orientation. "Here" is present, everything seems seizable, though
nothing can be possessed, and is finally understood. A process takes place:
"inventing air" and "U-sing".

The transition from the women's choir to the men's choir is signaled
quite traditionally. After a general *rallentando* the Leitmotiv-elements are
presented, and isolated through silence: the motives shown in ex. 2 (in the
following called "birdmotive", consisting mostly of four semiquavers in
wide intervals), the *pizzicato*-chord, the melodic sixth combined with a
melodic seventh, and transition to a narrow chord (C-C#-E and C#-eb of
the trombones), whose low position is a typical traditional sign for tran-
sitions. At this point of the composition, the different elements are al-
ready completely amalgamated. The only change is a repositioning in
space and the new impression of a foundation through the change to the
men's choir. The orchestral groups are always kept distinctly apart and
used as a structuring element. Now even the text becomes part of the
amalgamation. While tenor 1 "murmurs" the whole poem successively up
to "U", the other voices use the text of the poem in free combinations, the
text becoming part of the polyphony. However, this polyphony is not
arbitrary or chaotic, but it is part of a highly artificial orchestration of
sound. The text is used in its primordial musical quality. Boulez almost
decomposes the text, using even single consonants and setting their musi-
cal qualities free. Paradoxically, tenor 1, the only voice presenting the
text in its original successive order, is the least close to the poem, because
the pure horizontal presentation is contrary to the spatial effect of the
poem. The asynchronic and superposed presentation of the text transmits
its meaning more faithfully. The general amalgamation is a faithful pre-
sentation of the developments in the poem. The splitting of words into
syllables (even where the poem did not split them) and the introduction of
Sprechstimme merge text and music. In this space without a unidirection-
al time, there is quite often an impression of a waxen surface, which is
ready for inscriptions. This surface is not at all neutral or without struc-
ture. Its essential element, long notes in strings and brass, presents ever-
new colours: "sul tasto", with or without grace notes, trills, narrow or
wide position, a marked pulse or improvisation in time. However, the
surface is only one element in this space, other possibilities of which are
diagonals, and cuts in every direction, etc.

In this growing climate of a complex amalgamated space, moments of
simultaneity are all the more important in order to lead the listener al-
most imperceptibly through the globe. There are sudden general pauses,

gestures of silence, sudden homophony of the text, and free time set apart from pulsating time. In these points of simultaneity Boulez creates "flying lanes" for the perspective of listening.

Particularly intense and fascinating points of simultaneity are the inscriptions of the words "look, soul" at the transition to the middle part. They are only used here, only in opposition to the permutations of the other words of the text. The intact word as a dramatic event that is distinctly set apart is another example of Boulez' inspiration from baroque musical rhetoric. Both words are dramatically contrasted. After a long sound surface in "libre, très lent" time and *pianissimo*, the word "look" cuts into the air in *fortissimo* on one crochet of a 5-crochet bar. The other five crochets are disparately distributed in the instrumental groups in decreasing loudness, and the opening and closing direction of the intervals characterizes the whole piece. The word "soul" imitates the exhaling of air: a grace note in *forte* leads to a *piano* chord and to the bird-motive in tenors 1 and 2 in upward direction, again a pictorial element of the baroque era[17]. The melodic gesture is dissolved into pure sound. In this new surface an inscription of sharp and loud orchestral chords takes place. As is the case with a classical introduction, the basic elements of the following main part are presented as opening gestures. Coloured surface and incisive chords are the elements of permutation in the middle part.

Both elements have their own temporal indications: "lent, presque régulier" for the surface, "rapide, incisif" for the razor-sharp chords connected with Sprechgesang. This opposition is part of a suggested narrative, this "tale" dismembering distinctly the elements of the amalgamated first part. The vertical "straightening out" of the elements should not be equated with horizontal development. It is essential to take into account the impression compared with the first part. The extremely separated elements of surface and incision are used in permutation and association, as was the case in the first part. It is as if the composer had opened his workshop in the center of the composition. There the elements of the compositional workshop seem to repeat themselves incessantly, a little bit like in Goethe's poem of the "Zauberlehrling", the sorcerer' s apprentice, who gets out of control. However, Boulez is very well in control of his apprentice. Between the extreme separation and repetition of the same elements, there are significant variations in their presentation. Thus, for example, the beats have a large variety of formulation. Their common

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17   In the baroque era syntactic and rhetorical elements were imitated in their gestural aspects. Melodic direction and intensity of movement were other means of imitating gestural aspects or aspects of content of a text.

element is that, in spite of their incisive character, they are always "irrégulier" in their temporal presentation. But they are varied already in their distribution between voices and orchestra. The first beat (cipher 8) is still simultaneous in both groups: there is only one word of text, "birds". The second beat is composed of three parts, which are a kind of triplet, with Sprechgesang as an underlying counterpoint. The beats are vertically coordinated, but distributed brilliantly in the different orchestral groups. The effect is a kind of lightening in space. Thus, the temporal coordination is countered by the combination of colours and leads to dissociation of listening. Again, there is no unidirectional perspective even in an extremely coordinated space. The upper voices of the choir present other elements of the first part like the bird-motive or the interval of the sixth. The text of the "incisif"-parts is varied by permutation, the text of which is presented in simultaneous combinations. As a rule, in combination with beats the words, or syllables, of "birds", "here", "inventing", "air", and "U-sing" are used, whereas in the surfaces "now", "soul" and "twilight" are used. The setting of the text for the surfaces is permutative, too. The systematic distribution of the text to the two basic musical elements is another means of destroying linear development and creating a homogeneous, kaleidoscopic space.

The chordal structure of the surface parts is developed out of the "soul"chord:

Ex. 3

Strikingly enough, the surfaces have a regular key-note structure. The key-note of the whole part is C#, sometimes there is even a c-sharp-minor harmony, naturally enveloped with chromatic shades. All the chords of this part are permutations or transpositions of the "soul"-chord. In opposition to the "incisif"-parts, the surface-parts have a distinct regular rhythmic pulse. At the same time, they have a great density. At cipher 8 for the very first time all instruments and the whole choir sound together. In the top voice of this surface, the flute, the sixth a"-f#"' is exposed as a Leitmotiv. The sixth is complemented vertically in the violins. The violas 1 and 2 have a similar structure: they complement each other in a sixth a"-f', the chromatic counterpart to the violins. The shadowing in minor seconds is a structural element of the whole piece. Horn 1 and 2 play a sixth d'-b', the trombones E-C#. This sixth is intensified by cello 3 and the double bass. It is especially important because of the key-note C#. The sixths are subtly woven into complementary sevenths and ninths, which we can call a synchronization of different structures of sound. In all sur-

face-parts, the sixth plays an important role (e.g. in tenor 1, p. 16). It is significant that the "soul"-chord at cipher 11 uses the same interval structure as the first "soul"-chord. The transitional chord of the voices leading to the third part is identical to this chord, too. The text is "here". Thus "soul" and "here" are connected syntactically. What is coming "now" is a movement of the soul. As a consequence, the first combination of the text in the third part is a new one: "be come". A similar combination is to be found on p. 13 with "be look"; this combination is used for the first time here and never again. The external act of looking is transformed in the last part into an act of becoming.

The composition of this "becoming" is quite striking. It is not a series of temporal events, since there is not something that is becoming. What is meant is an internal becoming; the listener shall become, not the piece or music. This effect is reached through an almost endless, open sound. Again the impression is that of a globe, but only of half a globe. The top of the globe is open, and we hear the birds singing and see them flying at the same time. The song of the birds is, as mentioned above, composed of a seemingly linear series of the bird-motive in flute and harps. The compositorial technique is a strong reminder of Bach's linear counterpoint. The melody is at the same time harmony and in its serial structure endless repetition. As L. Morton has shown, the melody uses the same structure as the chords accompanying it. The result is, again, a homogeneous space. But this time it is not hermetic. For the first time in the piece we do not listen in perspectives of listening, but are inside a globe and looking and listening towards an outer space.

Ex. 4

The song, in widely spread intervals in the flute, has its counterpart in the two harps. Harp 1 seems to be an accompaniment, but it is only the melody in semiquavers (which is derived from the bird-motive) in "slow motion". It has the same interval-structure as harp 2 and the flute. The movements of the linear counterpoint in flute and harp 2 are complementary. Sometimes they meet in the accented notes of a tonal axis, which is identical with the axis in the choir, or they form chromatic intervals with each other. The principle of complementarity is another element of space saturating the linear development and its narrative quality. The tonal axis is the most remarkable feature of the last part. The term "axis" is misleading inasmuch as it designates a tonal center in the classical sense. There is decidedly a central quality to the D, presented as an octave, though it is not used as a "bottom" or "ground" for the other voices. The key-notes of the flutes and harp seem to flicker around this axis and there is a possibility of moving freely in every direction, although in a static space. The static quality of this space is caused by the seemingly endless notes of the choir and strings, by its oscillating character (almost imperceptibly, the notes are chromatically changed), the imperceptibly changing syllables which have lost their contours, and the character of the broken counterpoint. In its harmonic quality, the central note D is an axis, but in its construction and its surrounding it is an immaterial center for rotating spheres. The classical tonality of the axis is quite striking: from D it changes to F, and in the last chord the lowest note is B flat. However, this B flat is combined with the soul-chord, itself an "atonal" chord used as Leitmotiv. However, the identity of all soul-chords is only one part of the experience of "soul".

In the last combination of the text, "U" (pronounced like "you") is connected with "soul". Before, the combination was: "here soul: be come", the soul, the pneuma, is called upon to become. Now, at the end of the piece, soul *is*, we are able to say: you soul. The cadence structure of the last chord signals the end of the process, but its combination with the soul-chord with its open character and the "exhaling" character in *pppp* mean at the same time that the soul is set free, the inscriptions in the space of the piece are effaced, and with them the space itself.

Finally, we come to the question of why Boulez did not set the last part of the poem ("whose voices are ...") into music? In the poem, Cummings evokes the air for the birds; he lets the birds fly. The physical white of the page is used first as a space for the poem, second a symbolic space and third the symbol for the transformation of the evoked space

into an imaginary space of the reader, and what is more, to transform the reader's imagination. Cummings succeeds in this effort by making the birds sing. In showing the essence of the birds in their song, the birds are immaterialized and the song becomes our song. Boulez does not have to do this, for music is already sounding. But he had to invent a space. A space, in which pneuma, spirit, is set free. For Boulez, the flight of the birds is a metaphor for "spirit", for "soul". In an almost classical fashion, Boulez takes the key word and sets it into music – we know of similar treatments of the text by Schubert. But Boulez does more. He is able to formulate, to put into the words of music, to let us feel *and* understand at the same time the imaginary space that is, in the poem, only created at its end. In the poem, every reader has to create his own space for the birds of the spirit, while in the music he is able to move in it. Naturally, Boulez had to compose not only music for a poem, but to compose a new text as well. The title of the piece, *Cummings ist der Dichter*, is the outcome of an error of transmission[18], but it seemed so fitting, that it was retained. This piece could have had as its title: "Boulez ist der Dichter", since he composed the white of a page, both spatially and temporally.

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18   For concerts in Ulm and Stuttgart, Boulez was asked for the title of the piece. Boulez misunderstood the question and answered: "Cummings ist der Dichter" ("Cummings is the poet"); cf. *Pierre Boulez*, Conversations with Célestin Deliège, London 1976, p. 98.