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The Rite of Spring Revisited: Stravinsky's Stratifications and African Polyrhythm

ABSTRACT

The story of *The Rite of Spring* — of a music first scorned, yet soon thereafter reclaimed in triumph — can sometimes seem to have overshadowed the music itself. Yet the identification of *The Rite* with early rejection and scandal appears to have been largely a mistaken one. Far more than the music, it was the unorthodox character Vaslav Nijinsky's choreography that caused members of the audience to erupt in protest on the evening of 29 May 1913, at the Theatre des Champs Élysées in Paris. This is borne out by the critical reviews that followed on the morning after. Attention therein is focused almost entirely on the ballet. Some reviews acknowledge the composer but make no mention of the music. At the performance itself, the uproar in the audience may have rendered much of the music inaudible. Moreover, when *The Rite* was shifted to the concert hall less than a year later — 19 May 1914, with Pierre Monteux again conducting —, the success was immediate and unqualified. The success of this initial performance was repeated virtually without exception in the remaining capitals of Europe and North America, even in Soviet Russia, in Leningrad and Moscow, in 1926. From the moment of its christening to the present, *The Rite of Spring* has survived as a rarity in the annals of the avant-garde in 20th century music, a spectacular success with both the listening public and a multitude of professionals, including critics, composers, and academics.

1.

Let me turn for a moment to the dance movements of *The Rite*, the majority of which are stratifications, layered or polyrhythmic structures in which there is a superimposition of melodic fragments and rhythmic patterns that repeat according to varying cycles or spans.

Shown in Example 1 is an excerpt from the massive layering that begins in the 'Ritual of the Rival Tribes' and extends through the 'Procession of the Sage' in Part I. The brackets in this example mark off the spans separating repeats of the segments and patterns, which number seven at this stage; the numbers represent the number of quarter-note beats encompassed by the brackets.

Crucially, the repeating fragments and patterns in this example are not transposed, developed or tossed about from one instrument to the next in a sympathetic dialogue — as they are, typically, in works of the Classical style. Rather, each fragment, fixed registrally and instrumentally, is repeated quite literally from a melodic, rhythmic, and articulative standpoint. Missing is not only a sense of forward motion, but of harmony as well, at least as harmony is understood as encompassing chords leading to and away from each other. The entire stratification excerpted in Example 1 is virtually immobile.

The image shows a musical score for 'Ritual of the Rival Tribes' from Stravinsky's 'The Rite of Spring'. It features multiple staves for different instruments: oboe 1 & 2, bassoon, horn 1 & 2, horn 3 & 4, tuba, trumpet, trombone, violin, 3 cellos, and bass. The score is marked with rehearsal numbers 67, 68, and 69. Brackets are used to indicate spans of quarter-note beats across various instruments, with numbers 6, 8, 13, and 17 indicating the length of these spans. The notation includes various rhythmic values, accidentals, and dynamic markings like 'ritac.' and 'divisi'.

Ex. 1. *The Rite of Spring*, 'Ritual of the Rival Tribes', stratification, Reh. Nos. 67–68+2.

Example 2 singles out, from start to finish, the two most prominent layers in the stratification condensed in Example 1. In the horns and tubas beginning at rehearsal No. 67, the two fragments are Dorian tetrachords, with the lower one gapped; related by a semitone, the two reiterating fragments grind against one another like the separately revolving — and heavily rusted — gears of a giant locomotive. As the brackets show in Example 2, the spans between successive repeats of the horn fragment are irregular; not only do these spans shift in their alignment with the other fragments and the 4/4 meter, they themselves are irregular in length. Specifically, they number six, eight, thirteen — repeated three times — and seventeen quarter-note beats.

In turn, repeats of the fragment in the horns, A–D–C–D, are *displaced metrically*; see Example 3. Beginning just before rehearsal No. 67, they enter on the fourth, first, third, and second quarter-note beats of the 4/4 bar line, falling off and on the half-note beat as the likely tactus at 83 beats per minute. The changes in the metrical location and in the length of the spans are highlighted by what does *not* change, namely, *everything else*. Pitch, register, dynamics, and instrumentation are held constant, as the vertical alignment of the fragment shifts in relation to the other fragments and the meter — even the articulation of the horn fragment, with the pitches A and D accented and D–C–D slurred, is fixed from one displaced repeat to the next. In effect, traditional processes of motivic development — what Schoenberg called with 'developing variation'

— are sacrificed in order that vertical placement and displacement might be set in relief.

64 "Ritual of the Rival Tribes" 65

67 "Procession of the Sage" 68

69 70

71

Ex. 2. *The Rite of Spring*, 'Ritual of the Rival Tribes', 'Procession of the Sage', stratification, principal fragments, Reh. Nos. 64–71.

What counts in this music is alignment. Stratification in *The Rite of Spring* has everything to do with vertical coincidence, very little with harmony, and even less with harmonic change or progression. Its aesthetic point lies with the irregular accents and spans that mark off the repeats of the fragments and patterns, as these spans and accents are played out against a mostly static landscape of ostinatos, reiterating melodic fragments and dammed up, polarized harmonies. And it lies at least in part with the displacement of these irregularly spaced repeats in relation to a steady pulse and a meter, with the expectations of *metrical parallelism* that are in turn thwarted by displacement, and with the disruptions of the meter that may in turn be brought about by thwarted expectation.

a. b. c. d.

Ex. 3. *The Rite of Spring*, 'Ritual of the Rival Tribes', 'Procession of the Sage', stratification; metrical displacement of horn fragment.

When a fragment such as the one featured in the horns in Examples 2 and 3 is displaced relative to a meter, the listener's expectations that the fragment will be repeated at a metrically parallel location are frustrated. And since metrical parallelism can play a role in the actual establishment and subsequent confirmation of a meter, frustrating the listener's expectations in this regard can have the effect of challenging and even disrupting the meter. In Examples 2 and 3, expectations of this kind are foiled when the repeat of the horn fragment just prior to rehearsal No. 68 is displaced from the fourth to the first quarter-note beat (downbeat) of the 4/4 measure; as we have noted, the fragment falls first off and then on the half-note beat. The listener may respond:

1. *Conservatively*, in which case the 4/4 meter is sustained or *conserved* (quite possibly after a split-second jolt); the displacement of the repeated fragment, exposed by Stravinsky's conservative notation, is heard and understood as such;
2. *Radically*, with the meter disrupted; retroactively, the listener adds an extra quarter-note beat to the count just prior to the repeat, allowing the repeat to be heard and understood in a metrically parallel fashion — on the fourth beat of the 4/4 bar line; the conservative split-second jolt becomes a full-fledged interruption;
3. Or the meter may be suspended indefinitely.

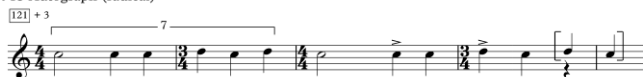
Crucially here, a passage notated conservatively might be heard radically, as well as vice-a-versa. Stravinsky's notation cannot always be trusted in this regard, so that the printed page is best kept separate from experience. The radical and conservative interpretations implied by a notation need not be those of the listener's experience.

And Stravinsky can be inconsistent in his barrings. Shown in Example 4a is a reduction of the opening block of the 'Evocation of the Ancestors' in Part II of *The Rite*; an initial fragment, spanning seven quarter-note beats (see the bracket), is immediately followed by its shortened repeat. The notation is radical; Stravinsky imagines the listener as interrupting her metrical bearings — should there be any — in order to hear and understand the fragment and its shortened repeat as metrically parallel; both segments fall on the downbeats of the measures in question.

However, the radical response to this passage is at odds with the experience of the present listener. Extracting and entraining to a 2/2 — or possibly 4/4 — meter, he hears the shortened repeat of the fragment as a displacement. The fragment falls

first on and then off the half-note beat, the likely tactus with a marking of 120 beats per minute — see the conservative rebaring in Example 4b). In effect, the repeat is heard as a *syncopated* version of the original. And the accents in the third measure of Example 4b, while re-enforcing the second half-note beat and downbeat of the third and fourth measures of the radical barring of Example 4a, respectively, are here heard as giant *syncopations* off the half-note beat.

a) 1913 Autograph (radical)



b) rebarred (conservative)



c) rebarred, with displacement removed



Ex. 4. *The Rite of Spring*, ‘Evocation of the Ancestors’, opening block.

Traced in Example 4c is a likely point of departure for the conservative and radical barrings of this passage. The fragment’s span of seven quarter-note beats is extended to eight beats, with the complications surveyed above converted into a veritable metrical comfort zone; the 2/2 meter is immediately confirmed by the true parallelism of the repeat of the fragment. Then, returning from this point of departure (Example 4c) to the conservative and radical barrings of Examples 4b and a, respectively, a single quarter-note beat is subtracted from the stereotypical eight beats of Example 4c, causing, conservatively, the shortened repeat of the fragment to fall on the fourth quarter-note beat rather than the first (Example 4b), and, radically, the bar lines to be shifted in order to preserve a form of parallelism (Example 4a). In each case, the shortened repeat arrives a quarter-note beat ‘too soon’, with the encompassed measures likely to acquire, as a result, a rushed, breathless quality. The metrical instability of this opening block of the ‘Evocation of the Ancestors’, revived with each subsequent restatement, is never truly resolved.

Perversely, then, Stravinsky’s radical barring at the outset of the ‘Evocation’ (Example 4a) can seem to have been conceived *in opposition* to the conservative reaction outlined in Example 4b. The radical conception is not merely non-metrical, it is *anti-metrical*, or *contrametric*, to use David Huron’s term in his book, *Sweet Anticipation* (Huron 2006). Stravinsky’s intentions were evidently to engage the listener both conservatively and radically, even if only one of these interpretations can be attended to at any given moment, while the other one is held at bay as a challenge.

2.

What might the origin of these polyrhythmic textures have been for Stravinsky? Stratification persists in his music, regardless of the stylistic orientation. Curiously, however, the technique is without precedent in the art music of Russia and the West generally.

Of course, they can bring to mind the music of other cultures, and perhaps most spectacularly in this respect, the polyrhyth-

mic textures of African dances and drum ensembles. The thought of such a correspondence must surely have occurred to any number of enthusiasts of Stravinsky’s music familiar to a degree with African music through recordings and the transcriptions of numerous scholars. The thought is unlikely to have escaped Steve Reich, in any case, as familiar as this composer appears to have been some years ago with the repetitive methods of Stravinsky and those in turn of various percussion ensembles in Ghana. The correspondence is worth pursuing briefly here not only for the additional light it can shed on Stravinsky’s notated bar lines and on the nature of meter itself. The completely ahistorical nature of the relationship carries with it a certain fascination of its own. At least, there is currently no evidence linking Stravinsky at the time — or any other time, for that matter — to a studied or even casual awareness of African polyrhythm. On separate continents and in isolation from one another, Stravinsky and percussion ensembles in Africa cultivated a polyrhythmic principle in which, against a metrical backdrop, two or more motives or rhythmic patterns of varying length are repeated often as ostinatos.

Shown in Example 5 is David Locke’s transcription of a Southern Ewe dance, *Gahu* (Locke 1987), which was subsequently reproduced in Kofi Agawu’s book, *Representing African Music* (Agawu 2003, 81). Another transcription of this dance appears in Steve Reich’s memoirs, *Writings on Music* (Reich 2002, 60), but it is modeled after the ‘polymetric’ approach favored by earlier scholars such as A. M. Jones. In effect, the reiterating patterns that are beamed and that enter in staggered fashion in Example 5 served as starting points for the staggered bar lines in the earlier ‘polymetric’ transcriptions.

Ex. 5. The polyrhythmic texture of *Gahu*, a Southern Ewe dance, as transcribed by David Locke (1987, 78).

As with Stravinsky’s stratifications generally, the different layers in *Gahu*, six in all, represent different instruments as well as distinct rhythmic patterns; reading from high to low or top to bottom in Example 5, the ensemble includes a bell, a rattle, and four different drums, the largest of which is the lead

drum. Like most of the reiterating fragments in Stravinsky's layered structures, the patterns in *Gahu* are ostinatos, cycled again and again with little if any modification — the lead drum may introduce variation, but in keeping for the most part with the length and shape of the pattern.

In polyphony generally, attention is drawn to the individual character of the fragments or motives, as each of these relates to the others and to the meter. More so than with the idioms of Western art music or the Classical style, meter lies to the background of *Gahu*, overshadowed by an abundance of phenomenal accentuation. Although the downbeat of each 4/4 measure carries 'power' and a sense of 'resolution', the quarter-note beats receive equal stress. To follow Locke, the 4/4 meter of *Gahu* is an 'African 4/4'; the downbeat of each measure 'functions physically — in the body and mind — rather than sonically' (Locke 1987, 19).

It should be noted, however, that the physical incorporation of meter, to the point where metrical beats are *felt* by the listener, is a reflexive form of behavior common to listeners in general, not to African listeners in particular. The reflex may be tens of thousands of years old, in fact, with a long evolutionary history, as many scientists now believe.

We as listeners entrain to meter, in other words, which in turn becomes physically a part of us. And the seat of this remarkable capacity to internalize meter may be our brains rather than any biological timepiece. It may have to do with neural networks that oscillate as a matter of course. In the computer model set up by David Gjerdingen in 1989, the ebb and flow of excitation and inhibition between two neural populations is made to enter into a up-and-down oscillation, the 'tick-tock of a neural metronome'. If the rate of excitation and inhibition between populations is doubled, the metronome will beat a 3/4 waltz time. Quarter-note and dotted half-note periodicities will combine to form a composite, ternary output. Greater metrical complexity is achieved by adding additional neural populations.

How any of this might work in the real still remains something of a mystery. Metrical entrainment is automatic — reflexive — as well as subconscious — or preconscious. Like walking, running, dancing, and breathing, meter is a kind of motor behavior, as Justin London has described it. Once entrained, it is abandoned by the listener only in the face of 'strong contradictory evidence'. Hence, with special reference to *The Rite of Spring*, the explosive potential of an actual disruption of the meter, the physical effect a disturbance of this kind can have on the listener. The physicality of *The Rite* arises accordingly, that is, from entrainment and from the challenges to and disturbances of an attuned metrical grid. These reverberations may account to some degree for the immediacy of *The Rite's* effect on a great many listeners, the ability of these listeners to become readily engaged with the raw, relentless character of the dissonance.

What ultimately distinguishes Stravinsky's stratification in Examples 1 and 2 from *Gahu* as transcribed in Example 5 are the varying lengths of the reiterating fragments — most of which extend beyond a measure —, the irregular spans between repeats of the horn and tuba fragments, and the displacements of the horn fragment in relation to the 4/4 bar line. A real sense of conflict prevails in Examples 1 and 2, as if each layer were in competition with the others. Compared to *Gahu*,

indeed, parts of the stratification condensed in these two examples can sound like a war zone.

To be sure, *Gahu* is immobile soundwise ('harmonically'), and its reiterating patterns, confined to within a measure, are of varying length. The patterns are also fixed in register and instrumentation, just as they are in Stravinsky's stratifications. In *Gahu*, however, they are fixed in their alignment as well; they enter in staggered fashion from one measure-repetition to the next, but there are no displacements among the patterns or as each pattern relates to the quarter-note, half-note, and whole-note beats (4/4 bar line). And so the listener's perception of a superimposition of varying or *conflicting* lengths is apt to be less pronounced; *Gahu* lacks the range of pitch, register, and instrumentation that had been available to Stravinsky. Indeed, many of the fragments and patterns in Example 1 from *The Rite of Spring* are defined as much by pitch as by rhythmic figuration. In the oboes and lower strings, the spans bracketed in this example are entirely a matter of pitch.

The six patterns of *Gahu* work together in an intricate clockwork, creating something like a musical mobile; the repetition does not change, but the listener's perception may. There are upbeat-downbeat reversals or 'Gestalt flips' — as Locke has described them; the stressed upbeats of the patterns of the first and third layers (see Example 5) might suddenly be perceived as onbeats, while, subtly, the perceived grouping may change as well. These shifts can be magical in their effect.

Locke treats *Gahu* as 'an autonomous aesthetic force', an 'artifact' or 'work' that for the past several decades has been performed the world over by amateur and professional groups with little reference to the original meanings of the song texts, drum rhythms, and dance movements. *Gahu* is now seen and listened to for its own sake, in other words, irrespective of the historical, geographic, and cultural circumstances of its creation. No doubt, as Locke assures us, something of the 'African mind and soul' remains, allowing *Gahu* to stand as a generalized symbol of a traditional culture (Locke 1987, 6). And such may be the case with recordings and concert performances of *The Rite of Spring* as well. Dim images of pagan rites and pre-historic Russia, as originally conceived by Stravinsky and Nicolas Roerich, may yet inflect the listener's experience.

KEYWORDS

Stravinsky, *Rite of Spring*, Polyrhythmic Structures, *Gahu* Music.

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