Pierre Boulez: Organisation/Freedom, Structure/Improvisation in the First Sonata for Piano In 1946 Pierre Boulez began composing the first works that he officially recognised as part of his artistic oeuvre. *Sonatine, Le Visage nuptial* and the 'First sonata for piano' mark Boulez's first pieces that rely on experimenting with, and furthering the Schoenbergian and Webernian principles of serial organisation. Although a number of Boulez's characteristic early traits can be found in his *Notations* for piano (1945), such as: a frequent reliance on binary dialogues, an often brutal approach to musical contrast, and an uncompromising attitude towards attack and texture, it proved to be the assimilation of these ideas and approaches with an extended serial language that formed Boulez's definitive early style.¹

In his introduction to *Orientations*, the collected writings of Boulez, Jean-Jaques Nattiez outlines the importance of binary dialogues, not only in Boulez's music but also as the defining characteristic of his thinking.

If a reader [...] were to ask me what I considered to be the fundamental characteristic of Boulez's thinking I should not have any hesitation in saying, 'The binary principle on which it is organised.' [...] Even a more or less random list of pairs of 'palpable categories', without any regard for context, will reveal the general lines along which Boulez's mind works – material/invention, past/future, choice/chance, discipline/freedom [...] Not that this perpetual dialectic in Boulez's thinking denotes actual opposition between pairs. Like every dialectician, Boulez is able to transcend his own contrasts, by making *transitions* (for example striated to smooth time) and by making fluctuations in tempi, but most importantly in the actual character of his works.²

Here, Nattiez proposes that the driving force in Boulez's musical language is a multifaceted dialogue of opposing musical categories. Boulez applied these methods of organisation to many pieces over his compositional career. However, Nattiez also points out that the most noteworthy musical

¹ The above mentioned characteristic traits of Boulez's early music are corroborated and discussed by Dominique Jameux, Jean-Jaques Nattiez and Pierre Boulez in writings and interviews discussing his early works. Dominique Jameux, 'The Lyric Age', *Pierre Boulez*: Harvard University Press (Cambridge, Massachusetts, 2001) P. 21, Jean-Jaques Nattiez, 'On Reading Boulez', *Orientations*: Faber & Faber (London & Boston, 1986) P.27 and Pierre Boulez interview with Wolfgang Schaufler: Universal Edition (2012), http://www.universaledition.com/Pierre-Boulez/composers-and-works/composer/88/aboutmusic. ² Jean-Jaques Nattiez, 'On Reading Boulez', *Orientations*: Faber & Faber (London & Boston, 1986) P.27.

examples of binary organisation include the first sonata. In this analysis of the first movement of the first sonata, I hope to show how Boulez created an explosive and varied sound world through his extension of serial pitch organisation, and his subversion of regularity in virtually all other musical aspects. By analysing the organisation of pitches and pitch aggregates, it will become clear how far the young Boulez was able to extend and alter the existing models of serialism in order to begin to produce a new, innovative and personal musical language. This new approach for Boulez would challenge the rigidity and determinism that he associated with serialism by allowing for a broader and more flexible dialogue between free and structured musical materials and systems, unlike what he found in the work of Schoenberg, Webern and his teachers Leibowitz and Messiaen.³

When listening to the first sonata one is struck by how multifaceted the work is. The entire first movement makes use of the piano's broad *tessitura*, with consistently chromatic pitch-configurations being spread across the entirety of the piano's range. This fundamentally broad chromatic texture is able to support a number of differing musical textures and gestures, the often harsh interplay of which becomes a major aspect of the piece's form and character. Sparse and fluid passages of quiet and rhythmically irregular material are suddenly interjected by jagged flurries, which create small pockets of movement and energy in the thin and largely static textures. These abrupt interjections seem almost like extreme figures of arabesque-like ornamentation; their presence embellishes the softer and thinner material, whilst establishing a dialogue of musically divergent gestures that creates a language laden with harsh interjection. To further enrich this approach to textural and gestural variety, Boulez incorporates a second significant texture into the first sonata; a faster and more rhythmically regular toccata, which is in a constant state of movement when present in the music. Also central is Boulez's focus on the horizontality of the music. While chords occasionally play an important role, the vast majority of the music is driven by the unfolding of musical lines, either

³ Peter Heyworth discusses many of the problems that Boulez identified with the music of these prominent figures in his early years in Paris. Peter Heyworth, 'The first fifty years' 'The Early Works' published in *Pierre Boulez A Symposium*: Eulenburg Books (London, 1986) P. 9-12.

individually or in counterpoint. This frequently leads to the density or transparency of passages being more the product of the rapidity of statements of pitch aggregates rather than the vertical stacking of pitches. Despite Boulez's uncompromising musical language of sharp musical contrasts and chromatic saturation, the clarity of line and clear distinction between types of material allow for clearly discernable textures to emerge within the work.

The overall structure of the piece is set up in a binary opposition. The first movement is fundamentally a sparse canvas that is violently interjected with erratic gestures and two extended toccata-like passages. The second movement predominantly takes the form of a toccata with intermittent interjections of more sparse and lyrical material, acting almost as a negative image of the first movement.⁴ Most other musical aspects of the work are polarised also: dynamics are often extreme and fleeting, the full range of the piano's register is used with frequent and sharp contrast,⁵ individually sounding, isolated notes are used in contrast with dense flurries of notes and the occasional thick chord, and tempi switch between the extremely slow and fast. This obsessive dialogue of extremes can create a bewildering effect for the listener who is often confronted with a barrage of frenetic material, or is left with single notes being held in stasis. This is, however, a vibrant and explosive musical language that is deeply ordered. Boulez's method for organising pitch materials is based on two main principles that provide the building blocks for the conflicting components of the piece.

The first technique for organising pitch materials is a process of, what I will refer to as, chromatic enclosure. An extremely clear instance of this can be seen in the first bar (Ex. 1). The piece opens with a statement of interval class four (ic4), an F# and D-natural sound individually in succession, and

⁴ This account of the pieces overall form is supported by Dominique Jameux in his brief analysis of the first sonata in *Pierre Boulez*: Harvard University Press (Cambridge, Massachusetts, 2001) P. 234.

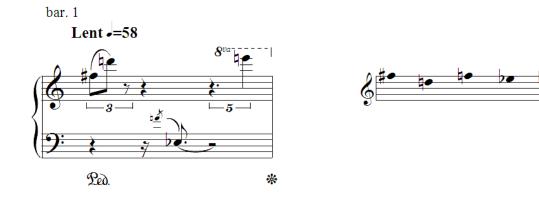
⁵ Gerald Bennet describes Boulez's consistent displacement of pitches and extension of intervals as a hugely important step in developing his own musical language. 'Boulez began immediately to move away from the rhapsodic long-windedness he had inherited from Messiaen, to punctuate his music with rests, to choose the expanded form of an interval more and more often, and to increase the range of individual parts, giving the impression of a more uniformly chromatic texture.' Gerald Bennet, 'The Early Works' published in *Pierre Boulez A Symposium*: Eulenburg Books (London, 1986).

are then followed by the remaining pitch classes in between ic4 moving chromatically inwards from either opening pitch [F#, D-natural, F-natural, E-flat, E-natural], but with each pitch in the sequence being subjected freely to octave displacement. Thus the opening statement, of what can be considered a consonant interval, is filled in chromatically, demonstrating a tendency to move from larger intervals to those pitch classes that would fill it in chromatically. In the second bar the same principle is used on ic3 (Ex. 2) [C-natural, E-flat, C#, D-natural]. This time stated in a descending flurry, with a completely different pace, texture and trajectory to the first statement, but with the same fundamental pitch construction. Charles Rosen, in his essay 'The piano music' described the process and effect of Boulez's continuous approach to pitch displacement:

The first sonata treats the series as a nucleus to be exploded, its elements projected outwards; this particular spatial metaphor, indeed, remains present in most of Boulez's later works. The opening bars display this at once. The elements of these clusters are suspended in different parts of space: at the opening of bar two, the cluster is, indeed, exploded. The effectiveness of this passage depends upon an unspoken acknowledgement of the module of the octave – in other words, of the inaudible presence of the cluster.⁶

In the first two bars, two greatly differing gestures of identically constructed pitch material are announced, establishing Boulez's disposition towards contrast in the opening statements of the sonata. Throughout the first movement this principle of chromatic enclosure is used on larger and smaller starting intervals, and is combined with other processes in a number of ways.

⁶ Charles Rosen, 'The piano music', Pierre Boulez A Symposium, edited by William Glock: Eulenburg Books (London, 1986)



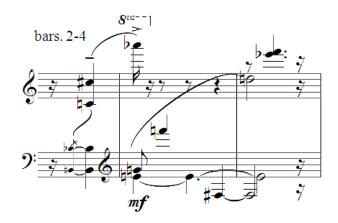
Ex. 2

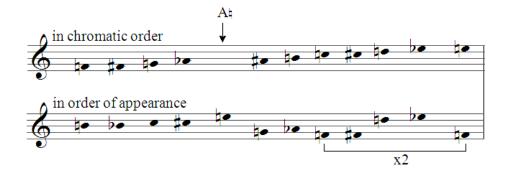


The second method of pitch organisation is a process more similar to twelve-tone composition that concerns the rapid statements of chromatic aggregates. In a similar phrasing manner to the first method, Boulez creates short phrases; each of which states (in their simplest and non-combined forms) an isolated group of pitches, with nine-to-twelve individual pitches being sounded in the majority of instances. I refer to these groups as chromatic aggregates, due to a common factor that they all share: when any number of notes are missing from an aggregate, all other pitch classes may still be arranged as a chromatic scale. For example, in a ten-note chromatic aggregate, the missing two pitches will always be adjacent semitones, preserving the chromaticism of the phrase, but avoiding the determinism of systematically moving through an ordered twelve-tone set. The first example of this method occurs at the end of bar two, immediately after the two opening statements of chromatic enclosure (Ex. 3). An eleven-note chromatic aggregate is stated with a missing

A-natural, despite the single missing note the chromaticism of the aggregate is preserved but the chromatic completion that would reasonably be expected is left unfulfilled.

Ex. 3

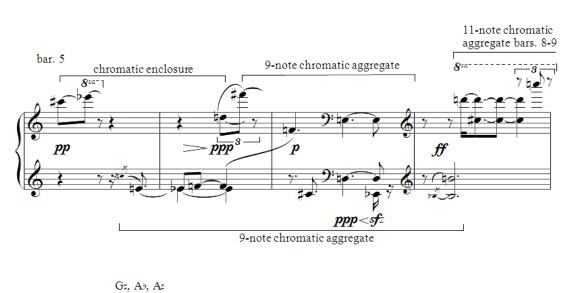




Both of these techniques for organising pitches occur in short, rapid, contained and combined statements throughout the piece. An isolated statement of chromatic enclosure or a chromatic aggregate rarely lasts longer than two bars, and is often localised within a single bar; however, extensions and combinations of these processes develop throughout the movement. By separating the work into these short statements of isolated or combined organisational processes, it will become clear how Boulez managed to implement his serial parameters throughout the piece, but consistently change the components that make up the processes. With no twelve-tone ordered set to refer to, Boulez implemented a changing chromatic language that was able to escape the deterministic intervallic processes and constraints that he perceived in earlier forms of serial music.⁷

Immediately after the incomplete chromatic aggregate of bars two-to-four, the two organisational methods are combined in a four-bar phrase (Ex. 4). Bar five starts with an example of chromatic enclosure in the right hand, the two opening notes sounding as a major second [C#, E-flat], which is then filled in by the D-natural in bar six. While this short statement occurs in the right hand, the left hand begins to move through a nine-note chromatic aggregate with the missing pitches G-natural, A-flat and A-natural. In this statement we can see an overlapping of the methods exposed in the previous four bars, over a wide range of the piano's register, and with a more extreme subversion of finality due to more missing pitches from the chromatic aggregate. In an incredibly short space of time, Boulez moves through several statements of his models of organisation, and begins to combine and entangle these principles. This extremely fast movement through his systems is part of what gives the music of the first sonata a bewildering sense of rapidly shifting complexity, even in patches of sparse music. Chromatically derived fragments of material go by at such a pace that it imbues the music with an uncompromisingly evasive character, never allowing the listener to become familiar with any of the material before it starts off in another direction. The incompleteness of chromatic aggregates also supports the music's evasive character on an analytical level, as it subverts the expectation of certain deterministic traits of serialism.

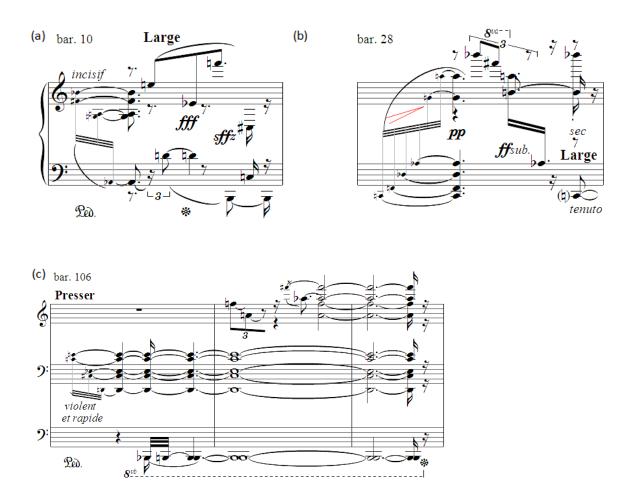
⁷ In an interview conducted by Wolfgang Schaufler for Universal Edition, Boulez describes how he felt, before the time of *Le marteau sans maitre*, that the twelve-tone system was impossible to work with due to its restrictive features. Instead he wanted to develop a system that could incorporate his own 'freedom' to compose. Pierre Boulez interviewed by Wolfgang Schaufler: Universal Edition (2012).





After the opening seven bars, in which the two methods of construction are exposed and combined, Boulez begins to alternate between short statements of each method with no discernibly regular pattern. Several noteworthy methods of extension and transformation occur during the first movement; for example, bar ten contains the first example of a fully realised twelve-note chromatic aggregate (Ex. 5-a), in which the first five notes [B-flat, F#, A-natural, G-natural and A-flat] are built up into a sustained chord before the remaining seven notes are sounded in a widely registered flurry with a dynamic level of triple *fortissimo*. Although this is the first instance of a complete chromatic aggregate being realised, there is still an element of Boulez withholding finality. When this gesture is compared with the final bars 106 until 108 (Ex. 5-c), the technique of building up a sustained chord with a section of a chromatic aggregate extends to eleven notes, an almost complete chromatic chord. The chromatic incompleteness of this penultimate gesture becomes the final subversive act of the movement, before the aggregate is completed by the missing G-natural after a lengthy silence, and is then, in some respects, undermined by the extremely high descending flurry of notes that quickly *diminuendo* towards quadruple *pianissimo*.

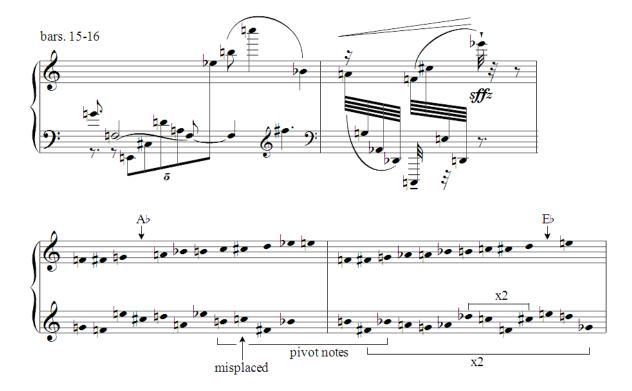
Ex. 5



Bars fifteen and sixteen also share interesting properties as statements of chromatic aggregates (Ex. 6). Bar fifteen contains an eleven-note chromatic aggregate with a missing A-flat and bar sixteen contains an eleven-note chromatic aggregate with a missing E-flat. These two adjacent statements are linked by three of the final four notes in bar fifteen [B-natural, B-flat and F#]. This process undermines strict serial function but preserve the chromatic integrity of the two phrases as the B-natural, B-flat and F# become pivot notes between aggregate statements. Unpredictable elements, such as these pivot notes, or the repeated notes that appear in certain chromatic aggregates (as illustrated in the examples) show that Boulez was composing freely in some manners. His principles

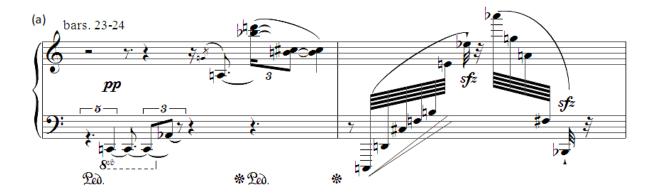
of pitch organisation, which could have been adhered to strictly, are loosened to accommodate seemingly sporadic instances of non-serialised transition or repetition. It does appear, however, that the central focus of chromatically invented musical material is always preserved.

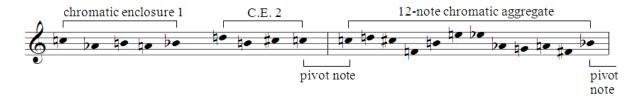
Ex. 6

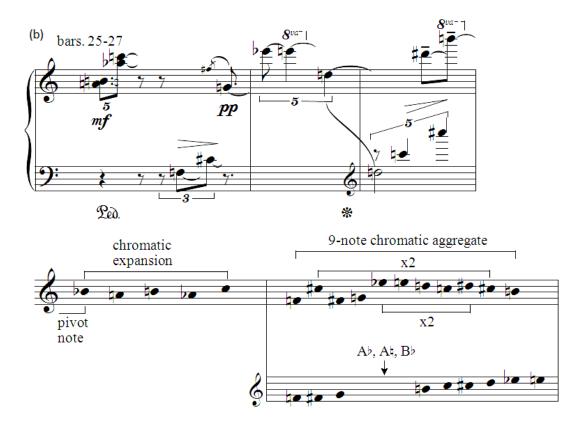


Statements of chromatic enclosure are also combined and manipulated in apparently intuitive ways. In bar twenty-three there are two statements of chromatic enclosure that are superimposed on to one another that form a short succession of closely voiced dyads (Ex.7-a). The first statement, which closes in from ic4 [C-natural, A-flat], is combined with a second statement, on the first statement's ending note of B-flat, that closes in from ic3. This statement [D-natural, B-natural, C#, C-natural] is completed in the ensuing bar, with the final C-natural acting as a pivot note between the end of the statement of chromatic enclosure and a complete twelve-note chromatic aggregate. This immediately leads into another configuration of the two processes (Ex. 7-b). The final B-flat of bar twenty-four becomes a pivot note, which begins the reverse process of chromatic expansion that starts bar twenty-five. Here, Boulez reverses his process of chromatic enclosure and instead has the single *sforzando* B-flat chromatically expand into ic4, in a dyadic gesture that almost mirrors the end of bar twenty-three. What then follows is a statement of a nine-note chromatic aggregate, where the missing pitches are the A-flat, A-natural and B-flat from the previous fragment of chromatic expansion. In this short five-bar sequence, there are an alarming number of processes occurring and interacting within an extremely short space of time: Combination and superimposition of chromatically enclosing statements, the use of pivot notes that provide different functions to adjacent statements of distinct processes, and the reversal of the construction of a process. Despite this density of processes there is a transparency to the music itself; sustained single notes extremely separated in *tessitura* comprise the majority of material in this sequence, with one short bar of ascending and descending *sforzano* flurries, and a small number of closely voiced dyads. Boulez's complex and entirely chromatic approach to structuring the pitch content and harmony of the first sonata still left him room to incorporate a constantly changing world of pianistic textures and disparate gestures.

Ex. 7







The first movement continues presenting short fragments of material derived from the two methods of organisation, in what Dominique Jameux has described as the movement's exposition and development sections.⁸ The overall form of the piece seems to further illustrate an opposition of extremes regarding Boulez's reliance on and destruction of classical forms. On one level the title of sonata would appear to be ironic, in the sense that Boulez's approach to musical construction is so far removed from the generalised functionality of the tonal and formal requirements of sonata form and the piano sonata. His approach is a radical reimagining of construction, manifesting as an almost impenetrable contextual functionality concerned with the subversion of deterministic serial organisation and the pursuit of a strident chromatic language, saturated in contrasting musical fragments. However, in the first movement, there are two clearly predominant passages of material

⁸ In Jameux's short chapter on the first sonata for piano in *Pierre Boulez* (Harvard University Press, 1991), he explains that the form has four main sections:

^{&#}x27;1 Exposition 1-68

² Development 69-97

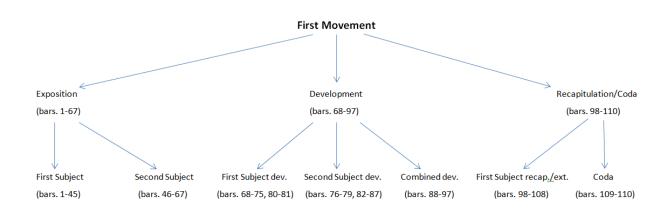
³ Recapitulation 98-105

⁴ Coda 106-110'

This basic outline of the form of the first sonata seems incontestable; I have elaborated on this already strong parallel to sonata form with explicit reference to a first and second subject.

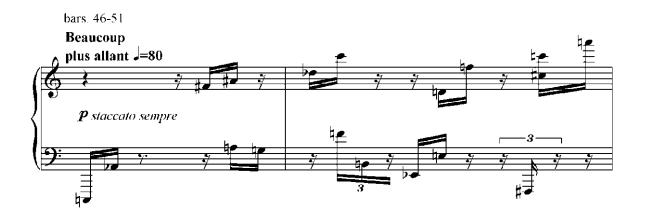
that emerge at distinct points. The opening until bar forty-five demonstrates a fundamentally slow, sparse and irregular pianistic texture that is frequently interjected with disruptive flurries and dense swells of music. At bar forty-six this opening material makes way for the much faster toccata section that lasts until bar sixty-seven. These two distinct sections of material could be viewed as a first and second subject. This possibility is strengthened upon the subsequent return of the opening musical texture and the quicker interplay between the first and second subjects, suggesting a development section. This continues until the recapitulation of the opening material at bar ninety-eight that then makes way for a coda passage at bar 106. Of course the functionality of sonata form is not maintained, but there is a visible mapping of its proportions and relationships onto Boulez's radically conceived material (Ex. 8).

Ex. 8

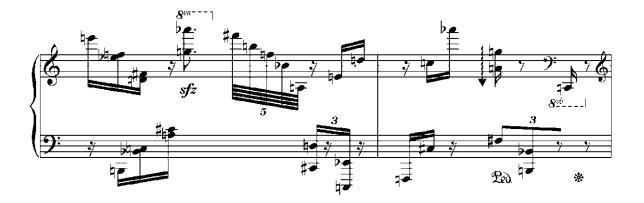


The toccata sections are structured similarly to the portions of the first subject's material that use chromatic aggregates for their construction. Boulez moves through statements of twelve-note aggregates extremely quickly, which frequently share pivot notes at the beginnings and ends statements. Although this method is well explored in the first forty-five bars, the speed and rhythmic impetus is drastically changed, as is the sense of regularity of gesture and attack. At bar forty-six the toccata section begins with an extremely fast statement of a twelve-note aggregate with a repeated C-natural that takes just one and a half bars to complete (Ex. 9). In bar forty-seven a new chromatic

aggregate begins, but the final pitches of the previous chromatic aggregate [E-flat, E-natural and D-natural] act as three pivot notes, which finish the previous set and begin the next. The end of the chromatic aggregate that is stated in bars forty-eight and forty-nine has even more pivot notes than the last statement; five pitches [A-natural, A-flat, B-flat, B-natural, G-natural] are shared between the two statements that overlap in bar forty-eight. After this extended example of transitional commonality, Boulez states a twelve-note aggregate, with a repeated F# and D-natural, sharing no pivot notes with either of the surrounding statements. Boulez then instigates a pattern of using two pivot notes between all of the chromatic aggregate statements until bar fifty-one. Boulez's seemingly free approach to aggregate combination and transition happens at a blisteringly fast pace. In six short bars, Boulez moves through his organisational system seven times, constantly changing the ways in which statements interact and transition into one another. The material of the second subject is extremely musically dense; although this is not the density of thick, or built up, chords and harmonies, instead it is dense with process, information and single notes or up to four-note chords compacted extremely closely in musical time. These toccata sections also contain a certain uncompromising thinness and dryness of pianistic texture due to their staccato sempre markings and complete lack of pedal, which further contributes to the antithetical natures of the movement's first and second subjects.



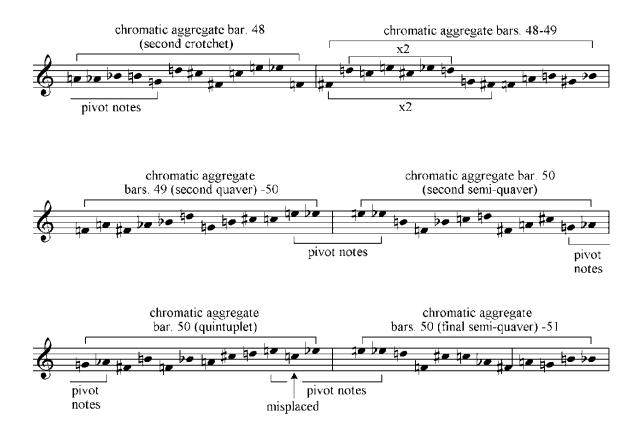






Ex. 9

Ex. 9 (continued)

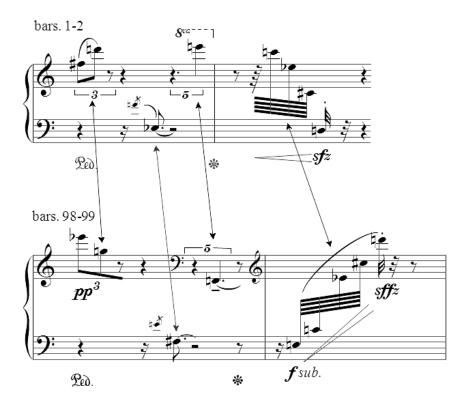


These two distinct subjects form a major aspect of the pieces binary organisation. Like the larger structure of the two opposite movements, or the smaller structures of the two methods of distinct pitch organisation, the two subjects contrast in a carefully considered manner. As the movement continues through the exposition, and into the development section, with the interplay between the subjects becoming quicker as the sections of each subject become shorter, non-pitch based elements of each subject finally combine at the end of the development section at bar eighty-eight. Some of the more sustained and irregular gestures and rhythms that are particular to the first subject begin to appear in the toccata tempo of crotchet equals eighty. In bars ninety and ninety-four occasional held notes and a higher concentration of *acciaccaturas* and descending flurries, similar to that of bar two, enter into the pointillist staccato texture of the second subject. The development section ends with a triple *fortissimo* statement of the two intervals that have been particularly important in the construction of the statements of chromatic enclosure; both in the low register of the piano the left

hand plays ic4 [C-natural, A-flat], and the right hand plays ic1 [D-natural, C#]. This rather thin, but loud and abrupt gesture ends the development section on the interval central to the process of chromatic enclosure and the semitone itself, which is an essential building block for Boulez's constant chromatic texture. This passage then leads into the recapitulation section.

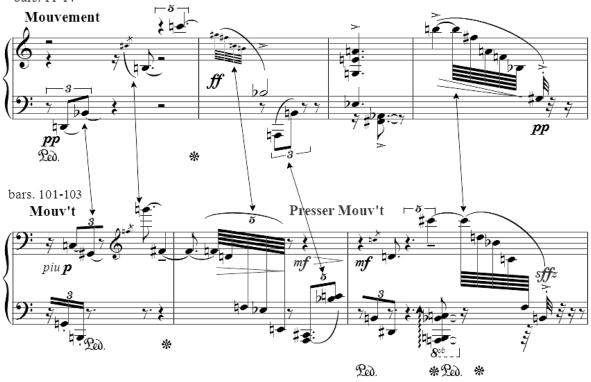
The recapitulation is not a straightforward repeat of the piece's opening. At bar ninety-eight Boulez maintains precisely the same rhythm, sustain and construction of chromatic enclosure around ic4, as in the opening bar, but reverses the trajectory of the statement. The opening bar, which ascends to an E-natural four octaves above middle-C, is turned upside-down in bar ninety-eight to end on an F-natural two octaves below middle-C. The same is true of the quick flurries of chromatically enclosing material in bars two and ninety-nine. In bar two the flurry descends to a D-natural one octave below middle-C, and in bar ninety-nine it ascends to a D-natural two octaves above middle-C (Ex. 10). Bars 101 until 103 then contain similar arpeggiated material to what is found near the start of the piece from bar eleven, both sections marked with the tempo indication *movement* (Ex. 11). The final statement, as has been mentioned, is the conclusion of the process of building up sustained chromatic chords that begins in bar ten, is embellished and extended in bar twenty-eight, and brought to it's almost fully chromatic conclusion from bars 106 to 108 (Ex. 5-a, b and c). This neat mirroring and repetition of the opening might suggest closure and finality, but the final statement does more to undo any familiarity that the listener might experience. Boulez creates a final extreme contrast of textures; again in antithetical fashion, Boulez seems to find an opposite texture to the thick, eleven-note, sustained chord that occupies almost the entirety of the piano's register. He writes a descending flurry of non-sustained, single notes, and one minor second dyad, that rapidly diminuendos to quadruple pianissimo. The movement is ended on the weaker of the two gestures, which states a seven-note chromatic aggregate that is left suspended.

17



Ex. 11





Ex. 10

Boulez's effectiveness in realising such a radical musical language at such a young age can be explained through his rigorous attention to organisation, material, aesthetic priorities and invention. The way Boulez reimagined serial composition seems to be at the forefront of his developments; he not only found a way to inject the first sonata with an all-encompassing method of phrase construction, which resulted in a vital organisational continuity, but also built a level of freedom in to his organisational principles that necessarily avoided what he perceived as a fundamental problem with previous serial technique. His approach to musical material was to establish continuity through unfailingly chromatic pitch structures that allowed for varied musical textures and gestures. These facets of Boulez's compositional process allowed him to elaborate on his central ideas about binary dialogues and oppositions in music, which became a preoccupation for his entire compositional career. Finally, Boulez's invention and constant variation of his non-serialised musical parameters, such as articulation, attack, sustain, dynamic variety, use of register and rhythmic approach, cemented his style of explosive musical variety within consistent and thoughtful structures. The first sonata marks a great leap forward in Boulez's early style and contains many of the traits that remain in his later music.

Word Count: 4,171

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