

The Spectral Music of Horatiu Radulescu: An Alchemical Perspective

Dr. Francis Heery

Introduction

This paper will examine spectral music from an alchemical perspective, focusing on the music of Horatiu Radulescu. Firstly alchemy will be presented as a field of enquiry where science and aesthetics meet. Following this the main correspondences between alchemy and spectral music will be presented. Finally some key aspects of Radulescu's music will be shown, concentrating on the text composition *Sound Plasma – Music of the Future Sign or My D High Opus 19∞*.

Alchemy's Exoteric and Esoteric strands.

Alchemy is often seen as an early form of chemistry, a rudimentary grasping towards the rationalism that would come to sustain modern science from the Enlightenment on. But it was more than merely an unrefined proto-science. It melded together concepts regarding the physical and metaphysical, the material and the spiritual to create a complex and perplexing system of thought. Indeed alchemy embodied its own thematic content by being a elusive interplay of opposing tendencies; one concerned with matter and the other with spirit.

The goal of material alchemy was the creation of an ideally pure substance that would grant supreme power. The well-known alchemical theme is the transmutation of *prima materia* into "gold", or the creation of the philosopher's stone, which would give the alchemist the power to perform this transformation. In Eastern alchemy the focus was often on the

creation of an elixir that would prolong life, or grant immortality. (Gilchrist, 2015, p. 23)

The non-material aspect of alchemy was centered on essentially the same type of concern, transposed to a metaphysical plane where the emphasis was on spiritual purification, as a means to access profound inner knowledge.

Towards the age of the enlightenment, materialistic alchemy increasingly shed its mystical preoccupations and was eventually absorbed into the new rationalist paradigm. But before this split, in alchemy's classical period, there was often no clear distinction between materialistic and the metaphysical (Jung, p.228). A dominant theme in alchemy is the interaction and reconciliation of opposites, which was represented in many forms, for example in the images of the moon and sun and in a variety of masculine and feminine symbols which included the use of sulphur and quicksilver, male and female respectively. There was also the recurring theme of the wedding and the symbol of the hermaphrodite; the symbol of the snake eating its own tail or *ouroboros*; and the alchemical processes of dissolution and coagulation. The goal was always the transcendent unification of opposing forces, finding its ultimate expression as the *coniunctio*. In this paper the same theme will prove to be particularly relevant when looking at the music of Horatiu Radulescu.

Alchemy and Aesthetics

Alchemy's paradoxical character lent the field an aesthetic power that likens it to the creative arts. In art, both the objective and the subjective form a duality of complimentary and integrative opposites and worldly materials combine with intuitive expression to be finally unified as artwork, whose power transcends the sum of its parts.

If alchemy lacked the technological precision of modern science, this opened it to a heightened sensual engagement with matter. The world of the alchemist was heavily laden with smells, colours and textures and all manner of perceptual signs and signals that had immanent lived-*qualities*; it was a quality-rich form of science. Added to this, the Hermetic influence ensured that alchemy retained a sense of awe at the divine mystery inherent in the material world. Hermeticism lent an aura of piety and the sublime to physical experiments, helping alchemy to function as a mystic-phenomenology positioned at the point where both matter and spirit could be transformed.

Alchemy brought 'mood' to the laboratory and doing so it coupled an aesthetic sensibility with scientific rationality¹. It was an aestheticized science, one that retained something of a Dionysian spirit that combined a methodological attitude with a profound respect for the uncanny 'otherness' of the world. This aesthetic core was given further expression through the profusion of rich pictorial and linguistic symbolism that runs throughout alchemical literature.²

Music and Alchemy

The combinative interaction between the exoteric and esoteric strands in alchemy is echoed in music. Musical *practice* is grounded in the phenomenal and technological world, through the design of musical instruments, the use of digital technology, or the simple physicality of

¹ The rhetorical affectation that we can discern quite readily in physical-alchemical writings, was not in fact eradicated as science advanced. Rather it changed its form, from a rhetoric of mysticism to a rhetoric of epistemological rectitude and sobriety.

² This melding of analysis and aesthetics wasn't unique to alchemy and is a key feature of continental philosophy. There are strong literary elements to Nietzsche, Heidegger, Derrida and Wittgenstein for example, where not only does style carry the philosophical content, the very presence of this content is to a large extent dependent on rhetorical strategies employed.

actually generating sound through interactions of bodily and instrumental matter.

At the same time the *experience* of music has a paradoxical quality where it communicates through being primarily self-referential, generating significance through internal relations of pitch and rhythm; an *ouroburos* where meaning and non-meaning give rise to one another. In the musical experience the rapport that is set up between sound and listener ultimately evades linguistic description. Thus music has the quality of being meaningful, yet untranslatable and this ineffable aspect to music gives it a revelatory quality.

Spectral Music - Introduction

Spectral composition provides a clear example of another dual practice where science and aesthetics interact. It came to prominence in 1970s France and is based on the analysis of sound, using Fourier analysis, to determine its constituent components, simple sonic elements each with a specific frequency and amplitude envelope.

Spectral music contrasts with the major tendencies of Western Art music in its focus on the inner morphology of sound. It takes a phenomenological attitude to composition, where the aesthetic agency is located primarily in the sound itself. The various movements in the history of European art music involved the employment of musical sounds to construct quasi-semantic relations. In contrast spectralism involved musical representations and elaborations of acoustic activity. In doing so it opened the way for the further exploration of microtonal harmonies, the exploration of continuity and evolution in sound and new approaches to musical time. (Grisey, pp.2-3)

Both spectral music and alchemy were sustained by an interaction between empirical, rational and analytic exploration of the material world, and a-logical, intuitive, inward looking forms of expression. Grisey remarking on the utopian aura of spectralism called it a “musical language articulated on scientific facts [representing the] dream of an art-science”. By taking a more “ecological approach to timbres, noises and intervals” (Grisey, p. 2), sound is unveiled as a fascinating entity, rather than employed in dialectical fashion, as a variant of the rational spoken word.

Spectralism’s Indirect Hermetic Roots

Indeed there is an indirect historical link between spectral music and the Hermetic tradition in the form of Pythagorean number theory. The information gleaned from spectral analysis is spectral music’s *prima materia*. The sonic spectra of instrumental sounds are usually harmonic, where the frequencies of the partials are related by simple integer ratios. For example, the frequency ratio of the two pitches that comprise an octave is 2:1; that of the perfect 5th, 3:2; that of the perfect 4th, 4:3. Pythagoras (ca 570-490 BC) is credited with discovering the acoustic relationship between harmonic intervals and numerical ratio in the 6th century BC. He is a constant presence in the history of Hermetic philosophy, especially where it intersects with Cabalistic theories (Yates, 2002, p. 92) and Frances Yates notes that Pythagorean numerology is implicit in the *Corpus Hermeticum* (Yates, 2002 p. 164).

[Slide 2: Tetraktys]

The harmonic ratios mentioned above correspond to the *tetraktys* of the Pythagorean school. This referred to the number ten, created by adding numbers one, two, three and four (Huffman, 2014). The *tetraktys* was also

illustrated as an equilateral triangle constructed from ten points, four at the base followed by three, then two and finally one at the top. It had central significance for the Pythagorean school and later followers of Pythagoras treated it as a summary of the philosopher's teachings. (Huffman, 2014). In a musical context the acoustic ratios mentioned above are comprised of combinations of the numbers one to four, and were heard by Pythagoras as being the most consonant. (Iamblichus, 1818, p.235). The *tetraktys* is also found here in numerical form in Albertus Magnus' *Philosophis Naturalis* (Jung, 2010, p. 233). As will be seen, Radulescu placed particular emphasis on spectral music's Pythagorean lineage.

[Slide 3: Do Emerge Ultimate Silence]

Horatiu Radulescu

Radulescu's music has overtly esoteric leanings and so intensifies the correspondences already outlined between spectral music and alchemy. His music is an unusual blend of erudition and mysticism, where highly specific instructions regarding harmonics, microtones, tuning and playing technique are combined with rather abstruse concepts and notation requiring some effort to decipher. Many of Radulescu's compositions feature semi-improvisational techniques, expressed using the composer's own symbolic language. His music often has strong sense of ritual, where the dynamic morphology of a spectrum or a combination of spectra are steadily worked through, revealing in detail the dynamic inner life of the sound.

This is an excerpt from *Intimate Rituals XI* for viola and two 'sound icons'. 'Sound icons' were grand pianos with lids removed turned on their sides and played like a harp. The strings can be bowed or plucked with gold

coins, which are particularly resonant. In this version the sound icons were pre-recorded.

[Intimate Rituals XI – excerpt].

Sound Plasma: An Alchemical Perspective.

Radulescu highlights the Pythagorean correspondence in a text based composition entitled *Sound Plasma - Music of the Future Sign or My D High Opus 19 ∞* (1975). The score is in fact two separate *types* of work simultaneously: As *Sound Plasma - Music of the Future Sign* it is a theoretical text (Radulescu p. 1) expressing Radulescu's aesthetics of sound; this forms the bulk of the work. As *My D High Opus 19 ∞* it is a performable spectral composition for open instrumentation and free duration which uses this concept as "theoretic data" (Radulescu, p. 1).

The theoretic part is framed by the composer's own rather dismissive interpretation of the history of western art music. He refers to Pythagoras as an idealized originary figure who had "permeated the secret" (Radulescu, p. 3) of sound, but whose knowledge was subsequently ignored by future generations of composers. The result of this oversight was centuries of what he calls "pantomime music", where sound was treated "from the outside" (Radulescu, p. 3). Here the Hermetic undertones are clear; we have a lament for a lost antiquarian 'golden age', with profound knowledge stemming from a semi-divine figure and a utopian call to reclaim this ancient knowledge.

Sound Plasma outlines a spectrally orientated aesthetic theory that remained relevant to the composer for his entire life. The work corresponds with alchemy in two main ways. The first correspondence is the style of language used in *Sound Plasma*. Like alchemical literature its meanings are often elusive and the aesthetic veneer of the text tends to dominate the content. The work features what might be called a fuzzy

rationalism, a quasi-scientific tone that categorizes sounds and their transformations, but in a rather 'loose' manner.

Secondly, there is a distinctly alchemical flavour to the content of the text as it features numerous examples of dynamic and integrative tensions regarding the worldly and the metaphysical. As will be seen, this relation is most clearly evident in the performance instructions, as they serve to guide the performer or performers towards a radical unification with sound, where the boundary between listening subject and sound as object is removed. The stated aim *Sound Plasma* is to "ENTER THE SOUND, PLAY THERE AND FROM THERE" (Radulescu, p. 4)

Initiation

Sound Plasma is divided into short sections that organize sounds into various categories and also describe overall behavioral characteristics of sound that should be used as performance material. The work begins with an initiation. In the opening lines the reader is instructed that only after they have meditated on the 5040 permutations of the words in the title for "nearly 7 days" should they proceed to the text proper (Radulescu, p. 1).

Radulescu categorizes sounds into fields such as language-based, instrumental or object based, vocal, natural or electronic, which he calls Global Sources.

[Slide - Sound Compass]

Sounds can also be categorized anywhere within four cardinal points of a Sound Compass that relate to their clarity and density, which also acts as a guide for transformations of sounds over time, via processes of what the composer calls evo-involution. This is described as a "naturally intricate phenomenon of self building up and destroying sonority" (Radulescu

p.18). A central element in the work is the Narrow Frequency Band. It is an “irregularly trembling” fundamental (in this case a d in a very high register) whose pitch oscillates within a $\frac{1}{4}$ up to $\frac{3}{4}$ tone (There is a discrepancy in the text here, as the accompanying illustration states within a $\frac{1}{3}$ up to $\frac{3}{4}$ tone). This is used as the *prima materia* for various spectral transformations in performance.

Stardust Poetry

[Slide - stardust poetry p. 4]

Superimposed on this text is what Radulescu calls “Stardust poetry” (Radulescu p.2). This poetry features lines such as “ CREDO snow bound calm sublime towards loves and birches our barbaric stars!” (Radulescu p. 4) [**Slide - stardust poetry pp 14-15]** or “THE OTHER WHERE TO WHY BEYOND UNCERTAIN WHEN I’M A LONGING THERE WHERE NOW AND THEN” (Radulescu, p. 15). Accompanying this are shorter lines of poetry called “vertical verses” written in a similar style, which act as numbers for the sections. So in contrast to the outline of a methodology we have simultaneously a highly personalized use of language that Radulescu says “...suggest[s] the “universe” of this music” (Radulescu, p. 2).

[Slide: Sound Plasma excerpt]

Sound Plasma: Practice

Compared to the theoretical content the instructions for the performance of the composition are relatively short, but again rest on a mystically influenced duality regarding the world of matter and the world beyond matter. A D in a “very high register” can be either performed *or imagined* (Radulescu, p. 1) so that the empirical and objective acoustic reality of the sonic material has equal status to the private psychic representation of such sound. The aim of the performance is to create the possibility for “nirvana” to manifest “within the audible realm” (Radulescu, 1975, p. 2).

[SLIDE- Sound Plasma p.2]

Here I'll quote the entire passage:

“The harmonic aureole of this high d enters more or less the ultrasonic realm.

When you feel UTOPIA surging and tending to overcome REALITY and vice versa, imagine or realize a reflection of that harmonic aureole into the infrasonic realm.

This mirroring process, the increasing crystallization and stress at the two poles may induce “nirvana” within the audible realm (middle and low register).

These enlightening shadows may appear about three times during the whole performance.” (Radulescu, p. 2)

This passage illustrates the synthesis of opposing forces to create a purified state of being that is radically different its constituent parts. Worldly reality and idealized utopia are engaged in a reciprocal process of mutual overcoming; a self-reflexive interaction that resonates with the processes at work in the hermetically sealed alchemical vessel.

The catalyst for this process is the spectrum of the high d, which is acoustically present but psycho-acoustically inaccessible. Thus a tension is created between objective phenomenon and the subjective participation in that phenomenon.

A mirroring process is then called for, where the performer transposes the inaudible spectrum into the infrasonic realm, again rendering it imperceptible as sound, which links to the Hermetic emphasis on the correspondence between what is above and below. Through this state of

mysterious tension “nirvana” may manifest³. It is significant that in contrast to the term *Utopia*, “Nirvana” is placed in quotations, as if, whatever the nature of the idealized state accessed by this process, it has a revelatory quality that eludes linguistic description.

Conclusion

Carl Jung once criticized the legacy of the Age of Enlightenment for viewing contradiction as being merely a hindrance to true, objective knowledge, saying: “Only the paradox comes anywhere near comprehending the fullness of life” (Jung, 2010, p. 16). Alchemy was certainly a contradictory field of enquiry, and contained a wealth of paradoxical concepts. But it was also a field where science and aesthetics intermingled, a fact that gives it particular relevance today. Like alchemy spectral composition also combined these two fields in its quest to creatively engage with the inner life of sound. Its key merit in the context of Western art music was so treat sound not as a mere cipher, but as a self-sustaining aesthetic object. Radulescu’s music highlights this hidden revelatory motivation to spectralism. In *Sound Plasma* he presents a type of sonic alchemy, suggesting that for the dedicated participant, a unifying transmutation of listener into sound and sound into listener can be attained. Sound is revealed as something more than an acoustic phenomenon; it is also ineffable and intoxicating, providing a possible access point to a transcendent mode of being.

³ Here, given the correlation to alchemy, the metaphor of crystallization is particularly apt.

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