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UNIVERSITY OF CALIFORNIA, SAN DIEGO

Three Essays on Music, Mimesis and Meaning

A thesis submitted in partial satisfaction of the requirements for the degree
Master of Arts

in

Music

by

Sean Leah Bowden

Committee in charge:

Professor Steven Schick, Chair
Professor Anthony Davis
Professor Mark Dresser

2012

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Chair

University of California, San Diego

2012

TABLE OF CONTENTS

Signature Page..... iii

Table of Contents..... iv

Abstract..... v

Future Fantasy..... 1

Nature Musics of the West..... 7

Varese's Nocturnal..... 18

References..... 27

ABSTRACT OF THE THESIS

Three Essays on Music, Mimesis and Meaning

by

Sean Leah Bowden

Master of Arts in Music

University of California, San Diego, 2012

Professor Steven Schick, Chair

In this thesis, I will present essays centered on two recent projects of my own and one work by Edgard Varése. In *Future Fantasy: Identity, Imagination and Internet Design* I will explore the construction of a

promotional web site that functions as an art object. I will also focus on the manipulation and creative organization of digital materials for public display within that website. In *Nature Musics of the West* I will draw on selected philosophical and theoretical works from Horkheimer, Adorno, Derrida and Rousseau to develop a detailed conceptual framework for a small-scale musical play. In the final paper, I will analyze Varése's *Nocturnal*, working towards a theoretical study of meaning in his work.

Future Fantasy

Identity, Imagination and Internet Design

When I moved to San Diego in August 2010 to pursue graduate studies in music, the idea of creating an artist web site had been on my mind for some time. I met Andrew Allen, a musician and programmer who appeared to be the perfect collaborative partner because of our complimentary abilities and overlapping aesthetic views. A series of conversations between us led to a long-term collaborative project in web design; our aim was to integrate the creative presentation of music and other materials into a work constructing an online identity and presence. This would be achieved through project-specific conceptual art techniques, the creative use of found materials, and stylistic manipulation of content. Our collaboration would result in an interactive web site, inspired by internet-related themes such as futuristic fantasies, collective memory, absurd juxtapositions, the anxiety and excitement of modern life and various relationships between technology, surveillance, privacy, and control (Allen and Bowden).

The layout for the site combines visual art by Albert Robida with my own audio/visual and written content. Robida (1848-1926) was a French novelist and visual artist (etcher, lithographer, caricaturist, illustrator). Allen and I selected and extracted images from Robida's work entitled *La Sortie de*

l'opéra en l'an 2000 (Going to the Opera in the year 2000) as well as other futuristic illustrations by him. The title sums up the absurd and somewhat disturbing quality that fascinates us as 21st-century viewers.

In Robida's drawings, the architecture is beautiful but physically impossible. The people in the drawings are dressed in late 19th-century attire while riding around in flying shuttles that have open-air seating. These images suggest that it is possible for culture be preserved in the face of significant technological development and change. The people in his illustrations appear to be naive and oddly out of place; seduced by their futuristic world, they do not realize that any consequence might arise from their dependent relationship with technology.

Our original decision to use this material primarily reflected our interest in looking at the future through the eyes of the past, and the absurdity that modern observers might see in Robida's drawings one hundred years after they were made. Still, the assumptions suggested by this art may not have been so strange; maybe we *are* still going to the opera in the 21st century. As a multi-sensory experience, the internet shares a number of important features with opera. They are both heavily mediated ways of communicating information that dramatically recontextualize content, and both hold potential for influencing peoples' conceptions of reality on a large scale. Both of these media bring up questions about the power of representation, framing, saturation and focus, production and reproduction. Because of these and

other connections, Robida's art becomes a vehicle for relating the thematic content of the web site to the conception of the internet itself.

Like the internet, the web site presents an alternative reality that visitors can inhabit and explore. It takes the form of a vertical dreamscape divided into three segments, each with animated elements: a cloudy sky with flying space shuttles at the top, a city with variously animated people in the middle and a body of water with bobbing ships at the bottom complete with an underwater scene. The animated units move around in different ways and freeze when the curser is held over them. Visitors never actually leave this imaginary world; instead, the animated objects provide links to smaller pop-out pages with semi-transparent backgrounds that do not completely obscure the main page.

Each pop-out page has its own title, and serves a purpose for potential visitors of the site. The first three links are located on the shuttles near the top of the page. They fly across the page from left to right and bob up and down slightly. The first three pages contain general information that is geared toward networking, marketing, and publicity under the following titles: "about me," "lessons and booking," and "events." The fourth shuttle flies around where the sky meets the top of the cityscape and provides a link to the demo video described below.

Upon entering the cityscape portion of the page, visitors will find that four of the illustrated people have become animated links. These links take

users to collections of audio/visual material under the following titles: “audio,” “video,” and “photos.” The fourth animated city-dweller links viewers to my “friends” page, which is a collection of links to the web sites of my colleagues and fellow musicians. The animated characters generally serve an archival purpose and contain materials of a specific format (i.e. videos, photos, etc.) that are organized to be easily accessible. Once visitors to the site have scrolled through the city, they will see bobbing ships on the surface of the ocean, one of which links to my blog. The scene beneath the surface of the water is chaotic; after all the strangeness above we finally descend into a space where nothing makes sense.

To allow for frequent updating and editing, Allen and I needed to design a simple, accessible interface. This administrative page, like the site itself, would be built from scratch and would consist of original technology now copyrighted by him. The process took several months to complete. He made many versions of this administrative page and sent them to me; I would test the software and respond with problems and suggestions. The eventual result was a user-friendly interface that allowed for the editing of text and the addition and removal of materials.

The content of my original materials adds to the themes mentioned above. The demo video consists of clips with mismatched musical content, conceptual material, location and context, recording quality, and visual perspective. I (the subject common to all clips) seem caught in the act of

performing in settings that oppose one another, drawing attention to anxiety about privacy and surveillance that exists in our current culture, with the predominance of cell phone cameras and other recording devices.

In addition to the videos presented explicitly as examples of my current work, there are also hidden links to videos from another collection. With performances from my teen years that might be considered “embarrassing.” these are also amateur in skill level and entertaining to watch. Like the demo video, this technique uses the theme of surveillance and privacy, but in a slightly different form that requires user agency; people can actively search for and discover “secret” material that they would not have access to otherwise. Similarly, surprise video clips pop out at viewers unexpectedly with loud, rambunctious, somewhat threatening material. This occurs at randomly generated times that change when viewers return to the site multiple times, raising questions about technology and control.

As visitors browse through the various scenes and pop-out pages, they are likely to notice an unsettling juxtaposition of “professional” materials with “amateur” features. This is consistent with the internet as a theme, because it is a medium that allows different sets of standards for judging quality to exist simultaneously. The subtitle under my name, which reads “drums and vibraphones,” is a playful oversimplification of my performance specializations. This is immediately followed by a short biography with more formal language under the informal title “About Me.” Also, the pop-out photo

page has a bizarre mix of content; some of the images are promotional and explicitly relevant to my musical career, whereas others look more like profile pictures from a dating or social networking site. The decision to organize materials in this way, and to combine overt self-marketing, sex appeal, and informal photography draws attention, again, to the omnipresence of personal recording devices, webcam culture and the public exposure of bodies and identities on the internet.

Nature Musics of the West

History, Science and Philosophy on the Same Wall

> NATURE invented humans.
>
> No, no… wait.
>
> HUMANS of the West invented nature. That's what we meant to say. Certain forces try to categorize, control, and regulate other forces. HUMANS have rules to determine appropriate ways for other HUMANS to interact with and protect nature. HUMANS develop scientific disciplines to understand and define what nature is.
>
> *Nature Musics of the West* presents a selection of found texts from a wide variety of sources as well as some aleatoric words and incidental music. *Nature Musics of the West* combines seemingly different perspectives, but they all draw attention to our tendency to view our subjective selves as separate from an ahistorical and objective natural world. (Bowden and Skaller "Program Notes")

The musical play *Nature Musics of the West* was written, directed and first performed in 2011 by Leah Bowden and Phil Skaller (Bowden and Skaller "Script"). It consists of ten interchangeable monologues and dialogues using found texts from a wide variety of contemporary and historical sources. The themes of the texts include ways we view ourselves in relation to the world, strategies for manipulation and domination of our surroundings, and relationships between language and nature. Presented together, the texts reveal a pervasiveness of certain tendencies across time and space, in a way that is both comedic and disturbing. The conceptual content of this paper

takes as its starting point select writings on nature, mimesis and language by Jacques Derrida, Jean-Jacques Rousseau, Max Horkheimer and Theodor W. Adorno: through the exploration of these texts it is possible to construct a theoretical framework for the play.

In his *Essay on the Origin of Languages,* Jean-Jacques Rousseau argues that music presupposes language; according to him, the separation of speech and song has been a gradual but inevitable process of distancing from natural origin coupled with a diffusion of energy. He sees the increasing standardization, calculation and precision associated with grammar, writing and the scientific disciplines as further movement in this direction. In his critique of Rousseau from *Of Grammatology*, Jacques Derrida points out that "....nature is the ground, the inferior step: it must be crossed, exceeded, but also rejoined" (197). Both Derrida and Rousseau address how constructions of physical and intellectual separation create a need for return to an idealized nature. Through the use of mimetic techniques on multiple levels, *Nature Musics of the West* expands upon the ideas mentioned above to reveal its central argument: that nature is a construction of language facilitated by Western thought.

Rousseau presents a series of analogous dichotomies in his *Essay*. These include speech and song, reasoning and feeling, cultivated and natural, human and animal, animate and inanimate, North and South (which become West and East in *Nature Musics of the West*), among others. The

play does something similar by juxtaposing the found texts so that seemingly different relationships to nature become reducible to being two sides of the same coin. The subjects of these texts, which include reality television, nature television, wilderness protection programs, bioterrorism, well known philosophical musing, New Age spiritualism and international environmental legislation, are all connected to the themes of distancing, objectification, and gradual domination of nature through language. As stated above in the program notes from the play, "[the texts] draw attention to our tendency to view ourselves as separate from an ahistorical and objective natural world" (Bowden and Skaller "Program Notes"). As a result the play is similarly problematic when compared to Rousseau's famous text: by addressing such broad ideas and drawing connections between them it also risks perpetuating stereotypes and universalizing thought.

> Colors and sounds are capable of a great deal as representations or signs, of little as simple objects of the senses. Series of sounds or chords will amuse me for perhaps a moment; but in order to charm me and to move me, these series have to offer me something that is neither a sound nor a chord, and that succeeds in moving me in spite of myself. (Rousseau 325)

Nature Musics of the West uses found texts as a mimetic technique to reveal something about the original, through difference. Derrida discusses mimesis and the role of outline; his ideas are applicable to the use of found text as a tool for creating mimetic, referential art. He claims that "imitation

alone can interest us in art, concern us by representing nature and by expressing the passions" (212). Like Rousseau, Derrida connects the search for meaning to the search for the familiar and makes implicit arguments connecting art without representation to fetishistic ideals.

According to Derrida, the essence of art is mimesis and the essence of mimesis is the outline. The outline permits the reproduction and alteration which constitutes art to take place. In the space of the outline a calculated act is a move toward reason and away from the original iteration which signifies natural origin. For Derrida, the birth of art is already the death of art because the inanimate supplement is immediately introduced. He writes, "The outline (design or melodic line) is not only what permits imitation and the recognition of the represented in the representer. It is the element of formal difference which permits the contents (colored or sonorous substance) to appear" (Derrida 209).

One example from the play shows how the use of found text as an outline and the starting point for mimetic art can be revealing of the original. Scene one includes two actors and three musicians performing a found text by Steve Irwin, a Nature Television star from Australia. In the original television clip entitled *Steve Irwin Plays with Inland Taipan (Fierce Snake)* on Youtube.com (Amorlobresias), Irwin performs an act of doubling by handling a wild snake, narrating in first person and teaching viewers about it at the same time. Although the nature theme implies a certain connection to reality,

Irwin is a professional actor with an exaggerated persona. Not only is Nature on display, but Irwin is also showcased as an entertaining, risk-taking character. Irwin informs viewers that he is handling “the most venomous snake in the world” and reminds us not to “try this at home.” He comments on the snake’s wildness and describes several of its traits associated with nature.

Irwin undergoes a major transformation during the video by mimicking the snake’s gestures and “becoming” more like the snake. At the beginning of the clip he throws himself onto the ground and slides rapidly toward the snake. Later, as Irwin accommodates the snakes movements; his own body gradually takes on a snake-like shape as he curves his back, neck, arms and legs. At the end of the clip Irwin is lying flat on his stomach, assuming the position that the snake was in before he started handling it. Now he lifts it close to his face, and lets it pass repeatedly through his fingers. Irwin’s narration connects his process of becoming to the theme of distance and return. He relates how, through his father, he learned to “be at one with the snake.”

Irwin’s vision for establishing a mutual understanding with the snake leads him to exercise his will upon it through physical control. His domination of the snake becomes rhetorical as he projects various gender identities, thoughts, and feelings onto the snake. He interprets the snake’s behaviors to inform the audience of what the snake understands and what it wants. Irwin

uses different pronouns to refer to the snake as he makes different statements about it. When he refers to reverence, violence, strength or danger the snake becomes male. It becomes female when he mentions romance, beauty, passivity, fear and childishness. The pronoun “it” is more generic and is used when he describes the snake’s aggression, awareness, natural tendencies or descriptive qualities.

At one point he compares snakes to people, but concludes by declaring, “I reckon that people are much more dangerous.” Although he offers no clear explanation as to *why* he thinks humans are more dangerous, Irwin’s final statement is consistent with themes from Derrida and Rousseau when viewed in the context of the entire performance. Over the course of his monologue Irwin reveals a distancing from nature coupled with fear, caution, reverence and admiration. He implies that humans are more dangerous because we possess certain things that the snake does not, including language, technology and motivations beyond physical needs. His statement reveals an idealization of origin and a preference for things (or beings) that are closer to nature.

Irwin refers to the snake alternatively as “sweetheart,” “mate” and “bloke:” although this contributes to the role of gender in this video, it plays a larger role in establishing and reiterating the concept of place. As Rousseau points out, “... in an accented language it is the sounds, the accents, the inflections of every sort that constitute the greatest energy of the language;

and that makes a turn of phrase, even a common one, belong only to the place it is found" (300).

In *Nature Musics of the West*, a transcription of Steve Irwin's monologue is transformed into mimetic art in the space of the outline. Certain shifts in context and content take place inside this "element of formal difference" (Derrida 209). Here, new details efface those of the original in order to make specific statements about the original. The text is removed from its previous setting of nature television, a medium with socially agreed-upon purposes including education and entertainment. It is transported into the less comfortable space of conceptual art with more explicit cultural, philosophical and political messages. This strategy was used to show that these kinds of messages are frequently encoded into mainstream media as well.

In the play, the gender and species identities of the characters are changed to mirror the both gender confusion of the original and Irwin's "becoming" a snake in the video clip. The actor who plays Steve Irwin is female; since this does not change during the scene Irwin is instantly transformed. The snake is changed into a human and played by a male actor. This snake-man is still subject to the gender projections of the original. Since these projections are preserved through the outline, supplementary shifts in gender and species simply add another layer of mirroring and mimicking.

Different gestures and tones of voice are introduced to replace those of the original. This process draws attention to the content of the outline as it becomes self-conscious. Irwin's character maintains an exaggerated persona but replaces the professional acting with bad acting: viewers are reminded that they are watching something scripted. The actors emphasize the violence in the text by behaving in a way that is more directly abusive and condescending. The gender confusion theme becomes a more explicit projection of Irwin's character when romantic, sensual and dominating gestures are added. The "dangerous" qualities of the snake are emphasized when snake-man character moves threateningly toward the Irwin-woman character.

> Man is modified by his senses, no one doubts it; but we fail to distinguish their modifications, we confound their causes; we do not see that often they affect us not only as sensations but as signs or images, and that their moral effects also have moral causes. (Rousseau 319)

During a performance of the play musicians use the script as an outline as they provide improvised thematic music centered on the use of musical signifiers. They are instructed to imitate specific musical traditions, genres and sound effects within a form that mirrors the organization and content of the found texts. The task of creating an improvised sound track encourages the musicians adopt a deliberate, flexible and mimetic approach to evoking specific referential material.

The singing voice references opera as a multi-sensory theater experience and song as a signifier for interiority and animated, intelligent life. Through the singing voice we can more easily identify with beings other than ourselves. As Rousseau writes, “sounds proclaim movement, the voice proclaims a sensitive being, only animated bodies sing” (325). He later continues, “...as soon as vocal sounds strike your ear, they proclaim a being similar to yourself; they are, so to speak, the organs of the soul, and if they also depict solitude for you, they tell you that you are not alone there. Birds whistle, man alone songs...” (326).

In *Dialectic of Enlightenment*, Horkheimer and Adorno critique enlightenment’s “systematic enquiry into nature... (to) establish man as the master of nature” and argue that “Enlightenment stands in the same relationship to things as a dictator to human beings” (1). Certain content in *Nature Musics of the West* focuses on the connection between our preoccupation with science and objectivity and our desire for power and control. For example, scenes centered on the theme of taxonomy are broken into three segments that become increasingly violent and dominating. The narrator outlines a taxonomy of “body sounds” while giving a demonstration on someone else’s body. These scenes suggest that it is problematic and authoritarian to try to understand something and define it at the same time. Ideally, the content will cause viewers to contemplate what it means to

subject something as complex as a living organism to systematic categorization.

> The passions are not extenuated but *repressed* by what takes the place of desire: work. Work represses more than it lessens the force of desire. It displaces it. (Derrida 224)

The idea that distance creates a need for return implies movement in at least two directions. Derrida argues that progress takes place both for the worse *and* for the better, so it is non-teleological. It becomes reducible to difference (229). Distance creating a need for return is central to the meditation scene in *Nature Musics of the West*. Here, the narrator leads the other characters through a New Age meditation in which they are encouraged to release tensions and worries through an increased awareness of their surroundings. They are instructed to "experience a healing energy returning to [them] from nature" and to "Tune into nature until [they] feel the love flow." The meditation text was extracted from a self-help section of the Sierra Club Activist Network's web site, and edited by the authors of *Nature Musics of the West* (Larry11). The text directly supports Derrida's point that "a progression-regression which, destroying the effects of the previous one, brings us back to a nature yet more secret, more ancient, more archaic. Progress consists always of taking us closer to animality while annulling the progress through which we have transgressed animality" (203).

One of the goals of *Nature Musics of the West* is to encourage viewers to contemplate the themes discussed above and recognize the use of mimesis on multiple levels. The play is consistent with Rousseau's views about art, Derrida's theories about mimesis, and Horkheimer and Adorno's writings on nature, but its ultimate goal is to call these ideas and others into question. Parts are specific and referential yet combine into a whole in a way that is open to interpretation by audience members. Ideally, the play will reflect the difficulty of trying to understand ourselves and our world while living in a perpetual state of uncertainty.

Varése's Nocturnal

An Analytical Approach

Edgard Varése conceived of music as intelligent sound (Schuller 33) and summarized his vision for a hypothetical music in the following statement: "The entire work will be a melodic totality. It will flow as a river flows" (Varése 11). Metaphors such as this apply particularly well to *Nocturnal*, a late work which brings together instrumental, vocal and percussive writing. In addition to exploring several terms and concepts that were discussed by Varése, I will develop analytical parameters specific to this work that clarify and illuminate Varése's understanding of music as intelligent sound.

The voices, pitched instruments and percussion in *Nocturnal* act as three interdependent identities that define themselves in terms of timbre, musical material and behavioral function relative to one another. The three groups are further divisible on a smaller scale into several individual entities, or units. Although instruments such as violin and piccolo are treated as distinct voices, they function similarly and share the same general identity because they are both pitched instruments. The three identities interact and develop together in ways that suggest an inherent intelligence; as a result, the music takes the form of a global conversation, a narrative in which information is exchanged and identities are shifted.

Existing arguments for the meaning of intelligent sound in the music of Varése tend to emphasize how the sounds have agency, acting of their own accord. While this may be the case, it is also clear that the three identities depend on each other because they form a multiplicity of interactions and change the immediate behavior of other sounds. The illusion of inherent intelligence is not created by each entity acting freely, since they are not autonomous, but by the sense that the voices "speak" to one another and are highly influenced by their aural surroundings.

When discussing his music, Varése utilized unique terminology of his own creation. He did not always offer explicit definitions for the terms that he used, but by examining his statements we can speculate more accurately as to their meaning. The following concepts are discussed below: intelligent sound, musical space and the sound mass, and melodic totality.

Intelligent Sound

> It seems to me that [Milton Babbitt] wants to exercise maximum control over certain materials, as if he were *above* them. But I want to be *in* the material, part of the acoustical vibration, so to speak. –Varése (Schuller 36)

Varése translated Hoene-Wronski's definition of music into English in several different ways, one of which was: "Music is the corporealization of the intelligence that is in sound" (Schuller 33). According to Anderson, these words suggest "that sound possesses an inherent intelligence, perhaps a will,

independent of human transformation or perception" (16). He points out that the avoidance of developmental, musical directionality (an influence from Debussy) in Varése's music emphasizes the importance of each musical moment, and the listener experiences "sound as such". This argument against the importance of narrative is inadequate when we consider that the illusion of intelligence attaches human characteristics to sounds, including memory. Memory can only exist where past, present and future are connected, and the result is a definite narrative that reveals the willful hand of the composer.

Anderson also points out that in the music of Varése, rhythmic simultaneity and complexity are "consistent with the notion of intelligent sound (because) sounds move seemingly of their own free will" (35). However, the three are subjected to the narrative in various ways, some of which will be described below. At times the entities are extremely responsive to one another and at others, they act in a more isolated manner. A few of the various means to this end include: imitation and unison writing (suggesting interaction and the idea that the voices are "listening"), the spontaneous introduction of new material and the simultaneous presentation of seemingly unrelated material (suggesting a greater degree of isolation).

Anderson's comments provide valuable insight into a large number of statements made by Varése, yet he does not fully explore the musical manifestations of *music as intelligent sound*. Varése creates sonic

environments in *Nocturnal* through which sounds are perceived as intelligent agents because of several aspects of their behavior. As mentioned above, individual entities act in ways that suggest a state of simultaneous independence *and* interconnectivity, so that the unpredictability of the future in a situation grounded by the present and past helps bring the sounds to life.

Musical Space and the Sound Mass

> Varése was greatly interested in auditory space and the movement of sound within it. This can be seen as being very much in keeping with his thoughts of sound as a living entity, with its own intelligence and abilities. (Mitchell 73)

Varése described sound masses as "blocks of sound… volume in an architectural sense" (Schuller 34). He preferred not to use the term "chord" when discussing his vertical structures. Chou Wen-chung explains that "… a sound mass refers to a body of sounds with certain specific attributes in interval content, register, contour, timbre, intensity, attack and decay" (18).

In *Nocturnal,* sound masses that consist exclusively of pitch material, referred to here as pitch-complexes, can be perceived as three-dimensional. The pitches are sustained to create a static quality and to give the impression of continuous projection into space. Individual pitches are separated by large intervals and they tend to occupy multiple registers; this quality gives the pitch-complexes a definite and easily perceivable shape that defines the musical space that the sounds occupy at any given moment.

Melodic Totality

Since Varése did not fully explain the concept of a melodic totality in his writings, there are many possible interpretations. According to Anderson, “for Varése there is an equality between the vertical and the horizontal that constitutes what he referred to as a ‘melodic totality’” (35). In Varése’s music, this often takes the form of a direct verticalization of previously heard melodic material. This process involves the transformation of planes (Varése’s term for horizontally organized material) into sound masses, and the reverse. It is possible that Varése was instead referring to the melodic totality as a form of global trajectory. We hear this music as a sequence of *events*, and in this context the word “event” refers to any complete set of temporally connected musical material; compared to “sound mass”, the term “event” has a more general, all-encompassing meaning. It can include anything from a complex sound mass and all of its components to an isolated, unaccompanied line. At any given moment, at least one event is taking place, and all sounds and silences are included as all or part of an event. The events often show striking differences in intensity, color, and other descriptive features, and as a result it is easy to distinguish one event from another and their composite can be heard as one might hear a melody.

We can define “melody” as a linear series of *pitches* with a definite shape that can be mapped in terms of frequency versus time. A “melodic

totality," then, would consist of a linear sequence of *events* that combine to form a perceivable trajectory over time. In music as a melodic totality, the individual events become analogous to the pitches in a melody, and listeners can (ideally) perceive, visualize, and remember the shape of the music in a linear sense.

The Forces at Work in Nocturnal

In *Nocturnal*, each of the groups discussed above has one or more defining roles. The human voices generally perform linear, incantatory material. Pitched instruments establish musical space in a harmonic sense by generating and shifting sound masses containing characteristic pitch-complexes often spread over several registers. The principal roles for the percussion instruments are slightly more varied, with different functions represented by specific entities. The following instruments generally execute complex rhythmic material with a disconnected feeling: drums (snare, field, tenor, and medium bass), wooden tubes, twigs, timpani, low wood block, guiro, sand paper, and brush on field drum. Examples of this can be found in measures 6-7, 16, 23-24, and 32-42. Another subset of percussion instruments tends to generate integrative textures and softly punctuate simple, floating rhythms. These instruments include maracas, cymbals, low bass drum, sand paper, low wood block, and metal sheet, with examples in measures 9-11, 14-15, and 18-22.

Each group is able to shift its identity and “become” one of the other groups by behaving and/or functioning atypically. A number of methods are used to accomplish such transference, including unison playing and the direct imitation of pitch content and/or intervallic structure. In measures 43-48, five pitched instruments (bassoon, horn, piano, cello, and contrabass) play in unison with the bass voices in a forceful, tormenting gesture. The pitched instruments seem to “sing along” with the human voices, and they temporarily become members of that group. Another example happens in bar 53 when the soprano sings a solo melody referencing material presented previously by the pitched instruments, shifting her identity toward theirs. Imitative behavior in the percussion is generally not centered on pitch material. One exception to this is when the timpani imitates certain pitched instruments by “borrowing” pitches from them.

Another method of “becoming” happens when one group shifts timbre towards that of another group. This is the typical way that human voices and pitched instruments act as percussion. In measures 69-73 the instructions for the soprano read, “deep in throat.” Her rhythms are doubled first by tenor drum, then by the low bass drum. This vocal technique shifts attention away from pitch; it is combined with direct imitation in order to modulate her identity towards that of certain percussion instruments through similarities in timbre, articulation and shared materials. Also in *Nocturnal*, the voices use techniques that create a percussive quality and/ or obscure pitch; these can

include manipulations of timbre, forceful attack, short articulations, rapid decay and other sonic features. This happens at bars 9 and 31, with instructions such as “spoken, low, marcato,” and “sing with a harsh, rasping sound... (as though from underground).”

Transference as described above can also occur through other *spatial, incantatory, percussive* or *textural* gestures by an entity not typically associated with such qualities. Occasionally, the soprano sustains a pitch high in her register, and her voice acts as a pitched instrument when her singing becomes part of a pitch-complex. In measures 64-67, the bass voices create their own pitch-complex on the words “dark… ah-oh-eh,” and they join the pitched instruments in the same way. Incantatory glissandi played by the percussion and pitched instruments in bars 69-73 give certain instruments a striking vocal quality (specifically, violas, cellos, basses and flex-a-tone). Cluster chords in the piano and quarter tones in the strings obscure pitch and turn our focus toward the textural and timbral concerns most often associated with percussion in *Nocturnal*.

Instruments such as the medium gong, low gong, metal sheet, suspended cymbal, timpani and sleigh bells become pitched Instruments by adding texture to sound masses. This helps to establish musical space in measures such as 12, 17-19, 49-51 and 60-66. The string drum, flex-a-tone and timpani glissandi imitate the human voices through incantatory gestures in certain instances; this can be heard in measure 9-11 and 72-72. Some of

the rhythmic material generated by the percussion forms sound masses similar to that of the pitched instruments. These sound masses stand out against surrounding material because these instruments are the only actors articulating complex rhythms that seem to move at their own pace.

Conclusion

This study has developed working definitions for several of Varése's most widely discussed terms and concepts, including music as intelligent sound, melodic totality, sound mass and the articulation of sonic space via sustained pitch-complexes. A close examination of *Nocturnal* has revealed specific ways in which Varése applied these ideas to his musical composition, and the above conclusions can hopefully be applied to the analysis of contemporary music outside the work of Varése.

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