

**CREATAHOLIC**

**EDGARD VARESE  
ORCHESTRAL  
TECHNIQUES**



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**~ Edgard Varèse – Orchestral Techniques ~**

**MUSI 4300: Contemporary Music (Winter Term 2005)**  
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*"I don't care about reaching the public as much as I care about reaching certain musical-acoustical phenomena, in other words, to disturb the atmosphere – because, after all, sound is only an atmospheric disturbance!"*  
– Edgard Varèse (Schuller, 1965)

Varèse was born in 1885 in France during a time when music was undergoing great transformations; Wagner passed away in 1883, Debussy wrote his award winning *L'enfant Prodigue* in 1884 and the Romantic era was coming to a close. The winds of change were activated bringing about new advancements in tonality and instrumentation.

Varèse studied at the *Schola Cantorum* with Vincent d'Indy, whom he resented for his conservative approach, Albert Roussel, and at the Paris Conservatoire with Charles Widor (Wen-Chung, 1966). He also studied the Medieval, Renaissance, and early Baroque masters with Charles Bordes. Debussy, Auguste Rodin (painter interested in exotic subjects) and German composer, Richard Strauss provided support and friendship to Varèse (Swafford, 1992). In 1907, Varèse moved to Berlin to meet Ferruccio Busoni. Furthermore, he associated with Karl Muck (conductor and pioneer in acoustical recordings of symphonic music), and Hugo von Hofmannsthal (librettist/playwright for Varèse). The earlier works from this period, except for one, *Bourgogne* (1908), were lost in a warehouse fire. *Bourgogne* was destroyed by Varèse later in his life during a fit of depression. In 1915, Varèse emigrated to the United States where he believed he had come "to the 'New World' to seek a new world of music." (Wen-Chung, 1966).

Both Schoenberg and Stravinsky influenced Varèse resulting in his shift away from tonality and towards new orchestral techniques. It is also evident that Debussy was an influential figure to Varèse. Debussy favoured the woodwinds but reduced the importance of the strings to supportive roles in many of his compositions. Stravinsky brought forth a new appreciation of percussion in *The Rite of Spring*. These influences are observed in Varèse's works which also

favoured the clarity of the woodwind and brass sections in addition to a great emphasis on percussion (Henderson, 1965).

Varèse stated that he “was the first composer to explore, so to speak, musical outer space...”(Henderson, 1965). Although his orchestration has made several contributions towards modern concepts of orchestration and composition, his music displays characteristics of both Debussy and Stravinsky whom may have planted the seeds of inspiration in his music. These characteristics will be explored further in this paper.

Varèse believed in the concept of “organized sound” as a living organic matter (Wen-Chung, 1966). He often compared his compositions to the process of crystallization, allowing the form and sound-masses to organically develop from an idea. Varèse believed that form was “the result of a process” and not a “pattern to be followed, [or] a mold to be filled” (Wen-Chung, 1966). In fact, he was known to create sections of his compositions and then fit them together like puzzle pieces (Strawn, 1978), much like Stravinsky who composed sections of *The Rite of Spring* backwards.

Varèse placed great emphasis on sound and rhythm, dispensing with conventional harmony, meter, texture, and form (Simms, 1986). His intention was for music to possess a three dimensional quality similar to that of a crystal and often used the process of crystallization to describe how his music took form. He stated that the “possible musical forms are as limitless as the exterior forms of crystals” (Varèse, 1966). This was realized through the use of sound masses and the manipulation of such masses. A “sound-mass” or “plane” is defined as a grouping of sounds that share particular characteristics including intervallic relationship, register, melodic contour, timbre, intensity, and attack/decay (Strawn, 1978). The projection of these sound-masses is intended to create the illusion of distance, much like perspective painting and is

often portrayed through dynamic shadings and the melodic movement, or lack of movement, in relation to the other sound-masses. When sound-masses collide, certain characteristics of one sound-mass are transferred through metamorphosis to the other producing a concept Varèse called “penetration” (Wen-Chung, 1966). Stravinsky also developed his form from “germ themes” (Browne, 1930) that are transferred and repeated with transformation occurring regularly.

The following excerpt (fig. 1) from *Octandre* illustrates Varèse’s notion of sound-masses. John Strawn (1978) used “sound-mass” analysis to discuss *Integrales* and *Octandre*. Concerning Strawn’s analysis of bar 43 in *Octandre*, I propose an alternative analysis based on his definition of the characteristics of a sound-mass. Strawn explains that “a mass consisting of the horn, trombone, and double bass is separated from two other masses: one in the clarinet, oboe, and bassoon; the other in the trumpet.” This is not possible if his original definition of a “sound-mass” is maintained. In addition, Strawn writes that we should “assume that he had a single sound mass in mind whenever a given group of instruments appears together consistently in a characteristic manner.” Strawn’s analysis of this section contradicts the above statement.

The oboe, clarinet, bassoon, trumpet and contrabass form one mass at bar 43 (mass #1) due to rhythmic similarities between the five instruments. The horn and trombone sustain their own separate sound-masses (masses #2 and #3 respectively) with a definite rhythmic disparity to the other instruments beginning in bar 43. At bar 46 the trombone penetrates mass #1 allowing the horn (mass #3) to continue. The only connection between this section of the work (bars 42 to 48) and the next section at bar 49 is a single tied note in the Trumpet remaining from mass #1.

The transformation of sound-masses is clearly heard at bars 65 to 66 (fig. 2) in the second movement of *Octandre*. The solo flute sound mass appears to finish, and looking at the score,

one would expect to hear a clear break between the flute and entering sound mass of oboe and clarinet, but Varèse blends the sonority and timbre of his instruments so seamlessly that the trumpet enters and bridges the gap to produce a smooth transfer of the two masses.

Stravinsky's strategy is similar to that of Varèse. He kept ideas distinct by separating each "into its own layer by differences of timbre and rhythm – and by abruptness with which events follow one another." (Cross, 2003). The opening of *The Rite of Spring* may also be analysed using this method (fig. 3). The opening solo by Bassoon is (mass #1) is penetrated briefly by the horns with a distinctive theme creating sound mass #2. At marking 1, the clarinet and bass clarinet collide with mass #1 creating mass #3. The Piccolo Clarinet, which, due to registral and rhythmic similarities may be considered part of mass #1 briefly collides lasting only two bars. The sound-masses are distinct because of the registral and timbral differences. The clarinet is presented in its least penetrating chalumeau register while the bassoon solo is in the upper reaches of its range.

Layering of orchestral elements, implying sonorous "planes" of sound is also found in the works of Debussy. The following excerpt (fig. 4) from *La Mer* shows the influence of Debussy's layered sonorities on Varèse. Debussy allows for a single thread of melody (mass #1) in the flute to be heard above additional masses consisting of strings, horns, and other woodwinds.

In Debussy's, *Prélude à l'après-midi d'un faune*, sound masses can be easily discerned at bar 55 (fig. 5). Sound-mass #1 is quite large and includes flute, oboe, english horn, clarinet, violin and viola. Violin and viola are included within mass #1 not because of melodic material, but because they share the same rhythmic characteristics as discussed in Strawn's definition of a sound mass. Mass #1 is complemented by two additional sound masses in bassoon and horns

(mass #2) and cello and double bass (mass #3), again, grouped according to rhythmic characteristics as heard by the ear.

Both Debussy and Stravinsky stretched the concept of metric rhythm, often blurring the regular accentuation. They created flowing rhythmic movement by obscuring bar lines with repetitive figures or long, tied notes and through the use of polyrhythms. This too is found extensively in the music of Varèse.

Sabaneev (1929) describes Debussy's rhythms as,

...elusive, vacillating, quavering, fluid as it were... Debussy creates a whole world of new, free, rhythmical tone sensations, changing fantastically and capriciously like columns of smoke blown by the wind. In his music there is the eternal 'agogic,' the eternal struggle with the bar line, with definiteness of meter; the perpetual fluctuations of tempo."

The following excerpt (fig. 6) from Debussy's *Prélude à l'après-midi d'un faune* illustrates his "free, rhythmical sensations" through the use of repetitive notes set in a syncopated rhythm which offset the expected accentuation of the first beat. In figure 6, the idea of sound-mass has been used to show rhythmic similarities and therefore the label, "rhythmic grouping" has been used. Rhythmic grouping #1 shows the regular triplet groupings accentuated with slurs to displace the expected accentuation. Rhythmic grouping #2 further displaces accentuation of the metric pulse through the use of ties. The quarter notes do not always fall on the first of each pulse. Rhythmic grouping #3 contains sextuplets grouped in regular accented beats. Rhythmic grouping #4 contains even groupings of three beats per bar, but displaced by ties and slurs that confuse the ear and displace the metric pulse.

This example (fig. 7) from Stravinsky's *Rite of Spring* shows his extensive use of polyrhythms. Rhythmic grouping #1 displays even distribution of notes over each beat and pulse accentuated by a single note on each pulse in piccolo and flutes. Rhythmic grouping #2 shows a veiling of regular beats with septuplets that transform into additional irregular groupings with the

entrance of the first and second clarinets. Rhythmic grouping #3 consists of sixteenth notes grouped to begin on the second pulse of the bar and ending on the first pulse, altering the accentuation and helping to mask the regularity of grouping #1. Grouping #5 reveals an attempt to disguise the regular accentuation with slurs that portray six beats that would conform to simple time. The result of these rhythmic groupings is a tremendous obscurity in the metric pulse of this passage.

“Stravinsky’s rhythm is entirely unfixed. It sweeps through the music, giving it quite an extraordinary sense of motion and vitality. Stravinsky’s genius for rhythm lies in his ability to combine insistence with variability” (Browne, 1930). This is duplicated in part by Varèse’s ability of creating a “dynamic sensation of pure motion” (Henderson, 1965) with his music. He believed that “rhythm is the element in music that gives life to the work and holds it together.” In this excerpt from *Octandre* (fig. 8), Varèse is able to veil metric accentuation through the use of extensive tied notes, blending with triplets and syncopated figures. Rhythmic grouping #1 splits the three beats of the bar into two pulses, suggesting compound time accentuation. Grouping #2 uses tied notes to displace the accentuation in addition to the accent (>) markings in bar 74. The bracketed notes ( [ ] ) in bars 74 and 77 show the attack of notes on every beat and half beat due to tied notes from previous bars. The ear is unable to ascertain a clear marking of beat accentuation therefore veiling the metric pulse.

Varèse also used additional instruments within the percussion section. He wanted to shape his music into a “‘continuous flowing curve’ which led him to the use of sirens, Theremins and martinets, but are often suggested by conventional instruments as well” (Chou Wen-Chung, 1966). This “flowing curve” was also a result of Varèse’s belief that music should “be heard as a three-dimensional entity moving through space, appearing, disappearing, and re-appearing in the

course of performance” (Strawn, 1978). Debussy often used silence as an expressive device within his music which tends to flow along a similar curve to Varèse’s. According to Jarocinski (1976), “almost all Debussy’s music emerges from silence, fades away at times, and then relapses once more into silence”.

In conclusion, Varèse had many influences that helped to shape the extraordinary music he created in the 1920s and 30s. His use of “sound-masses” allowed for music to become three-dimensional, and as the above excerpts show, his notion of orchestral layering and rhythmic strategies may have been derived from, or influenced by, composers such as Debussy and Stravinsky.

*Varèse “opened up new horizons in the twenties with his works for conventional instruments, anticipating today’s new developments by over a quarter of a century.” (Chou Wen-Chung, 1966)*

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