counterpart in his love of the 'immediate' in 'time.' He was that creature of the Pure Present so admired by Goethe." Lewis's rejection of the time doctrine and his reassertion of the spatialized consciousness of ancient man parallels the turning away from the "terror of history" which Eliade notes, on other grounds, as the emerging state of contemporary man's consciousness.

Music dominated by the temporal image and music dominated by the spatial image reflect completely opposite attitudes or stances toward reality. While they are both supremely human forms of musical expression, the former tends toward the subjective utterance of the individual while the latter leans toward an objectified projection in which the composer's energies are focused beyond himself and the lyrical flow of his inner personal states. Subjective man, "Faustian" man, to use Lewis's terms, views existence as change, himself and his history at the center of a process of becoming. For him, life is an experience, whatever the nature of its content, in which nothing stands still, nothing lasts, and the future beckons. Subjective man cannot transcend time; he is trapped in it. However, when man seizes on the present moment of his existence as the only real time, he spatializes his existence; that is, he fills his present with objects of perception which take on solidity and concreteness—a state of permanence. His world is no longer one of time and change alone; it is a world of space in which time and change are modes of motion.

In the new music, time as duration becomes a dimension of musical space. The new spatial image of music seeks to project the permanence of the world as cosmos, the cosmos as the eternal present. It is an image of music which aspires to Being, not Becoming.
direction of the self-contained approach the new theory may someday provide. That the attempt might indeed be rewarding was one of my main thoughts as I undertook this discussion of Stravinsky's "pre-twelve-tone" works, prompted by a desire to assemble some observations that seemed to me interesting enough to share. In organizing the observations I found it convenient to group them into four sections: I) diatonic writing in which "tone center" is not functional "tonic"; II) a symmetrical scale used in such a way as to emphasize tritone relation; III) the same scale with minor-third emphasis; IV) interaction between diatonic elements of I and the symmetrical scale of II and III. The prognosis for self-contained treatment seemed encouraging to me in the ground covered in I and II, but III is a turning point—a concern with the traditional minor third itself, perhaps, being symptomatic. In IV the synthesis produces a curious alchemy that brings tonal functionality in its wake. Yet this conclusion does not, I trust, invalidate the initial intention; since it is better for tonal functionality to insinuate itself gradually, than for it to confine all discussion at the outset to the level of established theory.  

A suitable point of departure from which to approach one of the main problems of concern to us is the familiar Danse Russe (in the 1911 version), where the "white notes"—which I take to conveniently represent the total content of any of the so-called "diatonic" scales—may be said to comprise the referential collection of pitch classes inferable from the main theme of the rondo and/or the codetta at No. 44. The referential order of intervals, on the other hand, varying independently of the referential collection.

2 For purposes of non-tonal centric music it might be a good idea to have the term "tone center" refer to the more general class of which "tonics" (or tone centers in tonal contexts) could be regarded as a sub-class (see note 1). Any attempt at a statement of what I assume tonal functionality to be would, I fear, result in a distinction—consigning the Stravinsky discussion to a postscript. This article could not have been written without the author's relying on the reader to supply the preciously elusive first principles and to take it on faith that thought has been given to the much needed revaluation of tonality that is now taking place. Indeed, as a gesture to this revaluation I have taken what may, perhaps, be the need least precaution of borrowing the latest terms (e.g. "simultaneity" where "chord" might have been perfectly adequate); but having done so, I feel I should say a few words, however informal, regarding them. In the first place, those who are in close touch with the rethinking responsible for the new nomenclature and who tend to forget its limited currency, are the ones whose obligation it is to define and justify it, which thus is not my intention here. To avoid the linguistic battle over what constitutes a "chord," I shall simply add to what I have already remarked about "simultaneity" that its attraction for me has something to do with its being a fair substitute for the German Zusammenhang, "Pitch class" (or "pc," in the folksy abbreviation used by a young contributor elsewhere in this issue) is useful to distinguish the observation about a pitch, say C, that may occur in any octave from an observation about a given C (such as middle C). Finally, notwithstanding the suggestion in note 2 regarding "tone center" vs. "tone center," for that future time when a new theory is evolved, I feel uneasy about present usage which equates them: hence the precautionary "priority," a more noncommittal term than "tone center." By virtue of its freedom from conventional associations it even lends itself to being applied below to a tone that is hierarchically at the head of a three-tone group in the "Petrouchka chord" without necessarily being a tone center as it is here understood. But normally "C priority" will mean "C is the tone center." It may be odd to add that the borrowing of these terms (as also the semitonal numbering, 0-11) is to be more referred to as evidence that the writer shares the total philosophy that gave rise to them than the use of the terminology of logic by some of my most esteemed colleagues is to be taken as a proof of the logical consistency of their arguments.  

3 Use of this version (except in one instance where the new orchestration is more practical for quotation) should avoid the objection that what are cited below as similarities between Stravinsky's early and recent practices are not altogether reliable simply because the new version of Petrouchka may embody some of his recent attitudes.

4 The argument for G priority is supported by Stravinsky's own interpretation of this passage in the 1947 revision. Thus, among other things, the G is further emphasized by virtue of the fact that it is doubled by the basses not only, as in the old version, in its first appearance but in each subsequent appearance as well. Considerable "interference" qualifies G: e.g. an A pedal point (potentialized in the A priority of the subsidiary themes at Nos. 34 and 41) and a doubling of the tritone, to both of which I shall return later (see p. 22 below). In Exx. 1 and 2, the alternation of the triads B-D-F and C-E-G produces the whole step of the opening tremolo of the work (D-E or A-G)—a relationship that is made explicit when the opening section returns in its D-major metamorphosis at the beginning of the fourth tableau. Such are some of the structural issues that are, of course, also relevant in different ways to other musical examples given here, insofar as complete data in terms of the totality of relations is to be sought. But especially since music is heard in time, local events may also, I believe, be considered as having independent validity, since they are more than a subula musa to be inscribed by total structure.
The codetta affirms the familiar referential ordering of the C major scale, for which the main evidence is the cadence, and especially the final simultaneity (Ex. 2b), which gradually materializes over a G pedal after No. 44 (x in Ex. 2a) and then persists to the end.

Ex. 2a
Ex. 2b

It may be wondered why we should be burdened with two referential categories: the collection and the ordering of intervals, since theme and codetta could both be referred to the C major scale, in terms of which the G-emphasis could be regarded simply as a prolonged functional "dominant seventh"; or the theme could be referred to one interval-ordered pitch-class collection, and the codetta to another. Now, the first alternative leads to the proverbial historical search for correspondences which we should like to avoid if possible; while the second alternative, although it allows the independence of a G priority among white notes—and is to this extent preferable—ignores common pitch-class content. To retain both categories, therefore, seems desirable.

Since the major scale and tonality are strongly inter-identified, however, it may be insisted that the functioning of the referential collection tonally when the referential ordering is that of the major scale, but not tonally when the same referential collection has the referential ordering of the other available white-note scales, engenders an interaction between tonal and non-tonal procedures—such interaction being implicit in the very existence of common pitch-class content. It would therefore seem to follow from this that what to some may appear to be unjustifiable tonal bias is not only legitimate but necessary for dealing rationally with this music. A self-contained theory, in order to refute this argument, would ultimately have to demonstrate that, though elements of the major scale provide the conditions for tonal functionality, Stravinsky does not significantly realize these conditions.

This is something I am not prepared to demonstrate now. However, it is not insignificant in the present regard that in Agon (a transitional work between the "neoclassic" and the "twelve-tone" periods), relations similar to those in Petrushka appear four decades later, with G priority (i.e. as distinguished from a tonal functional "C major") still treated as just one referential ordering among all the others obtainable within the white-note collection. The Pas-de-Quatre from Agon and the Danse Russe differ markedly from one another on every conceivable level, so that apprehension of any similarity requires a high degree of abstraction. For example, the pitch class C is prominent from the outset of the former, while in the latter it is not. But if we discount the support this C gets in Agon from repetition and instrumentation, the B-G in the first simultaneity (Ex. 3a) may be said to have its counterpart in Danse Russe (y in Ex. 2a), though its appearance in the Petrushka movement is, of course, delayed until almost the end. Furthermore, the measures with the triplet figure (Ex. 3b) carry in distilled form the G implications of the Danse Russe theme, return in like rondo fashion (MM. 21 and 36, though the last time with a problematic Bb), and stand in analogous relation to the C-dominated simultaneity at the movement's end (Ex. 3c).

Ex. 3a
Ex. 3b
Ex. 3c

Having taken due cognizance of the parallelism, however, let us pause over this last simultaneity. G gives C the acoustical support of the fifth—the assumption of the possibility of such acoustical support being indispensable to this entire discussion. At the same time, G’s association with D, and even, to a certain extent, with F, forms a sub-complex of the simultaneity relating directly to the referential order that governed the measures with triplet figure. There are other ramifications, since F serves a double purpose, being also associated timbrally (in the harp) with C, in such a way as to allude to F’s role on a secondary level of importance—as lowest tone both in the opening simultaneity and in the one in winds in Ex. 3b. As such, the F may be
compared to the A in the final simultaneity of Danse Russe, except that this A is not only an allusion to earlier events in the movement, but also a simple continuation of an insistent element of the immediately preceding measures. The main point, however, is that the G supporting C in the final simultaneity of Danse Russe does not, unlike the G at the end of Pas-de-Quatre, directly relate back—by virtue of special contextual associations—to the G priority that accounts for so large a part of the Petrouchka movement as to make the absence of such a relationship quite perceptible.

Another example of what I have in mind—less complex than the one from Agon because the movement has less complex relationships—is provided by Dumbarton Oaks Concerto, where the referential white-note collection is that of “E♭ major.” Extra doubling and the neighbor-note motion around G at the opening of the finale substantiate the triad G-B♭-D (Ex. 4a), defining a referential ordering of the scale: 0, 1, 3, 5, 7, 8, 10, whose normal abstract representation (always reading upwards), incidentally, indicates an ordering of intervals retrograde-inversionally related to the ordering of the major scale, similarly represented. The last eleven measures of the movement do not deviate from the pitch content of E♭ major, but E♭ priority has only begun to gradually infiltrate the original G priority since about No. 74, and even now, in the final simultaneities, retains from the G priority a G (as lowest voice), and a D (Ex. 4b).

Despite its triadic elements, the ending, like that of Pas-de-Quatre, is far from a “resolution” in the harmony-book fashion, yet in an empirical sense, the basic structural issues are all resolved.

It may have occurred to some readers that this discussion could benefit from the paraphernalia of “modality,” which would seem so very appropriate for the identification of the different interval-orderings within the white-note collection. But quite apart from the multifarious confusions with which this notion is laden, it does not really apply here. To claim that the finale of Dumbarton Oaks is “Phrygian” discloses nothing of the peculiar symbiotic relationship between scales with common referential collection but different interval orderings. It is quite frankly only on the most trivial level that “modality” can be helpful, i.e., by freeing us from dependence on the concept of “major” scale for identifying the referential collection. “D-mode,” “E-mode,” etc. rid modern modal nomenclature of extraneous historical implications; and by simple substitution of “scale” for “mode” (e.g., “D-scale”) we, in turn, may derive a nomenclature that analogously circumvents the implications of “modality,” both modern and archaic. According to such a convention, each letter-name can define a different ordering of the white-note collection (including C), the same letter-name being retained for transpositions, so that Dumbarton Oaks may be said to open in the E-scale on G and to close in the C-scale on E♭.

Before dispensing with “modality,” it is tempting to make a special case for the Hymne of Sténade en la, which has an opening section in the E-scale on A (with few deviations from the referential collection up to m. 19), closes with a transitory allusion to it (m. 77), and has about a third of the movement (mm. 52-76) dominated, despite “black” patches, by a transposition of the E-scale to the form referable directly (i.e., without transposition) to the white-note collection. The symbiotic relation between referential order and referential collection seems unimportant here, until attention is drawn to the inside pun of the opening measures, at which point the modal interpretation collapses. In these measures, the referential ordering of the C-scale (transposed to F), which played such an important part in Danse Russe and Dumbarton Oaks, covertly intrudes by way of the elements of the triad F-A-C which, in a narrow grammatical sense, account for most of the simultaneities through the third beat of m. 5.

But any realization of their potency for the assertion of F priority is studiously avoided owing to their employment in such a way as to firmly assert A by virtue of various kinds of articulation: repetition, doubling, registration (A in outer voices and the more exposed inner ones), and accentuation (both quantitative and qualitative).

This by now classic example of the extent to which pitch-class priority may be stipulated by compositional procedures, serves as an appropriate transition from contexts referable to the white-note collection to contexts
referred to a more complex collection. In the latter, all possible modes of articulation become more necessary than ever for the assertion of pitch-class priority—so much so, in fact, that the absence of such articulation, as it soon will be seen, may place the music in those interstitial realms between the centric and noncentric.

II

Without criteria for selection of certain pitches over others, the passage from *Les Noces* (Ex. 5) cannot be referred to the white-note collection, though an observer with strong tonal bias might claim that, except for what may be regarded as a “closely related” E, all the tones are accommodated by B♭ “harmonic minor”—and thus (so the argument would go) what results is simply another “diatonic” scale of the white-note class.

![Ex. 5](image)

Now I do not wish to tangle here with questions of the “hybrid” minor formations, except to stress that they do not fulfill the conditions of the white-note collection of being capable of having its elements arranged in an uninterrupted series, the first and last tritone-related and the adjacencies separated by the identical interval—the only such possible interval being, within the white-note collection, the fifth. But even if the interpretation of the “hybrid” minor scales was acceptable in its tonal functional sense, it would be hard to prove that the F♯ (G♭) is treated *functionally*, so that if it is to be said that there is any correlation at all with B♭ minor it would seem to be more statistical than anything else.

Should this, too, be considered insufficient grounds for rejecting the “B♭ minor” interpretation, there would still remain the more serious objection that may be levelled against the low hierarchical position assigned in this scheme to the E♭—namely as appoggiatura to D♭. Thus the dyad formed by the linear expression of E♭-D♭ associates with D-C of the preceding section (No. 27ff.), where D may be interpreted as the pitch class of priority, as well as with the E-D at the opening of the work, where the insistence on the soprano’s C♯ leaves no doubt at all as to the priority of E. The position of E♭ is, then, hierarchically of a higher order than that of appoggiatura to D♭, though there is insufficient evidence to establish its priority as the tone center; therefore, when the mezzo-soprano line at No. 35 is heard in transpositions on C (No. 38) and on A (No. 39) these tones by analogy also have a certain potentiality for assertion of priority, each tone in its turn.7 If an assessment is made of the relative weight of these transpositions, it is observed that A priority receives most substantiation: 1) from the A’s on each quarter beat of the pianos’ ostinato at Nos. 35-40; 2) from the significant reinforcement just before No. 39 by the octave doubling and by the new A on the offbeats; 3) from the bass voice’s entrance (6 measures after No. 36 and 3 measures after No. 37) with what starts on A as another transposition, but continues as a variant that will be prominent at No. 40.

These bits of evidence, while not particularly effective in asserting A in this section of *Noces*, are significant in the light of the A priority ultimately realized in the modified return of the material at Nos. 82-87:

![Ex. 6](image)

In the two transpositions, the original undergoes the following slight modifications: in both of them, m. 6 is truncated and the (B♭) grace-note omitted; where the transposition on C has the contour A-C-E, identical interval order calls for A-C♯-E, which is restored when this transposition recurs at No. 85.

---

7. In the two transpositions, the original undergoes the following slight modifications: in both of them, m. 6 is truncated and the (B♭) grace-note omitted; where the transposition on C has the contour A-C-E, identical interval order calls for A-C♯-E, which is restored when this transposition recurs at No. 85.
where the E tremolo acoustically supports A₃ of the pianos, and the A priority operates since No. 78 predisposes the ear toward the continued acceptance of this priority as asserted by the A's of long duration at No. 82.

But the question remains: why, given reasonable evidence to verify it, is A priority still in a certain doubt at Nos. 35-40? A search for the answer may lead one to contemplate the curious consistence that pervades forty-five measures at Nos. 35-40, and the same number of measures (of slightly longer duration because of some 3/4 meter) at Nos. 82-87, as a result of which everything, both linear successions and simultaneities, fits together like well-meshed gears, so that it is not surprising to discover, from a tabulation of the total pitch content, that a single referential collection of eight pitch classes accounts for it all—with a few exceptions so marginal as scarcely to require mention (some dozen tones, mainly ornamental, and most of them at Nos. 35-40). If it is granted that the pitch class A is the most likely element to determine the referential order within the collection, the scale drawn from the collection may be represented as follows:

\[
\begin{align*}
\text{pitch numbers:} & \quad 0 & 1 & 2 & 3 & 4 & 6 & 7 & 9 & 10 \\
\text{intervals:} & \quad 1 & 2 & 1 & 2 & 1 & 2 & 1 & (2)
\end{align*}
\]

A formal approach to this scale (hereafter referred to as “octactic”) would calculate the structure and enumerate the properties at once.⁸ Here the approach will be inductive, so that only such properties will be considered as are demonstrated by the musical examples discussed. Thus, the passage from Noxes makes us aware of the high degree of similitude that the scale generates to the end that it yields identical interval content for the reproduction of the linear configuration at 0, 3, and 6 (hence the lower-case letters in the scale representation above). Substantial preservation of pitch content from one transposition to another is also available. The form on A, for example, requires no pitch classes not present at the original statement on E♭—provided the piano’s A is counted. Naturally, what holds true for 0, 3, and 6 will hold true for 9, and indeed a transposition on this element is ultimately suggested between Nos. 83 and 84, where we are again reminded of the common pitch content, since it is produced as a result of the transposition at 0 crossing over to the one at 6.

Since each trichordal partition defines the interval order: 1, 2, it is easy to see what accounts for the symmetry. In combination, the four partitions produce a scale of whole and half steps. The fifth scale degree, at the interval of 6 semitones from A, is an axis around which the two halves of the octave are symmetrical; and at the interval of 3 or 9 there is another axis around which two quarters of the octave (halves of the tritone) are analogously symmetrical.

When we had only the simpler relations of the white-note collection to cope with (in Part I), the following condition prevailed: within any given white-note collection, for each pitch class there was only one possible referential interval ordering in which it could have priority. Within any given octatic collection, by contrast, the first element of any of the partitions of the octave at 0, 3, 6, and 9 has the potentiality of being the pitch class of priority in an identical ordering referable to the same given octatic collection, and this also holds true, analogously, for 1, 4, 7, and 10, with respect to a different ordering, of which more will be said later. That is to say, not only is each of the partitions a “transposition” of the other, in a sense, but the interval ordering of the total collection defined in relation to the first element of each partition is also identical; hence, each of the four possible orderings is also a different “transposition” of the octatic scale. (Strictly speaking, this is really “rotation,” since the collection has only three transpositions—see footnote 8.) Therefore, in the interval ordering of the scale as represented above, there are, loosely speaking, four potential “tone centers” of equal weight and independence.

In Noxes, the two-part partition of the octave concerned us more and seemed more prevalent than the four-part partition. If the octave is assumed—as I have already assumed the fifth—then a hierarchy is thus established, contingent on the octave as a fundamental construct within the semitonal system. This attaches special importance to the fact that A-E♭ and its complement E♭-A are intervals each adding up to 6 semitones, while A-C, which is 3 semitones, has a complement of 9. For if the octave takes precedence the symmetrical position of 3 within the tritone is of less consequence than the relation of 3 to the octave, thus placing it on a different, or “lesser,” hierarchical plane with regard to its potentiality for symmetry than the relation of 6 to the octave, but on a higher plane with regard to its potentiality for differentiation.

The, so to speak, equality (i.e. numerically) between the interval of a tritone and its complement is, if not the final verification, then at least highly symptomatic of the identity relation between these “two” intervals, or between their elements, or, specifically in Noxes, between A and E♭.

In addition, each tritone-related element has the potentiality, within the octatic scale, to stand in an identical relation to any available interval ordering (this order and relation being parallel rather than symmetrical).

---

⁸ Messiaen classifies this scale among “modes of limited transposition” in *Technique de mm. langage musical* (Paris: Leduc, 1944, pp. 52f). Its limitation to three transpositions becomes evident when the twelve pitch classes are arranged into the three available diminished-seventh chords: combination of any two yields the scale’s total pitch content, and only these such combinations are, of course, possible. Also, between any two collections of scale content there will be one of these chords in common. (If the chords are designated X, Y, and Z, they yield XI, YZ, and XZ.) Taking his cue from Messiaen, Roman Vlad draws attention to Stravinsky’s use of the scale (Stravinsky, London: Oxford University Press, 1960, pp. 7f.), without, however, exploring the special properties that will presently be seen to arise out of the ordering in which there is a semitone between first and second degrees.
—i.e. to be an element of a transposition with identical interval ordering and/or identical interval content. Therefore, given any two tritone-related pitch classes within the octatonic scale, to establish the priority of one over the other within the scale’s limits, this identity between the configurations of which they are respectively the members must be eliminated. One of the ways in which this can be brought about is demonstrated by the section of Noets between Nos. 82 and 87, where the high degree of similitude observed earlier at approximately No. 39, between the elements gravitating around A and those gravitating around E♭, is now scarcely present at all, as a result, on the one hand, of the continuing fifth (the E tremolo)—the E♭’s fifth being transitory—and on the other, of the sustained A’s, all of which leaves no doubt as to the pitch class of priority, even though the transposition at 6 lingers on after No. 86 in very nearly its original form.

Since each scale degree of the octatonic scale is tritone-related, the noticeable presence of this interval is stipulated for any context referable to the collection of this scale; and any part of Noets where it is used will be more or less associated with the basic simultaneity at No. 1, where E is in the voice and B♭ is in the piano. (Thus, the mezzo-soprano’s E♭ and the piano’s A at No. 35 actually reverse the opening roles of the “black” and “white” notes.) Similarly, in Petrouchka it is clearly evident to the ear that the scale emerges directly out of the frequent expression of the tritone as a dyad (usually linear) in the first tableau: B♭–E at Nos. 7, 9, 17, 22; F–B at Nos. 8, 11, 23; both forms alternately between Nos. 24 and 27, and, the form of most immediate concern here, C–F♯ in the interlude between the first and second tableaux. (In the total structure, the limited associations of identical pitch-class content also lend significance to F–B in the main simultaneities of Danse Russe (Ex. 1 above) as a verticalization of the linear dyads at Nos. 8, etc. According to this interpretation, G priority is a prolongation of the fourth degree of the basic D-scale of the first tableau, indeed, of the whole work; and the A pedal is an allusion to the supporting fifth of this D priority, an allusion clearly pointed up by the return of the tritonal dyads of No. 8 in the section of Danse Russe following No. 42.)

To regard C–F♯ of the interlude as a foreshadowing of the “Petrouchka chord” is to admit some evidence for the standard interpretation of this configuration as a confluence of two sub-complexes “based” on these two pitch classes, rather than as a unitary sonic event. So Stravinsky considered it, and, to judge from one of his most recent published remarks, probably still does: “I had conceived of the music in two keys in the second tableau as Petrouchka’s insult to the public. . . .” However, since the entire configuration may now be subsumed under a single collection with a single referential order, i.e. the octatonic scale, the dubious concept of “polytonality” need no longer be invoked; nor does such an interpretation make it impossible to acknowledge a certain compound nature of the configuration, since this can be done entirely within the referential collection of the octatonic scale, by means of the partitions.

To evaluate the pitch-class priority, if any, of the “Petrouchka chord,” it is well to determine beforehand toward what priority the ear may be disposed at its entrance, especially since the eight measures that precede this entrance deploy the octatonic scale from which the “chord” is drawn. The brief introduction to the second tableau involves, to begin with, the placing in the clearest relief a prolongation of G as the supporting fifth of the C which is carried over from the final simultaneity of the first tableau (Ex. 2b above) by a kind of liaison—the liaison, namely, of C of the linear tritone in the interlude between tableaux. Example 7 shows how the piano both articulates the C–G and segregates, from the intervening stepwise seminal activity (mm. 3–6), the following six elements of the octatonic scale: c, D♯, E♭, E, F♯, G. (Since all the essential features are preserved in the more concise 1947 orchestration, this version is quoted here. No. 93 of the new version corresponds to No. 48 of the original.)

9 See note 5. 10 Expositions and Developments, New York: Doubleday & Co., 1962, p. 156.
The simultaneity in the woodwinds in the third and fourth measures dissociates itself from the prolonged “neighbor-note” motion of the intervening elements by virtue of its duration, so that its content, all of it referable to the octatonic collection, may be applied to the higher level on which the scale is deployed—especially the A, which is not supplied by the piano. Whether the A♯ at No. 94 is similarly qualified to be applied to that level is very dubious, despite the octave doubling, accent, and exposed position at the beginning of a phrase. The understatement of this A♯ is far more striking—viz. the descent from G of m. 1, in Ex. 7, via flutes and violins, to G of m. 6, which deviates from stepwise semitonal motion only to avoid it, with the result that “in the place” of A♯ there is an extra B.

A♯ is a crucial element in more than one way; kept in reserve, essentially, for the first dyad of the “Petrouchka chord” (Ex. 8), it provides special conditions for a relationship which strongly counterpoises the tritone-related triads of the standard interpretation. Thus, if we assume that the horizontalized C triad of the first clarinet preserves the registration of the same pitch classes just as they occurred in the piano left hand at No. 93, the A♯, which can belong to an identically ordered triadic complex in relation to F♯, is precisely the element that avoids the identity by initiating a registral distribution for the F♯ triad (i.e. a first inversion) that is different from the registration of the C triad. Furthermore, the interval of 2 semitones formed by the simultaneity of this A♯ with C becomes a principal defining agency of the total configuration. (Notice how it is stressed by the registral extremities of the contour at x in Ex. 8.)[11]

The other vertical dyads in Ex. 8, if less prominent than that just indicated, should also be weighed against the tritone-related triads, since these dyads, along with the A♯-C, describe the interval content of the conjunct trichordal partitions of the octatonic scale: 2, 3, 1, in that order.

When, however, during the vertical statement at No. 51 (to return to the 1911 version), there is a concurrent linearization from which the F♯ triad is filtered out, isolating the C triad (cornets and trumpets), the interpretation of the chord as two triadic sub-complexes is strengthened, as is also the priority of C. Then, in the continuation of the linear statement, when the sub-complexes intersect, the balance shifts to the unified interpretation, substantiated by an arrangement of the elements (Ex. 9b) in what corresponds to “stepwise” representation of an incomplete octatonic scale “gapped” at two parallel positions (namely, where the interval of 3 occurs):

Ex. 9a

Ex. 9b

A♯ is first element in the above representation not because of priority, but on contextual grounds (the registration of the tremolo in piano and strings as in Ex. 9a); for in so symmetrical an arrangement even C priority, with all its backing (among other things, the support of the fifth) is not conclusive. Surely, an eventuality of this order must be what Stravinsky had in mind when he spoke of “polarity” in Poliquote Musique, and though he now cautions us that the book was one of those “written through other people,”[12] I take the liberty of quoting him on that concept:

What preoccupies us, then, is less tonality, properly so called, than what might be described as the polarity of a sound, of an interval, or even of a sonic complex [complexe sonore].[13]

While the meaning is perfectly clear, it is tempting to speculate on whether Stravinsky’s choice of “polarity,” a word which cannot accurately be applied (as he applies it) to one thing without its opposite, either had implications that escaped the intermediary who transcribed his thoughts, or—which seems more likely—reflected an awareness, if only on a subverbal level where it was difficult to articulate, of the special properties of the tritone which make it possible for pitches at 0 and 6 (capable of graphic representation as “poles” in a circle of fifths, whether or not one accepts the assumption on which this circle is predicated), by virtue of similitude or equal and thus independent weight, to remain in equilibrium or—to the end that a tone center is asserted by neither—to stand in a certain opposition. This speculation might easily take flight in a direction which would establish, as a necessary condition of “polarity,” the denial of priority to a single pitch class precisely for the purpose of not deflecting from the priority of the whole complexe sonore. And from here, it would be a simple step to the conclusion that short of twelve-tone and so-called “atonal” procedures, nothing provides this condition better than the

[11] A♯-C verticalizes the important unifying whole step, i.e. the opening D-E (see footnote 5). The interval’s prominence as a linear dyad in Noe will also be recalled.

octatonic scale. It is not the intention, however, to make exalted claims for this scale, but rather, to observe its behavior in such concrete manifestations as the "Petrouchka chord," to which, after this digression, we had better promptly return.

From the vantage point of the "gapped" scale, the C and F♯ can figure just as prominently as they do in the familiar interpretation, with the important distinction that they now function as basic elements not so much in terms of two triads, but primarily, in terms of two tri-chords, each with the interval order of 2, 1 (the notes with stems down in Ex. 9b), or of two tetrachords, each with the order of 2, 1, 3 (the notes with stems up)—in the latter case, the result of a partitioning of the octave to produce two conjunct segments. And the reason C and F♯ rather than, say, A♯ and E, are hierarchically higher terms for defining the relationship, is that since C has a certain priority, F♯, which stands in an identical relation to its two adjacencies, will also have analogically a certain priority within its own tri-chord (though one priority may be more strongly asserted than the other)—which brings us back to the statement made above as to the scale's potentiality for more than one tone center.

The inexhaustible "Petrouchka chord," needless to say, is far from accounted for by this brief treatment, the ramifications of which the reader will have to infer for himself. Yet, before leaving it, two small points should be resolved. First, there is the A♯, whose important function would seem to render it worthy of consideration for priority. Such priority, however, would yield the interval order 2, 1, for the conjunct tri-chords of the complete octatonic scale, instead of 1, 2, which—for reasons that will later become more apparent—has been posited as the fundamental form for Stravinsky. If now standing this A♯ priority is still considered, it might be well to keep in mind that it makes for conditions distantly akin to those determined by the "B♭ minor" interpretation in Notes. But, as the reader must be aware, though evidence has been given for C priority of the chord, no firm commitment has been made here with regard to this or any other priority at all. Which brings us to the second point: namely, the "polytonality" of the chord. Though I realize the disadvantages of making such a statement without a disquisition on one's theory of tonality, a "polytural" interpretation, insofar as it may have any validity at all, is even more problematic than the determination of single priority. For the "gapped" scale affords far too little information for the delineation of "keys" of any kind.

III

Let us make a fresh start, at a place in no way remote from this discussion up to here, but somewhat closer to the generally accepted analytical approaches. For it is untenable to pass from the tritone-related elements to those relations defined by the interval of 3 semitones without acknowledging Stravinsky's acceptance, until very recently, of the triad and its related chordal complexes, the permutations of which, often metamorphosing but never completely disguising the "basic" interval content (by such means as doubling, vertical spacing, inversion, etc.), have produced results admittedly very far indeed from the concept "triad" called to mind by the textbook representation. That this acknowledgment of presumed interval complexes will not involve relinquishing the notion that certain compositional procedures arise directly out of the independent choice of intervals should soon become evident. Meanwhile, it will be necessary to resort to chordal nomenclature—though often purely denotationally.

To say that Jeu de rapt is a veritable primer of the ways in which the octatonic scale may be arranged into four major triads or seventh chords is not to deny its abundance of detail. In considering the six measures at Nos. 42-43 of Sucre (two representative measures of which are given in partial reduction in Ex. 10), I shall ignore most of this detail (articulation, etc.) and concentrate upon the chordal regimentation of the elements.
ushered in by the return of the first simultaneity (that at No. 37) as a kind of signal for the filtering out, at this point, of all pitch content not referable to the octatonic scale. In triadic terms, these are the discernible configurations: 1) major triads on C, Eb, F♯, and A (horizontal at, for example, x; vertical at x—the latter being double-reed timbre rather than simultaneities as such); 2) dominant sevenths in first inversion (horizontal at y', but mostly vertical, y); 3) a brief vertical statement of the C triad at x (part of the simultaneity of No. 37); 4) a linear expression of the diminished-seventh chord (z).

Configuration z places directly in evidence a determining factor of simultaneity: it partitions the octave at different positions from those at which the four roots drawing the pitch-class content of their triads and dominant sevenths from it partition the octave; at the same time, z has an interval content identical with that of the only possible configuration (another diminished seventh) that can be formed by these chord roots; and the two semitone-related diminished sevenths (or any two diminished sevenths with no "common tones" at all) will, of course, always contain the total collection of an octatonic scale (see Sacrē, Nos. 30 and 70, where these parallel diminished sevenths, horizontalized, are articulated to show their "whole-step" relation). The identity is stressed by the order in which the vertical configurations enter: $y'(C)$ and y on Eb (the latter being the second element by virtue of duration), then y on F♯, and finally, y on A—piling up a simultaneity of three sub-complexes in m. 2 (note the weak articulation of G in the dominant on Eb). The "pyramided" entrances of y on Eb, F♯, and A are twice repeated; but the C triad (which took the form $y'$ at No. 42) does not recur in its original vertical form, though it is significant that among the linear triads (x) the one on C is timed to replace $y'$ (in Ex. 10, $x'$ is the beginning of one of these). Each tritone-related pair (either y on Eb and A, or the combination of $y'$ with y on F♯) inevitably contains the same interval content as the "Petrovskaya chord," but note in the combination of $y'$ with y on F♯ the similar interval order as well. (Pitch-class content, incidentally, is identical, too.)

It should also be noted that the tritone-related triads and/or dominant sevenths, such as are contained in the "Petrovskaya chord," are not very different from those complexes that are related by the interval of 3 and/or 9. For by simply exchanging, in the "Petrovskaya chord," the

$F^♯$ for an Eb, we derive a configuration whose sub-complexes are the dominant sevenths on C and Eb—all of which is nothing but a function of the diminished seventh that is the common pitch-class source for the chord roots that define the other diminished seventh encompassed by the octatonic scale.

If, from Ex. 10, the interval content of any two transpositions with adjacent roots (i.e. related by the interval of 3 semitones) is extracted out of the four available, the tritone-related triads are no longer present, but it follows from what has been just said, that there will still remain a substantial degree of interval content in common with the "Petrovskaya chord"; and if, moreover, the amount of timbral differentiation that was present in the passage from Sacrē is reduced to a minimum in the articulation of these two triads as sub-complexes in a larger configuration, common interval content will then be supplemented by another common factor: the special timbral consistency of the famous "chord." From all this, a family resemblance should result—as may be observed in the configuration of brief duration in Dumbarton Oaks:

where, when the elements are apprehended as a whole, the typical Stravinskyan "accordion" effect, much retarded, but belonging to the same general class as the "Petrovskaya chord," will be recognized by anyone who does not take the analogy too literally. With sufficient confidence, therefore, it may be said that what passes for one of the most peculiarly Stravinskyan "sounds," rises out of the octatonic scale.

Detailed analysis of this excerpt, to be sure, reveals the subtleties of differentiation to which the referential relationships lend themselves, and it becomes apparent that, in compensation for absence of marked timbral differentiation, the longer durations on the alternate beats dwell separately on each dominant seventh: first, the one on Ab, then the one on F. This phenomenon, of course, is simply a product of the different intersections of the stationary element (Ab-A-C) and the vertical dyads in the flute and clarinet lines; and in this process, according to conventional interpretation, Ab and A each assume the opposite roles of "chord tone" and "non-chord tone"—roles that they reverse when the intersection changes.

---

14 This is a mild form of a phenomenon that may be observed again and again in much more noticeable fashion in Stravinsky, as will become apparent from a comparison of the musical examples presented in the course of this discussion: namely, the association of given chordal relations with fixed pitch classes. In this sense, as in many others, Stravinsky is like the old masters who, as has often been remarked, for each key had their special way of writing. Thus Mozart, for example, had his "E-flat" manner or style, and this was different from his "C-major" style, etc.
Whereas *Jeu de rapt* delineated two diminished sevenths—one formed by the dominant-seventh roots and the other formed by the common pitch-class content source of the dominant sevenths—only the second type is evident here, demarcated by the octave-doubled C in terms of which the elements of the diminished seventh are clearly apprehended as agents of the four-part partition. But the diminished seventh seems to me, in significance, to be secondary to the trichordal stationary element which is capable of providing a modest exemplification of a useful compositional procedure, the preserved consistencies of which it would be profitable for us to follow within contexts referable to the octatonic scale.

The nature of these manifestations becomes apparent from a correlation of the stationary trichord a♭-A-C with a trichord formed from elements of the combined dyads: E♭-f-G♭. In each trichord the common intervals (the semitone and 3 semitones) are in a different arrangement. Or if it is assumed that the somehow “disembodied” intervals constitute a “basic cell,” then they may be said to have undergone “transformation.” Now, since each conjunct partition of the octatonic scale contains the intervals of 1 and 3, the scale is singularly adapted to transformation involving these two intervals. Hence when the above-mentioned trichords are conjoined, other transformations will result: f-G♭-a♭; f-a♭-A; G♭-a♭-A.

At the same time, it would be injudicious to ignore the conventional interpretation of “non-chord tone” and “major-minor” when the interval of 3 or 4 is taken as a “fixed” quantity and the semitone as a “movable” one, so that the latter is—to pursue the metaphor of the “disembodied” intervals—like something capable of being “attached” at any of the four possible positions “inside” or “outside” either form of the third (which is sometimes said, as a result, to be “bracketed”). But if somewhere in the background the procedure of transformation exerts any effect at all as an operation in which essentially no single interval has any priority, chances are very good that the implications of such a procedure will insinuate themselves into a context that is either tonal or otherwise centric, with the result that the choice or assertion of the “fixed” interval may be insidiously placed in doubt; and it is thus that there arises in Stravinsky’s music another occasion for the pun, different in detail from that of the *Sérénade*, but not altogether dissimilar in intent.

In this regard, the theme with variations from the *Octuor* (Ex. 12) is singularly apropos:

---

*AGAINST PLAUSIBILITY*

*HERBERT BRÜN*

It has been somewhat disturbing to observe the widespread growth in recent years of a body of criticism directed at certain European publications on contemporary music, criticism which has seriously inferred from the seemingly improper use of scientific terms and the prevalence of overly pretentious style to be found in some of the published articles a proof of their fallaciousness or lack of information. But none of these critics has attempted to prove, as a necessary condition for this inference, that an incorrect statement cannot communicate correct information. Nor has assurance been given that a proper application of scientific concepts and terminology would actually be useful in explaining musical theories. In fact, almost all these critics have jumped, quite unscientifically, to the fallacious conclusion that the presence in a statement of factors that prevent the intended information from being communicated also disqualifies the information itself.

The significance of this phenomenon, however, extends to a far broader context, to the pervasive tendency, currently prevalent in even the most unexpected quarters, to confuse or to ignore the essential difference between communicating information and teaching something. This is an ancient fallacy with a fascinating history; but since it seems to appear and disappear periodically, I shall limit my discussion here to its provoking influence on musical activity in our century, especially in terms of its relevance to the contemporary European situation. For it seems to me that by this means, a possible explanation for the recent developments in composition and theory can be formulated.

Most contemporary European composers agree with the general public’s view (though not with their choice of terminology) that our time has produced musical trends that constitute, with respect to the meaning of the word “music,” a revolution that is far greater and more decisive than any of its many historical antecedents. Evidently, something that had not basically been challenged for centuries, and was consequently taken for granted, has now been subjected to fundamental revaluation. The nature of this quality can only be vaguely described as the potential information value contained in the musical patterns that all musical events have a tendency to create in time. More simply, if still rather vaguely, this view seems to embody a growing suspicion that whatever