

The influence of
the Javanese gamelan
on selected piano works
of
Claude-Achille Debussy

catherine bird
1982

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fulfilment of the requirements
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Introduction

INTRODUCTION

With rare exceptions, all the biographers of Claude Debussy mention the influence on the composer of the Javanese gamelan which appeared at the Universal Exhibition in Paris in 1889. Strangely, however, none of these historians discourse on the extent of this influence, nor on the way in which it is manifested in the works of Debussy. It is for this reason that this study was undertaken.

"We can hardly overestimate the impact made on Debussy at this still formative period by the revelation of this entirely novel exotic music"¹ says Lockspeiser, and in the same vein, Austin writes "He absorbed a profound influence from the Indonesian gamelan ... What he learned from these exotic musics helped him to loosen European conventions"², while Vallas, too, makes mention of the influence absorbed : "Undoubtedly the gamelang helped to open up new musical paths for Debussy in the domain of melody, rhythm and harmony."³

Victor Seroff credits the Javanese music with even more importance than that given in the works previously mentioned : "[The Javanese gamelan]... not only left an indelible impression on Debussy, but was a major factor in his development as a composer."⁴

1 Edward Lockspeiser, Debussy : His Life and Mind, Vo. I Cambridge, C.U.P., 1978, p.113

2 William W. Austin, Music in the Twentieth Century, London, Dent, 1966, p.2.

3 Leon Vallas, Claude Debussy et son Temps, Paris, 1932 trans. as Claude Debussy : His Life and Works by M. and G. O'Brien, London, O.U.P., 1933, p.59

4 Victor Seroff, Debussy : Musician of France London, Calder, 1957, p.97

Lockspeiser says :

The elements of Debussy's musical language ... derive from many different sources : medieval sources (Gregorian chant and plainsong), the ecclesiastical modes, pentatonic scales, folk songs of several countries, European and Oriental music, unresolved discords of nineteenth century harmony.⁵

This dissertation will examine the extent of the influence of just one of these elements : Oriental music, and the Javanese gamelan in particular. It will trace the influx into Europe of Eastern art forms and show how these affected the artistic state of Europe at the time : no study of Debussy is complete without taking into account the cultural milieu in which he moved, for he, more than any composer before him, was truly a product of his time.

The Javanese gamelans which performed at the 1889 and 1900 Universal Exhibitions will be described here.

Finally, with reference to selected piano works by Claude Debussy, the appearance and evolution of elements typical of the Javanese gamelan will be considered and an evaluation made of their role in the musical development of the composer, for as Rollo Myers remarks after his description of the Javanese music which Debussy heard, " ... the experience thus gained undoubtedly tended to influence his musical thinking in the years to come".⁶

⁵ Lockspeiser, Debussy, His Life and Mind, Vol II, p.51

⁶ Rollo Myers, Debussy, London, Duckworth, 1948, p.39

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section 1
The Cultural Milieu

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chapter 1
ARTISTIC CURRENTS
IN FRANCE, 1850-1900

CHAPTER 1 : ARTISTIC CURRENTS IN FRANCE : 1850 - 1900

In any given era, changes in the concepts and traditions of the arts reflect the changing nature of the society of the time.

Erwin Panofsky¹, in the 1920's, endeavoured to show that, in fact, the two correspond exactly, and he believed that in order to understand the structure of society of any given epoch, one need only study the structure and forms of the artistic communication of the time.

In the last two decades of the nineteenth century, scientists and artists could no longer believe in the existence of a permanent, independent and unchangeable reality. The advent of the machine during the Industrial Revolution; the constant political turmoil of the Second Empire, the Franco-Prussian War and the Third Republic; the increased ease of transport with the popularization of the railway engine; the widening of horizons with the introduction of foreign customs and art forms through the international exhibitions held from 1855 onwards - all these served to mould the temper of the times, and thus to create the atmosphere of change and revolution peculiar to the *fin de siècle*.

Thus it was that Charles Henry, answering a questionnaire that was circulated at the time, could write :

It is impossible to believe in the future of 'naturalism' or of a 'realist' school of any kind; the advent of an art that will be truly idealist, and even mystical, based on new techniques, is inevitable. It is impossible to doubt it when one considers the developments in scientific methods and industrial progress. The future belongs to an art which will have got rid of methods of any kind, whether logical or historical, because men's minds,

¹ Erwin Panofsky, Studies in Iconology, New York, Harper and Row, 1962

exhausted by purely rational thinking, will one day feel a need to penetrate into completely different regions of thought.²

This attitude is reflected in the following extract of a letter by Debussy to M. Vasnier, written from Rome on 4 June 1885 :

... I think I should take advantage - as you would say - of the only good thing there is at the Villa, the liberty to work and do something original instead of always keeping to the old paths.³

This desire to leave the well-trodden and worn-out paths of tradition in search of that which is new and unsullied permeated all the art forms of the time. Composers, painters and writers met in private homes and in the cafès and nightclubs which abounded in late nineteenth century Paris and an exchange of ideas, such as never before, took place. Artistic communication at this time was far more than a style - it was a state of mind.

Debussy has been linked with many artistic movements in an attempt, by music historians, to define his compositional style. These movements include Impressionism, Symbolism and the Art Nouveau. It would be illuminating, at this point, to examine briefly these currents of artistic thought.

Impressionism

The Impressionist artists rejected the notion of a stable and immutable reality based on their own visual perceptions. They concerned themselves with the nature of light, the vibration of colour. Light was seen not only to permeate everything but, in fact, with each change of light, to change the form of the visual perception. Light was seen

² S. Jarocinski, Debussy : Impressionism and Symbolism, London, Eulenberg, 1976, p.69f.

³ quoted in Edward Lockspeiser, The Literary Clef London, Calder, 1958, p.94

to be the source of the subjective experience of colour, and this idea resulted in the use of juxtaposed primary colours laid down in short, choppy brushstrokes, a technique which captured the vibrating quality of light.

The ambitions of the Impressionists were reflected in the philosophies of Bergson. As Jarocinski says, Bergson, in fact, formulated the principle on which the Impressionists' practice was based, for he declared "that there was no psychic state, however simple, which was not subject to continual change - in other words, that there could be no two identical psychological moments in any one individual consciousness."⁴

Another influence on the Impressionist style of painting came from Japanese art which infiltrated into Paris in 1856. The prints of Hokusai and others captured the attention because of their simple colours and summary treatment of light and shade.

Although Debussy shared the admiration of the Impressionists for the prints of Hokusai, there is little else in the tenets of the school which reflects his own approach to music. He himself hated the term 'Impressionism' and, as Lesure says,

... his biographers might be good enough to refrain from illustrating their books with reproductions of Claude Monet, paintings that surely played little or no part in the artistic formation of a musician whose preferences in the matter were, as we know, for the pre-Raphaelites, Turner, Botticelli, Gustave Moreau and Hokusai.⁵

4 Jarocinski, p.67

5 Francois Lesure, "Claude Debussy after his Centenary"
The Musical Quarterly
Vol 49, No 3, July 1963, p.279

Symbolism

The Symbolist painters (Gauguin 1848 - 1903; Maurice Denis 1870 - 1943; Gustave Moreau 1826 - 1898 and Odilon Redon 1840 - 1916) turned inwards and attempted to show the feelings of the artist by a reworking of the observed reality. The Symbolist poets, too, espoused these ideals : as Wilson has observed "... Symbolism may be defined as an attempt by carefully studied means - a complicated association of ideas represented by a medley of metaphors - to communicate unique personal feelings."⁶

The symbol possesses both a dynamic and an ambiguous character, as the meaning of a work of art becomes apparent by active processes of thought and association; the symbol thus contains the meaning in embryonic form. Jarocinski considered that Goethe was the first to define the symbol in the most accurate way :

The symbol transforms the phenomenon into an idea, and the idea into an image, and does this in such a way that the idea in the image has infinite repercussions, and remains intangible; even when expressed in every language, it will always remain unexpressed.⁷

One of the main tenets of the Symbolist movement was the attempt to express the beauty which lay behind all material objects, and only the symbol could do this, for the beauty vanished when the object was fixed into the material forms of art. This led to the problem of finding words untainted by traditional usage. Mallarmé expressed this when he said

How ... can a poet understand the meaning of the world - in other words, the Idea - and penetrate to the heart of the phenomena, if the language he employs remains attached to traditions and conventions? If he is unable to create his own language, he must at least rid words of the dust with which they have been

⁶ Edmund Wilson, Axel's Castle
London, Collins, 1961, p.24

⁷ Jarocinski, p.23

smothered, and correct the deformations which language has forced them to undergo.⁸

Debussy identified with this problem, as we read in his letter to Ernest Chausson of 6 September 1893, where he gives an account of his meeting with Henri de Régnier :

As he was talking to me about certain words in the French language which had lost their original rich overtones through vulgar misuse, I thought to myself that the same thing was happening to certain chords whose sonorities had been cheapened in 'music for export'. There is nothing startling in this reflection in itself; but I must add that they have at the same time lost their symbolic essence.⁹

The links between Debussy and the Symbolist poets are many : he used their texts for songs, operas and instrumental interludes; he maintained close friendships as well as working relationships with many of them;¹⁰ in fact, no other composer matched the poets so closely.

Lockspeiser says :

... several of the poets with whom Debussy is identified were themselves aspiring to a state of music in their work, and indeed a large part of his music belongs almost as much to the history of literature as to the history of music.¹¹

8 quoted in Jarocinski, p.32

9 "Correspondance inédite de Claude Debussy et d'Ernest Chausson", La Revue Musicale, December, 1925, p.126

10 Included here are : Pierre Louÿs, whose texts were used for the Chansons de Bilitis; Stéphane Mallarmé, much of whose poetry was set to music by Debussy; Maurice Maeterlinck, whose Pelléas et Mélisande was used as the libretto for Debussy's opera.

11 Edward Lockspeiser, "Debussy and Swinburne" The Monthly Musical Record, Vol 89, March - April 1959, p.50

This aspiration to a 'state of music' derived from the fact that music appeared to the Symbolist poets to be the ideal art form, capable as it is of expressing a state of mind without the normal use of words.

Debussy himself said, when he wrote in the Revue S.I.M. of 1 November 1913,

Music is the art that is in fact the closest to Nature ... It is the musicians alone who have the privilege of being able to convey all the poetry of night and day, of earth and sky. Only they can re-create Nature's atmosphere and give rhythm to her heaving breast.¹²

One of the most important features of Symbolism was the intimate relationship between all art forms - as Madsen says, "The entire artistic milieu was woven together and permeated by the same ideas."¹³ This was perhaps because, as Baudelaire¹⁴ believed, since beauty is one single reality, each art form expresses the same reality and can thus achieve the same effect in response to each sensation.

Art Nouveau

One of the main features of this movement, and the most important in relation to the stylistic thinking of Debussy, was the concept of line. As Madsen says, "The principal ornamental characteristic of Art Nouveau is the asymmetrically undulating line terminating in a whiplike, energy-laden movement."¹⁵

¹² Francois Lesure, Monsieur Croche et autres écrits, trans. and ed. R.L. Smith as Debussy on Music, London, Secker and Warburg, 1977, p.295

¹³ S. Tschudi Madsen, Art Nouveau London, Weidenfeld and Nicolson, 1967, p.31

¹⁴ Enid Starkie, Baudelaire, London, Gollancz, ndg. p.232

¹⁵ Madsen, p.15

The designer and book illustrator, Walter Crane, said :

Hence line is all important. Let the designer, therefore, in the adaptation of his art, lean upon the staff of line - line determinative, line emphatic, line delicate, line expressive, line controlling and uniting ... It does not require us to stop and think to appreciate the rhythmic silent music which the more formalised and abstract decorative design may contain, quite apart from the forms it actually represents.¹⁶

Inherent in the line is a decorative symbolism - upward-moving lines express joy while downward-moving lines inhibit and depress.

We have much evidence showing that Debussy's musical and artistic sensibility at this stage was a reflection of the theories of the Art Nouveau movement. His conception of melody as an arabesque was the direct musical counterpart of these theories.¹⁷

Debussy himself, writing about the Bach Violin Concerto in G, said :

Once again one finds that almost the entire piece is pure 'musical arabesque' or rather it is based on the principle of 'ornament', which is at the root of all kinds of art. (And the word 'ornament' here has nothing to do with the ornaments one finds in musical dictionaries).¹⁸

La Damoiselle élue reflects the Art Nouveau movement most clearly. Based on Rosetti's poem The Blessed Damozel, it was first performed in the gallery of "La Libre Esthétique" in Brussels, then a centre of the Art Nouveau movement. As Lockspeiser says,

The score of this work brings us very near to a purely visual conception of music : the decorative Pre-Raphaelite

¹⁶ quoted in Madsen, p.50

¹⁷ Lockspeiser, Debussy : His Life and Mind, Vol I, p.118

¹⁸ La Revue Blanche, 1 May 1901, in Lesure, trans. Smith, p.26

curves are projected or translated into the long sinuous arabesques of the Damozel's aria.¹⁹

Other links with Debussy and the Art Nouveau movement are to be found in his admiration for Walter Crane, his love of Japanese prints²⁰, his monogram of ornately entwined initials (which, Lockspeiser implies, Debussy himself designed), and the care he took over the illustrations of his publications, especially the colouring and layout of the title page.

Conclusion

From what we know of Debussy at this time, it is clear that he had no faith in the traditional methods of composition, and was striving for that which was original. In his letter to Vasnier²¹ he said as much, in his desire to "do something original instead of always keeping to the old paths." It is clear also from his conversations with Ernest Guiraud, recorded by Maurice Emmanuel :

DEBUSSY : [I have] ... no faith in the supremacy of the C major scale. The tonal scale must be enriched by other scales ... Rhythms are stifling. Rhythms cannot be contained within bars. It is nonsense to speak of 'simple' and 'compound' time. There should be an interminable flow of them both without seeking to bury the rhythmic patterns. Relative keys are nonsense too. Music is neither major nor minor ...

GUIRAUD : (Debussy having played a series of intervals on the piano): What's that?

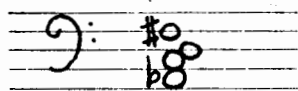
19 Lockspeiser, Debussy : His Life and Mind, Vol I, p.120

20 This is illustrated by a simplified version of Hokusai's "The Wave" which was used as the cover of the first edition of La Mer.

21 previously quoted p.

DEBUSSY : Incomplete chords, floating. One can travel
where one wishes and leave by any door.
Greater nuances.

GUIRAUD : But when I play this it has to resolve



DEBUSSY : I don't see that it should ...

and later

DEBUSSY : ... Counterpoint is not given to us for nothing.
As the parts go forward we come across some
splendid chords.²²

This admiration for counterpoint stems from the works of Orlando di Lasso and Palestrina which he heard in Rome. In another letter to Vasnier from Rome in November 1885, Debussy says :

... The two above-named people are masters, especially Orlando who is more decorative and more human than Palestrina. The effects they produce entirely from their great knowledge of counterpoint are tremendous feats.²³

In an article entitled 'Taste' which he wrote for the Revue S.I.M. in 1913, it appears, however, that this admiration has been replaced by that which he found even more impressive :

Thus Javanese music obeys laws of counterpoint that make Palestrina seem like child's play.²⁴

²² Lockspeiser, Debussy : His Life and Mind, Vol I, p.206f

²³ *ibid.*, p.82

²⁴ Lesure, trans. Smith, p.278

He heard the Javanese music for the first time at the Paris Exhibition of 1889 and this experience provided him with "New rhythmic and melodic ideas and, generally, a new approach to musical structure and feeling ... and which left a permanent mark on his writing for the pianoforte and the development of his musical ideals."²⁵

25 Martin Cooper, French Music from the death of Berlioz to the death of Fauré.
London, O.U.P., 1961, p.90

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chapter 2
THE PARIS
EXHIBITIONS OF 1889 and 1900

CHAPTER 2 : THE UNIVERSAL EXHIBITIONS IN PARIS, 1889 and 1900

The Universal Exhibition in Paris of 1889 celebrated the centenary of the French Revolution of 1789 and helped to dispel, for a while, the political anxieties of the time. Opened by President Carnot on the 6 May 1889, it extended over 90 hectares and occupied :

1. on the left side of the river Seine :
 - the Champ-de-Mars and the left bank of the Seine
 - the Esplanade des Invalides
 - the portion of the Quai d'Orsay between the Esplanade and the Champ-de-Mars
2. on the right side of the river Seine :
 - the park and certain other sections of the Palais du Trocadéro
 - the Iena bridge, which connected the area of the Trocadéro to the Champ-de-Mars.¹

The Exhibition was dominated by the not-quite-complete Eiffel Tower, around which were grouped the Palais des Beaux-Arts, the Palais des Arts Libéraux, the Galerie des Industries and the Galerie des Machines, all constructed entirely of iron, glass and ceramics and existing, thus, as a tribute to the science of engineering.

The foreign pavilions were housed on the Esplanade des Invalides. The Annamite² Theatre was situated to the left of the central avenue in the middle of the Esplanade, while the Javanese compound was near the end of the Esplanade.

¹ Information regarding the physical layout and other details of the 1889 Exhibition has been gleaned from Julien Tiersot Musiques pittoresques. Promenades musicales à l'Exposition de 1889, Paris, Fischbacher, 1889

² In the time when it was still a French colony, present-day Vietnam was known as Annam, hence the adjective Annamite

The theatrical presentations were long Annamite epics, based on heroic and religious legends and always centering around a heroic character. The dialogue was improvised. Because of the length of the epics, the stories would be divided into episodes of one hour each, with the director of the troupe explaining the forthcoming action at the beginning of each episode.

All the presentations were accompanied by an orchestra of six musicians : five placed round the sides of the stage and thus mixing with the actors, while the sixth who was seated at the back, punctuated the action at intervals with beats on a drum. Tiersot remarks on the precision of this orchestra and the role it played in the unfolding of the drama :

*La musique accompagne l'action entière ...
Dès que le dialogue commence, la percussion fait place aux instruments plus musicaux. Comme les acteurs, les musiciens ont une très grande part d'initiative et improvisent presque constamment en se conformant de leur mieux aux sentiments exprimés sur la scène ... Les musiciens ont un certain nombre de mélodies correspondant à un sentiment différent, qu'ils arrangent, répètent, prolongent ou écourtent à leur gré, suivant les besoins.*³

Debussy, recalling these performances, wrote in his article on "Taste", already referred to :

The Indochinese have a kind of embryonic opera, influenced by the Chinese, in which we can recognise the roots of the Ring. Only there are rather more gods and rather less scenery! A frenetic little clarinet is in charge of the emotional effects, a tam-tam invokes terror - and that is all there is to it. No special theatre is required, and no

hidden orchestra. All that is needed is an instinctive desire for the artistic, a desire that is satisfied in the most ingenious ways and without the slightest hints of 'bad taste'.⁴

Debussy referred over and over again to the Javanese music which he heard at this Exhibition and Robert Godet, who accompanied him on many of his visits, writes :

*Les heures vraiment fécondes pour Debussy, c'est dans le campong javanais de la section néerlandaise qu'il les goûta sans nombre, attentif à la polyrythmie percutée d'un gamelan qui se montrait inépuisable en combinaisons de timbres éthérées ou fulgurantes, tandis qu'évoluaient, musique faite image, les prestigieuses Bedayas.*⁵

In the Javanese pavilion, a village had been set up. Here sixty Javanese people went about their daily tasks of cooking, making batiks and, most importantly, making music and dancing.

Two "orchestras" had been transported to the Exhibition. One of these played only marches and was used to announce each presentation and to accompany the passage of the performers through the compound. Although the number of instruments in this group varied from day to day, there were, on average, eight, divided between three musicians. Seven of these consisted of sets of bamboo pipes, while the eighth was the *kendang*, or drum.

Although many journalists wrote accounts of the music played at the Exhibition, only Julien Tiersot tried to adapt his musical knowledge to this new ground; he spent many hours in the Javanese compound trying to discover the theory which lay behind the presentations.

⁴ Lesure, trans. Smith, p.278

⁵ Robert Godet, "En marge de la marge"
La Revue Musicale, May 1926, p.152

Of this small group of instruments he wrote :

Les instruments, au nombre de huit, étaient répartis entre trois musiciens, représentant en réalité trois parties.

La partie la plus grave se composait de deux notes, ré fa, représentées chacune par un seul instrument; la partie intermédiaire donnait sol la, avec deux instruments à l'unisson pour la, et un seul, plus faible, pour sol; enfin, la partie supérieure se composait de trois ré, à l'unisson entre eux, mais à l'octave du ré de la partie grave, lesquels, étant mis en mouvement par la même main, ne représentaient en réalité qu'une seule note.

A ces instruments est joint un tambour posé horizontalement et dont les deux côtés sont frappés tour à tour par une baguette, ou par la paume de la main, ou par les doigts.⁶

In describing the sound produced by this ensemble, he goes on to say :

"Les marches exécutées par les anklang sont ... très caractéristiques. Leur intérêt est purement harmonique et rythmique, nullement mélodique."⁷

6 Tiersot, p.33

7 ibid., p.35

The following example of such a march is given :

Example 1

The musical score for Example 1 is written in 2/4 time. It consists of two systems of staves. The first system contains measures 1, 2, and 3. The second system contains measures 4, 5, 6, 7, and 8. The melody in the right hand starts with a series of quarter notes in measures 1-3, followed by eighth notes in measures 4-5, and then a more complex rhythmic pattern in measures 6-8. The bass line in the left hand provides a steady accompaniment with quarter notes and eighth notes. The piece is marked with a '1' above the first three measures, a '4' above measures 4-5, a '6' above measure 6, a '7' above measure 7, and an '8' above measure 8.

Continuing his account of this march, Tiersot says :

Les entrées successives se font sur un mouvement de marche assez lent, et qui va s'animant peu à peu lorsque tous les instruments sont entrés ... le mouvement s'accélère, les notes se précipitent : les instruments s'agitent en cadence, par groupes de quatre ou six doubles croches. Pendant ce temps, le tambour, se conformant au mouvement de l'ensemble, marque les temps forts avec sa note fondamentale.

Enfin tous les instruments s'agitent à la fois,

formant ainsi une sorte de tremolo qui peut être représenté par l'accord ci-dessous :⁸



The other orchestra was the gamelan and this accompanied all the dances. The instruments in this group were all percussion, struck with hammers or padded sticks, except for the *rebab*, the only melody-playing instrument heard there. Tiersot⁹ lists the principal instruments in this ensemble as follows :

- the *rebab* - a sort of violin with two strings
- the *gambang* - a sort of xylophone with wooden keys
- the *saron-barong* - a xylophone with metal keys
- the *bonang-ageng* - a large metal gong resting on stretched ropes and the largest of a series of gongs.

Two sections could be discerned within the gong family : one which sounded low heavy sounds and the other which was rather shrill and piercing.

A series of drums, resembling kettledrums completed the orchestra, and of this ensemble Tiersot writes :

De l'ensemble de ces instruments sort une sonorité très neuve et non sans charme; car tandis que chez nous les instruments à percussion sont les plus sonores et les plus vibrants que possèdent nos orchestres, ceux du gamelang ont, au contraire,

8 *ibid.*, p.35

9 *ibid.*, p.32

*des sons très doux, très pleins, nullement désagréables et parfaitement musicaux.*¹⁰

This gamelan employed a scale consisting of five notes, without semitones. Tiersot likens these notes to C D E G A, but adds that they convey neither a major nor a minor mode, but, rather, a vague tonality in which C does not represent the tonic nor G the dominant.

In their combinations of sounds, Tiersot believes that they are motivated not by strict harmonic rules, as is found in Western music, but by an innate and instinctive feeling for the sound. He likens the sonority of the instruments to the sound of bells : "*de ne pas produire une cacophonie.*"¹¹

He writes that three levels of sound are constantly employed : the lowest sounds regulate the tempo, mark the ends of sections of the music, and double the theme notes in unison or octaves; the second group either plays the theme in long sustained notes or plays a rapid rhythm of two or three notes over and over again; the third combination is the most interesting : when the intermediate group plays the theme, the instruments in this third group execute a sort of counterpoint in equal rapid notes :

*Cette combinaison s'ajoute généralement aux précédentes, de sorte que l'échafaudage harmonique est ainsi composé d'un chant, fait par les instruments intermédiaires, du contrepoint exécuté à la partie supérieure, des tenues et dessins de deux ou trois notes formant pédales intérieures, du doublage du chant sur les temps forts, enfin de quelques notes de gongs marquant les principaux de chaque période. Une percussion assez nombreuse, sans être trop bruyante, joint ses rythmes variés à ceux du reste de l'orchestre.*¹²

10 *ibid.*, p.32

11 *ibid.*, p.38

12 *ibid.*, p.39

The rhythms of the main themes consist usually of notes of equal value, with important notes often being repeated in sextuplets. In the accompanying parts, syncopation and triplets are common.

In the following fragment of a gamelan composition,¹³ the first line belongs to the counterpoint of the *bonang*; the second is the main theme, played by the *rebab*; the third line contains the music played by the *sarons*; the fourth line contains the *gong ageng* and the largest *bonang* parts; the last line notates the rhythms of the drums

13 *ibid.*, p.41

Example 2

The first system of the musical score consists of five staves. The top staff is labeled 'bonang' and features a treble clef with a 4/4 time signature. It contains a complex melodic line with eighth and sixteenth notes. The second staff is labeled 'rebab' and also has a treble clef, with a simpler melodic line. The third staff is labeled 'sarons' and has a treble clef, showing a sequence of chords with fingerings (1, 2, 3, 4) and accents. The fourth staff is labeled 'bonang gong' and has a bass clef, with a sparse line of notes. The fifth staff is labeled 'drums' and has a bass clef, with a rhythmic pattern of eighth notes and rests.

The second system of the musical score continues with the same five staves. The 'bonang' staff shows a more active melodic line with a '6' above the final measure. The 'rebab' staff has a '3' above the final measure. The 'sarons' staff features a dense sequence of chords with a '6' above the final measure. The 'bonang gong' staff has a '3' above the final measure. The 'drums' staff shows a rhythmic pattern with a '6' below the final measure.

Tiersot¹⁴ gives the following example of a gamelan melody. Entitled *Dahonn-Maas* (Golden Leaf), it is played by the *rebab* as an accompaniment to a dance, and it employs a different scale to that of the previous example.

Example 3

ad lib.

The musical score consists of six staves of music in G major (one flat). The notation includes various rhythmic values, slurs, and articulation marks. The first staff begins with the instruction 'ad lib.' and ends with a fermata. The second staff continues the melody with slurs. The third staff features complex rhythmic patterns with triplets and a 2/4 time signature. The fourth staff includes a 6/8 time signature and a triplet. The fifth staff continues the melodic line with slurs. The sixth staff concludes the piece with a fermata.

The instrument playing the counterpoint would play the following for the first four bars of the melody :

Example 4



He compares this contrapuntal writing with the polyphony of the fifteenth and sixteenth centuries :

*Ce chant du rebab, c'est le chant donné des messes de l'Homme armé ou des chansons en parties des maîtres de ce temps - là; les dessins diversement figurés des autres instruments du gamelang sont des contrepoints qui, pour avoir moins de fixité que ceux de Josquin des Prés ou de Palestrina, procèdent évidemment de principes identiques. Au fond, malgré les différences apparentes les plus marquées, l'homme est partout semblable à lui-même, et parfois d'une façon singulière.*¹⁵

Louis Benedictus wrote transcriptions for piano of some of the Javanese music heard at the Exhibition of 1889, as well as that of 1900. These are included in Appendix A, although one seeks in vain to relate these examples to the scholarly work done by Julien Tiersot.

The aim of the Paris Exhibition of 1900 was to gather together all the achievements of the nineteenth century. It differed from the Exhibition of 1889 not only in size but also in style : whereas the 1889 Exhibition had concentrated on scientific achievements, the 1900 Exhibition portrayed a more luxurious and decorative

splendour, aided, to no small extent, by the new phenomenon - electricity.

In this year, the Eastern pavilions were housed in the Trocadéro. Although music was the least honoured of all the arts at this Exhibition, Debussy again spent many hours listening to the Egyptian, Japanese and, particularly, Javanese music.

Verhaeren, describing the exotic dances and music in an article written for *Le Mercure* towards the end of the Exhibition, wrote :

And the music, like flowing water, animates these fluid [Javanese] dances, these calm, chaste and tranquil dances; it has neither beginning nor end; one would say that it forms part of the unceasing movement of the universe.¹⁶

The *gamelan-goedjin* accompanied the dances in the Javanese pavilion, and Judith Gautier¹⁷ lists the instruments used in this ensemble as follows :

- rebab* - a sort of violin with two strings
- kromong* - sonorous bells placed on two thongs over a wooden box
- gambang* - consisting of wooden strips placed over a wooden box
- hénong* - similar to the *gambang*, but with metal strips
- penneros* - large suspended brass gongs
- kempoel* - a small gong
- guendang* - a drum

This gamelan employed a scale consisting of seven notes, with two semitones.

¹⁶ quoted in Philippe Jullian, The Triumph of Art Nouveau
pp. 170 - 171

¹⁷ Judith Gautier, Les Musiques Bizarres a l'exposition de 1900
Paris, Société d'éditions littéraires et
artistiques, 1900, pp. 7 - 8

Gautier compares the sound of this gamelan to the one which appeared in 1889 :

*Le gamelan de cette année diffère comme composition de celui de 1889. Moins nombreux, moins touffu, il est certainement d'un diapason plus clair, plus limpide, d'une harmonie plus douce et plus séduisante pour nos oreilles.*¹⁸

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chapter 3
DEBUSSY
and EASTERN MUSIC

CHAPTER 3 : DEBUSSY AND EASTERN MUSIC

Debussy's connections with the Orient began at an early age. His godfather, Achille Arosa, had journeyed to Tahiti in 1873 and was fond of recounting his adventures there.¹

At the Conservatoire, he attended classes in theory given by Albert Lavignac. Lavignac was dedicated to instilling a high standard of aural perception in his students, and the exercises which he gave required the pupil :

not only to read at sight in the four C clefs, the two F clefs and the G clef, enunciating the solfège syllables while singing in rapid tempos and complex rhythms, but to transpose the exercises with the same facility ... among the exercises provided by the erudite Lavignac were examples of exotic modes.²

It was perhaps this training which enabled Debussy to later say, "One often hears the remark : 'I need to hear that piece several times'. Nothing could be more untrue. When one listens properly to music one hears immediately what one ought to hear."³

With this in mind, it is not impossible that Debussy could have gained a thorough perception of the structure and sound of Javanese music through his frequent visits to the Expositions.

In fact, he may already have been familiar with the instruments of the gamelan, as a complete set of gamelan instruments had been presented to the Paris Conservatoire by the Dutch Government in 1887.

¹ Lockspeiser, Debussy : His Life and Mind, Vol I, p.17

² *ibid.*, p.31

³ quoted in Leon Vallas, Les Idées de Claude Debussy, Paris, 1927, trans. as The Theories of Claude Debussy by M. O'Brien, New York, Dover, 1967, p.52

André Schaeffner⁴ has suggested that Debussy may have tried over oriental scales on these percussion instruments with Bourgault - Ducoudray,⁵ professor of music history at the Conservatoire.

Debussy maintained links and friendships with many noted Orientalists. Most significant of these was Robert Godet, who had, in his youth, travelled to Java and other countries of the Far East.⁶ Godet and Debussy enjoyed a long and close friendship, and it was he who accompanied Debussy on his visits to the 1889 Paris Exhibition.

Louis Laloy, too, cherished a profound interest in Eastern music and, according to Lockspeiser,⁷ the friendship which he maintained with Debussy was based on the views which they shared of the music of Oriental civilizations.⁸

4 Lockspeiser, Debussy : His Life and Mind, Vol I., p.116 fn

5 Louis Bourgault - Ducoudray (1840-1910) won the Grand Prix de Rome in 1862 and was Professor of Music History from 1878-1908. He wrote much music, including two operas, but his best-remembered works are folksong collections, which he collected and harmonized. In 1877 he published Etudes sur la musique ecclesiastique grecque. Mission musicale en Grèce et en Orient, Janvier - Mai 1875. (In 4° viii 127 pp) In the same year he published Trente mélodies populaires de Grèce et d'Orient recueillies et harmonisées par Louis-Albert Bourgault-Ducoudray. And in 1878 appeared the second edition of Souvenirs d'une mission musicale en Grèce et en Orient. (In 4° 31 pp). I am indebted to Michael Tuffin for this information on Bourgault-Ducoudray.

6 On his return, Godet wrote theoretical treatises on the music of the Orient, which he later offered to Debussy, but Debussy rejected them, saying he had little use for theoretical treatises.

7 Lockspeiser, Debussy: His Life and Mind, Vol II, p.78 footnote

8 Louis Laloy wrote an article entitled "Debussy et le Debussisme" in the special edition devoted to Debussy of La Revue S.I.M. in 1910, in which he declares that Debussyism is the equivalent in music of Impressionism in painting and Symbolism in poetry. He also believed that non-European musicians are Impressionists and Symbolists without being aware of it.

Debussy, himself, was believed to incline towards Orientalism. The novel Le Soleil des Morts, by Camille Mauclair,⁹ was published in 1898 with Calixte Armel (Mallarmé) as central figure. Other characters who appear under fictitious names include Verlaine, Pierre Louÿs, Manet, Rodin, Toulouse-Lautrec, Ernest Chausson and Debussy, who appears as the revolutionary composer, Claude-Eric de Harmor. In the novel, the 'Préludes' of Harmor are performed at a concert, and Mauclair writes :

The cry of a satyr is heard, suddenly stifled but later developed into a sobbing chant ... The writing is complex, strange and exquisite. 'Assez!' shouts a hoarse authoritative voice ... Is this music too refined and delicate for ordinary listeners? ... The music is now lit up as if by the burning light of the sun and one hears the rhythm of the sea reproduced in primitive harmonies. Javanese flutes flash through the score, lingering on high notes or sparkling like running water, gongs are sounded, and the warm summer scene closes with a play of light in the form of an arpeggio figure.¹⁰

In response to an actual performance of Debussy's Nocturnes, James Gibbons Huneker wrote in the New York Sun of 19 July 1903 :

The man is a wraith from the East; his music was heard long ago in the hill temples of Borneo; was made as a symphony to welcome the head-hunters with their ghastly spoils of war ... If the Western world ever adopted Eastern tonalities, Claude Debussy would be the one composer who would manage its system.¹¹

⁹ Camille Mauclair was the pseudonym of Séverin Faust (1872-1945). He also wrote much art criticism, including L'Impressionisme (1904) and the essays Princes de l'esprit (1920) on, amongst others, Delacroix, Flaubert, Mallarmé and Poe.

¹⁰ Quoted in Lockspeiser, Debussy : His Life and Mind, Vol I, p.226

¹¹ N. Slonimsky, Lexicon of Musical Invective New York, Coleman-Ross, 1953, p.7

In an article on 'Taste' in Revue S.I.M. of 15 February 1903, Debussy writes :

There used to be - indeed, despite the troubles that civilization has brought, there still are - some wonderful peoples who learn music as easily as one learns to breathe. Their school consists of the eternal rhythm of the sea, the wind in the leaves, and a thousand other tiny noises, which they listen to with great care, without ever having consulted any of those dubious treatises ...

Thus Javanese music obeys laws of counterpoint that make Palestrina seem like child's play. And if one listens to it without being prejudiced by one's European ears, one will find a percussive charm that forces one to admit that our own music is not much more than a barbarous kind of noise more fit for a travelling circus.¹²

Debussy again recalled the Javanese music in an article in Gil Blas, of 2 March 1903 :

Let us rediscover tragedy, and enhance its primitive musical accompaniment with all the resources of the modern orchestra and a chorus of innumerable voices! Let us not forget the possibilities of a combined use of pantomime and dance, heightened by an extreme use of lighting effects to render it more suitable for a large body of people. One could learn much about this from the entertainments given by the Javanese princes, where the command and seduction of a language without words is taken to its furthest extremes, unfolding in acts rather than set patterns. It is the pity of our theatre that we have limited it to verbal means of expression.¹³

12 Lesure, trans. Smith, p.278

13 Lesure, trans. Smith, pp. 131-132

It is evident that Debussy was greatly impressed by the music which he heard at the Paris Exhibition of 1889. It was not only the Javanese use of counterpoint which he admired, but their theatrical presentations too, as well as their lack of tonic and dominant domination. He mentions the latter in a letter to Pierre Louÿs written in 1895 :

Do you not remember the Javanese music,
able to express every shade of meaning,
even unmentionable shades and which make
our tonic and dominant seem like ghosts.¹⁴

Robert Godet accompanied him on these visits, and he sums up the impression which was made on Debussy :

*L'avidité absorbée de sa contemplation, celle
aussi de son silence toujours aux écoutes,
faisait déjà pressentir que cette sorte de
"musique-image" laisserait plus d'une empreinte
dans son cerveau et peut-être son art : mais quelles?
C'était le secret du génie debussyste.*¹⁵

¹⁴ quoted in Lockspeiser, Debussy : His Life and Mind,
Vol I, p.115

¹⁵ Godet, "En marge de la marge", p.153

University of Cape Town

section 2
The Javanese Gamelan

University of Cape Town

chapter 4

THE GAMELAN

CHAPTER 4 : THE GAMELAN

At the centre of the Javanese music tradition is the gamelan¹, a generic term for orchestra. Each instrument within the ensemble performs its own fixed task, and the instruments are grouped according to the function they perform.

These functions are :

- the playing of the 'cantus firmus' or nuclear theme;
- paraphrasing of the nuclear theme;
- the playing of an independent counter melody;
- the colotomic function, and
- the agogic function.

The nuclear theme is the principal melody of all compositions and is the point of orientation for all strata of elaboration. With the exception of the counter-melodies, all melodic motifs of the composition are derived from the nuclear theme. In its strictest form, the nuclear theme is performed upon the *demung*², with pitches falling in the middle register (the range of the gamelan extends over seven octaves). As an example of a nuclear theme, an extract from an orchestral piece entitled GÉNJONG-GULING (transposed into Western notation) is given below :

Example 5



¹ The material for this section is taken from Jaap Kunst *Music in Java*, 2 vols, 3rd ed., enl. and ed. E.L. Heins, The Hague, Nijhoff, 1973.

² Descriptions of Javanese instruments and terms have been included in Appendix B.



fig 1 bonang

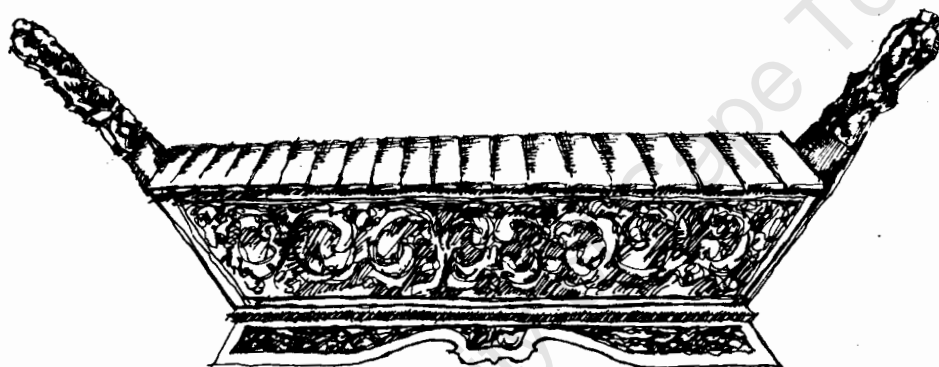


fig 2 gambang kayu

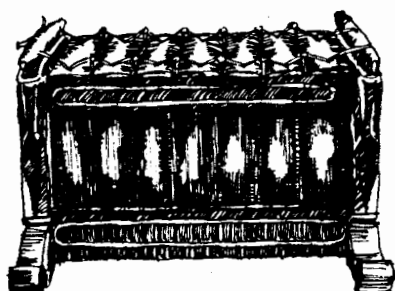


fig 3 gendèr

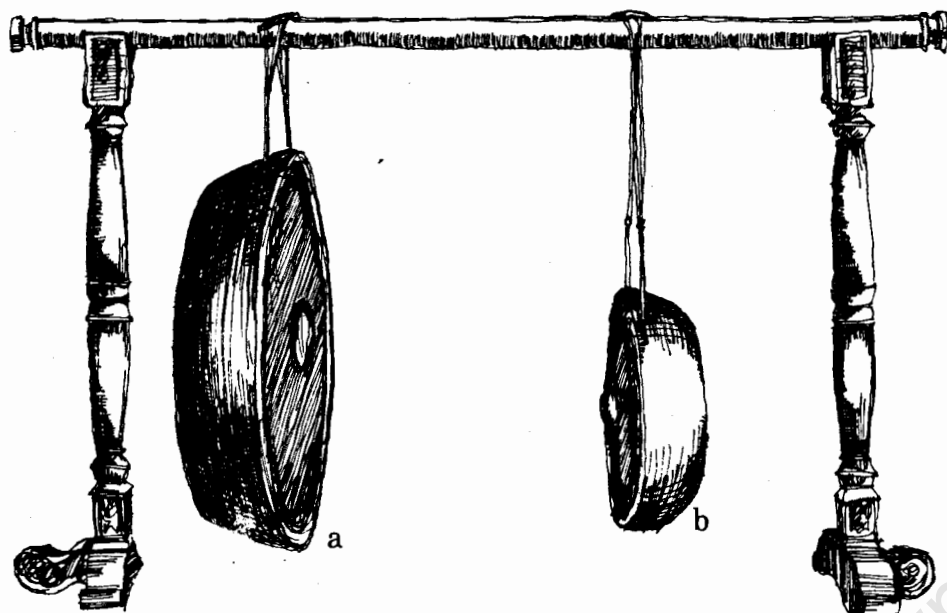


fig 4 a gong ageng
fig 4 b kempul

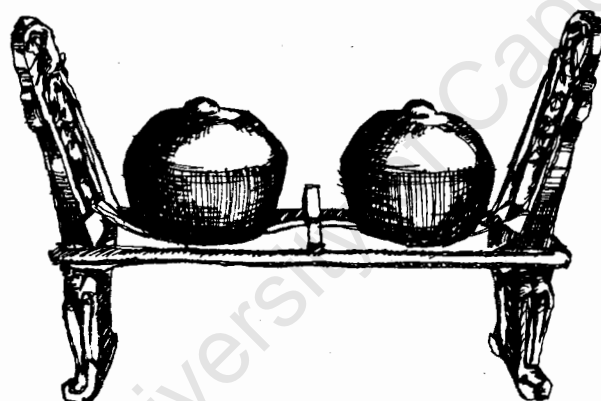


fig 5 kempyang

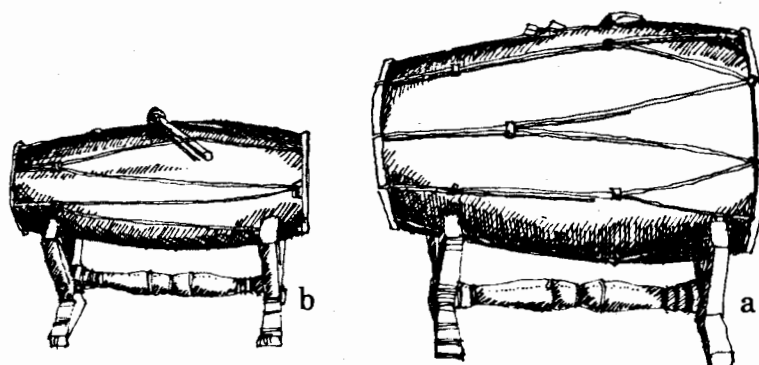


fig 6 a kendang gending
fig 6 b ketipung

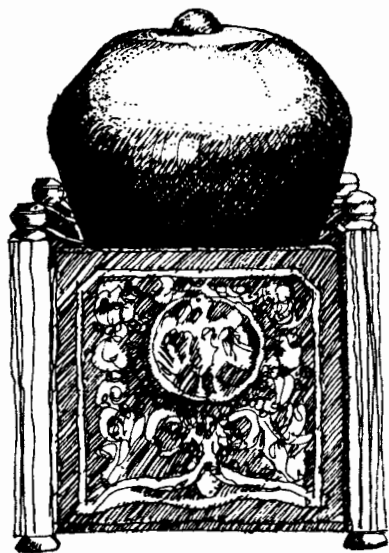


fig 7 kenong



fig 8 ketuk

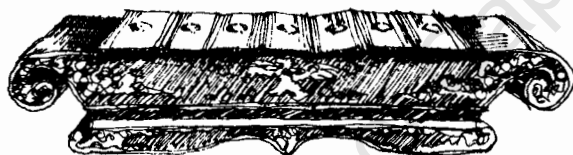


fig 10 saron

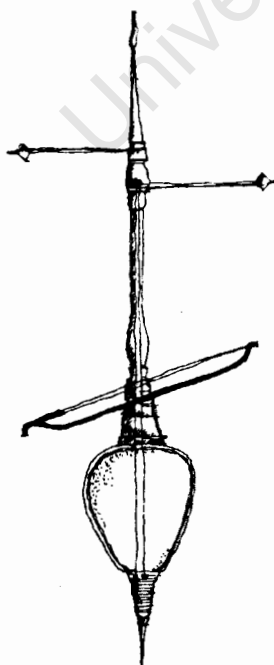


fig 9 rebab



fig 11 suling

The instruments which perform the task of paraphrasing the nuclear theme, the *panerusan* instruments, are divided into two groups :

- i) those which stay close to the nuclear theme, and
- ii) those which supply variations to the theme and are responsible for the filling and ornamentation of the framework of the nuclear theme.

The instruments which stay close to the nuclear theme include the *saron panerus*, the *saron barung* and the *slentem*.

The instruments which embellish the theme include the *gendèr panerus*, the *gendèr barung*, the *gambang kayu*, the *bonang panerus* and the *bonang barung*.

These instruments would thus paraphrase the nuclear theme given in Example 5 as follows :

Example 6

The musical score for Example 6 consists of eight staves, each representing a different instrument in a gamelan ensemble. The instruments are: Gendèr panerus, Gendèr barung, Gambang kayu, Bonang panerus, Bonang barung, Saron panerus, Saron barung, and Slentem. The score is written in a single system with a common key signature of one flat (B-flat) and a common time signature. The Gendèr panerus and Saron panerus parts are marked with 'gve' (grave) and feature more complex, ornamented melodic lines. The other instruments provide a rhythmic and harmonic accompaniment.

There are many ways in which paraphrasing of the nuclear theme may occur. The simplest kind of paraphrase is a melody which gives only the essence of the nuclear theme. Another is the doubling of the theme with notes of the lower octave (performed by the *slentem* in Example 6 above).

Paraphrasing may also take the form of anticipation, diminution (performed by the *saron panerus* in Example 6 above), doubling at the octave (performed by the *saron barung* in Example 6 above), syncopation (performed by the *bonang panerus* in Example 6 above), and the filling in of the time spans between the notes of the nuclear theme with tinkling sound (see the *gambang kayu* in Example 6 above).

A form of paraphrase often found is *pancher*, which is a continually recurring note sounded between the notes of the nuclear theme "whereby the impression is created that this nuclear theme is curled like a festoon around a fixed pivot, or hanging upon a straight line"³.

A *pancher* is beaten only when the nuclear theme notes are temporally wide-spaced, in order to maintain the equilibrium and firmness of the playing.

Often occurring together with *pancher* is *imbal*, where the nuclear theme is played by two people and broken up into smaller values; for example, in Western terms : two crotchets to a minim (slow tempo) or four quavers to the minim (quick tempo). One player anticipates the next nuclear theme note, while the other coincides his notes with those of the nuclear theme. A hocket effect is thereby created between the two players.

The counter-melody is in many cases a richly-ornamented part, very independent of the nuclear theme. It therefore introduces a polyphonic element into gamelan music. This function is usually performed by the *suling* and the *rebab*. With paraphrasing and counter-melodies added, the nuclear theme given in Example 5 above would appear as follows :

Example 7

Musical score for Example 7, featuring ten staves of traditional Indonesian instruments. The score is written in a single system with ten staves, each representing a different instrument. The key signature is one flat (B-flat), and the time signature is 4/4. The instruments and their parts are:

- Suling**: Melodic line with trills and triplets.
- Rebab**: Melodic line with a steady eighth-note accompaniment.
- Gendér panerus**: Rhythmic accompaniment with a complex pattern of eighth and sixteenth notes.
- Gendér barung**: Rhythmic accompaniment with a steady eighth-note pattern.
- Gambang kayu**: Rhythmic accompaniment with a steady eighth-note pattern.
- Bonang panerus**: Rhythmic accompaniment with a complex pattern of eighth and sixteenth notes.
- Bonang barung**: Rhythmic accompaniment with a steady eighth-note pattern.
- Saron panerus**: Rhythmic accompaniment with a complex pattern of eighth and sixteenth notes.
- Saron barung**: Rhythmic accompaniment with a steady eighth-note pattern.
- Demung**: Melodic line with a steady eighth-note accompaniment.
- Slentem**: Rhythmic accompaniment with a steady eighth-note pattern.

The score includes various musical notations such as trills, triplets, and dynamic markings like *gve* (grave).

The colotomic structure of a composition is the interpunctuation by means of which the *gending* (orchestral composition) is subdivided into longer or shorter phrases. This function is performed by the gongs : the *kempyang*, the *ketuk*, the *kenong*, the *kempul* and the *gong ageng*. It is expressed by the number of *keteg* (the smallest unit of time) per *kenongan* (period of time marked off by the *kenong* gong) and by the number of *kenong* beats per *gongan* (period of time marked off by the big *gong ageng*).

These gong rhythms are illustrated in the following example, which contains the nuclear theme given originally in Example 5 together with its paraphrasing, counter-melodies and gong rhythm :

Example 8

The musical score for Example 8 is a multi-stemmed composition for various traditional Indonesian instruments. The score is written in a key signature of two flats (B-flat and E-flat) and a common time signature (C). The instruments and their parts are as follows:

- Juling:** Features a melodic line with trills and triplets, marked with *8ve*.
- Rebab:** Provides a melodic accompaniment.
- Gender panerus:** Plays a rhythmic pattern of eighth notes, marked with *8ve*.
- Gender karung:** Plays a melodic line.
- Gambang kayu:** Plays a rhythmic pattern of eighth notes.
- Bonang panerus:** Plays a melodic line, marked with *8ve*.
- Bonang karung:** Plays a melodic line.
- Saron panerus:** Plays a rhythmic pattern of eighth notes, marked with *8ve*.
- Saron karung:** Plays a melodic line.
- Demung:** Plays a melodic line.
- Slentem:** Plays a rhythmic pattern of eighth notes.
- Kempuangi:** Plays a rhythmic pattern of eighth notes.
- Keluk:** Plays a rhythmic pattern of eighth notes.
- Kenang:** Plays a melodic line.
- Kempul:** Plays a melodic line.
- Gong ageng:** Plays a rhythmic pattern of eighth notes.

At the bottom of the score, there are two *8va basso* markings, indicating the octave range for the Gong ageng.

The colotomic function may also include the division of the music into phrases by means of shrill sounds on one of the melody-playing instruments. In some cases, the rhythmic form of the composition is realized entirely by the colotomic function, so that "the melodic stream itself can quietly flow on, unhampered by periodical stresses."⁴ Colotomy is part of the concept of heterorhythmy, which is the superposition of layers of different rhythms. These varying rhythms meet at certain points in the melody and at the ends of important sections : apart from this, each level is more or less free to go its own way.

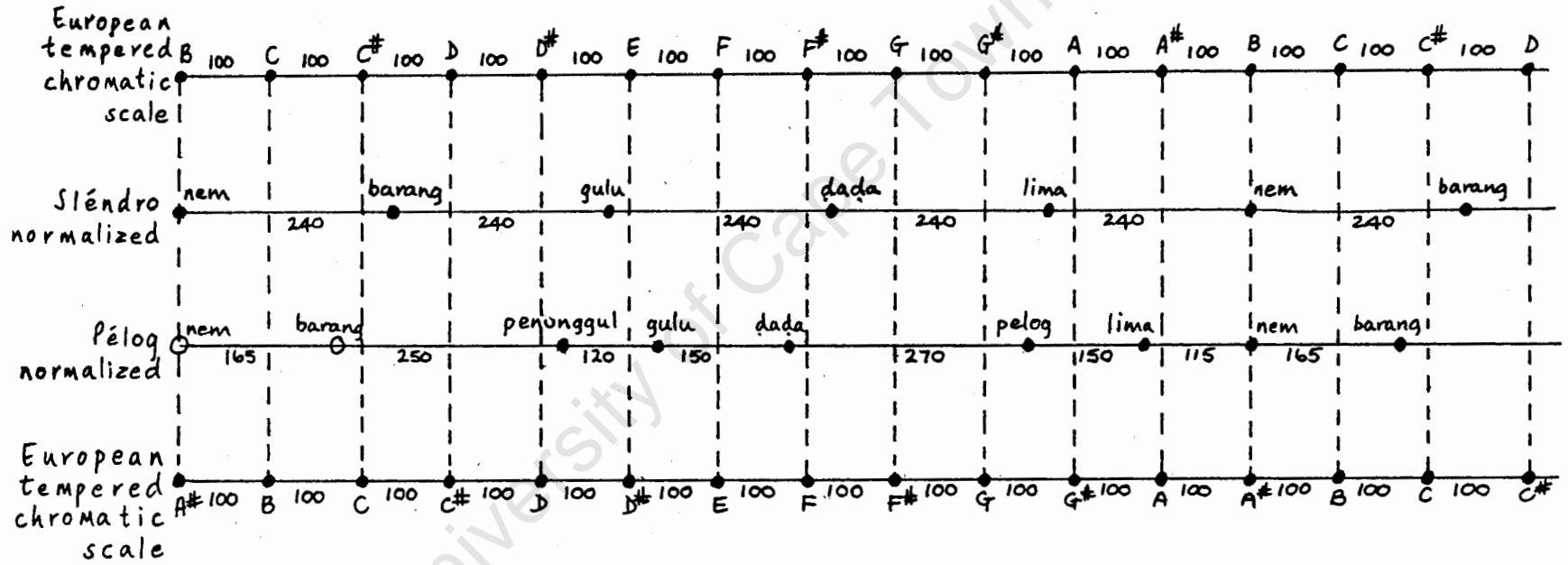
The agogic function is that which controls the tempo and the task is to lead, slow down, accelerate or maintain the tempo. In the gamelan, this task is performed by the player of the *kendang gending* drum, who either acts independently or takes his cue from the nuclear theme. The player may give the impression of a change in tempo by increasing or decreasing the number of drum-beats, as well as actually initiating a change in tempo by means of a musical signal to the other players in the gamelan.

The range of sound in the gamelan extends over six or seven *gembyangan* (octaves). In gamelan music, three distinct layers or levels of sound are discernable :

- i) the gong and drum rhythms on the lowest level;
- ii) the nuclear theme and counter-melodies which usually appear in the middle register, although they may be played on the upper level, in which case the paraphrasing instruments take up this middle layer; and
- iii) the elaborations and paraphrases of the nuclear theme which appear usually in the upper level.

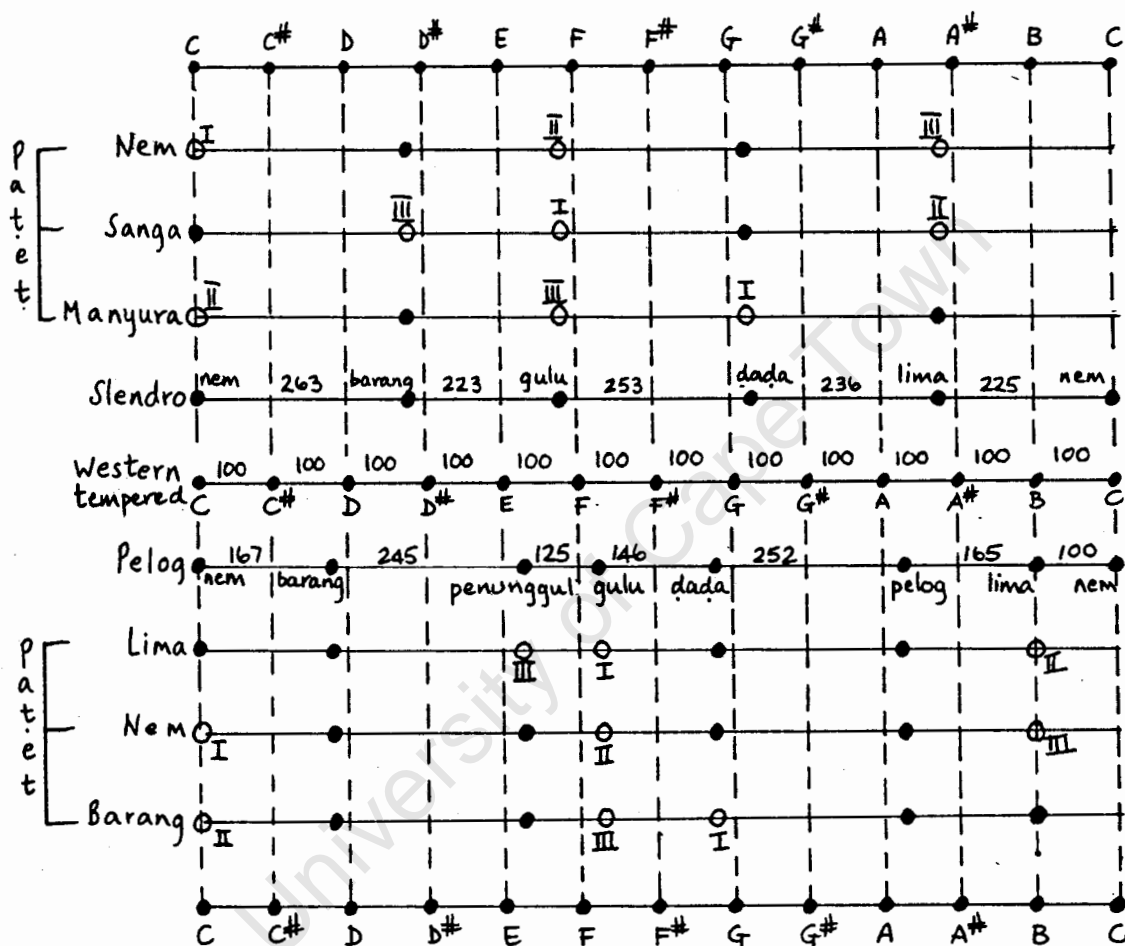
There are two basic scales in Javanese music, the five-note *sléndro* and the seven-note *pélog*. Studies of the fixed-pitched instruments throughout the island have shown that there is great variety in the actual pitches of the notes of these scales, as well as the intervals between them. The figure below shows the average form of each scale, together with the Javanese name for each note. The European tempered chromatic scale is included for comparison :

⁴ Kunst, Vol I, p.332



note: intervals are measured in cents

Each tuning system has three modes, called *patet*. "The nearest approach to the conception *patet* may be achieved by the formula : all scales possessing the same note of the basic scale as central note form together one *patet*"⁶ Each *patet* has a different set of principal notes that receive special melodic and colotomic emphasis. These are indicated in the following example by circles and the Roman numerals I, II and III⁷ :



In performance, a *patet* may be identified by its own introductory and cadencing melodic patterns. In addition, the particular *patet* to be used is chosen in relation to extra-musical factors which include :

- i) the emotion being portrayed
- ii) the three phases of the night (sundown to midnight; midnight to 3 a.m.; 3 a.m. to sunrise)

⁶ Kunst, Vol I, p.73

⁷ William P. Malm, *Music Cultures of the Pacific, the Near East and Asia* (H.W. Hitchcock, ed., Prentice-Hall History of Music Series, No.8) New Jersey, Prentice-Hall, 1967, p.31

Because of the two basic scale systems in use in Java, most large gamelans are double ones i.e. they consist of a *pélog* and a *sléndro* half. These two halves share the indefinitely pitched instruments. The *pélog* and *sléndro* halves are never played simultaneously, although the sections of a composition may require a transference from the one tonal system to the other; for example, the first section of the composition may be based on the *pélog* system, the second section on the *sléndro* system and the third may be back in the *pélog* system.

Javanese *gending*s are classified according to their structure and it is the colotomic structure which gives the criterion for the classification into a given group. These groups are :

- i) *gending ageng*, long and stately compositions comprising gong-periods of 4 *Kenongan*⁸ and 4 or more *ketuk* beats per *kenongan*;
- ii) *gending tengahan* or *gending madya*, in which the *ketuk* beats are close together so that the *kenongan* are very short; and
- iii) *gending alit*, possessing only 2 *ketuk* beats per *kenongan*.

These three groups contain compositions which consist of an introductory movement, a central section and a closing movement. The following two groups are different in that they consist of single-movement compositions only :

- i) *ladrangan*, which have gong-periods (*gongan*) of 4 *kenongan*;
- ii) *ketawang*, with *gongan* of 2 *kenongan* each.

A *gending* always commences with an introduction (*bebuka*). This introduction usually contains some anticipatory fragments of the *gending* which follows, as well as always setting the character or style of the *gending*. The instrumental introduction is usually only a few 'bars'

⁸ These terms are explained in Appendix B

long, whereas a vocal introduction is usually rather longer. The introduction may be repeated, in which case it is called a *mêrong*.

Both the instrumental and vocal introductions are concluded by a beat on the *gong ageng*, after which the main section of the composition follows immediately.

In the transition from introduction to main piece there is often a change in the drum beats, which sometimes accelerate and then slow down again for the main piece.

After the second movement (*ndawah* or *mungguh*) has been played once or twice, the *gendhing* is finished. In many cases, however, a short closing section is included. Usually only a few 'bars' long, this closing section is based on the material of the main piece.

A smaller *gendhing*, often a *ladrangan*, usually follows the large composition immediately, without being preceded by an introduction of its own. This second piece is usually in the same *patet* as the first.

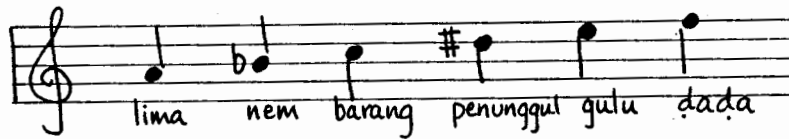
At the end of each movement, the tempo is greatly accelerated and then greatly retarded right at the end of the *gendhing*.

Most *gendhings* consist of repeated passages. If each new *kenongan* is represented by a letter, the structure of a *gendhing* may be portrayed as follows :

<i>Bebuka</i>	:	a b
<i>Ndawah</i>	:	a a b c a a b d e f f d e f f d
Closing section :		a b c

Formal construction may be seen in the following nuclear theme⁹, transposed into Western notation. It is the nuclear theme of a composition entitled BIMA KURDA. It uses six of the seven notes in

the *pélog* scale in the mode of *patet barang*, the scale of which is :



Example 9

Bebuka

Ndawah

Closing section

ritardando - - - - -

The gamelan employs a limited dynamic range : it will either play loudly or softly, the latter being the most common. Although slight modifications of dynamic level occur, these are always slight and subtle. Long plateaux of a single dynamic level are usually established, and changes in this level coincide with important events in the melodic structure.

Prior to the middle of the 19th Century, no system of notation existed in Java. Since then, however, various methods have been employed. The main aim of all these is to form a catalogue of works which are extant, and to preserve the nuclear theme of each composition, as this is the part from which most other parts derive.

Only indications with respect to tempo and pitch are given about the paraphrasing parts, since these depend on improvisation. The colotomic parts are normally not notated, as the colotomy of a given *gending* is more or less constant, according to the group to which the *gending* belongs.

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section 3
The Analysis

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Introduction

INTRODUCTION

The object of the analysis is to verify the claims made by those scholars quoted in the introduction and to determine the extent of the influence of the gamelan on the music of Debussy.

For this purpose, the following works for pianoforte solo¹ have been selected :

Douze Préludes Book 1 (1910)
Douze Préludes Book 2 (1913)
Estampes (1903)

For further comparison, works for pianoforte solo composed after the Paris Exhibition of 1889 but prior to that of 1900 were chosen :

Ballade (1890)
Rêverie (1890)²
Nocturne (1890)

and in addition, works for pianoforte solo composed prior to both Exhibitions were selected :

Danse Bohémienne (1880)
Deux Arabesques (1888)

¹ The decision to examine, almost exclusively, works for pianoforte solo is reinforced by Lockspeiser's comment in his Debussy : His Life and Mind, Vol II, p.51 : "More than any other single instrument it was the piano ... that most convincingly enabled him to define his musical language."

² Although most sources date Rêverie from 1890, thereby implying that this was the date of both composition and publication, it was found, in the analysis, that no traces of gamelan influence are evident. On further investigation, the following information was found in Frank Dawes, Debussy : Piano Music, London, BBC Publications, 1969, p.17: "Rêverie was published in 1890, but it is certainly a good deal older, for at the time of its publication Debussy wrote to Fromont, the publisher : 'I regret very much your decision to publish Rêverie ... I wrote it in a hurry years ago, purely for material considerations. It is a work of no consequence and I frankly consider it absolutely no good.'"

Finally, the two vocal settings of Clair de Lune were examined; the first is dated 1882-84 while the revised version dates from 1892.

The pieces are drawn from a time span of 33 years and therefore reflect the increasing maturity of the style of the composer. It was hypothesized, however, that if any of the developments which exist could be related to the salient characteristics of gamelan music, then it would be correct to assume that gamelan music played a role in the development of the compositional style of Claude Debussy.

Writings on and transcriptions of gamelan music³ have been studied and salient features isolated, and summarised here as follows :

- (i) the division of the instruments of the gamelan into five groups according to their function;
- (ii) the subsequent distribution of sound into three distinct layers of writing, each with its own specific pitch register;
- (iii) the lack of climax or development in melodic form; stylistic unity and logic is achieved by such factors as recurring melodic formulae, rhythmic surges and abatements and the prevailing (mostly descending) direction of melodic movement;
- (iv) paraphrasing (as opposed to development) of the nuclear theme;
- (v) the colotomic structure, whereby the piece is divided into different phrase lengths by means of interpunctuation and by means of which the rhythmic form of the piece is realized;
- (vi) the use of indefinitely-pitched percussive sounds;
- (vii) pentatonic scales;
- (viii) the preference for improvisation itself and a free, improvisatory character about each piece;
- (ix) the form of the pieces, consisting of introduction, main section and closing section;
- (x) the use of dynamics, in which long plateaus of either loud or soft dynamics are established rather than frequent crescendos or decrescendos.

³ A glossary of Javanese terms has been included in Appendix B for easy reference.

These ten features formed the basis of the analytical method employed in the study of the Debussy compositions selected. Each characteristic is discussed in the chapters which follow.

However, before discussing these features individually, it would be illuminating to compare the two vocal settings of Clair de Lune as they form a useful comparison in terms of Debussy's early style, uninfluenced by the gamelan, and his later style, having heard the gamelan.

The first setting was written during Debussy's years at the Conservatoire, 1882-84, before his visits to the Paris Exhibitions. The second setting, written in 1892, after Debussy's visit to the Paris Exhibition of 1889, was published as the third song of the first set of Fêtes galantes.

In the first version, voice and accompaniment have separate material. The accompaniment is just that : it does not share, double or imitate the vocal line and introduces no independent or contrasting rhythmic ideas. It exists, for the most part, as a chordal basis for the melodic line :

Example 10

The musical score for Example 10 shows three staves. The top staff is the vocal line in treble clef, with lyrics: "Votre âme est un pa- y- sa- ge choi- si que". The middle staff is the piano accompaniment in the right hand, and the bottom staff is the piano accompaniment in the left hand. The key signature is three sharps (F#, C#, G#) and the time signature is 3/8. The piano accompaniment is primarily chordal, with the right hand playing chords and the left hand providing a harmonic foundation with some melodic movement.

Clair de Lune I, bars 12-16

In addition, in this accompanying part, there are frequent stops and starts throughout the piece, a feature which is in direct antithesis to the gamelan concept of an almost constant stream of small time values.

The accompaniment of the second setting reflects this gamelan idea, for it consists of persistently repeated semiquaver figures. Melodic material is at times shared, doubled or imitated between voice and piano (see Example 11), while at other places in the score (see Example 12) the parts are rhythmically and melodically independent :

Example 11

Example 11 is a musical score for a vocal line and piano accompaniment. The key signature is two sharps (F# and C#), and the time signature is 4/4. The vocal line is marked *p* and includes the lyrics: "Votre âme est un pa - y - sa - ge choi - si Que". The piano accompaniment is marked *pp très doux et très expressif* and features a complex, rhythmic pattern of semiquaver figures. A fermata is present over the final note of the piano accompaniment. A circled number (5) is located at the end of the vocal line.

Clair de lune II, bars 5-6

Example 12

Example 12 is a musical score for a vocal line and piano accompaniment. The key signature is two sharps (F# and C#), and the time signature is 4/4. The vocal line is marked *un peu animé* and includes the lyrics: "Tout enchantant sur le mo - de mi - neur L'amour vain.". The piano accompaniment is marked *p* and features a complex, rhythmic pattern of semiquaver figures. A fermata is present over the final note of the piano accompaniment. A circled number (5) is located at the end of the vocal line.

Clair de lune II, bars 13-14

These examples illustrate Colin McPhee's description of gamelan music:

The parts meet, separate, wander in opposite directions, meet again in free heterophony. A rich weaving sound is the result ... however, the general melodic direction is clear; important structural tones are sounded in unison and each individual part, while apparently casual, is conceived in close relation to the basic tones of the composition.⁴

The following example illustrates the independence of the parts in the second version; here, too, the density of the small time values approaches saturation point, which Mantle Hood describes as "a filling-up of all possible time units ... a hallmark of polyphonic stratification in the Javanese gamelan."⁵

Example 13: Clair de Lune II, bars 17-20

The musical score consists of three systems. The first system shows the vocal line starting with a mezzo-forte (*mf*) dynamic and the piano accompaniment. The lyrics are "Ils n'ont pas l'air de croire à leur bonheur,". The second system continues the vocal line with a decrescendo (*dim.*) and the piano accompaniment. The lyrics are "Et leur chanson se mêle au clair de lune,". The piano accompaniment includes markings for piano (*p*) and *e molto* (eighth notes). The score ends with a fermata over the final notes.

⁴ Colin McPhee, "The Five-tone Gamelan music of Bali", *Musical Quarterly*, v35, n2, April 1949, p.261

⁵ Mantle Hood, *The Ethnomusicologist*, New York, MacGraw-Hill, 1971, p.115

The texture of this second version is far more rich and varied than that of the first. The following graphic representation of the parts illustrates the sparse and homophonic character of the first version and the richly heterorhythmic character of the second.

Example 14

voice

accompanying parts

Clair de Lune I, bars 21-24

Example 15

voice

accompanying parts

Clair de Lune II, bars 21-24

The placement of the sustained notes at the base of the rhythmic structure of the second version is significant, for it recalls the function of the gongs in gamelan music, which provide a temporal support for the quicker rhythms of the other parts.

The harmony in the first version of the song is for the most part, traditional. The tonality of the piece is always clear and the traditional functional principles of tension and release are adhered to : the dominant moves to the tonic to produce perfect cadences, and dissonances are resolved.

Both versions have a short introduction and, in each, a dominant pedal is employed. In the first version, the repeated dominant chords find their resolution in a perfect cadence. In the second version, however, the effect of the perfect cadence is destroyed by the use of a flattened leading note. In addition, the dominant is used here as the basis of pentatonic harmony : the introduction is based on the pentatonic scale $c^\# e f^\# g^\# b$:

Example 16



Clair de Lune II, bars 3-5'

This employment of the pentatonic scale is significant not only because of its relation to the gamelan but also because it induces an effect which is, in Kunst's terms, "static"⁶. In fact, this static idea is the

6

Kunst, Vol I, p.120

overriding feature of the harmony of the second version of the song : successions of triads in root position appear frequently and, always, the harmonic rhythm is slow.

In no way can the first version of the song be related to any characteristics of gamelan music, while the similarities in the second version are many.

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chapter 5

THE FIVE COMPONENTS

CHAPTER 5 : THE FIVE COMPONENTS

As discussed in the chapter "The Javanese Gamelan", there are five functional components¹ of the music of the gamelan.

The first of these is the 'cantus firmus' or nuclear theme : the point of orientation for all strata of elaboration. In this, it resembles more closely the concept of the 'subject' in polyphonic composition than the 'first subject' or 'leitmotiv' in later compositional forms. For the composition is largely the admixture of melodic, rhythmic and registral variants of a single nuclear theme. But, as Debussy himself commented, it is done in such a way as to make the polyphony of Renaissance and Baroque times appear, by comparison, "child's play". In the works Debussy composed before 1889, there is no trace of a nuclear theme, in the gamelan sense of the term. In these pieces, there are usually at least two melodic ideas which are, throughout the piece, extended, developed and varied. In addition, far from being polyphonically treated, they are clearly stated together with an accompaniment of block or broken chords, as the following examples illustrate :

Example 17

Deux Arabesques No 2 , bars 10 - 13

¹ The second component, paraphrasing, and the fourth, the colotomic function, will be discussed later in separate chapters. Since paraphrasing and colotomy warrant extended discussion, they cannot be included in the brief overview which the present chapter provides.

Example 18

Più mosso

Danse bohémienne, bars 45-48

In the 1890 pieces, although there is rarely a single nuclear theme, the themes are clearly treated as the nucleus of all that happens around them : they are not developed but paraphrased in a remarkably gamelan-like way. This will be illustrated and discussed more fully in the section of this work devoted to paraphrasing.

No longer do the themes appear over pure accompaniment. Melodic material is shared, doubled and imitated in all the parts, thereby resembling more closely the gamelan concept of a nuclear theme. This may be clearly seen in the following extract from Nocturne, bars 65-68 :

Example 19

Nocturne, bars 65-68

In bar 65, the theme is doubled, except for the last beat, a major 10th below;

In bar 66, the interval is a major 6th for the first two notes; from there the lower voice plays, as a counterpoint, a paraphrase of the nuclear theme, through bars 67 and 68.

In the later works, the use of nuclear themes is even more striking. The following example from La fille aux cheveux de lin (Préludes, Book 1, No 8) shows the nuclear theme presented almost totally unaccompanied in bars 1-3 :

Example 20

La fille aux cheveux de lin, bars 1-3

and later re-appearing in paraphrased form as the melodic basis for the movement of all the parts, bars 24-25 :

Example 21

La fille aux cheveux de lin, bars 24-25

In Danseuses de Delphes (Préludes, Book 1, No 1), the nuclear theme is not only the melodic source of the entire composition but, again, is shared, doubled and imitated in all the voices.

It first appears in bars 1-2 (the dotted lines outline the notes of the nuclear theme) :

Example 22

Danseuses de Delphes , bars 1-2

re-appears in bars 6-7, now doubled with the lower octave :

Example 23

Danseuses de Delphes , bars 6-7

transposed and doubled with two octaves below, in bar 15 :

Example 24

Danseuses de Delphes , bar 15

and finally, in paraphrased form, with full chordal support in bars 25-26 :

Example 25

Danseuses de Delphes , bars 25-26

Counter melodies are secondary to the nuclear theme. There may be as many as three or four of these, and their melodic material is independent of that expressed in the nuclear theme. They may, like the nuclear theme, appear in paraphrased or elaborated form, but their role in the construction of the piece is never equal to the role of the nuclear theme : a counter melody cannot, therefore, be compared to the "second subject" found in traditional forms of Western music. Since the counter melody frequently appears together with the nuclear theme, it introduces a polyphonus element into the texture of the composition.

In the selected works of Debussy composed prior to 1889, there are no brief melodic ideas which fall into this category. As mentioned previously, these works contain two main themes which carry more or less equal weight in the development and construction of the piece.

Counter melodies make frequent appearances in the later works. Melodically, they are in no way related to the nuclear theme : they tend to dart in and out of the texture of the piece and the only function they can be said to serve is that of providing, for a brief moment, an extra layer of melodic activity.

Canope (Préludes, Book 2, No.10) uses two counter melodies which bear no relation to the melodic material of the nuclear theme; in addition, their appearances are so brief that they can in no way be said to equal the role of the nuclear theme in the construction of the piece. The first counter melody appears in bars 7-8, in octaves in bars 9-10 and in octaves again in bars 20-23 :

Example 26

Canope , bars 7-8

The second counter melody appears for the first time in bars 3-4,
and in ornamented form in bars 11-13 and bars 30-32 :

Example 27

Canope, bars 3-4

Example 28

Canope, bars 11-13

Pagodes makes extensive use of counter melodies in a remarkably gamelan-like way. The first of these appears in bars 7-8, below the nuclear theme :

Example 29

Pagodes, bars 7-8

It is repeated, again below the nuclear theme, in bars 9-10, while in bars 27-30, a paraphrase of this counter melody appears below a paraphrase of the nuclear theme. Bars 53-72 are an exact repetition of bars 3-22, with the same treatment of this first counter melody. It makes its final appearance in bars 84-87 in its original form but doubled with the lower octave, below yet another paraphrase of the nuclear theme.

Example 30

Pagodes, bars 84-85

It is obvious, from the foregoing examples, that this counter melody is a truly polyphonous element in the structure of this composition.

The same may be said of the second counter melody which makes its first appearance in bars 11-12 below a paraphrase of the nuclear theme :

Example 31

2 Ped

Pagodes, bars 11-12

It re-appears in paraphrased form in bars 13-14, again below the paraphrase of the nuclear theme. In bars 19-22 it is stated, again in paraphrased form, without the nuclear theme but together with the accompaniment figure of the nuclear theme.

Example 32

Pagodes, bars 19-20

Bars 41-44 contain this second counter melody now stated in chords. As previously mentioned, bars 53-72 repeat the material of bars 3-22, with the same treatment of this second counter melody.

Bars 73-75 are an almost exact repetition of bars 41-44, with this counter melody moving in chords.

It makes its last appearance in bars 88-96, below a paraphrased form of the nuclear theme.

Example 33

Pagodes, bars 88-89²

The third counter melody appears only three times in the composition and, while it does not coincide with a statement of the nuclear theme, it does, however, appear together with material previously used to accompany the nuclear theme. The first statement of this third counter melody appears in bars 33-36 :

Example 34

Pagodes , bars 33-36

It re-appears in bars 46-49 at the lower octave, and with the two octaves combined in bars 50-52.

The examples given above are so clearly reminiscent of the use of counter melodies in the gamelan, and their appearances so consistent in the post-1900 compositions, that coincidence can surely be excluded.

The agogic function is related to maintenance and modification of the tempo. In the gamelan it is performed by the drummer, who will either give the impression of a change in tempo by increasing or decreasing the number of drum-beats, or, with a signal, actually initiate a change in tempo for all parts.

In the later works of Debussy, an indicated change in tempo is frequently preceded by a change in the rate of accented or pedal notes.

In the pre-1889 compositions, nothing analogous to this function could be traced.

In the following extract, for example, there is no part which could be said to predict the indicated modifications of tempo :

Example 35

The image shows two systems of piano music. The first system consists of two staves (treble and bass clef) with a key signature of two sharps (F# and C#). The music features a melodic line in the right hand and a supporting bass line in the left hand. A marking 'p e Rit' is placed above the right-hand staff. The second system also consists of two staves with the same key signature. It features similar melodic and bass lines. A marking 'Tempo' is placed above the right-hand staff, and a marking 'p e Rit' is placed above the left-hand staff.

Deux Arabesques No 1 , bars 21-24

In the 1890 works, the beginnings of this technique may be seen. In the following extract, the previously rapid movements of quavers and semiquavers is interrupted for the first time, heralding the subsequent change of tempo :

Example 36

The image shows a musical score for a piano ballade. It consists of two staves (treble and bass clef) with a key signature of one flat (Bb). The music features a melodic line in the right hand and a supporting bass line in the left hand. A marking 'Animez peu à' is placed above the right-hand staff. The score includes various musical notations such as quavers, semiquavers, and rests.

Ballade , bars 44-46'

With the Préludes and Estampes, this technique is firmly established .
 In Voiles (Préludes, Book 1, No 2) a drum-like rhythm heralds the
 approach of the nuclear theme :

Example 37 : Voiles, bars 5-7

pp expressif

→ $\flat \bar{\text{p}}$ $\flat \bar{\text{p}}$ $\gamma \bar{\text{p}}$ $\flat \bar{\text{p}}$ $\bar{\text{z}}$ toujours pp

It continues in this rhythm until near the end of this section,
 where it is replaced with the following rhythm :

Example 38

pp

→ $\flat \bar{\text{p}}$ $\flat \bar{\text{p}}$

Cédez -

Voiles, bars 23-26

predicting the indication *Cédez* in bar 26.

This then continues until bar 45 where, despite the indication of *Très retenu*, the rate of these notes increases for three bars, predicting the *au Mouvt* in bar 48 :

Example 34

The musical score for Example 34 is written for piano. It consists of two staves, treble and bass clef, with a key signature of two flats (B-flat and E-flat). The piece is in 3/4 time. The score is divided into three sections by bar lines. The first section, starting at bar 45, is marked 'Très retenu' and contains four measures of music. The dynamics are *p*, *più p*, *pp*, and *più pp*. The second section, also four measures long, continues the same musical material. The third section, starting at bar 48, is marked 'au Mouvt' and contains two measures of music. The dynamics are *pp*. A performance instruction '(comme un très léger glissando)' is written above the final two notes of the third section. Below the staves, there are seven groups of notes, each preceded by a fermata and a '7' (likely indicating a fingering or a specific rhythmic value). A large, faint watermark 'University of Cape Town' is visible across the page.

Voiles , bars 45 - 48¹

A repeated low note is used, with similar effect, in Feuilles Mortes (Préludes, Book 2, No 2) : in only two places in the entire piece does the repeated g^\sharp appear and, in each case, it is followed by an indication to slow down :

Example 40

The image displays two systems of musical notation for a piano piece. The first system consists of three staves: a treble clef staff with a *ppp* dynamic marking and a slur over four measures of chords; a bass clef staff with the instruction *un peu en dehors* and a *p* dynamic marking, featuring a melodic line with a slur; and a grand staff (bass and treble clefs) with a *pp* dynamic marking and a slur over four measures of chords. The second system also has three staves: the top staff has a *ppp* dynamic marking and a slur over four measures of chords; the middle staff has a *p marqué* dynamic marking and a slur over four measures of chords; and the bottom staff has a *ppp* dynamic marking and a slur over four measures of chords. The piece concludes with a final chord in the grand staff.

Feuilles Mortes, bars 25-31

Example 41

The image displays two systems of musical notation for piano accompaniment. Both systems are in the key of D major (two sharps) and 3/4 time. The first system consists of three staves: a treble clef staff with a melodic line featuring two triplet eighth notes, a bass clef staff with a harmonic accompaniment, and a lower bass clef staff with a single bass note. Dynamics include *p* and *pp*. The second system is similar but includes the instruction *Cédez* above the treble staff. A large watermark 'University of Cape Town' is visible across the page.

Feuilles Mortes, bars 37-40

In the following example, the low bass notes act as a signal for the subsequent *Retenu* : they are not prepared for in the preceding bars, but suddenly appear within the texture of rapid, high-pitched notes :

Example 42

Feux d'artifice, bars 53-55²

With the aid of the examples given in this chapter, a significant change in Debussy's style of composition has been noted. Because of the time span between the earlier works and the later ones, the concept of change itself is not significant : with increasing maturity, a lack of change in the style of composition would have been more remarkable.

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chapter 6

SOUND LAYERS

CHAPTER 6 : SOUND LAYERS

In gamelan music, three distinct layers of sound are discernable :

- i) in the lowest layer are placed the interpunctuating gong and drum rhythms, which perform three functions :
 - to divide the work into various temporal sections
 - occasionally to double the notes of the nuclear theme
 - to provide a slow-moving bass over which the upper parts move more rapidly;
- ii) the nuclear theme and counter melodies are usually found in the middle layer. Occasionally these melodies are played in the upper level, in which case the paraphrasing instruments take up this middle layer;
- iii) in the upper layer are usually to be found the elaborations and paraphrases of the nuclear theme. Percussive bell-like sounds are also placed in this layer.

These layers of sound each have their own pitch register, corresponding to the low, middle and high registers of the piano. The range of the gamelan extends over seven octaves, and it is not unusual to find all seven employed in a composition.

In the pre-1889 compositions, layering of elements is not discernable; there are no high-pitched percussive sounds and no slow-moving bass line. The entire composition falls, for the most part, into the middle register, as may be seen from the following examples :

Example 43

Allegro

mf

Danse bohémienne, bars 1-8

Example 44

A tempo

pp

poco a poco cresc

Deux Arabesques No 1, bars 6-10

Example 45

The image displays a handwritten musical score for 'Deux Arabesques No 2, bars 3-8'. The score is written in G major (one sharp) and 3/4 time. It consists of three systems of staves, each with a treble and bass clef. The first system shows a treble staff with a melodic line of eighth notes and a bass staff with a sustained chord. The second system features a treble staff with a melodic line starting with a piano (*pp*) dynamic and a bass staff with a harmonic accompaniment. The third system continues the melodic line in the treble staff, which includes a triplet of eighth notes, and the bass staff with a harmonic accompaniment. A watermark 'University of Cape Town' is visible across the middle of the page.

Deux Arabesques No 2, bars 3-8

The pieces composed in 1890 begin to show the separation into layers of sound. In the following extract from Nocturne, the nuclear theme lies in the upper register. In this upper layer, too, are the bell-like accompanying chords which perform a twofold function :

- i) the colotomic function of saturating the texture of the piece with sound; and
 - ii) the colouring of the accompaniment in the middle register.
- In the middle register are the rest of the accompanying parts. These upper layers are supported by the low, slow-moving bass line:

Example 46

The image shows two systems of musical notation for piano. Each system has a treble clef staff and a bass clef staff. The treble staff in both systems features a melodic line with a slur over the first two measures and bell-like chords. The bass staff in both systems features a low, slow-moving line with a forte (f) dynamic marking and a slur over the first two measures. The key signature is three flats (B-flat, E-flat, A-flat).

Nocturne, bars 14-15

Three layers of sound are frequently employed in the two books of Préludes and the Estampes.

In the following extract from Feuilles Mortes (Préludes, Book 2, No.2), the nuclear theme lies in the middle register, paraphrasing by doubling in octaves is heard on the upper level, while the gong sounds lie in the lowest register :

Example 47

Mouv^t (dans le sentiment du début)

The musical score is written for piano and consists of three staves. The top staff is in treble clef, the middle in bass clef, and the bottom in bass clef. The key signature is three sharps (F#, C#, G#) and the time signature is 2/4. The tempo/mood is marked 'Mouv^t (dans le sentiment du début)'. The score shows three measures. In the first measure, there is a triplet of eighth notes in the upper register (marked with a circled 3 and a 4/5 time signature) and a single eighth note in the middle register. The second and third measures continue this pattern. The bottom staff features a series of eighth notes, with a dashed line below it labeled '8^a bassa' indicating an octave transposition. The dynamic marking 'pp' is present in the middle staff.

Feuilles Mortes , bars 41 - 43

In "Les fées sont d'exquises danseuses" (Préludes, Book 2, No.4), the three levels are clear. The trill is reminiscent of the tinkling bell-sounds of the *panerus* instruments of the gamelan :

Example 48

"Les fées sont d'exquises danseuses" , bars 84-87

A bell-like motif appears again in La terrasse des audiences du clair de lune (Préludes, Book 2, No.7).

From the following extract may clearly be seen the differentiation of the sound into three registral layers :

- i) on the upper level, a paraphrase at the octave of the nuclear theme, together with the bell-like motif;

- ii) in the middle register, the nuclear theme together with a counter melody pitched slightly lower; and
- ii) on the lowest level, the interpunctuating gong-like sounds.

Example 49

The image displays two systems of musical notation for piano accompaniment. The first system consists of three staves: a treble staff with a melodic line, a middle staff with a counter-melody, and a bass staff with a low register line. The music is in a key with four sharps (F#, C#, G#, D#) and a 3/4 time signature. The first system is marked *pp* and includes dynamic markings *8^a bassa*, *8^a b.*, and *8^a b.* below the bass staff. The second system consists of two staves (treble and bass) and includes the dynamic marking *8^a bassa* below the bass staff. A large watermark 'University of Cape Town' is visible across the score.

La terrasse des audiences du clair de lune, bars 16-18

It may be seen from the three previous examples that almost the entire range of the piano is employed. It is interesting to note that the gamelan, too, employs a wide range, in some cases as much as seven octaves. In the pieces which Debussy composed before 1890, the extremes of the piano are used inconsistently and usually only at climax points.

The following extract from Pagodes provides yet another illustration of the three sound layers, each with a specific function in the layered construction of the work :

- i) a rhythmic paraphrase of the nuclear theme in octaves on the upper level;
- ii) the second counter melody, paraphrased in octaves in the middle register; and
- iii) one soft, low "gong-stroke" in the lowest layer.

And again, almost the entire range of the piano is employed in this composition.

Example 50

Pagodes, bars 11-14

Examples of this layering technique are endless. The significance of his use of this technique lies in its resemblance to the usage in gamelan music.

That layers of sound should be employed is, in itself, insubstantial evidence : but that each layer should perform the self-same function in the music of Debussy as in the music of the gamelan reveals the influence of the one upon the other.

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chapter 7
MELODY
and **IMPROVISATION**

CHAPTER 7 : MELODY AND IMPROVISATION

Melodies used by the gamelan are characterized by a lack of climax or development; they appear aimless : not "becoming" but "being". Unlike Western music, thematic development is the exception rather than the rule. It is common for the melodies to dart in and out of the texture of the piece, either in original or paraphrased form. It is in this way that stylistic unity and logic are achieved.

In the early Debussy pieces, melodic development is integral. In Deux Arabesques No.1, the following melody appears for the first time in bar 10 :

Example 51

poco a poco cresc.

sempre cresc. e stringendo - - - - - *rit.*

Deux Arabesques No 1, bars 10-16

This melody is subsequently developed in the section which begins in bar 39 :

Example 52

Tempo rubato (un peu moins vite)

The musical score for Example 52 consists of two staves. The upper staff is in treble clef and contains a melodic line with various ornaments and slurs. The lower staff is in bass clef and contains a harmonic accompaniment. The piece is marked with a piano dynamic (*p*) and includes dynamic markings such as *p* and *f*. The tempo is indicated as *Tempo rubato (un peu moins vite)*.

Deux Arabesques No 1 , bars 39-42

Climax in melodic form is aided, in each case, by the accompanying dynamic instructions.

In the later works, development and climax of melodic form no longer play a role in the construction of the piece. The following melody from Danseuses de Delphes (Préludes, Book 1, No.1), remains undeveloped, in the Western sense. Yet it is paraphrased in the manner of the gamelan, in bars 6-9, bars 15-17 and bars 25-26:

Example 53

doux et soutenu

The musical score for Example 53 consists of two staves. The upper staff is in treble clef and contains a melodic line with various ornaments and slurs. The lower staff is in bass clef and contains a harmonic accompaniment. The piece is marked with a piano dynamic (*p*) and includes dynamic markings such as *p* and *pp*. The tempo is indicated as *doux et soutenu*.

Danseuses de Delphes , bars 1-4

Tension is induced in bars 3-4, both harmonically and dynamically. This build towards a climax is, however, cut off by the series of chords, played *pp*, which completes bars 4 and 5.

The melody of La fille aux cheveux de lin (Préludes, Book 1, No.8) is, again, without climax or development. The instruction *sans rigueur* emphasizes the floating character of this theme :

Example 54

Très calme et doucement expressif (♩ = 66)

p sans rigueur

p

La fille aux cheveux de lin, bars 1 - 7

It is through constant repetitions of this melody, both in original and paraphrased form, that the stylistic unity and logic of this composition is achieved. It is not written in any traditional Western form, nor is any contrasting material interspersed : the entire piece is derived from this nuclear theme, which wanders in and out of the texture throughout. Like gamelan compositions, this piece is the admixture of melodic, rhythmic and registral variants of a single nuclear theme.

The use, by the gamelan, of melody in this way poses a viable alternative to the Western concept of thematic development. An alternative was, in fact, what Debussy sought, for he wrote :

Previous researches I had made in pure music had aroused in me a hatred of the classical 'development' whose beauty is purely technical and can be of interest only to mandarins. I wanted music to enjoy that liberty which she possesses perhaps to a greater degree than any other art.¹

The liberty afforded by improvisation was an attraction, and, in fact, "It is well known that Debussy wished his music to assume the character of an improvisation, as if it had been drawn from the circumambient air"²

Improvisation is a most important quality of Javanese music :

" ... in Java the very spirit of gamelan music is based on group improvisation".³ Elaboration of the nuclear theme provides the area most conducive to improvisation.

Paraphrasing instruments in the gamelan therefore fall into two types : those which stay close to the nuclear theme (and therefore allow less freedom) and those which are free to go their own way for a time. Although the following chapter is devoted to paraphrasing, the latter type may briefly be discussed here in terms of the concept of improvisation and not the method.

There is the character of an improvisation about many of the later piano compositions, while the earlier works emit little or nothing of this. The evanescence of this phenomenon of improvisation allows for no detailed definitions, although certain features may be isolated, which include : fragmentation of the melodic line; complete absence of a melodic line; brief reminiscences of an earlier theme punctuating

1 Jarocinski, p.107

2 Edward Lockspeiser, "Debussy in Perspective"
Musical Times, Vol 109, 1968, p.905

3 Hood, p.58

a rapid chromatic or arpeggio passage ; a melody in which the nuclear theme is only dimly recognisable.

In the work of Debussy, this concept is not allied to the cadenza of an earlier age. There is never a section of the work in which improvisation is 'permitted'; it is an ambient character which pervades the entire composition.

Feux d'artifice (Préludes, Book 2, No.12) assumes this character : melodies are so fragmentary that they may be said to be almost non-existent; scale-, arpeggio- and chromatic passages abound, without being goal-oriented. Something of this may be seen from the following extract, although it is a sensory rather than a cognitive phenomenon.

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Example 55

Musical score for "Feux d'artifice" (bars 36-40). The score is in G-flat major (three flats) and 4/4 time. It consists of four systems of piano music. The first system starts with a forte (*f*) dynamic and features a triplet of eighth notes in the right hand. The second system begins with *più f* and includes an 8-measure rest in the right hand. The third system starts with *ff* and continues with a triplet. The fourth system ends with *molto dim.* and *m.d.* markings. The piece concludes with a double bar line and a key signature change to B-flat major.

Feux d'artifice , bars 36-40

Ondine (Préludes, Book 2, No.8), with its fragmentary melody and rapid, arabesque-like scale passages, also emits something of this improvisatory character, as does Ce qu'a vu le vent d'Ouest (Préludes, Book 1, No.7).

Improvisation is not an element introduced by Debussy into Western music, for it dates back to the sixteenth century and has ever played a role in both composition and performance. That the entire piece should assume the air of an improvisation is, however, innovative. Taken in conjunction with the other facets of gamelan music which find correspondence in the music of Debussy, the improvisatory character of much of his work assumes a new significance.

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chapter 8

PARAPHRASING

CHAPTER 8 : PARAPHRASING

This differs from the Western concept of 'development' in that the melodic material is not used as the basis for extension and exploration of the rhythmic, intervallic and motivic content.

Paraphrasing consists of doubling the material at the octave¹ and of stating the same material in a slightly different way, either in simplified or amplified form. In this respect, the concept bears a resemblance to the paraphrases of plainsong melodies in the fifteenth and sixteenth centuries.

The specific techniques used by Debussy in the paraphrasing of his melodic material are, however, more closely allied to the devices used in gamelan music than to the devices used in early Western music. In the latter case, "paraphrase is a ... subtle transformation in which original and additional notes blend into a new melody of homogeneous design".²

In the gamelan, elaborations in which a new melody is formed take the form of an improvisation so distantly related to the nuclear theme that it cannot be said to be a 'subtle transformation'. The other type of paraphrase used by the gamelan stays so close to the notes of the nuclear theme that no 'new melody' is formed. It is with paraphrase of the latter type that this chapter is concerned, improvisation having been briefly discussed in the preceding chapter.

¹ Though octave doubling is a common form of writing for keyboard in Western practice, it is interesting to note that the gamelan, too, employs this device : see Example 6.

² Willi Apel, Harvard Dictionary of Music, 2nd ed., London, Heinemann, 1973, p.642

In the works of Debussy composed before 1889, development rather than paraphrase of melodic material is integral. No device which could be related to those found in the music of the gamelan was encountered.

The most commonly used technique of paraphrasing is the doubling of the notes of the nuclear theme with the same notes in the lower or upper octave. In the pieces examined, the earliest example of this device appears in Nocturne, written in 1890.

The following melodic idea appears for the first time in bars 32-34 :

Example 56

ppp (Dans le caractère d'une chanson populaire)

Nocturne , bars 32-34

and is repeated in bars 36-38 in the following form :

Example 57

The musical score for Example 57 consists of three systems of piano accompaniment. Each system is written for a treble and bass staff. The first two systems show a melodic line in the treble staff and a bass line in the bass staff, with a triplet of eighth notes in the bass staff. The third system shows a similar melodic line in the treble staff and a bass line in the bass staff, with a triplet of eighth notes in the bass staff. The score includes dynamic markings 'cres' and 'cen' and a watermark 'University of Cambridge'.

Nocturne, bars 36-38

In Danseuses de Delphes (Préludes, Book 1, No.1), the nuclear theme which is stated in bars 1-2 re-appears doubled with the lower octave in bars 6-7 and again in bars 15-16.

In Voiles (Préludes, Book 1, No.2), an interesting use of this technique is made : the nuclear theme is doubled at the lower octave in its first appearance :

Example 58

pp expressif

toujours pp

très doux

Voiles, bars 7-13¹

The paraphrase of this, which appears in bars 33-37, is doubled with the lower octave, so that the theme now appears in three octaves :

Example 59

The musical score for Example 59 consists of two systems of piano accompaniment. Each system has a treble clef staff and a bass clef staff. The first system begins with a double bar line in the treble staff and a 'pp' dynamic marking in the bass staff. The second system also has a 'pp' dynamic marking in the bass staff. The music features chords and melodic lines in both hands, with some notes marked with accents and slurs.

Voiles , bars 33-37¹

The nuclear theme of Canope (Préludes, Book 2, No.10), appears in parallel chords in bars 1-3 :

Example 60

The musical score for Example 60 shows a single system of piano accompaniment. The treble clef staff has a 'pp' dynamic marking. The music consists of parallel chords in the treble staff, with a double bar line at the end of the system.

Canope , bars 1-3²

and is paraphrased in simplified form, doubled with the lower octave, in bars 5-7 :

Example 61

Canope, bars 5-7¹

This simplification of the melody, in which only the essence of the theme is given, is another frequently-used form of paraphrase in gamelan music.

Debussy uses this technique again in La Cathédrale engloutie (Préludes, Book 1, No.10) : the theme appears in original form in bars 7-10 :

Example 62

La Cathédrale engloutie, bars 7-10

and is restated in simplified paraphrase in bars 47-50 :

Example 63

Although it is more usual to find the melodic idea in the middle layer and the paraphrase above this, the melodic idea in this case is clearly the semiquaver motif, since it appears both first and consistently within the piece. The functional roles of the pitch levels have simply been reversed.

Another form of elaboration used in the gamelan is to surround the notes of the nuclear theme with rapid semiquaver figures. This device is used extensively by Debussy.

A clear example of this appears in Ondine (Préludes, Book 2, No.8) in bars 18-19 :

Example 65

The image displays two examples of musical notation for the piece 'Ondine' by Debussy. Each example consists of three staves: a grand staff (treble and bass clefs) and a separate bass staff. The music is in G major (one sharp) and 3/4 time. The first example (top) shows a piano (p) dynamic. The right hand plays a series of eighth notes (semiquavers) in the upper register, while the left hand plays a similar figure in the lower register. The second example (bottom) is identical to the first but includes a fermata over the final notes of the semiquaver motif in both hands. A large watermark 'University of Exeter' is visible across the score.

Ondine , bars 18-19

Ce qu'a vu le vent d'Ouest (Préludes, Book 1, No.7.), employs a specific device called *ngrachik*, in which the notes of the nuclear theme are paraphrased with sets of three notes, of which the first doubles the corresponding note of the nuclear theme.

Precisely this technique is found in bars 15-18 :

Example 60

The musical score for Example 60 illustrates the *ngrachik* technique in the piano accompaniment of 'Ce qu'a vu le vent d'Ouest'. The score is presented in four systems, corresponding to bars 15-18. The first system (bars 15-16) shows the bass line with a 'un peu marqué' marking and a treble line with 'pp' dynamics. The second system (bars 17-18) continues the bass line with 'pp' dynamics. The third system (bars 15-16) shows the treble line with 'p' dynamics. The fourth system (bars 17-18) continues the treble line with 'p' dynamics. The *ngrachik* technique is clearly visible as groups of three notes in the bass line, where the first note is a double of the nuclear theme note.

Ce qu'a vu le vent d'Ouest , bars 15-18

This device is used again in Ondine (Préludes, Book 2, No.8) in bars 46-53, of which an extract is given below :

Example 67

Example 67 shows a musical extract from Ondine (Préludes, Book 2, No.8), bars 46-53. The score is written in treble and bass clefs with a key signature of three sharps (F#, C#, G#). The top staff features a slur over two groups of notes, with a '(5/8)' marking above the first group. The middle staff is marked *pp* and contains chords. The bottom staff contains a bass line. A large brace spans the bottom two staves.

Ondine, bars 48-49 shows a musical extract from Ondine (Préludes, Book 2, No.8), bars 48-49. The score is written in treble and bass clefs with a key signature of three sharps (F#, C#, G#). The top staff features a slur over two groups of notes. The middle staff contains chords. The bottom staff contains a bass line. A large brace spans the bottom two staves.

Ondine , bars 48-49

In Les collines d'Anacapri (Préludes, Book 1, No.5), too, sets of three semiquavers fall between the notes of the melodic idea, the first of each set being the double of the corresponding theme note. The first appearance of this device is in bars 40-46 :

Example 68

f

f

ff

f

m.g.

Cédez - //

a Tempo

dim. e Rit.

Les collines d'Anacapri, bars 40-45

re-appearing in bars 81-85 of the same piece.

The use of semiquavers over the notes of the nuclear theme appears polyphonically in the following extract from Pagodes. In the lower voice appears the original form of the nuclear theme, while the decorating motif above is itself derived from this nuclear theme :

Example 69

Pagodes, bars 82-83

The Javanese word *pancher* describes another elaboration device : this is a continually recurring note, always the same for a number of bars, through which the notes of the nuclear theme appear. It gives the impression of a melody curled round a fixed pivot, or hanging from a straight line. It is used especially when the melody notes lie far apart, or are fragmented, in order to maintain the equilibrium of the piece. This technique is used by Debussy in a number of compositions.

In La soirée dans Grenade from Estampes, the repeated note appears in the rhythm of the Habanera; below this the melody line hangs as on a straight line :

Example 70

The image shows two systems of musical notation. Each system consists of two staves. The top staff in each system is a treble clef staff with a key signature of two sharps (F# and C#). It features a repeated note on a straight line, indicated by a dashed line above the staff and the number '8'. The bottom staff in each system is a bass clef staff with the same key signature. It contains a melody with various rhythmic values and dynamics. The first system includes the dynamic marking 'ppp' and 'pp expressif'. The second system includes the dynamic marking 'p'.

La soirée dans Grenade, bars 5-14

The device appears again in bars 22-88, where the repeated note is now an octave lower, where it remains for the subsequent appearances in bars 60-66 and 78-86.

The repeated note appears together with each statement of the secondary melodic idea in Ondine (Préludes, Book 2, No.8), and acts as a stabilising element for the semiquaver figure :

Example 71

The image shows a piano score for Example 71. It consists of three staves: a treble clef staff, a bass clef staff, and a grand staff (treble and bass clefs). The key signature is two sharps (F# and C#). The score is marked 'au Mouvt' and 'p'. It features a semiquaver figure and a repeated note. The repeated note is indicated by a dashed line above the staff and the number '8'. The semiquaver figure is indicated by a dashed line below the staff and the number '8'. The score includes various rhythmic values and dynamics.

Ondine, bars 16-17

It is restated in bars 26-27 and bars 38-39.

One of the fragmentary melodic ideas of Ce qu'a vu le vent d'Ouest (Préludes, Book 1, No.7) curls around not one, but two, constantly repeated notes. Used consistently from bars 23-32 of this composition, an extract is given below :

Example 72

dim. molto

Un peu retenu -p mais en dehors et angoissé

p.

p.

Ce qu'a vu le vent d'Ouest, bars 25-28

The alternation of these two notes creates the impression of a vibrating straight line around which the melodic idea is draped. It is reminiscent of the vibrating quality of gamelan music which is induced by the sustained resonance of the gong sounds.

Taken individually, almost each technique discussed above could be traced to a source in traditional Western music, but that all would appear from the same Western source is unlikely. However, all are employed by the gamelan, and, taken in the context of this discussion, the possibility that they do derive from the gamelan is not untenable.

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chapter 9
HETERORHYTHMY
and COLOTOMY

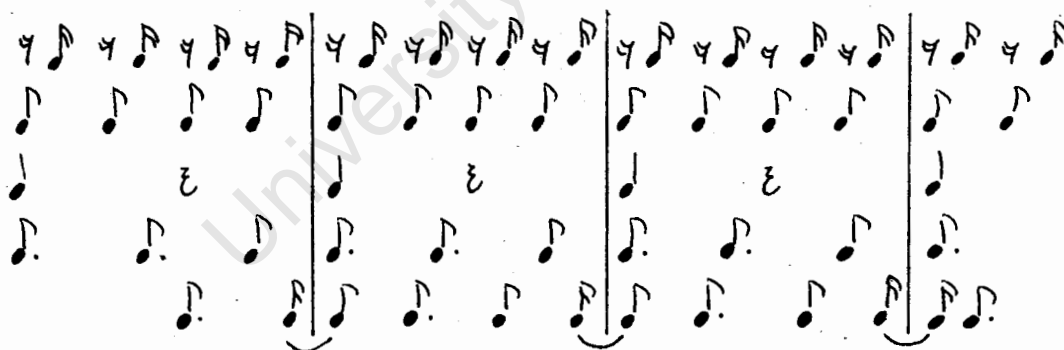
CHAPTER 9 : HETERORHYTHMY AND COLOTOMY

Heterorhythm consists of the superposition of layers of different rhythms. These varying rhythms meet at certain points in the melody and at the ends of important sections. Apart from this, each level is more or less free to go its own way.

For, each layer of rhythm is horizontally conceived, causing the vertical cross-rhythms to be produced purely accidentally. It is the latter feature which distinguishes the phenomenon from polyrhythm.

The heterorhythmic structure of a composition is most clearly seen when represented in graphic form. A typically Javanese heterorhythmic structure could thus be illustrated as follows :

Example 73



Stamping composition : rice - block score¹

¹ Kunst, Vol I, p.195

Part of the heterorhythmic structure of a piece is colotomy. The colotomic function is performed by the gongs in a gamelan composition. These interpunctuating gongs mark off the ends of phrases and sections, thereby subdividing the music into longer or shorter temporal lengths. In many gamelan compositions, the melodic line is free of metrical or periodical accents, the prevailing rhythm being maintained by the supporting colotomic structure. The independence of the individual gong rhythms contributes to the heterorhythmic nature of gamelan music.

In the works which Debussy composed before 1889, neither a colotomic structure nor heterorhythmic layering is evident :

Example 74

The image shows two parts of musical notation for Example 74. The top part is a rhythmic pattern consisting of four measures, each with a vertical bar line. The notes are arranged in two staves, with the upper staff having a treble clef and the lower staff having a bass clef. The notes are mostly eighth and sixteenth notes. The bottom part is a piano score for the same piece, showing a treble and bass staff with a key signature of two sharps (F# and C#) and a time signature of 3/4. The music is marked with a dynamic of *mf* (mezzo-forte). The piano score shows a melodic line in the treble staff and a bass line in the bass staff, with various articulations and phrasing marks.

Danse bohémienne , bars 45 - 48

Example 75

The image shows two parts of musical notation for Example 75. The top part is a rhythmic pattern consisting of four measures, each with a vertical bar line. The notes are arranged in two staves, with the upper staff having a treble clef and the lower staff having a bass clef. The notes are mostly eighth and sixteenth notes. The bottom part is a piano score for the same piece, showing a treble and bass staff with a key signature of two sharps (F# and C#) and a time signature of 3/4. The music is marked with a dynamic of *pp* (pianissimo). The piano score shows a melodic line in the treble staff and a bass line in the bass staff, with various articulations and phrasing marks.

Deux Arabesques No 1 , bars 6-7

In the 1890 compositions, however, some of these features appear. In the following illustration from Nocturne, the parts move horizontally, each layer being very different, rhythmically, from the other; low sounds on the off-beats punctuate the texture in a way which resembles colotomic interpunctuation :

Example 77

The image displays two systems of musical notation. Each system consists of four staves. The notation is a form of musical shorthand, likely representing a specific instrument or voice part. The first system shows a sequence of notes and rests across four staves, with a vertical bar line after the second measure. The second system continues the notation, also with a vertical bar line after the second measure. A large, semi-transparent watermark reading 'University of Cape Town' is overlaid diagonally across the lower half of the page.

Example 77

The first system of musical notation consists of two staves. The upper staff is in treble clef with a key signature of three flats (B-flat, E-flat, A-flat) and a 3/4 time signature. It contains a melodic line with eighth and sixteenth notes, some beamed together, and a dynamic marking of *p* (piano). The lower staff is in bass clef with the same key signature and time signature, featuring a bass line with quarter and eighth notes. A double bar line is present after the second measure.

The second system of musical notation consists of two staves. The upper staff is in treble clef with a key signature of three flats and a 3/4 time signature, containing a melodic line with eighth and sixteenth notes. The lower staff is in bass clef with the same key signature and time signature, featuring a bass line with quarter and eighth notes. A double bar line is present after the second measure.

The third system of musical notation consists of two staves. The upper staff is in treble clef with a key signature of three flats and a 3/4 time signature, containing a melodic line with eighth and sixteenth notes. The lower staff is in bass clef with the same key signature and time signature, featuring a bass line with quarter and eighth notes. A double bar line is present after the second measure.

Nocturne, bars 6-9

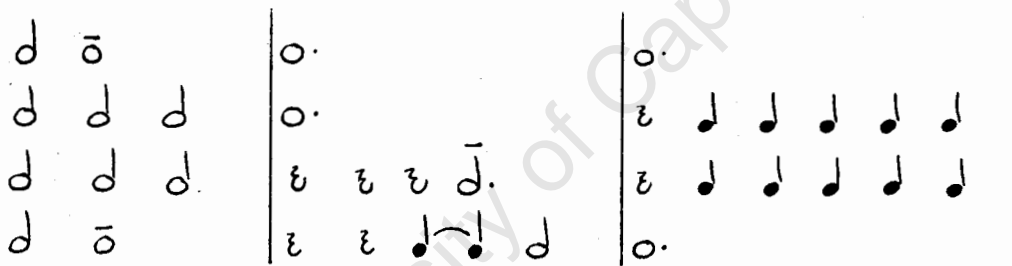
The quaver in the lowest voice in bar 9 marks the end of this section of the composition : in bar 10, rhythmically and melodically new material appears. In the same way, one low gong-stroke is used to mark off the musical sections of gamelan music.

Almost all the pieces in the two books of Préludes and the Estampes consist of layers of different rhythms superimposed upon each other. Only the most striking examples have therefore been selected for comment.

The use of interpunctuating notes and chords is integral in the subdivision of La Cathédrale engloutie (Préludes, Book 1, No.10).

Bar 13 of the following example marks the end of the section extending from bars 1-12 and the start of the new section :

Example 78



La Cathédrale engloutie , bars 12-14

In the next example, the accented and stressed notes in bars 27 and 28 mark another division of the material :

Example 79

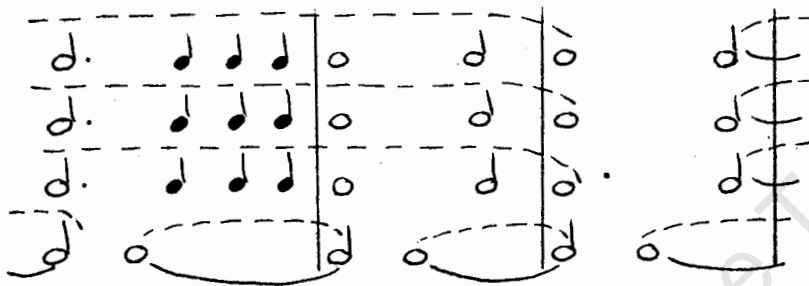
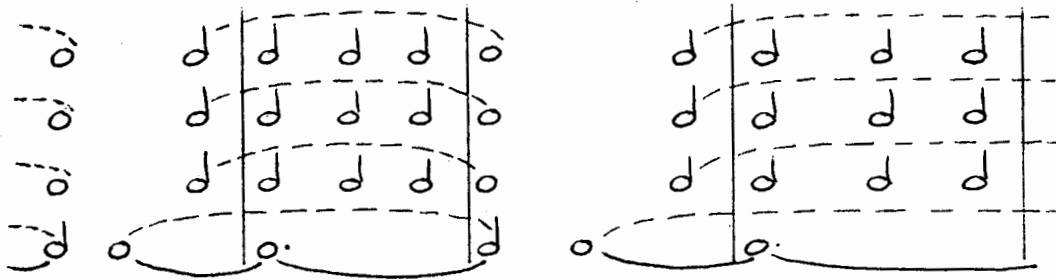
Sonore sans dureté

La Cathédrale engloutie, bars 26-29

In this section which begins in bar 28, it is interesting to note how the phrasing of the lowest line differs from the superimposed melody lines. If one views this line as analogous to the function of the *gong ageng* in gamelan music, then it may be seen that it is this part which divides the music into varying temporal lengths, allowing the melody to flow on free of periodical stress.

In the following example, the solid lines represent tied notes and the dotted lines the phrase lengths :

Example 80



La Cathédrale engloutie, bars 32-38

Both high- and low-pitched punctuating chords, used from bars 42-46, mark the end of this section and the beginning of the new section in bar 47.

Punctuating chords are again employed from bars 66-69 to provide for subdivision:

Example 81

Example 81 shows a vocal line and a piano accompaniment. The vocal line consists of four measures of whole notes, followed by a sixteenth-note run. The piano accompaniment features chords and a melodic line in the right hand, and chords in the left hand. A 'pp' dynamic marking is present in the final measure of the piano part.

La Cathédrale engloutie, bars 66-70

The end of this composition is marked by both punctuation and the rhythmic meeting of all parts, in typical gamelan fashion :

Example 82

Example 82 shows a vocal line and a piano accompaniment. The vocal line consists of four measures of whole notes, followed by a sixteenth-note run. The piano accompaniment features chords and a melodic line in the right hand, and chords in the left hand. A 'pp' dynamic marking is present in the final measure of the piano part.

La Cathédrale engloutie, bars 86-89

The middle section, from bars 32-100, of "Les fées sont d'exquises danseuses" (Préludes, Book 2, No.4), is constructed in a way that resembles the gamelan very closely : four layers are employed, each differing from the other melodically, functionally and rhythmically. As may be seen from the following illustration, it is the lowest part which provides the broad temporal outline, leaving the upper voices free to form their own individual phrase lengths within this outline. Rhythmically, the parts coincide only three times during this section in bars 77-78, bar 87 and bar 100, the latter being the end of the section.

Example 83

The musical notation for Example 83 is presented in three systems, each containing four staves. The notation is handwritten and includes various rhythmic values, accidentals, and trills (tr). The music is organized into three systems, each with four staves. The first system shows a single melodic line with trills. The second system shows four staves with more complex rhythmic patterns and trills. The third system shows four staves with further rhythmic development and trills. The notation is handwritten and includes a large watermark 'University of Cape Town' across the middle.

Example 83

En retenant

sf>p *piu p* *marqué* *pp*

Doux et rêveur

un peu en dehors

pp

"les fées sont d'exquises danseuses", bars 73-87

The following extract from La terrasse des audiences du clair de lune (Préludes, Book 2, No.7) illustrates not only the use of heterorhythmic layers, but also a pinciple which Mantle Hood has called 'saturation density'. This is the hallmark of polyphonic stratification in the Javanese gamelan, whereby almost all possible time units are filled. In addition, the colotomic structure is represented in the gong-rhythm and rhythmic punctuation, contributing to the heterorhythmic nature of the extract.

Example 84

bell-like motif
 theme
 paraphrase
 rhythmic punctuation
 counter melody
 gong-rhythm

8♯ bassa.....
 8♯b.♯
 8♯b.♯

La terrasse des audiences du clair de lune, bars 16-17

'Gong-rhythm' is used almost throughout Pagodes, dividing the piece into varying temporal lengths. The nuclear theme and its paraphrases appear always without accent or stress, even without the natural metrical accent, since they start each time on the off-beat. Rhythmic form is therefore, for the most part, realized by the part

of the colotomic function performed by the long, low bass notes. These appear on the first beat of each bar, except in bars 40-44 and bars 73-77 where they are, nevertheless, heavily accented, thus underlining their function :

Example 85

The musical score for Example 85 is divided into several sections. The top section consists of three measures of rhythmic notation, each with four staves. The first measure has a 'vib.' marking below it. The second and third measures also have 'vib.' markings below them. Below this is another section with two measures, each with two staves. The first measure has a 'vib.' marking below it. The bottom section consists of two measures of piano accompaniment, each with two staves. The first measure has a 'toujours ff' marking above it. The piano accompaniment features complex rhythmic patterns with many beamed notes and rests.

Pagodes, bars 73-77

The heterorhythmic construction of this piece is particularly clear in the following example :

Example 86

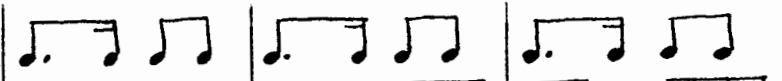



nuclear theme	7		7	
colotomic punctuation	7			
counter melody	7			
colotomic punctuation	7			
gong-rhythm				

Pagodes, bars 7-8

Although the Spanish origin of La soirée dans Grenade (Estampes, No.2) is obvious, the use of colotomy in this composition is particularly gamelan-like. The melody line is rhythmically free to go its own way, while the rhythmic form of the habanera is maintained in another voice. Interpunctuating chords are frequently employed, together

with a regular gong-rhythm which supports the superimposed layers :

Example 87

habanera rhythm	
melody	
punctuation	
gong-rhythm	



La soirée dans Grenade , bars 98-100

Many music historians have referred to the use of gong-like sounds in Debussy's piano music, though none have sought to determine the function of these notes. In the foregoing chapter of this work, the role of gong-rhythms and rhythmic punctuation has been examined and a marked resemblance to the colotomic function of gamelan music has been noted.

Jarocinski has remarked, briefly, on Debussy's use of rhythm.

He writes :

... had it not been for the liberty of rhythm which Debussy cultivated, the innovations of Stravinsky in this field would not have been conceivable.²

This is all very well, but the obvious parallels to be drawn between Debussy's use of rhythm and that of the Javanese gamelan cannot be dismissed in one phrase concerning the origins of Stravinsky's rhythmic writing. For, the entire fabric of Debussy's rhythmic style, post-1889, demonstrates quite clearly the Javanese concept of heterorhythm, as well as that part of heterorhythm known as the colotomic structure.

² Jarocinski, p.143.

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chapter 10

PENTATONIC SCALES

CHAPTER 10 : PENTATONIC SCALES

With Debussy, pentatonism assumes the same validity and importance as all other tonal possibilities in Western music. Constantin Brailoiu, in his article "Pentatonismes chez Debussy"¹, reveals that Debussy's use of pentatonic scales is both integral and consistent in the works composed after 1889. Prior to this, pentatonic references are fleeting and superficial. Like Lockspeiser², Brailoiu believes that the influence of the Javanese gamelan of 1889 generates this pervasive use of 5-note scales in the works composed after 1889.

In Deux Arabesques No.2, written in 1888, a superficial glance would suggest the use of a pentatonic scale in the melody in bar 7. However, the pentatonic nature of this melody is negated by the traditional functional harmony placed underneath, producing a simple alternating tonic and subdominant harmony :

Example 88

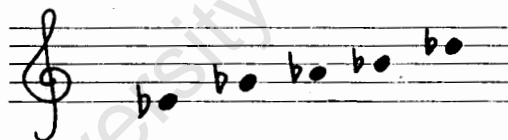
Deux Arabesques No 2 , bar 7

- 1 Constantin Brailoiu, "Pentatonismes chez Debussy"
Studia Memoriae Belae Bartók Sacra
Budapest, Aedes Academiae Scientiarum Hungaricae, 1956, pp.385-426.
- 2 Edward Lockspeiser, "The Significance of Debussy"
Music and Musicians, Vol 10, No.12, 1962, p.14

In the later piano compositions, however, Debussy's use of pentatonic scales appears to be deliberate. No longer are the pentatonic structures accompanied by traditional Western harmony. In most cases, in fact, pentatonicism is the underlying tonal basis for both melodic and harmonic content of the musical structure.

I feel that one of the most important aspects of pentatonic structures is their lack of tonal centre, which reduces the need for tension and release as traditionally practised in Western harmony. Pentatonic structures therefore exist as pure sound complexes and, in the later works of Debussy, it is this characteristic which is exploited.

Voiles (Préludes, Book 1, No.2) consists of three sections : the first and third employ the whole-tone scale, while the contrasting section is based on the following pentatonic scale, which is used from bar 42 to bar 47 :



Both melodic and harmonic content of these bars derive from the pentatonic scale :

Example 89

Voiles, bars 42-43

Pentatonicism appears regularly throughout Les collines d'Anacapri (Préludes, Book 1, No.5). The scale $b\ c\#\ e\ f\# \ g\#$ forms the basis of the nuclear theme (cowbell motif) :

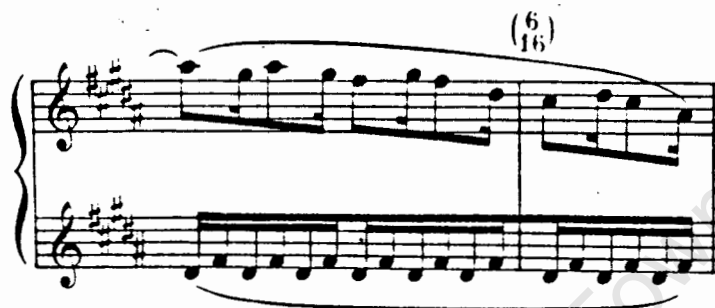
Example 90

Les collines d'Anacapri, bar 1

This motif permeates every aspect of the piece and thus acts as a unifying element within the fragmentary texture of the piece.

The tarantella theme, one of the secondary motifs of the piece, is also based on a pentatonic scale, comprising the notes a# c# d# f# g# :

Example 91



Les collines d'Anacapri, bars 16-17

while the first of the two popular tunes is based on the pentatonic scale b c# d# f# g# :

Example 92

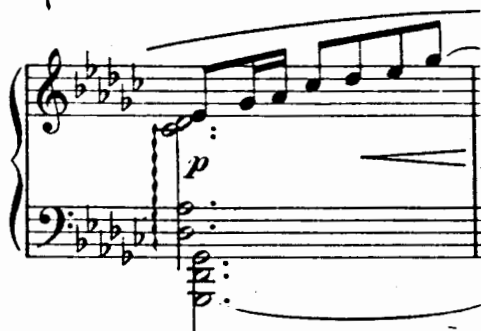
a Tempo (Avec la liberté d'une chanson populaire) Cédez - - - //

Les collines d'Anacapri, bars 32-33

From the foregoing, it is clear that pentatonicism is an integral element in the fabric of the piece. Although the composition is clearly rooted in B major, pentatonicism plays a role here which is equally as important as the diatonic tonality.

The pentatonic scale $e^b g^b a^b c^b d^b$ is used in a particularly gamelan-like way in La fille aux cheveux de lin (Préludes, Book 1, No.8). Appearing for the first time in this form in bar 12 :

Example 93



La fille aux cheveux de lin, bar 12

it re-appears in bar 35 in the same order. In this bar, however, a second voice is added; this lower voice also uses the pentatonic scale in the same order of notes, so that the two voices together form a progression of, predominantly, perfect fourths. The use of the pentatonic scale together with this interval produces a particularly Oriental effect :

Example 94



La fille aux cheveux de lin, bar 35

This concept is concentrated still more in bar 27 of La Cathédrale engloutie (Préludes, Book 1, No.10), where the 5-note scale is used both as a chord and a scale :

Example 95



La Cathédrale engloutie, bar 27

It is difficult, in fact, to isolate here a single example of this technique, since it permeates the entire composition. Further instances may be found in bar 1, bars 7-12, the chords in bars 17 and 18, and (similarly to bar 27) bars 22-26.

Just as in Les Collines d'Anacapri, pentatonicism is an integral element of the tonal construction of this piece.

A pentatonic motif characterizes "General Lavine" - eccentric -, (Préludes, Book 2, No.6). It appears for the first time in bars 11-12 :

Example 96

"General Lavine" - eccentric -, bars 11-12

and is regularly repeated throughout the piece. The last three appearances of this motif (bars 94-95 and 98-100) occur at the following pitch :

Example 97

"General Lavine" - eccentric -, bars 94-95

- i) the nuclear theme appears on the black notes of the piano :

Example 99

Musical score for Example 99, showing piano accompaniment for bars 5-6 of 'Pagodes'. The score is in G major and 3/4 time. The right hand features a melodic line with a trill in the final measure, while the left hand plays a steady bass line. A 'Rit.' marking is present in the right hand part.

Pagodes , bars 5-6

- ii) the second counter melody is based on the scale
 b c# d# f# g# :

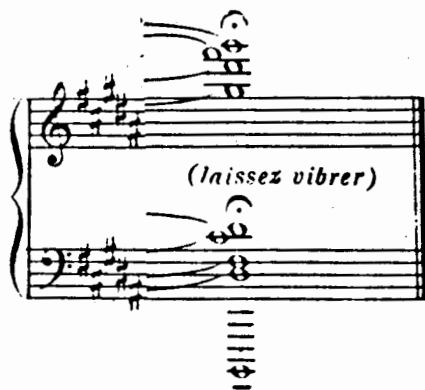
Example 100

Musical score for Example 100, showing piano accompaniment for bars 11-12 of 'Pagodes'. The score is in G major and 3/4 time. The right hand features a melodic line with a triplet in the first measure, while the left hand plays a steady bass line. A 'p' marking is present in the left hand part.

Pagodes , bars 11-12

Since these melodies combine continually throughout the piece, the pentatonic scales appear polyphonically throughout the work. This extends even to the final chord, which is based on the second pentatonic scale :

Example 101



Pagodes , bar 98

It is clear from the foregoing chapter that pentatonism is used too consistently to be coincidental or unconscious. In fact, the relative lack of tension which it embodies makes it inevitable that it should be one of the elements of Debussy's musical language, representing as it does the purely sonorous quality towards which he strove. It is not true to say that Debussy introduced the pentatonic scale into Western music; he did, however, afford it the same validity as all other forms of tonality. In his work, pentatonism enters Western music in an innovative and pervasive way, a way that bears a marked resemblance to the employment of this phenomenon in Eastern cultures.

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chapter 11

FORM

CHAPTER 11 : FORM

In the Javanese gamelan, forms do not evolve from thematic development or the juxtaposition of contrasting material. Instead, recurring melodic formulae and variations in tempo are the most prominent formal elements.

Most gamelan compositions contain a short introduction (*bebuka*) in which only fragments of the main musical idea appear. This is concluded by a variation in tempo and, frequently, a low-pitched beat on the gong.

The main section of the piece is composed of repeated melodic passages, either in their original or paraphrased form. The end of the composition is again signalled by a change in tempo and, occasionally, a low-pitched beat on the gong. In some cases, the gamelan falls silent towards the end, leaving one voice or instrument to finish the piece alone. In some gamelan compositions, a short movement is attached to the end of the main piece. Although fragments of earlier material may appear at this point, the closing section usually contains new material repeated at regular intervals.

The early works of Debussy retain the traditional thematic development within traditional formal outlines. Danse bohémienne comprises two contrasting melodic ideas, each developed and extended in turn. No innovative tempo variations are introduced and no gong-like signals are employed.

This is true also of the Deux Arabesques (1888), in which development of two contrasting melodic ideas accounts for their formal construction. Neither work is characterized by unusual tempo modifications, and each ends traditionally with repeated tonic chords.

With Ballade, however, dating from 1890, certain new procedures are evident. Again, two contrasting themes are employed, but each is extended rather than developed. The introduction (bars 1-5) contains anticipatory fragments of the main theme, and a pause marks the end of the introduction and the approach of the main section of the piece. In addition, a shorter movement is attached to the end of this composition (bars 88-105) : containing fragments of the original melody, it consists, for the most part, of large block chords, a new element in the fabric of this work.

Voiles (Préludes, Book 1, No.2) employs a short introduction in which only the secondary or counter melody appears, without accompaniment. The end of this is marked by the entry of the agogically-placed drum-like beats in bars 5 and 6, while all other voices are silent. This reduction of the voices in the introduction is a particularly gamelan-like characteristic. It throws into relief the entry of the nuclear theme in bar 7. This entry, together with the supporting drum-rhythms, marks the beginning of the main section (*ndawah*) of the work.

The introduction to Les collines d'Anacapri (Préludes, Book 1, No.5) is, similarly, reminiscent of gamelan practice : five tempo modifications, ranging from *très modéré* to *vif*, accompany this section, the conclusion of which is marked by heavily accented chords. Both the pentatonic nuclear theme (cowbell-motif) as well as one of the secondary melodic ideas appear in this introduction. The main section of the work is thus anticipated. In this composition, formal balance and unity lie not in thematic development but in recurring melodic formulae, particularly the pentatonic motif, which re-appears regularly throughout the piece.

The same is true of "General Lavine"-eccentric (Préludes, Book 2, No.6.). In this piece, the introduction, too, conforms to gamelan practice. It ends with the cessation of all voices, two low-pitched gong-like sounds and a pause before the start of the main section of the work :

Example 102

8:1 bassa -----!

sff sec

"General Lavine" - eccentric - bars 8-10

The main section begins with the pentatonic motif mentioned in the previous chapter; it is, in fact the recurrence of this motif throughout the piece which establishes the formal unity and balance of the otherwise fragmentary structure. A section based largely on the introduction forms the conclusion of the composition.

The form of Le vent dans la plaine (Préludes, Book 1, No.3) consists entirely of repeated passages - not developed, simply repeated in more or less original form. A diagrammatic representation of the construction of this piece will serve to illustrate its divergence from traditional Western forms :

Section 1 (bb 1-20)		Section 2 (bb 21-34 ¹)		Section 3 (bb 34 ² -59)	
a	bb 1- 2	d	bb 21 -27	a	bb 34 ² -35
b	bb 3- 6	e	b 28 ¹	b	bb 36 -37
a	bb 7- 8	d	bb 28 ² -29	a	bb 38 -39
c	bb 9-12	e	bb 30 -31 ¹	b	bb 40 -41
a	bb 13-14	d	bb 31 ² -32	a	bb 42 -43
b	bb 15-17	e	bb 33 -34 ¹	b	bb 44 -49
a	b 18			c	bb 50 -51 ²
b	bb 19-20			a	bb 51 ³ -51 ⁴
				c	bb 52 -53 ²
				a ¹ (Coda)	bb 53 ³ -59

Although clearly a ternary or *da capo* form, it is remarkable for its rapid alternation of ideas, as well as the lack of traditional development of any of these ideas. The pattern illustrated above bears a marked resemblance to the reiteration of melodic material which characterizes the music of the gamelan. The final single note, with its instruction *laissez vibrer* is also reminiscent of the gamelan practice of leaving a single voice to conclude the composition. This cessation of all voices except one is frequently used by Debussy to conclude his works :

The rapid semiquaver movement of "Les fées sont d'exquises danseuses", (Préludes, Book 2, No.4) ceases abruptly in bar 121, leaving a slow-moving melodic fragment to finish the piece alone :

Example 103

The image displays two systems of musical notation for piano. The first system consists of three staves. The top staff has a treble clef and a key signature of three flats (B-flat, E-flat, A-flat). It begins with a whole note chord, followed by a single note in the eighth measure with an 8-measure rest indicated above it. A dynamic marking of *p* is placed below the staff. The middle and bottom staves have a grand staff clef and the same key signature. The middle staff contains a rapid semiquaver movement starting in the second measure, marked *pp*. The bottom staff contains a slow-moving melodic fragment, also marked *pp*, consisting of a series of notes with a long slur over them. The second system consists of three empty staves with a grand staff clef and the same key signature, showing the continuation of the slow-moving melodic fragment from the first system.

"Les fées sont d'exquises danseuses", bars 121-127

Canope (Préludes, Book 2, No.10) too, employs a melodic fragment to conclude the work, a practice far removed from traditional formal endings. In Canope, the fragment is supported only by sustained block chords :

Example 104

très doux et très expressif

pp *più*

encore plus doux

pp

Canope , bars 30-33

This technique is used again in Les tierces alternées (Préludes, Book 2, No.11), where not only the ending of the piece is so constructed but also the end of each section of the piece :

- i) the introduction is concluded with a sustained chord as well as half a bar of silence :

Example 105

Cédez - - - - - //

The musical score for Example 105 shows the final bars of a section. It begins with a piano introduction consisting of sustained chords in the right hand and moving lines in the left hand. After a half-bar of silence, the section concludes with a final chord marked *pp*.

Les tierces alternées, bars 7-11

- ii) the end of the first section is marked again with sustained chords :

Example 106

The musical score for Example 106 shows the final bars of a section. It begins with a piano introduction consisting of sustained chords in the right hand and moving lines in the left hand. The piece concludes with a final chord marked *pp* and the instruction *doux et lié*.

Les tierces alternées, bars 88-91

- iii) the close of the middle section employs both sustained chords and a pause in the rapid movement of the thirds :

Example 107

au Mouvt

Les tierces alternées, bars 115 - 117

- iv) and, finally, the end of the composition employs retardation of the movement of the thirds by means of silence and sustained chords :

Example 108

Les tierces alternées, bars 160 - 165

Other pieces which end in this gamelan-like manner include
Danseuses de Delphes (Préludes, Book 1, No.1) bars 30-31;
La fille aux cheveux de lin (Préludes, Book 1, No.8) bars 36-39;
La Cathédrale engloutie (Préludes, Book 1, No.10) bars 87-89;
Feuilles Mortes (Préludes, Book 2, No. 2) bars 50-52;
La puerta del Vino (Préludes, Book 2, No.3) bars 85-90.

Pierre Boulez has described the difficulty of analysing Debussy in any detail :

A component section of a theme is defined as another is selected. We place them together and an outline of a theme is suggested; another phrase is added and we have the beginnings of a form. More material is added and we have a structure.¹

Lockspeiser, too, recognizes the problem but skirts round the solution :

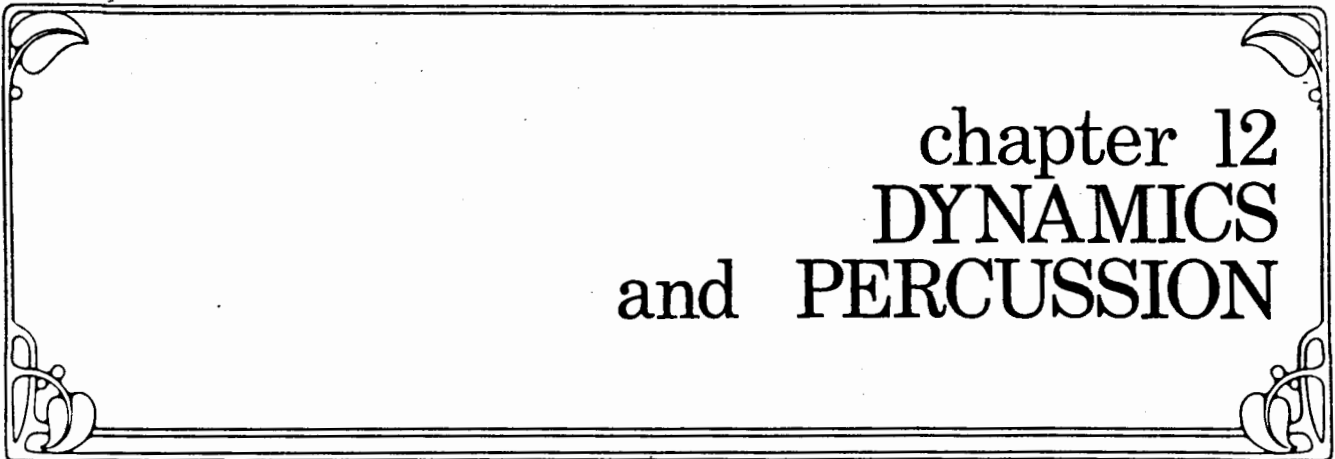
Perhaps in the end we may best summarize Debussy's method of composition in the simple definition of Cézanne : 'Je travaille sur le motif'. The motif is the generating design or symbol. How it proceeds to acquire a form is so much an internal matter that any kind of formal analysis is bound to be inadequate.²

It would be incorrect to assume that the Javanese gamelan provides the solution to all the problems of this formal analysis. The use of recurring melodic formulae to provide unity and balance does, however, shed some light on the problem of how the motif 'proceeds to acquire a form'.

¹ quoted in Lockspeiser, Debussy - His Life and Mind, Vol II, p .244

² *ibid.*

University of Cape Town



chapter 12
DYNAMICS
and PERCUSSION

CHAPTER 12 : DYNAMICS AND PERCUSSION

The concept of loudness in Javanese music bears no relationship to the gradation of sound from *pp* to *ff* in Western music. A Javanese gamelan will either play loudly or softly, the latter being the most common. This is not to say that the composition contains no variation in dynamic level; modifications are, however, always slight and subtle. The gamelan tends to establish long plateaux of more or less the same sound level, changes in this level coinciding with important events in the melodic material.

It is common knowledge that the larger portion of Debussy's piano music exists on a very soft dynamic level. This is not entirely true of the earlier compositions, however. Danse bohémienne, written in 1880, contains frequent changes in dynamic level, these changes ranging from *pp* to *f*. In addition, one cannot speak here of the establishment of dynamic plateaux, since the changes are both too frequent and too contrasting. In bar 45 of this piece, for example, the indication is *mf*; four bars later appears a *crescendo* lasting for two bars, followed by a *decrescendo* lasting for another two bars, followed by the indication *f* in the very next bar. Under no circumstances could this be said to resemble the dynamics used in the gamelan compositions. The same may be said of the Deux Arabesques : changes in the sound level are both frequent and contrasting.

The pieces composed in 1890 exhibit a much slower rate of dynamic change, even though the range of sound still extends from *pp* to *f*. With reference to Ballade, one may speak of the establishment of predominantly soft plateaux of sound : the first 25 bars of this piece are played *p* or *pp*, with the exception of one *mf* marking in bar 15.

Indeed, there are only four *f* indications in the entire composition, this being the loudest end of the range of sound. Yet, by comparison with some of the later Préludes and Estampes, these 1890 compositions remain somewhat noisy.

Voiles (Préludes, Book 1, No. 2) exists almost entirely on a *p* or *pp* plateau. The only variation of this occurs in bars 42-44, where the pentatonic middle section begins.

Corresponding, thus, with an important event in the melodic material, this short-lived departure from the soft plateau remains in keeping with gamelan practice.

Similarly, it is only in the short middle section (bars 28-34) of Le vent dans la plaine (Préludes, Book 1, No.3) that the dynamic level moves away from the softer range. Corresponding, again, with an important modification of the melodic material, this dynamic change achieves both formal and motivic prominence.

It goes without saying that the use of soft dynamics in this composition is picturesque. In only one work did Debussy every try, consciously, to reproduce the sound of the gamelan. This did not prevent him, however, from assimilating the generally low level of sound at which the gamelan usually plays to suit his own expressive needs in this case.

In Des pas sur la neige, (Préludes, Book 1, No.6) the use of a soft dynamic level is again painterly, as a snowy landscape always seems quieter than a sunny one. It is nevertheless remarkable that the entire composition remains within a *p* or *pp* indication. Despite the programmatic significance, this lack of dynamic change is not common to traditional Western practice, pre-Debussy.

With La fille aux cheveux de lin (Préludes, Book 1, No.8), a predominantly soft plateau is again established. Only once is there a deviation from this, in bar 21, where the indication is *mf* : this

point corresponds almost exactly with the middle of the composition, signalling a return to the melodic material presented in the opening bars.

La Cathédrale engloutie (Préludes, Book 1, No.10) employs plateaux of sound in both a formal and an expressive role. Each section of the composition appears on its own dynamic level, together with its own melodic material :

First section	bb 1-15	<i>pp</i>
Second section	bb 16-21	<i>p marqué</i> for chords <i>sempre pp</i> for the rest of the material
Third section	bb 22-41	<i>f</i> and <i>ff</i>
Fourth section	bb 42-58	<i>p</i> , <i>più p</i> , <i>pp</i> , <i>più pp</i>
Fifth section	bb 59-63	<i>f</i> , <i>ff</i>
Final section	bb 64-89	<i>p</i> , <i>pp</i> , <i>più pp</i>

Examples illustrative of Debussy's use of soft dynamics are too numerous to be mentioned *in toto* here. From the foregoing material it is clear that dynamic levels are used by Debussy in both an expressive, a pictorial and a formal role. This practice, corresponding as it does with gamelan practice, achieves further significance when combined with the use of percussive sounds.

Percussion is an integral feature of gamelan music. The employment of percussion in the gamelan is distinguished by two aspects :

- i) percussive sound is nearly always indefinitely-pitched, though there are fixed pitch ranges: and
- ii) percussive sound almost always appears on a very soft dynamic level.

Indefinite pitch is effected in two ways :

- i) the playing of two notes, slightly different in pitch, simultaneously, and

- ii) the playing of two notes in such rapid alternation that the individual sounds merge.

It is these aspects which differentiate between the use of percussion in Javanese music and the usage in Western music. In the later works of Debussy, however, these Eastern principles find their expression.

It is impossible to illustrate Debussy's use of soft percussive sound with examples drawn from the pre-1889 piano compositions : no trace of this technique is evident in these works. With the Préludes and the Estampes, however, examples abound.

The phenomenon is used consistently in Danseuses de Delphes (Préludes, Book 1, No.1). In the following extract, the indicated dynamic level is *p*. The use of the major 2nd interval has two functions :

- i) to colour the harmony of the chords; and
- ii) to create the effect of indefinitely-pitched high bell sounds.

Example 109

Danseuses de Delphes, bars 8-9

The emulation of church bells in La Cathédrale engloutie (Préludes, Book 1, No.10) affords yet another example of the use of subtle, indefinitely-pitched percussive sound, as the following example illustrates :

Example 110

La Cathédrale engloutie, bars 42-45

Particularly with the aid of the damper pedal here, numerous sympathetic vibrations are effected. This resembles closely the aural impression of a peal of church bells, or of gamelan gongs, in which a whole fabric of extra sounds, sympathetically arrived at, are set in motion.

The merging or blurring of sounds through the rapid alternation of these sounds is used almost throughout Le vent dans la plaine (Préludes, Book 1, No.3). Together with a consistently soft dynamic level, this technique creates the effect of a delicate reverberation surrounding the fragmentary melodic lines :

Example 111

The musical score for 'Le vent dans la plaine', bars 1-3, is presented in two systems. The key signature is G-flat major (three flats) and the time signature is 4/4. The first system features a right-hand part with a continuous melodic line of eighth notes, starting on G4 and moving up stepwise. The left-hand part provides a rhythmic accompaniment of eighth notes, with some notes marked with '6' and '8'. The dynamic marking 'pp' is indicated. The second system continues the melodic line in the right hand and the accompaniment in the left hand, with some notes marked with '7' and '2'.

Le vent dans la plaine , bars 1-3

This technique is used again, with similar effect, in
Ce qu'a vu le vent d'Ouest (Préludes, Book 1, No.7) :

Example 112

The first system of music is in treble clef. The right hand plays a melodic line with eighth notes, and the left hand provides a steady eighth-note accompaniment. A piano (*p*) dynamic marking is placed above the first measure. The second system is in bass clef, following the same pattern with a piano (*p*) dynamic marking above the first measure.

Ce qu'a vu le vent d'Ouest, bars 27-28

and later in the same piece, in the following form :

Example 113

The first system is in bass clef. The right hand is mostly silent, while the left hand plays a steady eighth-note accompaniment. A pianissimo (*pp*) dynamic marking is placed below the first measure. The second system is also in bass clef. The right hand plays a melodic line with eighth notes, and the left hand continues with the eighth-note accompaniment. A pianissimo (*pp*) dynamic marking is placed below the first measure, and the instruction *pp incisif* is written above the first measure.

Ce qu'a vu le vent d'Ouest, bars 54-55

In the latter two compositions, this technique is particularly suited to the evocation of the picturesque effect implied in the titles.

Light percussive sounds characterize Canope (Préludes, Book 2, No.10). The accompanying appoggiatura figures surround the chords with additional vibrations, picturesquely creating the 'zing' or the 'ring' which one traditionally associates with bell sounds.

Example 114

Canope, bars 17-19

Very high-pitched percussive sounds, another feature of Debussy's compositional style, find expression later in this piece, again on a very soft dynamic level :

Example 115

Canope, bars 24-25

Feux d'artifice, (Préludes, Book 2, No.12) makes use of indefinitely-pitched percussion on a large scale. In the following example, the softness as well as the pitch of the punctuating chords produces a particularly gamelan-like effect, as does the rapid alternation of notes only slightly different in pitch :

Example 116

The musical score for Example 116 is written for piano. It consists of a grand staff with three staves. The top staff has a treble clef and a key signature of one flat (B-flat). The music begins with a dynamic marking of *pp* (pianissimo) and a tempo marking of 8-7. The score features a series of chords and notes, with a rapid alternation of notes only slightly different in pitch, creating a gamelan-like effect. The music is characterized by softness and a gamelan-like effect.

Feux d'artifice, bar 8

In the following extract, too, the rapid succession of notes creates the effect of a vibrating cluster of sound :

Example 117

The first system of the musical score consists of three measures. The top staff is a grand staff with a treble clef and a key signature of one flat (B-flat). The first measure contains a single note (B-flat) with a dynamic marking of *p*. The second measure contains a single note (B-flat) with a dynamic marking of *piu p*. The third measure contains a rapid succession of notes, starting with a dynamic marking of *pp*, which creates a vibrating cluster effect. Below the first measure, there is a small diagram of a piano key labeled "81b2".

The second system of the musical score consists of four measures. It continues the rapid succession of notes from the first system, maintaining the vibrating cluster effect. The notes are written in a grand staff with a treble clef and a key signature of one flat (B-flat).

Feux d'artifice , bars 18-21

Soft percussive rhythm is a feature of Pagodes; used consistently from the opening bars onwards, these chords provide the percussive layer of the multilayered construction which is Pagodes :

Example 118

The musical score for 'Pagodes' (bars 1-4) is presented in two systems. The first system shows the initial chords and melodic lines, with dynamics 'pp' and 'm.d.', and a tempo marking 'm.g.'. The second system shows a continuation of the texture with a 'Rit.' marking. The score includes various musical notations such as slurs, ties, and dynamic markings.

Pagodes, bars 1-4

Soft percussive sounds appear consistently in Debussy's post-1889 compositions. Additional examples may be found in :

Ce qu'a vu le vent d'Ouest (Préludes, Book 1, No.7) bars 10-14;

La danse de Puck (Préludes, Book 1, No.11) bars 30-51, 77-78, 92 and 94;

"General Lavine" - eccentric - (Préludes, Book 2, No.6) bars 11-16, 19-22, 35-38, 70-75, 78-81, 94-95, 98;

La terrasse des audiences du clair de lune (Préludes, Book 2, No.7) bars 3-4, 10-11, 16-18, 25-27 (middle register);

Ondine (Préludes, Book 2, No.8), bars 1-3, 5, 10, 53-57 (middle layer).

That Debussy was aware of the subtle percussiveness of Javanese music is evidenced by his comment :

... And if one listens to it without being prejudiced by one's European ears, one will find a percussive charm that forces one to admit that our own music is not much more than a barbarous kind of noise more fit for a travelling circus.¹

Apparent also, in this comment, is a reaction against the 'noisiness' of Western music. The hypothesis of Javanese influence becomes tenable, therefore, when this comment is juxtaposed with the softness of both melody and percussion prevalent in the post-1889 compositions of Debussy.

¹ Lesure, transl. Smith, p.278

University of Cape Town

Conclusion

CONCLUSION

When Debussy spoke of Javanese music as being based on a counterpoint beside which that of Palestrina pales, he revealed himself as having perceived not only the multi-layer structure in gamelan music but also its rhythmic intricacy.¹

The influence of this perception manifests itself in Debussy's compositions, which are structures both multilayered and rhythmically intricate.

Assimilation of gamelan technique is reflected also in the fact that these layers consist frequently of the stratification of a single melodic and rhythmic idea : the structure of the composition evolves from subtle modification and ornamentation of the one idea, presented in different linear strata.

This use of superposed melodic, rhythmic and textural levels has been noted by a number of eminent historians :

Paul Jacobs writes :

Debussy's forms tend to be a series of waves, large crests whose principal themes recede into the background and continue as ostinatos while other versions of themselves ... [are] ... superposed ... Although the thematic repertory ... is fairly limited, alterations in texture and rhythm disguise thematic identities so that they often become mere suggestions of themselves.²

¹ Chou Wen-Chung, "Asian Concepts and Twentieth-Century Western Composers", The Musical Quarterly, Vol.57, No.2, 1971, p.212.

² Paul Jacobs, "Debussy", in Vinton, J.(ed.), Dictionary of 20th Century Music, London, Thames and Hudson, 1974, p.177.

Wilfred Dunwell affords Debussy a prominent role in the ... transition from harmony based on chord-progression within a defined tonality, to the organization of texture on a basis of movement and interplay of strands and patterns ... and melodic lines set in endless variety of inter-relation,³

while Wittlich believes Debussy to be the originator of melodic stratification, which he defines as :

An alternative to the long-line quality ... rather than being temporal, linear and goal-oriented, melodic events appear as linear strata and tend to take on a spatial objectified characteristic. In general, melodic stratification begins to appear when the linear aspects consist principally of segmental groupings; as a consequence, the long line recedes in structural significance, and characteristics of objects existing in space tend to become prominent.⁴

But without an awareness of the melodic procedures of the gamelan and Debussy's assimilation of these techniques into his overall musical fabric, such theorisings are rootless.

From the material presented in the preceding chapters, it is evident that a substantial portion of Debussy's musical language derives from his interpretation of the musical events presented by the Javanese gamelan at the 1889 and 1900 Paris Exhibitions. The most significant aspect of this influence is manifested in the use of superposed layers of sound. Apart from the rhythmic freedom inherent in such a method, the use of paraphrasing rather than development provided for Debussy a viable alternative to the 'mechanistic bondage' imposed by traditional

³ Wilfred Dunwell, The Evolution of Twentieth-Century Harmony, London, Novello, 1960, pp.230-231.

⁴ Gary E. Wittlich (ed.), Aspects of Twentieth-Century Music, New Jersey, Prentice-Hall Inc., 1975, p.310.

methods of composition :

Thematic development in the works of Mozart, Beethoven and Wagner appeared to Debussy to be based on a mechanical procedure, a mere formula.⁵

Infinitely more appealing, by comparison, was the gamelan technique to Debussy

- the wilful maladjustment of similar melodic lines [which] has often a particular charm in its blissful impression of personal freedom against mechanistic bondage.⁶

Included also in this layering technique is the use of independent melodic ideas which dart in and out of the fabric of the composition, providing, for a moment, another layer of melodic activity in the sonorous texture.

It has been seen that these strata of linear activity are, for the most part, condensed into three distinct registral and functional layers :

the slow-moving bass line provides a predominantly rhythmic outline for the more rapid movement of the superimposed parts; in the middle register is placed the melodic nucleus of the composition, while ornamental and elaborated versions of this material find their expression in the highest register.

This subdivision is a feature of Debussy's later piano music. Without an awareness of gamelan practice in this regard, this feature remains noteworthy but inexplicable.

In the same way, Debussy's combined use of tempo, agogia and dynamics is illuminated by the obvious affinity with gamelan practice. Up till now, this aspect has merely been noted, with the question of origin hitherto circumvented.

⁵ Lockspeiser, Debussy : His Life and Mind, Vol II, p.231

⁶ Curt Sachs, The Wellsprings of Music, The Hague, Nijhoff, 1962, p.188

Jarocinski sidesteps this issue by saying

These various methods of treating sound with the aid of dynamics and articulation are the consequence of Debussy's tendency to enlarge the scale of sound-values.⁷

He goes on to comment on the phenomenon in detail :

Whereas with the Romantics the volume of sound is almost bound to be in direct proportion to its density, with Debussy it is often just the opposite : a considerable volume combined with a relatively restricted intensity. He rarely has recourse to the dynamic effects resulting from an alteration in the original volume of sound, and shows a marked preference for *pianissimos* and *pianos*. Eimert has calculated that in Jeux 557 bars out of 709 remain within those limits. His other works show a similar percentage (80 per cent). It can therefore fairly be said that Debussy 'reduced the dynamics of music.' ... since it is the relations between duration and intensity which determine the tempo of a work, our conception of the role played by rhythm, metre and agogia has fundamentally changed ... The harmonic significance of chords is lost in a quick tempo where they can be transformed either into dynamic values, or into what today we should call 'bands of sonority.' The same succession of sounds creates different values if there is a change in the agogic conception. Debussy employed a great variety of methods. He introduced agogic and rhythmic relationships.⁸

While Jarocinski's observations are both accurate and significant, they remain incomplete without the concomitant information that these were not new inventions on the part of Debussy, but his interpretation and introduction into Western music of concepts integral to Javanese musical thought.

7 Jarocincki, pp.139-140.

8 *ibid.*

Related to Debussy's 'reduction of the dynamics of music' is his use of indefinitely-pitched percussion. Wen-Chung has remarked on this :

Another common characteristic of Asian music is the subtle use of percussion that has no precise pitch. And Debussy was perhaps also the first Western composer to recognize the lyrical qualities and possibilities of the percussion.⁹

Practical examples of this assimilation have been included in a previous chapter of this work; with the amplification of Wen-Chung's comment which this chapter provides, a hitherto neglected aspect of Debussy's musical language is illuminated. In conjunction with Debussy's comment, previously mentioned, that by comparison with Asian percussion Western instruments produce the noise of a travelling circus, this aspect of style must be included in any subsequent attempts to define a critical approach to his work.

In the same way, Debussy's approach to the matter of form remains elusive; a definitive appraisal of this aspect is yet to be developed. Any such appraisal must, however, take into account the influence of the Javanese concept of form : the present dissertation has shown that, similar to Javanese practice, Debussy's forms derive, in part, from recurring melodic formulae as well as temporal variations. Something of this was discerned by Paul Gilson as far back as 1907, when he observed that :

The predominant feature of Debussy's instrumental works is repetition ... Incidental clauses are linked together as motives in a tapestry ... The instrumental works ... appear to consist of a series of impressions connected by 'repeats'.¹⁰

⁹ Wen-Chung, p.212.

¹⁰ quoted in Lockspeiser, Debussy : His Life and Mind, Vol II, p.232

This perception has not, however, been developed by the analysts of Debussy's music, and the many affinities with Javanese use of form have been, hitherto, unnoticed. These Javanese affinities are further illuminated by the resemblance which they bear with the following description given by Margaret Kartomi in her writings on Javanese music :

Unlike Western music, phrase repetition and thematic development are the exception rather than the rule; stylistic unity and logic are achieved by such factors as recurring melodic formulae ... rhythmic surges and abatements, and the prevailing (most descending) direction of melodic movement.¹¹

The descending direction of melodic movement which features in much of Debussy's music has been allied by Jankélévitch to the botanical phenomenon of geotropism. Lockspeiser gives an account of this :

Geotropism is the name given to the phenomenon which causes the roots of plants to gravitate towards the centre of the earth ... One is reminded here of the symbolical significance of the floral and plant designs of the Art Nouveau ... Many of the typical arabesque designs of Debussy appear to be propelled by a downward-moving force ... [this is] unquestionably a musical counterpart of the decorative designs carried over into Impressionism from the Art Nouveau.¹²

This symbolic explanation of the predominantly downward direction of melodic movement in the music of Debussy is perhaps possible : necessitating the botanical intricacies as it does, however, the theory appears somewhat contrived. Oddly, Lockspeiser later proceeds to diminish the value of his analogy :

... the downward moving design of the arabesque [in Debussy's works] ends by defeating itself in the form of a design of horizontal uniformity or in monotonously repeated notes.¹³

11 Margaret Kartomi, "Conflict in Javanese music" Studies in Music, No.4, 1970, p.69

12 Lockspeiser, Debussy : His Life and Mind, Vol II, pp.237-238

13 ibid., p.242

Since 'horizontal uniformity' and 'monotonously repeated notes' would not be out of keeping with Javanese practice in this regard, a simpler (and, therefore, more tenable) analogy may be achieved if Debussy's employment of descending melodic lines is allied with the Javanese use of this phenomenon

This dissertation does not attempt to provide the definitive assessment requested by Lockspeiser : "Above all, the wide span of Debussy's evolution requires assessment from a technical viewpoint."¹⁴

It does provide, however, an assessment of the role played by the Javanese gamelan in this evolution, a role which, it has been seen, is too pervasive to be neglected in any technical analysis. It amplifies, too, the claims made by those historians quoted in the Introduction.

In his article celebrating Debussy's centenary, "The Significance of Debussy", Lockspeiser writes :

A novel and, I believe, unprecedented feature of our musical life today is the widening panorama that has gradually been made available to us, embracing nothing less than the entire range of musical history. Not only are the familiar 19th, 18th and 17th centuries at the basis of our normal musical experience : the music of the Renaissance is equally well known to us and even some aspects of the music of the Middle Ages; and as if the vast contributions of western music were not enough we are further stimulated by exotic music cultures ... What concerns us is how it came about that this eclectic outlook followed so closely the musical explorations of Debussy. I think the answer is that Debussy was the first composer who himself enlarged the expressive resources of music in this universal fashion.¹⁵

This dissertation has been an attempt to illuminate the role of just one of these expressive resources.

14 ibid., p.245

15 Lockspeiser, "The Significance of Debussy", p.14.

University of Cape Town

Appendices

APPENDIX A

Louis Benedictus wrote transcriptions of the gamelan music played at both the 1889¹ and 1900² Exhibitions in Paris.

Much musical detail has been omitted by Benedictus, especially in the 1889 pieces, so that these appear more as reductions than transcriptions. In the Danse Javanaise of 1900, however, the work is somewhat more precise. Some idea of instruments has been given here, and the intricacy and fullness of sound common to gamelan music has been more clearly indicated than in the earlier transcriptions.

In all the pieces, faithfulness to the reproduction of the actual sounds has been neglected in favour of pianistic interpretation. In the light of this, accurate conclusions regarding the music of the gamelan cannot be drawn.

Despite the imperfections, however, the work of Benedictus is both valuable and interesting, for it provides the only extant record of the Javanese gamelan music which Debussy heard at the Paris Exhibitions.

¹ G. Hartmann, (ed.), Les Musiques Bizarres a l'exposition recueillies et transcrites par Benedictus.
Dessins de F.-A. Gorguet, Paris, Hartmann et Cie., 1889,
pp.3-17

² Judith Gautier, Les Musiques Bizarres a l'exposition de 1900 "Danse Javanaise" transcrites par Benedictus.
Paris, Société d'editions littéraires et artistiques, 1900,
pp. 5-9

1889

LE GAMELANG

PROCESSION DES MUSICIENS JAVANAIS.

(Ce morceau doit être joué *piano* jusqu'à la fin)

Allegretto moderato.

8-

PIANO.

U. C.

8-

8-

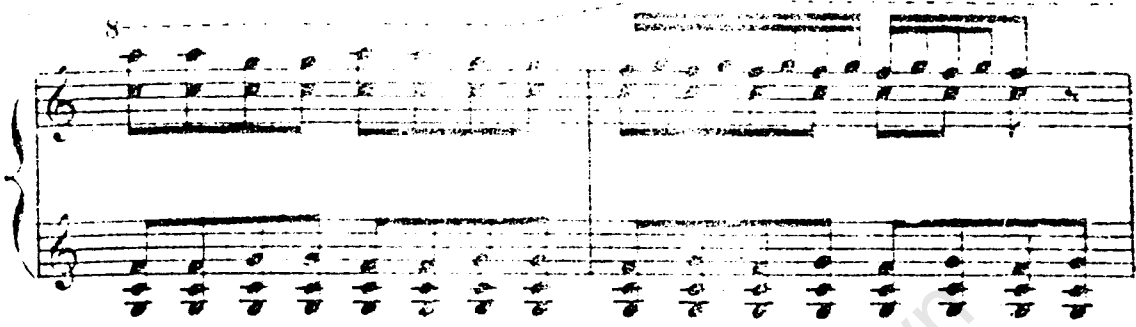
First system of musical notation. The upper staff contains a melodic line with eighth and sixteenth notes, including a fermata. The lower staff contains a bass line with chords and eighth notes. A dashed line is positioned above the upper staff.

Second system of musical notation, starting with a measure rest labeled '8'. The upper staff features a melodic line with eighth notes and a fermata. The lower staff continues with a bass line of chords and eighth notes. A dashed line is positioned above the upper staff.

Third system of musical notation, starting with a measure rest labeled '8'. The upper staff features a melodic line with eighth notes and a fermata. The lower staff continues with a bass line of chords and eighth notes. A dashed line is positioned above the upper staff.

Fourth system of musical notation, starting with a measure rest labeled '8'. The upper staff features a melodic line with eighth notes and a fermata, ending with a dynamic marking of *sf*. The lower staff continues with a bass line of chords and eighth notes. A dashed line is positioned above the upper staff.

5



This system contains two staves. The upper staff is in treble clef and features a melodic line with eighth and sixteenth notes, including some beamed sixteenth notes. The lower staff is in bass clef and provides a harmonic accompaniment with chords and moving lines. A dashed line with the number '5' is positioned above the first measure.

8



This system contains two staves. The upper staff continues the melodic line from the previous system. The lower staff continues the harmonic accompaniment. A dashed line with the number '8' is positioned above the first measure.

8

rit. sc.



This system contains two staves. The upper staff features a melodic line with eighth notes. The lower staff features a rhythmic accompaniment of eighth notes. The instruction *rit. sc.* is written in the lower staff. A dashed line with the number '8' is positioned above the first measure.

8

sempre p



This system contains two staves. The upper staff features a melodic line with eighth notes. The lower staff features a rhythmic accompaniment of eighth notes. The instruction *sempre p* is written in the lower staff. A dashed line with the number '8' is positioned above the first measure.

8

The first system of music consists of two staves. The upper staff is in treble clef and contains a sequence of quarter notes: G4, A4, B4, C5, followed by a group of four eighth notes: D5, E5, F5, G5. The lower staff is in bass clef and contains a sequence of quarter notes: G3, A3, B3, C4, followed by a group of four eighth notes: D4, E4, F4, G4.

8

The second system of music consists of two staves. The upper staff is in treble clef and contains a sequence of quarter notes: G4, A4, B4, C5, D5, E5, F5, G5. The lower staff is in bass clef and contains a sequence of quarter notes: G3, A3, B3, C4, D4, E4, F4, G4.

8

The third system of music consists of two staves. The upper staff is in treble clef and contains a sequence of quarter notes: G4, A4, B4, C5, D5, E5, F5, G5, with a sharp sign (#) above the C5 note. It includes a triplet of eighth notes (D5, E5, F5) and a triplet of eighth notes (G5, A5, B5). The lower staff is in bass clef and contains a sequence of quarter notes: G3, A3, B3, C4, D4, E4, F4, G4.

8

The fourth system of music consists of two staves. The upper staff is in treble clef and contains a sequence of quarter notes: G4, A4, B4, C5, D5, E5, F5, G5, with a sharp sign (#) above the C5 note. It includes a triplet of eighth notes (D5, E5, F5) and a triplet of eighth notes (G5, A5, B5). The lower staff is in bass clef and contains a sequence of quarter notes: G3, A3, B3, C4, D4, E4, F4, G4.

First system of musical notation. The left hand (bass clef) plays a steady eighth-note accompaniment. The right hand (treble clef) features a melodic line with a trill-like figure and a fermata. A dashed line above the system indicates a measure rest.

Second system of musical notation. The left hand continues with eighth-note accompaniment. The right hand has a melodic line with a trill-like figure and a fermata. A dashed line above the system indicates a measure rest.

Third system of musical notation. The left hand continues with eighth-note accompaniment. The right hand has a melodic line with a trill-like figure and a fermata. A dashed line above the system indicates a measure rest.

Fourth system of musical notation. The left hand continues with eighth-note accompaniment. The right hand has a melodic line with a trill-like figure and a fermata. A dashed line above the system indicates a measure rest. The instruction *sempre p* is written below the right hand staff.

8

The first system of music consists of two staves. The upper staff is in treble clef and contains a sequence of eighth notes and quarter notes. The lower staff is in bass clef and contains a more complex rhythmic pattern with eighth and sixteenth notes.

8

The second system of music consists of two staves. The upper staff continues the melodic line from the first system. The lower staff continues the bass line with similar rhythmic complexity.

8

The third system of music consists of two staves. The upper staff features a steady eighth-note pattern. The lower staff continues the bass line with eighth and sixteenth notes.

8

The fourth system of music consists of two staves. The upper staff has a more varied melodic line with some rests. The lower staff continues the bass line.

8

The fifth system of music consists of two staves. The upper staff features two triplet markings over eighth notes. The lower staff continues the bass line, also featuring triplet markings over eighth notes.

1889

DANSE JAVANAISE.

Lento ma non troppo.
(Pédale tenue jusqu'à la fin du morceau)

PIANO.

très doux.

8

p *non legato sempre.*

This system shows the first two measures of the piece. The right hand has a melodic line starting with a quarter note, followed by eighth notes. The left hand has a simple accompaniment of quarter notes. A dynamic marking of *p* (piano) is present. The instruction *non legato sempre.* is written across the measures. A dashed line with the number 8 above it indicates the end of the first octave.

8

This system contains the next two measures. The right hand continues the melodic line with eighth notes. The left hand accompaniment remains consistent. A dashed line with the number 8 above it indicates the end of the second octave.

rit.

This system contains the final two measures. The right hand features a triplet of eighth notes. The left hand has a triplet of quarter notes. A *rit.* (ritardando) marking is placed above the first measure of this system. The piece concludes with a final chord in the right hand and a whole note in the left hand. A dashed line with an 'x' above it indicates the end of the piece.

First system of a piano score. The right hand features a melodic line with a slur over the first two measures and a fermata over the second measure. The left hand has a simple accompaniment. The instruction *legg. stacc.* is written above the right hand.

Second system of a piano score. The right hand has a rapid sixteenth-note passage. The left hand has a steady accompaniment. The instruction *non legato.* is written above the right hand, and *crusc.* is written below the left hand.

Third system of a piano score. The right hand has a triplet of eighth notes. The left hand has a steady accompaniment. The instruction *f rit.* is written below the left hand. Dynamic markings *p* and *mf* are present.

Fourth system of a piano score. The right hand has a rapid sixteenth-note passage. The left hand has a steady accompaniment. The instruction *p ma marcato.* is written above the right hand.

The first system of music consists of two staves. The upper staff is in treble clef and contains a melodic line with a series of eighth notes, some beamed together, and a few quarter notes. The lower staff is in bass clef and contains a rhythmic accompaniment of eighth notes. The key signature has one sharp (F#) and the time signature is 3/4. The system is divided into two measures by a bar line. Dynamics markings 'p' (piano) are placed below the bass staff in each measure.

The second system of music continues the piece. It features the same two-staff structure as the first system. The melodic line in the treble staff and the accompaniment in the bass staff are consistent with the previous system. The system is divided into two measures. Dynamics markings 'p' are present below the bass staff in both measures.

The third system of music continues the piece. It features the same two-staff structure. The melodic line in the treble staff and the accompaniment in the bass staff are consistent with the previous systems. The system is divided into two measures. Dynamics markings 'p' are present below the bass staff in both measures.

The fourth system of music continues the piece. It features the same two-staff structure. The melodic line in the treble staff and the accompaniment in the bass staff are consistent with the previous systems. The system is divided into two measures. Dynamics markings 'p' are present below the bass staff in both measures. Performance instructions are included: 'poco accel.' (poco accelerando) is written above the treble staff in the second measure, and 'cresc.' (crescendo) is written below the bass staff in the second measure.

The first system of music consists of two staves. The treble staff contains a melodic line with eighth-note patterns, while the bass staff provides a rhythmic accompaniment with eighth notes. The dynamic marking *p* (piano) is placed below the bass staff at the beginning of the system.

a Tempo.

The second system continues the musical piece. The treble staff shows a melodic line with some rests. The bass staff features a more active accompaniment with eighth-note patterns. A dynamic marking of *f* (forte) is placed above the bass staff in the middle of the system.

The third system shows a continuation of the musical texture. The treble staff has a melodic line with a slur over the final notes. The bass staff has a rhythmic accompaniment. A dynamic marking of *sf* (sforzando) is placed above the bass staff.

The fourth system concludes the page. It features similar melodic and rhythmic elements to the previous systems. A dynamic marking of *sf* (sforzando) is placed above the bass staff.

The first system of music consists of two staves. The treble staff begins with a half note G4, followed by a half note F#4, and then a half note E4. The bass staff features a continuous eighth-note pattern. A dynamic marking of *sf* is placed below the first measure. A slur covers the first two measures of the treble staff.

The second system continues the musical notation. It includes a dynamic marking of *sf* and an *accel.* (accelerando) marking above the treble staff in the second measure. The notation is similar to the first system, with a half-note melody in the treble and an eighth-note accompaniment in the bass.

The third system shows the continuation of the musical piece. The treble staff has a half-note melody, and the bass staff maintains the eighth-note accompaniment. There are no dynamic markings in this system.

The fourth system concludes the page. It features a dynamic marking of *f* and a *molto rit.* (molto ritardando) marking below the bass staff. The treble staff ends with a half note G4, and the bass staff ends with a half note G2. Both staves feature triplet markings over the final two measures.

Tempo 1^o ma più mod^{to}
tres rythmé

f animé. *sf*

sf *sf*

sf *sf*

sf *sf*

First system of musical notation, featuring a grand staff with treble and bass clefs. The music is in a key with two sharps (F# and C#) and a 3/4 time signature. The right hand plays a complex, multi-measure chordal passage, while the left hand provides a rhythmic accompaniment with eighth notes. Dynamic markings include *sf* (sforzando) and accents.

Second system of musical notation. The right hand continues with a melodic line of eighth notes, marked with *f* (forte) and accents. The left hand plays a steady eighth-note accompaniment. A *sf* marking is present at the end of the system.

Third system of musical notation. The right hand features a melodic line with eighth notes and slurs, marked with *f* and accents. The left hand continues with eighth-note accompaniment. A *sf* marking is present at the end of the system.

Fourth system of musical notation. The right hand plays a complex, multi-measure chordal passage with slurs and ties. The left hand provides a rhythmic accompaniment with eighth notes, marked with *sf* and accents.

Fifth system of musical notation. The right hand continues with a complex, multi-measure chordal passage. The left hand provides a rhythmic accompaniment with eighth notes, marked with *sf* and accents.

First system of musical notation. The right hand (treble clef) plays a series of chords, while the left hand (bass clef) plays a rhythmic accompaniment of eighth notes. A dynamic marking of *sf* (sforzando) is present in the right hand.

Second system of musical notation, continuing the piece with similar chordal and rhythmic patterns in both hands.

Third system of musical notation, maintaining the established musical texture.

Fourth system of musical notation, concluding the page with the same musical style.

molto accel.

sempre f

sempre f

sempre f

molto rit.

f *ff*

GAMELAN - GOEDJIN

DANSE - JAVANAISE

1900

Le caractère de ce morceau exige l'emploi de la pédale sourde durant toute sa durée, même aux endroits marqués d'un *f*.

Allegretto molto moderato (M. d = 56)

(Gambang)

(Trommong) *dolce leg.*

(Kenong)

(Gendang)

(Gong)

This page contains a handwritten musical score for piano, consisting of four systems of staves. The key signature is one sharp (F#) and the time signature is 3/4. The notation includes various musical elements:

- System 1:** Features a treble staff with triplets of eighth notes and a bass staff with a melodic line. Performance markings include *bv* (bravissimo) and *(Rebab)*.
- System 2:** Shows a treble staff with dense chordal textures and a bass staff with sustained notes. Includes a *cresc.* (crescendo) marking.
- System 3:** Contains a treble staff with triplets and a bass staff with chords. Markings include *rall.* (rallentando), *a tempo*, and *mf* (mezzo-forte).
- System 4:** Features a treble staff with triplets and a bass staff with a melodic line. Includes *Ped.* (pedal) markings and a dynamic of *f* (forte).

First system of musical notation. Treble clef, key signature of one sharp (F#). The right hand features a series of chords and eighth notes, with dynamic markings *pp* and *ff*. The left hand has a bass line with eighth notes and rests. A fermata is placed over the first measure of the right hand.

Second system of musical notation. Treble clef, key signature of one sharp (F#). The right hand has a melodic line with eighth notes and a dynamic marking *sf*. The left hand has a bass line with eighth notes and rests. A fermata is placed over the first measure of the right hand. A *Ped.* marking is present.

Third system of musical notation. Treble clef, key signature of one sharp (F#). The right hand has a dense texture of chords with a dynamic marking *f*. The left hand has a bass line with rests. A *Ped.* marking is present.

Fourth system of musical notation. Treble clef, key signature of one sharp (F#). The right hand has a dense texture of chords with a dynamic marking *f*. The left hand has a bass line with rests. A *Ped.* marking is present.

Fifth system of musical notation. Treble clef, key signature of one sharp (F#). The right hand features a melodic line with eighth notes and triplets, with dynamic markings *sf* and *p*. The left hand has a bass line with eighth notes and rests. A *Ped.* marking is present.

First system of a musical score. The upper staff is in treble clef with a key signature of one sharp (F#) and contains a series of chords, each marked with a 'v' (accendo) above it. The lower staff is in bass clef with the same key signature and contains a few notes, including a half note with a 'v' above it. The word "ped." is written below the first measure of the lower staff.

Second system of the musical score. The upper staff continues with chords marked with 'v'. The lower staff contains fewer notes, with some marked with 'v'. The word "string." is written above the first measure of the lower staff.

Third system of the musical score. The upper staff features chords, some marked with 'v' and others with a '3' (triplets). The lower staff contains chords, some marked with 'v', and includes the instruction "molto rall." above the first measure. The system concludes with a fermata over a final chord in both staves.

University of Cambridge

APPENDIX B : GLOSSARY OF JAVANESE TERMS

1. *Bebuka* : introductory movement
2. *Bonang* : (illus. fig.1, p.32) a double range of bronze, gong-shaped beating-kettles, placed with the open side downward on a grating of cords stretched over a wooden frame. It is beaten with a stick, the head of which is bound in wool or cord
3. *Bonang barung* : an instrument of the *bonang* family, with pitches lying in the middle register
4. *Bonang panerus* : also a *bonang*, with the highest pitches of the family
5. *Colotomy* : adj. colotomic; the rhythmic structure of the composition and the interpunctuation by means of which the composition is divided into phrase lengths
6. *Demung* : an instrument of the *saron* family, with pitches falling in the middle register
7. *Gambang kayu* : (illus. fig.2, p.32) a series of teak or bamboo strips lying on small pads of cloth stretched over a wooden trough. The strips are struck with two soft-wood discs mounted on flexible sticks. The instrument covers between three and four octaves
8. *Gamelan* : the Javanese orchestra

9. *Gembyangan* : octave
10. *Gendèr* : (illus. fig 3,p.32) a series of thin bronze strips hung by means of cords over an underframe above tubular resonators
11. *Gendèr barung* : a member of the *gendèr* family with pitches in the middle register
12. *Gendèr panerus* : the multi-octave *gendèr* with the highest pitches
13. *Gending* : orchestral composition
14. *Gong ageng* : (illus. fig.4a, p.33) the largest gong, with a diameter of 60-70 cm. It is hung vertically and beaten either with a cloth-covered hammer or with the stiffly-clenched fist. It has definite, although limited, pitch
15. *Gongan* : period of time between each beat of the *gong ageng*
16. *Imbal* : a division of the nuclear theme between two players in such a way as to produce a hocket effect
17. *Kempul* : (illus. fig.4b, p.33) one of the highest-pitched hanging gongs
18. *Kempyang* : (illus. fig.5, p.33) a set of two sound-kettles, which are beaten simultaneously with a cloth-covered stick
19. *Kendang gending* : (illus. fig.6a, p.33) the principal drum of the gamelan. It is two-headed and beaten either with sticks or with the hand. It has a length of approximately 1 metre

20. *Kenong* : (illus. fig.7, p.34) a single sound-kettle placed upon crossed cords on top of a wooden bottomless box. A number of these are used in each orchestra, each pitched to a different note of the scale.
21. *Kenongan* : the period of time marked off by the *kenong*
22. *Keteg* : the smallest unit of time
23. *Ketipung* : (illus. fig.6b, p.33) s small two-headed drum
24. *Ketuk* : (illus. fig.8, p.34) a sound-kettle placed in a wooden frame over a bowl-shaped resonator and beaten with a cloth-covered stick
25. *Ladrangan* : a small *gending* or orchestral composition
26. *Mérong* : the repetition of the introductory movement
27. *Mungguh* : the second movement of a *gending*
28. *Ndawah* : another name for the second movement of a *gending*
29. *Pancher* : a continually recurring note sounded between the notes of the nuclear theme
30. *Panerusan* : paraphrasing, or parts supplying variations and embellishments to the nuclear theme
31. *Patet* : all scales possessing the same note of the basic scale as central tone form together one *patet*
32. *Pélog* : seven note scale

33. *Rebab* : (illus. fig.9, p.34) a two-stringed bowed lute. The body is heart-shaped, the back of which is pierced by a small rosette of small holes. It rests on the ground on a spike when played. The strings are of copper wire and tuned by means of pegs at the neck. The bow is similar to that of the violin
34. *Saron* : (illus. fig.10, p.34) a series of heavy bronze strips placed over a wooden frame and held in place by means of metal pins. Each *saron* comprises a single octave and the notes are sounded by beating with a wooden mallet
35. *Saron barung* : a member of the *saron* family with pitches falling in the middle register, slightly higher than those of the *demung*
36. *Saron panerus* : the *saron* with the highest-pitched octave
37. *Sindèn* : solo voice performing the lyrics of the song
38. *Slendro* : five note scale
39. *Slentem* : the member of the *saron* family with the lowest-pitched octave
40. *Suling* : (illus. fig.11, p.34) an endblown flute, made from a bamboo tube, with four finger-holes in *slendro* and six in *pélog*
41. *Wela* : indicates the missing of a colotomic beat

APPENDIX C

In an article entitled "Debussy und das indonesische Gamelan"¹, Helmut Rösing reports the results of a scientific sound-colour analysis, which was undertaken to compare gamelan music with the music of Debussy.

The record or magnetic tape is placed on a rotating disc at intervals which have a maximum duration of 2,4 seconds. The Kay-Sonograph divides this sound phenomenon into a spectrum of tone particles. The spectrum is then transferred onto radio-register paper and appears as a sonogram, from which one can read the frequencies (up to 12000 Hz) and amplitudes of the sounds.

A section of the Gending Glejong was analysed.

The gamelan which played this composition comprised gongs, drums, *sarongs*, *bonangs* and the *rebab*. A *slendro* scale was employed.

Several bars from "La Passion" and "Le bon Pasteur" from Le Martyre de Saint Sébastien by Debussy were selected for the sonographic analysis.

A comparison of the sonogram derived from the gamelan composition with that of the Debussy composition yields several significant similarities, while the differences are relatively minimal.

A summary of the results shows the following :

¹ Helmut Rösing, "Debussy und das indonesische Gamelan", Hi Fi Stereophonie, Vol 7, No 2, 1968, pp. 127-134

A. Similarities

- i) Strong tone particles are formed, in the gamelan, from approximately 50 to 600 Hz, while weak tone particles reach a maximum of 3 kHz.

With Debussy, strong tone particles appear from 65 to 1000 Hz, while weak tone particles reach a maximum of 4 kHz.

When one considers that compositions by other composers show frequencies which may reach to 12000 Hz, the differences in the frequency spans of the sonograms discussed here are negligible.

Strong tone particles are those components of the sound which are still represented after 2 seconds have elapsed, while weak tone particles disappear after 0,5 seconds.

- ii) The strong tone particles, in the gamelan as well as with Debussy, are enveloped in a continuous veil of sound, which serves to disguise both the individuality of the components and the changes in the quasi-stationary course of the sound. No instrument appears as a solo : the sounds of the various instruments are suspended in a vibrating balance.
- iii) The spectrums are streaked with strong, short vibrations, which effect an additional smelting of the sounds of the various tone particle components.
- iv) Long low notes in the music of Debussy produce the same effect on the sonogram as beats on the big *gong ageng* : an apparently static (but, within itself, moving), colourful, oscillating sound band.

B. Differences

- i) The frequency span of the strong tone particles is broader in the music of Debussy than in the gamelan music.
- ii) The sound complex, with Debussy, is hardly sub-divided at all, while the sound of the gamelan is structured within the colotomic frame of the gongs by the regular, even course of the "crochets" and "quavers". This continuous rhythmic flow serves, however, to disguise the divisions that, in fact, exist and effects the impression of an undivided flow of sound.

The number of comparisons which were made with the aid of the sonograph, is small. In fact, the choice of sound-tests occurred by chance, for the researchers originally wished only to observe basic and general characteristics.

Rösing concludes that one may assume, therefore, that in a comparative analysis which has, as its original goal, a portrayal of the similarities of the sounds produced, the concordant characteristics would appear even more strongly.

University of Cape Town

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