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# Jamary Oliveira Black Key versus White Key: A Villa-Lobos Device

Among Villa-Lobos's most discussed characteristics is his peculiar—not to say exotic—use of so many diverse materials piled together. This characteristic has granted him the no less peculiar label of "instinctive composer" and has prevented a significant insight into his music. The enormous output of the composer—many of whose works are without deep significance—the all too frequent editorial problems, and, mainly, the apparent lack of stylistic uniformity, have discouraged serious analysis of his compositions. Occasional remarks on modality, polytonality, clusters, and other "events" have added up to little more than superficial description of the foreground and have not pointed to any clear stylistic characterization.

Villa-Lobos himself did not leave any clear clues to elucidate his compositional and technical procedures. The general misunderstanding of his theoretical ideas discouraged him from commenting on them further or from writing them down for future reference. Mário de Andrade, the foremost (and a controversial) proponent of modern Brazilian music, admired Villa-Lobos but did not regard him very highly as a theorist; he actually wrote that the composer "used to be so irritated by the dislike and impertinence of native criticism that he developed an increasing fear of a universal incomprehension and a mania for explaining his intentions" (Kiefer 1981:141).

Andrade would have been more helpful had he documented Villa-Lobos's ideas in writing. Some of the composer's pronouncements, however, seem to indicate that he indeed had something to say about his own ideas on composition. In fact, when questioned on his position concerning recent trends in and techniques of music, he answered,

I have not and I will not assume any position or attitude toward recent trends in and techniques of music; I think that, if my works were studied profoundly and seriously, one would realize that I have a very personal and different style from the others. I admire any art innovation, but I criticize and condemn that which does not take into consideration the logical laws of humanity. (Lopes Graça 1970:66)

Although he does not clarify what he calls "logical laws of humanity," his statement implies that he had an individual stylistic procedure different from other composers that could be verified by a serious examination of his works. The idea of Villa-Lobos's consciously writing in a certain way agrees with Nicolas Slonimsky's comments:

His [Villa-Lobos's] artistic credo is paradoxical: "I am a sentimentalist by nature," he says, "and at times my music is downright sugary, but I never work by intuition. My processes of composition are determined by cool reasoning. Everything is calculated, constructed." Whereupon, he produces a curious exhibit, a sheet of graph paper, with the chromatic tones marked in the vertical, and the rhythm values, a sixteenth note to each square, in the horizontal line. "This is how I compose," he said. He does not have to wait upon inspiration. Any outline, any graph can serve him for a melody (Ewen 1949:252–253).

In his analysis of the *Próle do Bebê No. 2*, João Souza Lima says that, "in the No. 1, A Baratinha de Papel, there appears a pianistic formula that Villa-Lobos created and that establishes a basis for all his subsequent piano compositions. . . . It consists of a tone sequence that obeys a certain symmetry among the white and black keys" (1946:152). Contrary to Lima's assertion—a fact he recognized in 1969—this was not the first time Villa-Lobos used the formula, nor did he really create it or use it in all of his later piano compositions. The combination of the black- and white-key notes, however, was one of Villa-Lobos's real concerns in his piano pieces, and, in fact, he developed this device to the extreme, with obvious consequences to his own style. It is worth noticing that this device is characteristic of his piano pieces but is rarely used for other instruments. Among the exceptions are measures 13–14 and 69–73 in the "Tocata" of the Bachianas Brasileiras No. 8, in the woodwinds and the strings, respectively.

The distribution of black- and white-key notes for the left and right hands, separately, is quite surely the most obvious example of the technique. Both the scoring and the outcome of a passage using such a process are self-explanatory and carry no doubt as to the composer's intention. Which hand takes care of which keys apparently is not relevant from a merely compositional standpoint, and Villa-Lobos's preference for the right-white and left-black combination seems to be a matter of pianistic convenience (see exs. 6, 8, 30, 32). The left-white and right-black combination is restricted to instances in which the context demands it, such as in the last measures of "A Baratinha de Papel" (ex. 1)—a quite familiar combination of chords—or in the beginning of "Uma

Camponesa Cantadeira' (No. 2 from Suite Floral), (ex. 2)—melody in black, accompaniment in white.



Example 1



Example 2

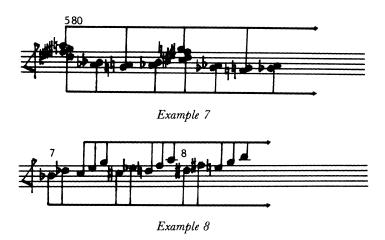
Villa-Lobos's use of the black- and white-key alternation possibilities can be viewed in two ways: first, as the alternation itself and its treatment regarding the number of notes, both melodically and harmonically; and second, as the motivic formation and its relation to the beat subdivision.

The binary alternation, that is, consecutive black-white or white-black formations, is more frequently used than alternation with three, four, or more notes. *Rudepoema*, m. 526 (ex. 3) reveals a two-voiced, "out-of-phase" alternation, whereas *Poema Singelo*, m. 101 (ex. 4) shows a three-voiced, "in-phase" alternation (see also exs. 21 and 23 as instances of single-voiced and exs. 20, 28, and 30 as instances of three-voiced alternations). (This regularity, however, is not always the case, as can be seen from examples 19 and 24, where two voices alternate with three, or from examples 12 and 13, based on a still less regular pattern.) Examples 5 ("A Baratinha de Papel," mm. 68-77) and 6 ("O Lobozinho de Vidro," No. 9 from the *Próle do Bebê No. 2*, mm. 67-68) show a ternary alternation, the first, single-voiced, with a neighboring-note similar motion, and the second, originated apparently in a three-voiced alternation, where the three white-key notes are distributed in two plus one.

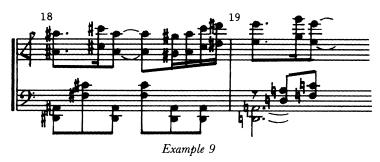


The binary alternation sometimes implies a four-note organization. However, we find examples in which, undoubtedly, the four-note alternation is the real starting point, as can be verified from examples 11, 22, and 25, with two black- followed by two white-key notes, or from example 17, where the white-black is reversed. (In this last example the color order in the original is changed in every third pattern of the sequence,

to a two black-two white, the same order as in the former examples.) Rudepoema, mm. 560-582 (ex. 7), provides an illustration of a four-note organization resulting from a binary alternation, the placement of a white-key note over a black-key chord. Example 8 ("O Polichinelo," No. 7 from the Próle do Bebê No. 1, mm. 7-11) shows a five-note pattern, with the white-key notes arpeggiating a triad and the two neighboring black-key notes rounding the roots, resulting in a surprisingly special sound effect. (See, additionally, example 32 for a six-note pattern, or three-note pattern, if we consider that black and white have the same motive.)



The second piece of *Suite Floral*, "Uma Camponesa Cantadeira," referred to in relation to example 2, has an odd treament of the black-key-white-key notes. Beginning with the accompaniment in white and the melody in black, gradually it also changes the accompaniment to black (m. 15), and in measure 19 it "modulates" to all white (ex. 9). Although this is not a true alternation, it discloses the same principle, this time with structural consequences.



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The rhythmic aspect of Villa-Lobos's works is, perhaps, the single most important characteristic of his style. Even concentrating only on the use of color-key notes, this subject would, in itself, give rise to analytical considerations out of the scope of this paper. My focus on the combination of color alternation with the beat subdivision, resulting in rhythmic motives to be repeated or sequenced, will suffice to illustrate where and how this combination produces a polyrhythmic arrangement:

Two-note motive: see examples 4, 23, and 28 (2x3);

Three-note motive: Poema Singelo, m. 111 (ex. 10, 3x4);

Four-note motive: Rudepoema, mm. 260-261 (ex. 11, 4x3; see also ex. 33, 4x5);

More-than-four-note motive: *Rudepoema*, mm. 116-120 (ex. 12, 6x8); and mm. 159-164 (ex. 13, 12x16).

As a matter of fact these are binary alternations arranged so as to produce a more elaborate pattern.



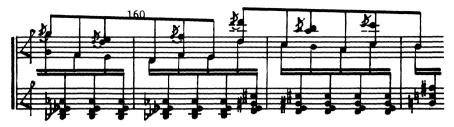
Example 10



Example 11



Example 12



Example 13

In reference to the melodic aspect, both the black-white neighboring relationship and the resulting pitch-class sets are my main concern here. The dependence of white-key notes on the five black-key notes is, in most cases, very definite. If this fact were a rule without exceptions, it would be easy to correct some of the numerous editorial problems. However, the exceptions do occur and are sometimes quite evident. I should say that this apparent lack of consistency is a point in favor of Villa-Lobos as a composer, for this variety brings forth unexpected results related to more important issues in the piece. As far as the rule is concerned, measures 65-74 of the "Dansa (Miudinho)" from the Bachianas Brasileiras No. 4 (ex. 14) reveal the use of white-key notes as upper neighbors of black-key notes, in an ascending direction, sequentially down. Although the white-key set is completed here by the addition of an F and a C (as main tones, I would say), this is not always the case, as can be seen in example 21, this time in a descending direction, sequentially up.



Example 14

Referring back to example 3, the upper voice, in a descending direction, sequentially down, illustrates the exception, for the upper neighbors of E-flat and B-flat here are, respectively, F and C, and not E and B. (The implied upper voice of example 22—second and third notes of each group—however, with the same motion, follows the rule. See also example 7, in which the black and white keys are played simultaneously, resulting in a four-note pattern, as mentioned before.) The inverse neighbor relationship, that is, white-key notes as lower neighbors of black-key notes, is displayed in example 15 ("O Passarinho de Panno,"

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No. 7 from the *Próle do Bebê No. 2*, mm. 32-34), lower voice, in an ascending direction, sequentially down (see also example 20—except for the g-sharp-a—in the three voices, and example 24 in the middle voice).



Example 15

Villa-Lobos goes far with this idea, using both neighbors in a same pattern. For instance, in "Fui no Tóróró . . ." (No. 9 from Cirandas), mm. 12-13 (ex. 16), he uses both upper and lower neighbors in an ascending direction, sequentially up (note, however, the F instead of an E as upper neighbor of E-flat); or in Rudepoema, mm. 553-556 (ex. 17), both in descending direction, sequentially up. The contrary motion, that is, the upper neighbor in an ascending direction and the lower neighbor in a descending direction, can be seen in example 25, with two implied voices, and in examples 4 and 28, one ascending against two descending voices.



Example 16



Example 17

To a certain extent, the resulting white-key sets seem to be dependent on the black-key notes. The black-key notes themselves occupy a position ranging from complete independence, as in "O Camondongo de Massa" (No. 3 from the *Próle do Bebê No. 2*), m. 12 (ex. 18), to a complete dependence, as in *Poema Singelo*, mm. 62–64 (ex. 19), here an arpeggiation of the d triad.





Example 19

Being pentatonic, the black-key set will, of course, tend to generate white-key pentatonic sets. This is the case of "Xô, Xô, Passarinho" (No. 7 from *Cirandas*), mm. 32–33 (ex. 20), in which the black-key lower neighbors generate a penta-F, and of the "Tocata (Catira Batida)" from the *Bachianas Brasileiras No. 8*, mm. 69–72 (ex. 21), in which the upper neighbors generate a penta-G (see also ex. 16, in which case the substitution of E for F, as mentioned before, generates a penta-F).



Example 20



Example 21

Although those pentatonic sets are a natural consequence of their nearness to the black-key notes, other pentatonic sets are also generated, as, for example, the F, G, A, B, D, implying a superimposition of thirds (G, B, D, F, A) instead of fifths. This last set is not so rare in Villa-

Lobos pieces; we find it, for example, in "Bruxa (A Boneca de Pano)" (No. 8 from the *Próle do Bebê No. 1*), m. 29 (ex. 22) and in "O Boisinho de Chumbo" (No. 6 from the *Próle do Bebê No. 2*), mm. 61-62 (ex. 23).



Example 22



Example 23

The complete white-key set appears not only in a straightforward manner, scalewise, as in examples 5 and 29, but also as combinations of pentatonic or other sets, or, as in example 14, by the addition of the remaining tones to a related neighboring set. (The combination of the two pentatonics mentioned as natural consequences can be verified in example 28—the upper voice with a penta-G and the two lower voices with a penta-F.) The only other possible pentatonic set implying a circle-of-fifths origin, in white keys, the penta-C, is combined with penta-F in *Rudepoema*, mm. 25–28 (ex. 24) to complete the set (see also example 3—a combination of the penta-F with B, C, D, F, G—and example 15—penta-F with B, C, D, E, G).



Example 24

In example 25 ("Mintika," No. 3 from As Tres Marias, mm. 1-3), the

white-key set is a result of a penta-F (E-sharp) with an e<sup>7</sup> chord V<sup>7</sup> [dominant seventh chord]). Through the use of such complicated notation this passage confirms the dependence of the white keys on their black neighbors (implied lower voice), and, concurrently, displays an exception so clear that no doubt remains as to the implied upper voice, that is, the arpeggiation of an e<sup>7</sup> chord.



Example 25

The resulting white-key set sometimes comes accompanied by a chord formation with each tone, as in *Rudepoema*, mm. 599-601 (ex. 26), a sequence of triads in thirds, or, as in "O Polichinelo," mm. 30-44 (ex. 27), following the melodic line (a very popular folk song in Brazil), or, as in "O Passarinho de Panno," mm. 83-84 (ex. 30), in a scalewise sequence. The chord formation by thirds is nothing but "color chords," as are the chord formations in fourths (see ex. 12) or in seconds (ex. 7).



Example 26



Example 27

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Two other details concerning the melodic aspect deserve mention. First, the contrary motion, as in *Poema Singelo*, mm. 152-157 (ex. 28; cf. ex. 4), and the amplification and contraction of intervals result from the scalewise motion of both black- and white-key notes, as in *Rudepoema*, mm. 134-138 (ex. 29; see also ex. 5).



Example 29

Analyzing the black-key note capacities from the harmonic perspective, we find very few possibilities of perfect triads or chords built up from superimposed thirds: just a d-sharp (e-flat) triad or a d-sharp (e-flat) chord, and an F-sharp (G-flat) triad. Chords built up from fourths or mixed intervals would certainly be a good choice, but Villa-Lobos usually prefers to retain the neighborhood idea. This, of course, produces simultaneities whose bases are only the major seconds and the minor thirds, as in "O Passarinho de Panno," mm. 83–84 (ex. 30; see also ex. 6, 19, 26, and 27). Although the same principle was applied in ex. 3, the black-key notes came in succession, simultaneous with the white-key notes.



Example 30

Sometimes, however, one of these neighboring notes is inverted, producing new textural results. This is the case of "Xô, Xô, Passarinho," mm. 32-33 (ex. 20), with the middle of the three voices displaced an octave below; and of Rudepoema, mm. 25-28 (ex. 24), with two inverted neighbors. The neighborhood idea goes so far as to produce patterns, such as in Poema Singelo, m. 101 (see ex. 4), in which the chords are also built up from contiguous black-key notes with a gap between the two lower voices, and in Rudepoema, mm. 116-120 (ex. 12), with gaps between each couple of voices. Taking into account that these two chord formations are nothing but inversions of each other, they will produce similar simultaneities: either the two perfect triads, or fourth-derived chords. But isolated perfect black-key chords, in a black-white context, as in "Alnitah" (No. 1 from As Tres Marias), m. 69 (ex. 31)—an Fsharp resolving in G, or, as in "A Baratinha de Papel," m. 78 (ex. 1), a simultaneous d-sharp<sup>7</sup>-C are not very common.

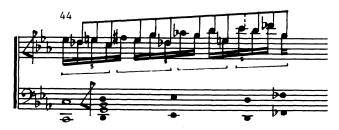


Example 31

Another aspect to be examined is the chord formations with whitekey notes. Leaving aside aspects such as simultaneous or arpeggiated chord formations, let us concentrate on those instances in which the chord formations are not so clear. I have already mentioned the e<sup>7</sup> chord (ex. 25) and the sequence of triads (ex. 26—the third always delayed). In example 12, besides the initial arpeggiation of the fourth-chords, with black-key chords in between, the implied white-key voices arpeggiate simultaneously C7, G7, and d7 chords. It is in the mixture of white- and black-key notes, however, that this process reaches its highest point, as, for example, in mm. 44-50 of "Caixinha de música Quebrada" (ex. 32). In mm. 44-45 all the tones, except for the g-sharp, are part of a D<sup>9</sup> chord, which is corroborated in m. 48 and finally resolved in m. 49. Measure 44 (ex. 33) of "Festa no Sertão," the third piece of Ciclo Brasileiro, is another example. Here the implied chord is a C9. At the beginning of each four-note pattern in the right hand there is always a blackkey note foreign to the chord, except for the C (which other choice would he have?), and even the melodic fragment restricts itself to chord tones.



Example 32



Example 33

In conclusion, I believe that such a thorough and complex manipulation of a single device, in such an exceptional way, contributes to the real creative ability of Villa-Lobos, not as an exotic or "instinctive" composer, but as a composer who, as he himself suggested, works with "strict and severe control of consciousness" (Villa-Lobos 1971:96).

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