University of New Mexico
UNM Digital Repository

Music ETDs | Electronic Theses and Dissertations

Spring 5-10-2019

A New Theory of Musical Semiosis

Matthew Stanley
Master's Student, Music Department

Follow this and additional works at: https://digitalrepository.unm.edu/mus_etds

 Part of the Music Theory Commons, and the Philosophy Commons

Recommended Citation

Stanley, Matthew. "A New Theory of Musical Semiosis." (2019). https://digitalrepository.unm.edu/mus_etds/40

This Thesis is brought to you for free and open access by the Electronic Theses and Dissertations at UNM Digital Repository. It has been accepted for inclusion in Music ETDs by an authorized administrator of UNM Digital Repository. For more information, please contact disc@unm.edu.

Matthew Stanley
Candidate

Department of Music
Department

This thesis is approved and is acceptable in quality and form for publication:

Approved by the Thesis Committee:

Richard Hermann, *Chairperson*

David Bashwiner

Michael Klein

A New Theory of Musical Semiosis

By

Matthew Stanley

BM Music, 2011-2015

THESIS

Submitted in Partial Fulfillment of the
Requirements for the Degree of

Master of Music

The University of New Mexico
Albuquerque, New Mexico
July, 2019

DEDICATION

This thesis is dedicated to my family; in particular, to my mother and father, Elizabeth Ann Rivera and John Matthew Stanley, whom have shown me countless times throughout my life what a love that is without condition looks, acts, and feels like. Their lessons of humility, passion, dedication, pride, and perseverance give me firm ground from which I may parlay failure into success and success into contentment.

Without them, none of this would be.

ACKNOWLEDGMENTS

I have many people throughout my life to thank for their support and encouragement. Everyone remembers their first music teacher; I was fortunate enough to have the collective of a collegiate faculty as mine. I would like to thank the University of New Mexico's Department of Music faculty and staff for their understanding, patience, and willingness to teach me the fundamentals of music from the ground up at age nineteen; Dr. David Bashwiner, Dr. Karola Obermueller, and Dr. Peter Gilbert have all had significant influence on my musical and artistic thought, and I hope one day to do the same for someone else.

I would like to especially thank Dr. Jose-Luis Hurtado and Dr. Richard Hermann, two men who have watched me grow so that may I struggle, so that I might grow again. They have given to me their selfless knowledge of music, art, and life, have provided me with innumerable opportunities as a music composer and theorist, and have inspired me to become excellent in all things.

I owe to them my musical life.

A New Theory of Musical Semiosis

By

Matthew Stanley

Bachelors of Music, 2015
Masters of Music, 2019

ABSTRACT

Musical semiotics is the study of the various ways in which musical structures become meaningful. This thesis is an attempt to create a logical, systematized, transformational theory of musical semiotics that can elucidate the various ways in which music conveys meaning. While the semiotic exploration of music is by no means novel, this thesis presents a unique, highly rigorous, and truly theoretical approach to musical semiotics that differs significantly from previous theories.

By combining all aspects of the semiotic theory of Charles Sanders Peirce with the metaphor theories of George Lakoff, Mark Johnson, and Zoltan Kovecses, a theoretical apparatus is constructed that is capable of describing a wide variety of musical experiences within a wide variety of contexts. The result is new theory of musical semiosis, one that details the formation of musical meaning to a degree of detail not previously attempted.

Table of Contents

Introduction

Suddenly, there is something: air strikes the tympanic membrane. Tiny bones turn the waves into vibrations that stimulate even tinier hair cells deep inside the inner ear. These cells turn the vibrations into electric signals and send them traveling through bundles of nerves to the deepest, oldest parts of the "lizard brain." From there, the signals find their way upwards and outwards, working first through the epicenters of emotion and memory before they reach the outer, newer parts of the "human brain."

Suddenly, we hear something: a pitch, a duration, a timbre, a dynamic. Then another... And another.... A melody slowly emerges to rise and fall while a rhythm begins to push and pull. Then another... And another... The thinness of the melodies combine to produce to a lush, deep harmony. Then another... And another... The instruments of the orchestra compound upon one another as the harmonic rhythm begins to speed up, casting a phrase that evolves through time.

Then another... And another...

Suddenly, it means something: a joy, a sadness, a character, a warning. Someone is speaking to us in terms we can hardly understand, but that we recognize all the same. We begin to remember what it felt like, or how it was, or who we loved. We are swimming, now, through a sea of associations and experiences evoked by those most mysterious of sounds that, mere moments ago, were nothing more than pressurized waves of air hurtling through the concert hall at seven-hundred miles-per-hour.

Suddenly, there is music.

That music can create perhaps some of the most meaningful of human experiences is one of the great, haunting mysteries in history. Music has seen some of the greatest minds the world has ever known. It can turn tragedies into comedies and can spark revolutions. It can make people fall into and out of love. It gave a king his speech and a killer his Helter Skelter.

But how?

The study of musical meaning can help to shed light on the process by which music begins as air and ends as one of the most powerful forces we know of (compound interest notwithstanding). One avenue by which we can analyze music as a meaningful activity is through semiotics - the study of how things mean. A semiotic analysis of music allows us to look at the structures of music and analyze them as meaningful entities.

The semiotic study of music is nothing new; Plato, in his *Republic*, and Aristotle, in the *Poetics*, both address the meaningfulness of music. More recent studies of music meaning have been undertaken by figures such as Eero Tarasti, Kofi Agawu, Robert Hatten, Michael Klein, and other so-called "music semioticians."

These semiotic explorations of music have yielded fascinating insights into the meaningfulness of music; and yet, some problems remain. One of the most glaring of these issues is that of "transformational" music semiotics, or lack thereof: semiotic music analyses often isolate their object of study in such a way that they are unable to account for the vast majority of potential meanings that the object of study can potentially have. Music semiotics has, until now, forced a particular set of understandings and constraints upon its object even before the analysis begins, so that a reader might gain little or no

insight into how *they themselves* understand and experience the music. The result has been relatively crude analyses that might even do more to obscure the ways in which music is capable of meaning than bring them to light.

It is the goal of this thesis to present music semioticians with a new theory of music semiosis; a robust, rigorous theory that can be employed in an analysis efficiently, accurately, and, most importantly, *consistently* from one piece to another. In this sense, what is presented below is an attempt at a true *theory* of music semiotics: a set of generalized, abstract principles with strong internal organizations that can be applied to individual instances of actually-existing things.

Another goal of this thesis is to present a theory that can account for any and all types of musical meaning - by which, I mean a theory that can explain the meaningfulness of music that is understood purely qualitatively (objectively) or purely associatively (subjectively). The theory presented here allows for an analysis of *any* kind of musical interpretation. One does not need to know that fate is knocking on the door for the music to be meaningful; *not* knowing such a thing is its very own kind of musical meaning deserving of analysis. This becomes particularly useful when analyzing atonal music, which lacks the associations and representations so important to the tonal system of the Common Practice period.

Finally, this new theory of musical semiotics seeks to substitute theories of metaphor formation for topic theory as a tool to compliment the semiotic analyses. Previous ventures through musical semiotics have relied almost exclusively on the idea of "the topic," from which the problems of isolation mentioned above arise. Topic theory

relies, not only on the formal pitch and rhythmic structures of the tonal system, but also on the listener *knowing* that there is a topic existing in the first place. In this sense, previous semiotic analyses "cherry-pick" their outcomes by forcing the reader toward one particular interpretation. The theory here does no such thing; the context in which a listener experiences the music personally is variable and dynamic, and the substitution of metaphor theory for topic theory (along with the inclusion of the semiotic "Interpretant," explicated below) allows for semiotic analyses that account for all kinds of musical experiences - not simply those that the analyst forces upon the reader.

It is my hope that this theory will refine musical semiotics to a degree not yet seen, by both recognizing and incorporating the dynamism of personal context and by employing a "transformational" semiotic system that allows for multiple interpretations of the same musical object. The ultimate goal of this theory is to present music semioticians with a method of analysis that is complex, but applicable; dynamic, but consistent. This will, hopefully, lead those interested in the meaningfulness of music toward a better, more complete understanding of the ways in which they themselves experience and interpret the music they love.

Chapter 1
Framework of Inquiry

1.1 Peircean Semiotics

This study is, first and foremost, an application of the semiotic theory of Charles Sanders Peirce to musical phenomena. This places it decidedly in the philosophical vein of naturalist pragmatism[1] and, more importantly, a tripartite division of the Sign. While an exegesis of Peircean semiotics is far beyond the scope of this thesis, a basic understanding is a necessary prerequisite.

Semiotics is often mischaracterized as the study of meaning; semiotics is not the study of *what* things mean. Rather, it is the study of *how* things mean. Semiotics does not seek to *interpret* the world around us, but to *describe* the various ways in which representation itself (in the most general sense) can be described. The fundamental concept of semiotics is the "Sign." From Peirce's *Collected Writings*:

> A sign... is something which stands to somebody for something in some respect or capacity. It addresses somebody, that is, creates in the mind of that person an equivalent sign... That sign which it creates I call the *interpretant* of the first sign. The sign stands for something, called its *object*. It stands for that object, not in all respects,

[1] Peirce's pragmatic maxim - "Consider what effects, which might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of those effects is the whole of our conceptual of the object." - is frustratingly vague; while Peirce reformulated the pragmatic maxim periodically in his later works, its opacity remained. One might paraphrase it as "we can understand a thing by how it interacts with another thing."

> but in reference to a sort of idea, which I have sometimes called the *ground*...[2]

As such, the fundamental "building block" of semiotics is the Sign.

Historically, two distinct semiotic "schools" have been described: the American-school of "philosophical" semiotics and the French-school of "linguistic" semiotics. Peirce's "American" semiotics differs significantly from the "French" semiotics of Swiss linguist Ferdinand de Saussure in two main respects: the first is that Saussurean semiotics is wholly linguistic, primarily concerned with determining the relationship between language (the "signifier") and concept (the "signified")[3]; the second difference is Peirce's introduction of the "Interpretant" to compliment Saussure's dichotomy, thus forming his now-famous "tripartite division of the Sign."

Peirce's semiology is naturalist-based, and so separates Signs as entities that occur in the natural world, distinct from the systems humans use to understand them. For Peirce, these systems are distinct from both the signifier and signified. The result is a trichotomy of the Sign that includes the "Ground," (Saussure's "Signifier"), "Object" (Saussure's "Signified"), and the "Interpretant."

Before discussing the Ground, Object, and Interpretant, one must have a grasp of where these aspects of the Sign "come from." Why do Signs have Grounds, Objects, and

---

[2] Charles Hartshorne and Paul Weiss, eds., *Collected Papers of Charles Sanders Peirce*, Vol. I, *Principles of* Philosophy (Cambridge, Massachusetts: Belknap Press of Harvard University Press, 1965), 135.

[3] Saussure's semiology is, in many ways, a reapplication of older semiotic ideas present since the time of Aristotle (*logos* and *lexis*), Boethius (*notae* and *significare*) and Quintilian (*res* and *verba*), ones that found more serious consideration in the Middle Ages within the "semiotics" of Thomas of Erfurt and other "speculative grammarians" (or "Modists"), who described the "dictio" (signifier) and its "modi significandi" (mode of signification).

Interpretants? The answer lies in Peirce's semiotic categories of "Firstness," "Secondness," and "Thirdness," which dominate and create the framework for Peirce's detailed taxonomy of Signs.

Firstness (Qualisign, Icon, and Rheme) is the monadic category of abstract quality; that is, it is the category of "feelings," insofar as a feeling about some *thing* is all that is possible: "Imagine me to make... a sense of redness, or of salt taste, or of an ache, or of grief or joy, or of a prolonged musical note. That would be... a purely monadic state of feeling."[4] Firstness, then, is an experience of only a feeling or a quality; an abstractness that manifests merely in the senses.

Peirce introduced the term "phaneron," derived from the Greek "*phaneros*" (to make visible; manifest) to describe the fundamental element of Firstness: "By the phaneron, I mean the collective total of all that is in any way or in any sense present in the mind..."[5] Essentially, the phaneron is the totality of the world in as fundamental a sense as possible; it is the indecomposable elements of all possible quality ("qualia") of a particular reality at any given moment.

Secondness (Sinsign, Index, Dicent) is the dyadic category of feeling and struggle: "By struggle, I must explain that I mean the mutual action between two things regardless of any sort of third or medium... [regardless] of any law of action."[6] Secondness operates on the principle of "cause and effect," of fundamental relationships between two things. "As an example of a dyad, take this: God said, Let there be light, and

---

[4] Ibid.,149.

[5] Ibid., 150.

[6] Ibid., 161.

there was light. We must not think of this as a verse of Genesis, for Genesis would be a third thing... We must simply think of God creating light by fiat. Not that the fiat and coming into being of light were two facts, but that it is in one indivisible fact."[7] Secondness relies on existential relations; that is, it relies on the absoluteness of the relationship between two things, regardless of any perceived "law" ("natural" or otherwise) that may connect them (as this would be a "Third").

Secondness is sometimes defined in terms of the "relate" and "correlate"; in the previous example, "God" and "light" would be the relate and correlate (since dyads are mutually dependent, there is no distinction of which subject is the relate and which is the correlate). Some of Peirce's broadest examples of dyadic relate/correlate relationships are "feeling and struggle," "action and perception," "resistance and change."[8]

Thirdness (Legisign, Symbol, Delome) is the triadic category of a complete Sign, one that involves cause (First), effect (Second), and what we might call "interpretation" (Third).[9] Thirdness is more abstract than the categories of Firstness and Secondness: "By the third, I mean the medium or connecting bond between the absolute first and last. The beginning is first, the end second, the middle third... The ideas in which Thirdness is predominant are... more complicated... The easiest of those which are of philosophical interest is the idea of the sign, or representation."[10] Thirdness is process,

---

[7] Ibid., 164.

[8] Ibid, 161-170.

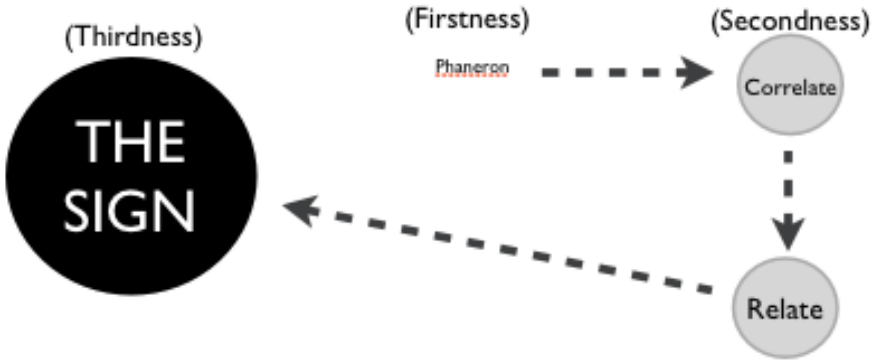
[9] The meaning of an "interpretation" in this sense is not (necessarily) a semantic one, but one that, as stated by Peirce, allows for the perceiver of the Sign to construct an equivalent Sign in a distinct system of significations that allows the original Sign (the one that represents the Object) to be understood in a broader context.

[10] Ibid., 170-171.

generality, law, order, logic, etc. While Firstness is the quality of some thing (its existential "cause") and Secondness is the manifestation of those qualities into a whole (its mindful "effect"), Thirdness is the understanding of how Firstness becomes Secondness, and how the combination of these two may be situated in some over-arching structure.[11]

Thirdness is the realm of actually-existing Signs, since each Sign consists of qualities (from the phaneron), objects made of those qualities (relates and correlates combined/compared), and systems within which those objects and their qualities might *actually* be capable of representation (Signs).

Fig. 1.1



While we may conceptualize Firstness and Secondness, our experience of reality is always in a kind of Thirdness, and necessarily so. The idea of the "meaningfulness" of Firstness and Secondness is irreducible into those parts:

[11] Interpretants can be notoriously difficult to conceptualize; they are mental Signs that may or may not actually manifest physically. The tonal system of music is a complex example of an Interpretant that is not an actually-existing Sign. If we take a note (as quality dimensions grouped into a singular object [a Sinsign]) and say that it is a "leading tone," tonality acts as an Interpretant that "translates" the note into an overarching system (as either a Dicent or Delome, since Rhemes are quality in and of itself). Tonality itself is a Sign, as are all Interpretants; it is this that initially led Peirce to conceive of semiosis as "unlimited" (a point he would later refute).

> It is impossible to resolve everything in our thoughts into those two elements [of Firstness and Secondness]. We may say that the bulk of what is actually done consists of Secondness... The immediate present, could we seize it, would have no character but its Firstness... But, we constantly predict what is to be... Not only will meaning always... mould reactions to itself, but it is only in doing so that its own being consists. For this reason, I call this element of the phenomenon or object of thought the element of Thirdness. It is that which is what it is by virtue of imparting a quality to reactions in the future.[12]

Peirce is describing the inability of a sentient being to isolate Firstness and Secondness, since we are always using their relationship as a means of *prediction*, a kind of Thirdness that draws (usually) logical *inferences* about causes (Firsts) and their effects (Seconds). Thirdness is a mark of intelligence; the knowledge that there is a logic between Firstness and Secondness from which we can *extrapolate* and *anticipate*.

Each of the categories of Firstness, Secondness, and Thirdness leaves a kind of "residue", so to speak, as a Sign "becomes." The "residue" of Firstness, of simple qualities, is the termed the "Ground." That of Secondness, of effects of those qualities, is termed the "Object." That of Thirdness, of the connections, interpretations, and

---

[12] Ibid., 175.

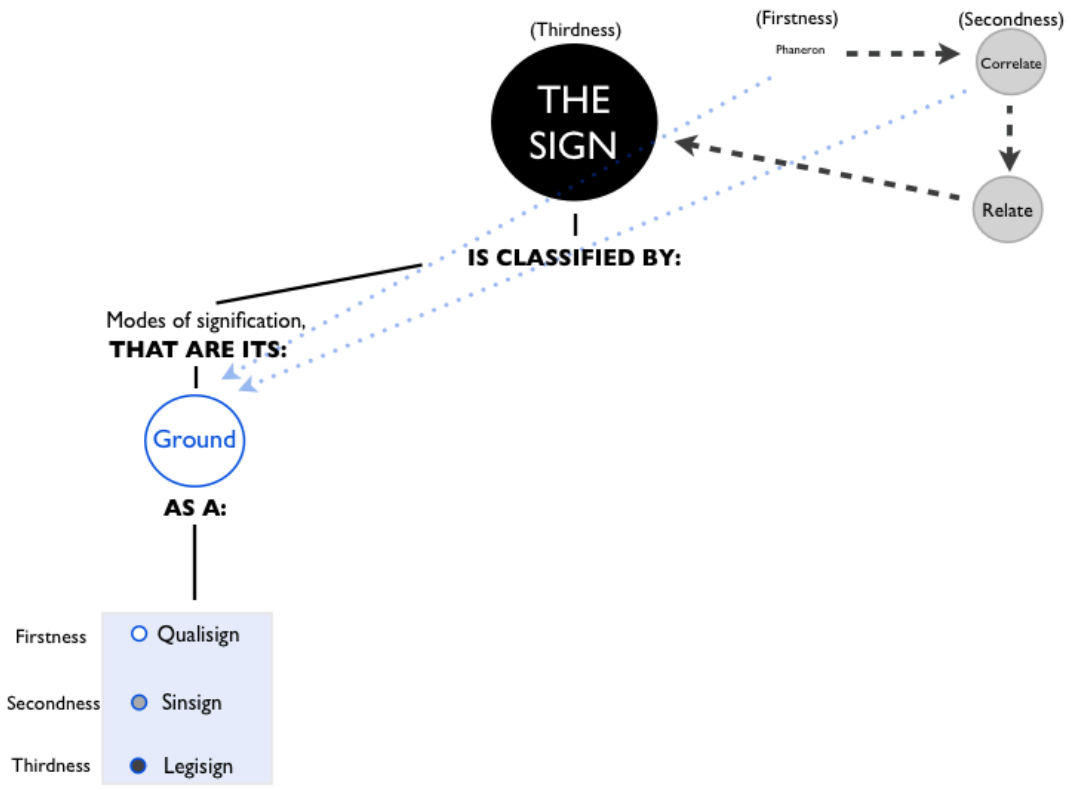
extrapolations based on the relationship between those qualities and their effects, is the "Interpretant." Together, these three elements constitute a fully-formed Sign; that is, every semiotic Sign has a Ground, an Object, and an Interpretant.

The **"Ground"** of the Sign is that aspect(s) of a Sign that allows it to signify, since not every characteristic of a Sign is involved in signification. For example, we recognize a German shepherd, a black labrador, a shih-tzu, and a golden retriever as the same species, *Canis familiaris*; yet, these dogs look quite different. Those aspects that differ between them (size, color, etc.) are *not* part of the Ground that contributes to the signification of the Object "dog."

The Ground of a Sign may function as a "Qualisign," "Sinsign," or "Legisign." If the Ground is a Qualisign, which is a First, then the features used to signify the Object are based on qualities: shapes, colors, textures, etc. If the Ground is a Sinsign, which is a Second, then the features used to signify the Object are based on causal relationships: smoke as a Sinsign of fire, since smoke is a causal consequence of fire.[13] If the Ground is a Legisign, which is a Third, the features used to signify the Object are based on arbitrary conventions or habits, such as the words you are reading right now or traffic signals.

[13] One must be careful with this classic example; while it illustrates the point in a simple way, not *every* instance of fire produces smoke. True Indices must be "existential facts," and are usually fundamental in nature. A more accurate Index in the same vein would be "heat is an Index of exothermic reaction."

Fig. 1.2



The **"Object"** of the Sign is the most easily conceptualized of Peirce's trichotomy: it is the thing that the Ground is involved in signifying.[14] Objects themselves are Signs, though they are commonly more akin to abstract ideas, as in the "dog" example: there is no one, single Object that is a "dog," but rather a set of general features that we know the idea of "dog" to have.[15]

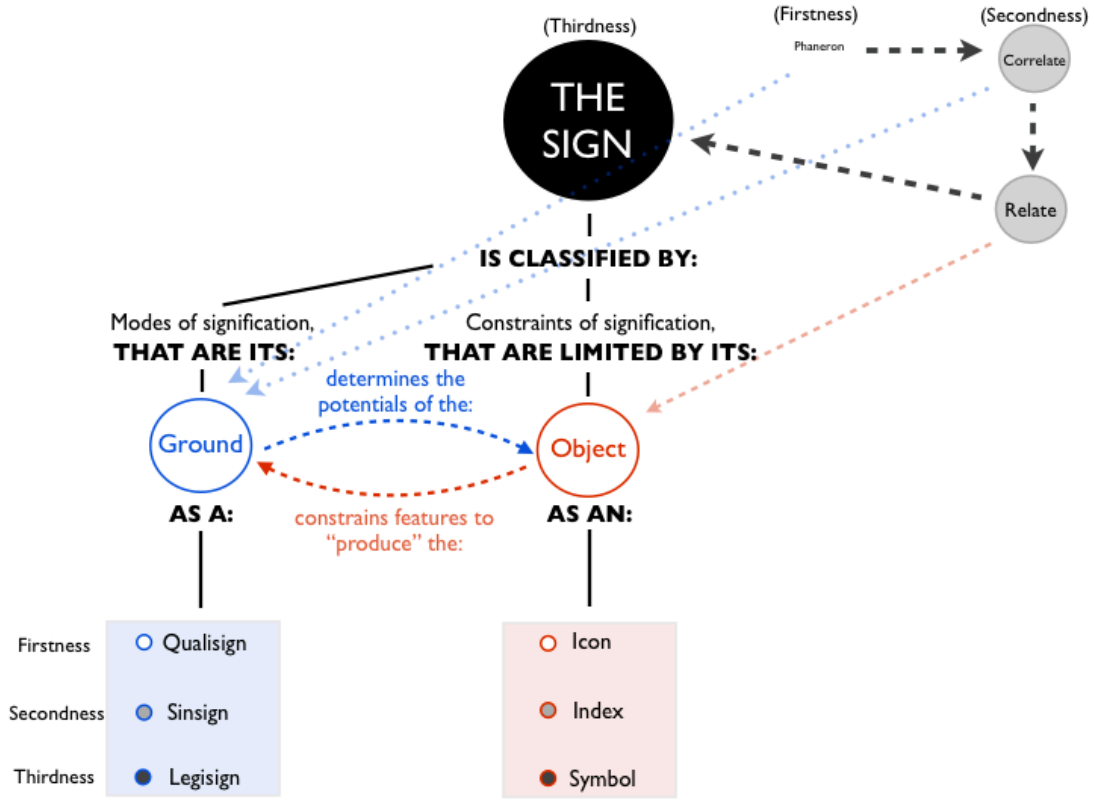
---

[14] Ground and Object are closely related, so much so that Objects *determine* their Ground. This makes sense: if our Object is "dog", the Ground must utilize the features that we know the Object, "dog", to have. If our Object is "bottle", the Ground must utilize entirely different features than those used to signify "dog"; this is why the Ground of the Object "dog" cannot stand as the Ground for the Object "bottle" (or, at least, it is extremely unlikely), as these two Objects require completely different sets of features in order to be signified; in this sense, the Object defines the Ground. It might be clearer to think of the Object, not as a physical object in a simplistic sense, but as a more-abstract "set of constraints" that determine the possibilities for its successful signification.

[15] This idea touches upon the psychological theories of the "Prototype" (some features of a category are more important than others) and the "Exemplar" (new, unfamiliar stimuli are constantly compared to instances of old, familiar stimuli).

Signs may stand for Objects as "Icons," "Indices," and "Symbols." If a Sign stands for its Object using only qualities, it is an Icon. If a Sign stands for its Object by virtue of some causal relationship, it is an Index[16], while a Sign that stands for its Object using conventions, laws, or habits is a Symbol (the Ground and Object are arbitrarily related).

Fig. 1.3



The most obtuse of Peirce's trichotomy is the **"Intepretant."** For Peirce, the Interpretant is another Sign itself; beyond this, Perice offers little insight into his

[16] Peirce explicates two kinds of Indices: a "genuine" and "degenerate" Index (Collected Writings, CSP, Vol II, 160-161). "Genuine" Indices are those whose relationships are wholly existential *facts*; for example, a falling book is a genuine Index of gravity, a weathercock a genuine Index of wind direction, heat a genuine Index of exothermic reaction, etc. These Indices are brute facts of the processes of reality. "Degenerate" Indices are constructed references, such as smoke and fire, a proper name, or even a pronoun (in context!). Degenerate Indices are distinct from Symbols in their relative "one-to-one"-ness; "her" (the concept, not the written word!) *always* refers to a singular female, while a cross does not *always* refer to Christianity.

conception of the Interpretant. Some describe the Interpretant as the translation itself of the Sign, going so far as to propose the term “translatant” instead; perhaps it is more accurate to describe the Interpretant as a *mediate* formed from the relationship between the Ground and Object that *allows* us to exchange the Sign for another Sign in some semiotic system (Thirdness). In other words, the Interpretant takes into account the relationship of the Ground and Object in a way that produces some kind of Sign in some kind of system that can act as a “translational” device, so that the interplay between Ground and Object may be understood in the context of a larger system of Signs.

Umberto Eco offers perhaps the clearest definition of Interpretant:

> The interpretant can assume different forms:
>
> **a)** It can be the equivalent (or apparently equivalent) signifier in another sign system. For example, I can make the drawing of a dog correspond to the word /dog/.
>
> **b)** It can be the index which is directed to a single object, implying an element of universal quantification (<all objects like this>)
>
> **c)** It can be a scientific (or naive) definition in terms of the same semiotic system, e.g. /salt/ signified <sodium chloride>

d) It can be an emotive association which acquires the value of an established connotation: /dog/ signifies fidelity (and vice versa)

e) It can simply be the translation of a term into another langauge, or its substitution by a synonym.[17]

The Interpretant is a Sign that we can exchange for another Sign in another system of understanding.[18] Rosario Mirigliano, in his essay "The Sign and music: A reflection of the philosophical bases of musical semiotics," offers the definition that the Interpretant "...does not permit untranslatable semiotic experiences. It forces the sign to come out into the open and guarantees the sign's translatability (into another sign system) and/or its reformulatability..."[19] Interpretants are Signs that give other Signs contextual meaning in some system.

The Interpretant of the Sign may be a "Rheme," "Dicent," or "Delome." Examples of these Interpretants are difficult to conceptualize; if the construction of the equivalent Sign is based on the relation between the Ground and its Object as being mere qualities, the Interpretant is a Rheme. If their relation is understood as one of causality,

---

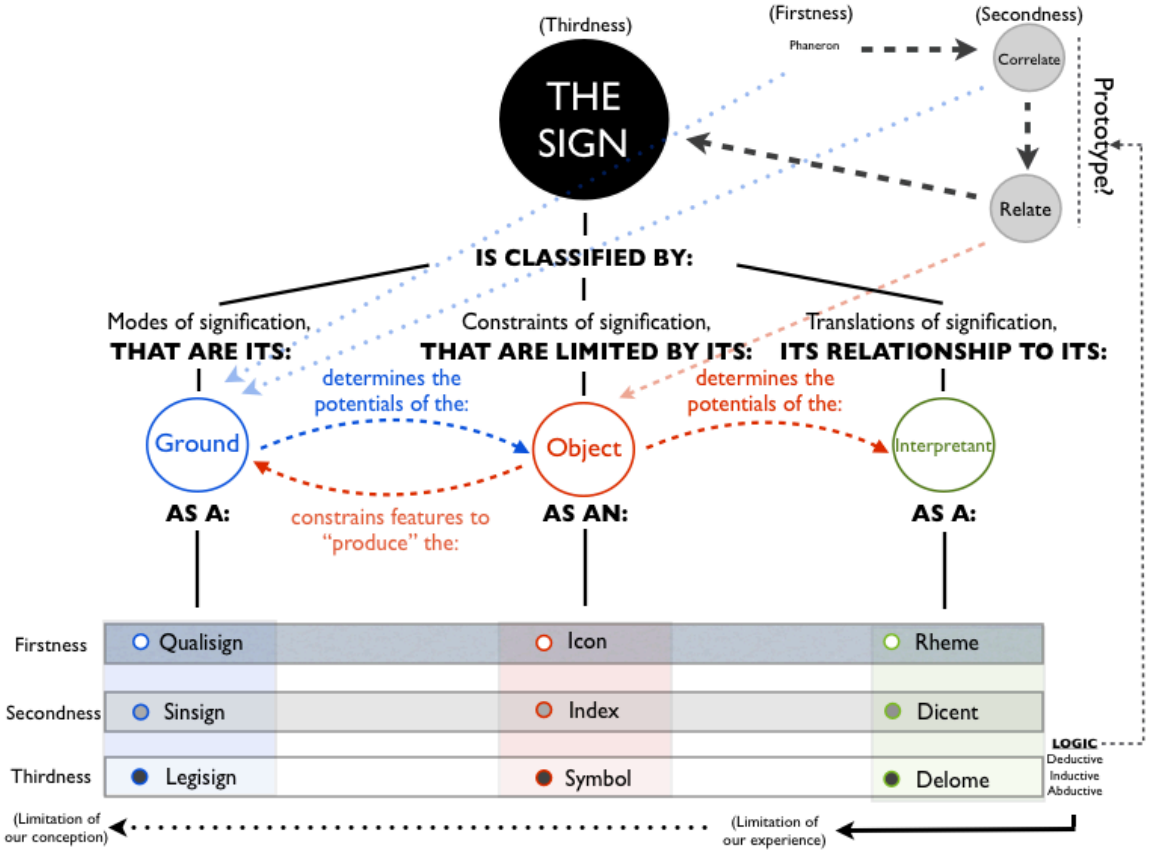
[17] Umberto Eco, *A Theory of Semiotics* (Indiana University Press, 1979), 70.

[18] It is through this conception that one might come to see Peirce's initial (though later refuted) idea that semiosis is unlimited, and ultimately accept it: Interpretants are Signs, and so act as Objects to some Ground. Yet, that particular Object has its own Interpretant that is a Sign, and so that Sign acts as an Object to some Ground... Yet that particular Object has its own Interpretant that is a Sign, and so that acts as an Object to some other Ground... Yet that particular... etc.

[19] Eero Tarasti (ed.), "Musical Signification: Essays on the Semiotic Theory and Analysis of Music" (Berlin: Walter de Gruyter, 1995), 53.

the Interpretant is a Dicent. If their relation is one of arbitrary habit, the Interpretant is a Delome.[20]

Fig. 1.4



Taken together, the triadic divisions of the Sign can form specific combinations, termed "Sign-classes" by Peirce. The basic rule of combination is simple: Any category

[20] The various Interpretants can be notoriously difficult to conceptualize. A Rheme might be something akin to "____ is"; that is we only understand that thing "____" exists as its own qualities, and therefore, as its own Sign. A Dicentic understanding might be something like "____ is ____"; moving beyond a qualitative understanding to an equivalent understanding *between* two things (cause and effect); one Sign may be conceived as equivalent to the other. Finally, a Delomic understanding is an understanding that places the Sign in context of how it functions in an over-arching system of relationships; how a particular Sign interacts with other, similar Signs. In musical terms, a Rheme might be "This note is" (merely quality of being). A Dicent might be "This note is C" (equivalent relationship between the qualities of "this note" and the thing "C"). A Delome might be "This note is C, the tonic of the key of C Major" (an understanding of how the relationship between qualities functions in a larger system; the "tonic" is the equivalent Delome in this case). This example demonstrates how those persons with "perfect pitch" experience sound differently in terms of semiosis: they are unable to construct Rhemes (since they automatically group qualities into particular wholes), and are limited to Dicentic Interpretants (as far as pitch is concerned).

(Ground/Object/Interpretant) that is in Thirdness may have subsequent categories that are in either Thirdness, Secondness, or Firstness. A category in Secondness may have subsequent categories that are in either Secondness or Firstness. A category in Firstness limits its subsequent categories to Firstness.[21] The process, however, may not be reversed: anything that is a First in one category may not have a Second in another; that is, a Sign that acts as an Icon (a First) cannot have a Dicent (a Second) as its Interpretant, just as Sinsigns (a Second) cannot have Symbols (a Third) as their Object. The table below summarizes the ten possible combinations in order from least-arbitrary to most-arbitrary, given this taxonomic rule (Fig. 1.5 reproduced from Peirce's taxonomic distinctions):

Fig. 1.5[22]

Ground	Object	Interpretant	Sign-class	Example
Qualisign	Icon	Rheme	I. Rhematic-Iconic-Qualisign	A feeling of "red"
Sinsign	Icon	Rheme	II. Rhematic-Iconic-Sinsign	An individual diagram
Sinsign	Index	Rheme	III. Rhematic-Indexical-Sinsign	A spontaneous cry
Sinsign	Index	Dicent	IV. Dicentic-Indexical-Sinsign	A weathercock or photograph
Legisign	Icon	Rheme	V. Rhematic-Iconic-Legisign	A diagram, apart from its factual individuality

[21] For example, if the Ground is a Legisign, the Object may be either a Symbol, Index, or Icon. If the Ground is a Sinsign, the Object may be either and Index or Icon. If the Ground is a Qualisign, the Object may only be an Icon. The same is true for the Object and Interpretant: an Object that is an Index limits its Interpretant to either a Dicent or Rheme, while an Object that is a Symbol may have an Interpretant that is a Delome, Dicent, or Rheme.

[22] The fourth column (from the left) uses Peirce's nomenclature for each Sign-class; these are named in "reverse" order (Interpretant-Object-Ground). The examples given also come from Peirce, though their references to language and logic, and overall largely abstract nature, may do little to provide more concrete understandings of their manifestations.

Ground	Object	Interpretant	Sign-class	Example
Legisign	Index	Rheme	VI. Rhematic-Indexical-Legisign	A demonstrative pronoun
Legisign	Index	Dicent	VII. Dicentic-Indexical-Legisign	A street cry (identifying the individual by tone/ theme)
Legisign	Symbol	Rheme	VIII. Rhematic-Symbolic-Legisign	A common noun
Legisign	Symbol	Dicent	IX. Dicentic-Symbolic-Legisign	A proposition
Legisign	Symbol	Delome	X. Argument (Delomic-Symbolic-Legisign)	A syllogism

Ojala's theory, explicated in Chapter II of this thesis, makes use of all ten Sign-classes.

1.2 Trends in Musico-semiotic Theory

Emerging from the various threads in musico-semiotic theory, analysis, and criticism, are two distinct schools of semiotic thought as it pertains to music. The "taxonomic-empiricists" and "semanticists," identified and described by Kofi Agawu,[23] have two distinct aims in regard to the goals of applying semiotics to music. The taxonomic-empiricists, typified by French linguistic semiotician Jean-Jacques Nattiez, sought to "inventory the types and modalities of symbolic references to which the music gives rise...".[24] The taxonomic-empiricists are largely concerned with classifications of significations, rather than their interpretations.

---

[23] Kofi Agawu, *Playing With Signs* (Princeton University Press, 1991), 11-14.

[24] Thomas Sebeok, *A Perfusion of Signs* (Indiana University Press, 1977), 124.

On the other hand, the semanticists take a more hermeneutic approach, and attempt to analyze the Signs of music as interpretations. As one might infer, the semanticists have the added apparatuses of various modes of communication to contend with, whereas the taxonomic-empiricists are content with the ascription of labels. As Agawu describes it, in referencing French linguist Émilie Benveniste, "...the business of semiotics is the... sign, whereas that of semantics is the discourse."[25] Put another way, the taxonomic-empiricists were more interested in a taxonomy based on *how* the Signs of music mean while the semanticists were concerned with *what* the Signs of music mean.[26]

Perhaps counterintuitively, this thesis begins at the outset with the semanticist school of semiology as a framing device and *not* an analytical tool (at least, not directly). The analyses of this thesis begin with the construction of a semiotic framework for each piece of music and the non-musical domain to which they refer, within which the meanings of the musical Signs are taken for granted and based on the intentions of either the composer (in the case of the Obermueller analysis); that is, this thesis does not attempt its own hermeneutic interpretations, but rather assume the validity of interpretations so that the interpretations *themselves* might be analyzed. It does not attempt to *assign* a particular Sign-class, but rather *describe* a particular Sign using Sign-classes. As such, the framework of this analysis is semantic, but the analysis itself is taxonomic.

---

[25] Agawu, 14.

[26] In this sense, the semanticists are hardly involved in the semiotics of music at all, and are mostly concerned with constructing a "narrative" of sorts that can explain how music is able to symbolize - in a word, "hermeneutics."

It is because of the stated goal of taxonomic descriptions that linguistic metaphor theory of proves a useful semiotic companion. Most semiotic analyses invoke topic theory as a compliment to semiotic analysis; in the context of music from the Common Practice Era (roughly 1650-1900), topic theory offers useful insight into musical signification. However, the breakdown of tonality and introduction of entirely new musical directions in the twentieth century (coupled with the highly esoteric nature of composer's individual languages) has rendered topic theory largely unhelpful. Thus, in order to describe musical Signs that lack connections to particular topics, metaphor theory is substituted in place of topic theory.

It is for two primary reasons that this analysis foregoes the topic in favor of the metaphor. The first was elucidated above: topic theory is largely unhelpful in analyzing the Signs of atonal music, to say nothing of modal musics or musics not traditionally included in the Western canon. The second, however, is perhaps more significant, and attempts to address one of the major issues regarding the validity and usefulness of semiotic analysis: context, and its apparent infinite formulations. Mitigating the problem of supposedly infinite contexts (using Peirce's category of the "Ground") is explicated at length in "Preliminary Consideration 1" below.

1.3 Preliminary Considerations

CONSIDERATION 1 - The Problem of Scope: The Ground as Isotopy

Perhaps the most immediate problem one faces when choosing to analyze music within a semiotic framework is the problem of scope: to what musical phenomena should the semiotic analysis be applied? Music often constitutes a series of larger and larger (or

smaller and smaller) structures, the constituent parts of which function differently depending on which aspects of the musical Sign(s) is under consideration. Notes might combine into intervals, intervals into chords, chords into phrases, phrases into sentences, sentences into periods, etc. Similarly, gestures might combine into motives, motives into themes, themes into formal divisions, and so on.[27]

So, how do we limit the level(s) to which we apply the semiotic process as an analytic tool, thereby simultaneously limiting its context? In essence, how to impart a "transformational" nature to the semiotic theory? After all, a Sign at one level (by which, I mean in a particular context) might function in a completely different way than the same Sign at a different level. In Greimassian terms, what we are searching for is the prevalence of some kind of "isotopy"; that is, a framework of "permission" that limits the possible instances of Thirdness to some level distinct from what Greimas calls the "semiological level" (termed "semiosphere" by Tarasti[28]):

> If, to function as such, symbolism must take support from the semiological level, it is nevertheless always a reference to something else, to a level of language distinct from the semiological level... We could say that the semiological constitutes a kind of signifier which... articulates the

[27] It is a common criticism of semiotic analysis that a single Sign may function in entirely different manners from one context to another, and so an analysis of such a Sign is unable to achieve the level of concreteness that is typically sought in scientific inquiries. By building Isotopy into the analysis itself, the variability of context becomes a strength instead of a liability: as the Ground/Isotopy changes, so, too, does the focus of the analysis. And, because the construction of Isotopy is built into the analytical framework, the theoretical apparatus itself changes concomitantly.

[28] Eero Tarasti, *Signs of Music: A Guide to Musical Semiotics* (Berlin: Mouton de Gruyter, 2002), 20.

> symbolic signified and constitutes it in a net of differentiated significations.[29]

This "level of language distinct from the semiological level" is isotopy, which functions as a limit to the application of Thirdness so that a Symbol might not stand for *anything*, but is simply able to receive definition to begin with.[30] Indeed, Umberto Eco describes isotopy as a category that "...would then have the function of textual or transsentential disambiguation..."[31] This disambiguation helps to define the "absolute limit," so to speak, of potentially acceptable symbolic representation.

Isotopy prevents the collapse of the semiotic process back onto itself; without it, the reality of a Thirdness drawn *only* from the semiological level would be left undefined, and as such, only qualitative: Thirdness would "fold back" into Firstness as it regresses to a state of unbound features that lack definition, since there is no "architecture" within which semiosis can occur. In other words, the semiotic process cannot take place in a

---

[29] Algirdas Greimas, *Structural Semantics: An Attempt at a Method*, trans. Daniele McDowell, Ronal Schleifer, Alan Velie (Lincoln, Nebraska: University of Nebraska Press), 67.

[30] It is isotopy that allows the same Object to be Symbolic in multiple ways, and plays an important role in the subjective experience of a Sign. The same diamond might be a Symbol of the love and fidelity of a happy couple or of the work and hardship of the one who mined it. But, isotopy may be defined in many, many ways, and need not be limited to the experience of a subject. Books, films, plays, musics, cultures, languages, events, minds... the list is potentially endless, and isotopies are defined and redefined in a myriad of ways.

[31] Umberto Eco, "Two Problems in Textual Interpretation," *Poetics Today*, vol. 2, no. 1a, 146.

vacuum. Put in terms of cognition and cognitive linguistics, isotopy aids in defining the bounds that might determine cloze probabilities.[32]

It is this problem of a kind of "infinite regress," born of the potentially endless amounts of "levels" (isotopies) to which analysis can be applied, and to which semiosis in music is so susceptible; it is also precisely why Peirce's "Ground" (also called "Sign-vehicle" or "the Sign in itself") plays a pivotal role in musico-semiotic theory. This conviction places my semiotic thought in stark contrast to many semiotic theories by even the most well-known theorists, which I believe have unduly neglected the role of the Ground in the formation of musical meaning. Peirce's complex taxonomy of Sign-classes has, as Agawu recognizes, "...more or less trickled away, leaving in its wake a tripartite division of signs into icons, indices and symbols."[33] In his book, *A Theory of Musical Semiotics*, Tarasti states, in regard to the Ground and the Interpretant, that "Musical semiotics has not yet determined what the counterparts of these sign categories are."[34]

This "trickling away" of Peirce's complex conception of the Sign has resulted in some significant misunderstandings in musico-semiotic theory. See "Consideration 2" below. I would posit that the Ground is *essential* to analyzing the Signs of music, and functions to ameliorate the inherent problem of scope. In the case of this analysis, the

---

[32] "Cloze probability", derived from the concept of "closure" in Gestalt psychology and first experimentally tested by W.L. Taylor in 1953, is the likelihood that a given word maintains the semantic content of a sentence. "Madlibs", in which one is invited to fill in blanks of sentences with any word they choose, exploit the cloze probability. Take, for example, the sentence "I drink cold _____." The word "beer" has a relatively high cloze probability while the word "books" has a relatively low cloze probability while the word "although" has virtually no cloze probability. While the concept of "cloze probability" is linguistically-based, its application to music is documented in a study by Koelsch, et al. (2004), at least in regard to extra-musical meaning. In Greimassian terms, the word "beer" maintains the isotopy of the sentence while the word "books" weakens it and the word "although" violates it.

[33] Agawu, 11

[34] Tarasti, 54

Ground defines the isotopy as a direct consequence of how Legisigns are formed; that is, the creation of a Legisign results in the creation of an isotopy because the Legisign defines the "architecture" within which its component Sinsigns and Qualisigns participate.[35]

For example, if we situate Wagner's "Tristan chord" itself as a Legisign, the isotopy is defined so that its Sinsigns might be the intervals of the chord (the comparisons of its notes) and its Qualisigns might be the notes themselves. The Ground gives an "upper bound" and "lower bound" that defines the outer limits of the Sign.[36] Conversely, if we take the entire opening leitmotif ("Longing and Desire") as a Legisign, the isotopy is defined so that the Tristan chord might now be a *Sinsign* (along with its and its intervallic relationships *Qualisigns*: in essence, we have moved up "one level" of isotopy, so that what was previously a Legisign is now a Sinsign and what was previously a Sinsign is now a Qualisign.

The reality, of course, is far more complex than this rather over-simplified example, but the process is clear: defining the Ground aids us in determining at which level a semiotic analysis will take place, and a change in the Ground (and consequently, the Object [and vice-versa!]) results in a change in the isotopy. This might seem abstract at first glance, but with some consideration, it becomes surprisingly simple: Grounds are

---

[35] The Ground and its component forms (Qualisign, Sinsign, Legisign) are explicated at length in Chapter II of this thesis, as is the rest of Ojala's theory; the fundamental principle is that Legisigns are created from the comparison of two or more Sinsigns to create a "general type" or "convention," while Sinsigns are created from the comparison of two or more Qualisigns. Thus, Legisigns necessarily contain Sinsigns and Sinsigns necessarily contain Qualisigns. Musical form is a good example with which to understand the process: Sonata Form is a Legisign, since its features come from an arbitrary rule or convention; its Sinsigns, then, would be the individual pieces of music that have the characteristics (Qualisigns) that determined what "Sonata Form" is. Essentially, the shared characteristics (Qualisigns) of actually-existing pieces (Sinsigns) were compared to create a "general type" - Sonata Form (Legisign).

[36] It is precisely in this way that the Object defines the Ground, as Peirce purports.

the features that signify Objects, and if we define which features are involved in signification (in particular, which features are Legisigns), we are also placing an "absolute maximum" on *what features we are allowed to consider at all*. We cannot consider the potentially infinite variety of features that exist "beyond" the Legisigns, because the Legisign is the limit of the isotopy; it is the Third of the Ground, when the features of a Sign signify an Object based on conventions and laws.[37]

In addition to offering a "buffer" against infinite regress, the inclusion of the Ground in musico-semiotic theory also expands the capabilities of the theoretical apparatus itself. For example, a common claim is that the individual note "ha[s] no meaning except in relation to others..."[38] This exclusion of the individual note's ability to convey meaning is largely a result of not considering the role of the Ground, and, should we include the Ground as a distinct aspect of the Sign, the statement is problematic: if we situate an individual tone as a Legisign, then its Sinsigns might be its components (pitch, timbre, duration) and its Qualisigns might be the components of the components themselves (ie, overtone presence as the Qualisigns of timbre). Whether or not an individual note is *metaphoric* is a different question; but, individual notes are just as capable of being treated as a signifier as any other musical aspect.

In this semiotic framework, an individual note, even devoid of any and all musical context, is indeed a fully formed Sign. One might consider the interpretive effects an individual note might have on a person that possesses perfect pitch and a person that does

---

[37] The level at which these constraints are placed is, of course, arbitrary. But, it allows us to isolate Signs in a way that gives clear (or, at least, clearer) distinctions between the different *modi significandi* of a single Sign.

[38] Agawu, 16.

not: in regard to the Interpretant, a person possessing perfect pitch is able to reach a Dicentic understanding of the individual note (since it is an Index and is grouped as an individual whole ["This sound is 'C#'"]), while a person without perfect pitch is limited to a Rhematic understanding (since it is only an Icon ["This sound is."] and can only be experienced as its qualities).[39]

The Ground as isotopy provides us with a means of disambiguating the levels at which we might apply a theoretical framework of semiosis to particular musical phenomena. No longer must we begrudgingly add caveats to our interpretations, explaining that we understand how "Phenomenon X" might function as a Sign differently in a different context. The addition of the Ground to musico-semiotic theory defines the isotopy in order to sharpen the analysis, and reduces the trepidation with which many approach the usefulness of semiotic analysis to begin with. It expands the theoretical apparatus and allows for new analyses of even the most fundamental of musical phenomena to take place.

CONSIDERATION 2 - The Problem of the Object: The Misunderstandings of Musical Icons and Indices, and the Necessity of the Interpretant

Symbolism in music (or anything else) seems rather self-evident; the exchange of one Sign for another based on arbitrary systems of laws and conventions leaves open potentially endless possibilities for such exchanges (though, as discussed, isotopy aids in limiting such potentials). Should we purport that music stands for some Object as a

[39] This is an example of the importance of considering the Ground and Interpretnant in musico-semiotic theories. The Interpretant is explicated in Part II of this thesis.

Symbol, one finds little resistance to the notion, if any at all. However, the Icon and Index in theories of musical semiotics, presented as straightforward, are anything but!

Take, for example, Tarasti's treatment of the musical Icon from his work *Signs of Music*:

> ...let us reconsider the example of the horn signal at the beginning of Beethoven's '*Les Adieux*' sonata. It is an iconic sign in the sense that, although played on piano, it imitates the horn signals of late eighteenth-century huntsman.[40]

At the outset, Tarasti's application of the term Icon here seems reasonable: the piano excerpt and the horn signals share a common physical quality (in this case, frequencies and their relations), and so it would seem that, indeed, one stands for the other as an Icon. Upon further examination, however, Tarasti's taxonomy is dubious. The problem inherent in Tarasti's analysis is indicative of the necessity of including the Interpretant in semiotic analysis.

While it is true that the piano excerpt in question *can* be Iconic, Tarasti's assertion that it is Iconic *of horn signals* breaks the taxonomic rules of Peirce's Sign-classes; specifically, Tarasti is explicating an Icon that is understood as a Dicent; that is, the piano excerpt and horn signals are two distinct signs in two distinct Sign systems. Dicentic

---

[40] Tarasti, 11.

Icons, according to Peirce, are an impossible combination; Icons may only have Rhemes as their Interpretants. By asserting that the piano excerpt *imitates horn signals*, Tarasti is moving beyond a purely qualitative understanding of the Sign, and into an understanding that the piano is standing for something other than its own features. Indeed, the relation moves from monadic Firstness ("The piano excerpt is"), in which the piano is its own equivalent Sign of the same Sign system, to dyadic Secondness ("The piano excerpt is the horn calls"), in which the piano as a Sign is equivalent to the horn calls as a Sign in a different Sign system. [41]

This, it would seem, is a misunderstanding that pervades semiotic theories far beyond the scope of music. *A Sign that is an Icon may only represent its own qualities as an Object*. It may *not* represent *any* Object that is *not its own qualities*. When we say that "this Sign is Iconic of a dog because it has the features of a dog," *we are not actually separating the Ground and the Object.* How could we, if we are only experiencing the features? It is the *language* that is separating them, and does so merely syntactically. This is a very difficult concept to grasp at first, but music might provide a clearer demonstration.

Let us suppose that I hear a sound that I have never heard before. I cannot place a "thing" to this sound; all that this sound "is" is its qualities. The Object of the Ground is not "X" but merely the Ground itself; *the Ground is the qualities is the Object*.[42] We must

---

[41] The reader may find this explanation confusing and/or insufficient; refer to section 3.2 of Chapter 3 of this thesis for an in-depth explication of my semiotic analysis compared to Tarasti's.

[42] Ojala's theory is acutely aware of this distinction; this is, in part, why Ojala's theory is so well-equipped to describe music qualitatively (see Chapter 2 of this thesis). Current musico-semiotic theories encounter difficulty in describing music as "pure" sound, and so, quite often, what is explicated as an Icon is actually either an Index or, more likely, a Symbol.

not get confused with the language we use to describe the sound: its qualities *cannot* be grouped into some "thing." I cannot say "This is the sound of X," because all I am capable of knowing about the sound *is the qualities I am perceiving*. They merely exist, as a First, a monad, a *possibility*; I can only know that "the sound is." Someone then tells me that this is the sound of a piano. *Now* the qualities of the sound are not *merely* qualities; they are now the qualities "of a piano". They have been grouped into cohesion, into the effect (a piano) of a cause (the qualities themselves). They are now a Second, a dyad, a Dicent, a *representation*. *This* is a true musical Index, a true musical Second; "*this sound is a piano*." This is an *entirely* different kind of understanding than "*this sound is*."[43]

Thus, the piano excerpt as horn call is a kind of Dicentic-Index, and not merely a Rhematic-Icon; the qualities of the piano excerpt are something other than the qualities of the piano excerpt.[44]

Many current musico-semiotic theories, in focusing so acutely on the Icon/Index/Symbol division, neglect the role of the Interpretant. If the *Les Adieux* musical example were truly an Icon, *we could only understand it by virtue of its qualities;* that is, we could only come to the conclusion that this piano excerpt ("Thing X...") has the qualities of a piano excerpt ("... is Thing X..." "...is Thing X..." "...is Thing X..."), since anything that is

---

[43] One might reconsider the perfect pitch and non-perfect pitch example from earlier as an even clearer example; those possessing true perfect pitch can not experience notes as Icons, as even an individual note is grouped into a whole that is something more than its mere qualities. One might debate whether individuals with perfect pitch are able to experience Icons in music at all!

[44] One must take care to not fall into the "isotopy trap"! In the example preceding this one, the isotopy was defined so that the Qualisigns were the qualities of "*the unknown sound*." Tarasti's excerpt defines the isotopy so that the Qualisigns were the qualities of "*the piano excerpt*." This isotopy is one level "higher," so that the actual qualities of "the sound" are not Qualisigns; it is the qualities of the "piano excerpt" that are now Qualisigns.

an Icon is also a Rheme (and Rhemes can only exchange the same qualities for the same qualities). The understanding is "self-referential," so to speak. But, this is not the case; we understand the piano excerpt as it *relates* to some other thing.[45] And so, what Tarasti calls an Icon is actually an Index; the piano is not an Icon of the horn signals, but is an Index of them, and necessarily so, given that our *understanding* of the Icon is Dicentic.[46] If this excerpt were truly an Icon, our understanding would be limited to a description of its qualities; the piano excerpt could only represent the piano excerpt, *nothing more*.[47] But, since Tarasti describes the excerpt as it relates to horn signals, our understanding of the excerpt is no longer Rhematic, but Dicentic. Specifically, if the piano excerpt stands for the horn call, it does so as a Dicentic-Indexical-Legisign (Class VII in Peirce's taxonomy).[48]

FINAL CONSIDERATION - The Problem of Relevance: What is the Point?

Those studying musical semiotics (or semiotics of any kind) have likely run into opposition to its usefulness as a theoretical tool. One of the oft-cited criticisms of semiotics is the lack of its ability to provide concrete answers; one might get two wildly divergent "analyses" of the same phenomena from two semioticians. Semiotic analyses

---

[45] Should one NOT reach the understanding that this piano excerpt is representative of a horn call (as was my own understanding prior to reading Tarasti's work), the piano excerpt is truly Iconic; however, as soon as one introduces a dyadic relationship (as a Dicent), and suspects that the qualities presented signify beyond merely being qualities themselves, the Object of the Sign necessarily becomes an Index.

[46] Given Peirce's logical rules of Sign-class formation, the Interpretant of an Icon (a First) may not be a Dicent (a Second), just as the Interpretant of an Index (a Second) may not be a Delome (a Third).

[47] For a deeper and more detailed analysis of the previous discussion, see Chapter III, section 3.2 *"A Simple Sample Analysis - Revisiting Beethoven's 'Les Adieux.'"*

[48] It compares the Sinsigns (features) of the piano with the Sinsigns of the horn call to form a Legisign, it stands for the horn call because of the existential,factual connection between the frequencies/organization of the piano excerpt and the horn call as an Index, and we understand that the piano excerpt stands for more than just its own features and can be exchanged with an equivalent Sign in a distinct Sign system as a Dicent.

often (whether implicitly or explicitly) come with an asterisk with the weight of an albatross that invokes a caveat along the lines of "this phenomena signifies in this particular way here, but might signify in a completely different manner in another context." And, so, one is often presented with the justifiable question of "if, ultimately, any thing can represent any thing in any way, what is the point?"

The question is a fair and important one. It is, ultimately, what motivated this thesis in the first place. I (as one who studies semiotics would expect!) find semiotics extremely useful in analyzing the world around us. I am, however, not blind to its very real pitfalls during its employ as a "theory" - the definition of which I take mainly from David Lewin as a set of *conceptual* structures that exist in the abstract, entirely separate from their individual manifestations.[49]

In this regard, it seems that the historical employment of musical semiotics in the 20th century (as a *theory* that can be used to *analyze*) has been largely inadequate. Essentially, most semiotic explorations of music have attempted to perform an analysis without a theory - that is, they have attempted to analyze individual aspects of music without the consistent, rigid, abstract principles of a true *theory* - leading to some very deep misunderstandings of how music represents, and to the dismissal of semiotics as an ultimately unhelpful and un-insightful means of understanding musical structure.

In fact, semiotic "analyses" seem to be just that: "explorations" that sometimes careen from topic to topic haphazardly, with no theoretical apparatus to give them concise direction or academic rigor. They are potentially unlimited in their scope (and might even

---

[49] David Lewin, "Behind the Beyond: A Response to Edward T. Cone," *Perspectives of New Music* 7, no. 2 (Spring/Summer 1969): 59-72.

be more akin to "streams of consciousness"), as there is no actual theory being applied at all; there is merely a set of semiotic musings regarding the crude understandings of "Icon, Index, and Symbol" that, frankly, offer little insight into the formation of musical significations. At best, these analyses reveal only one small portion of music's significations; at worst, they offer an over-simplified version of musical semiotics that often obscures more than it reveals.

It is my hope that this thesis presents music semioticians with a true *theory of musical semiotics* - that it presents music semioticians with a framework of abstracted, generalized principles that can be consistently applied to *any* musical phenomena in *any* context as a means of understanding how musical structures represent. This theory does so mainly in two ways: first, by including *all* aspects of Peirce's tripartite semiotics (Ground, Object, *and* Interpretant[50]), and second, by invoking metaphor theory in place of topic theory to compliment Peirce's semiotics.[51]

The goal of this theory is to give music semioticians a firmer theoretical ground to stand on (no pun intended...), so that their analyses may be taken more seriously as a legitimate means of analyzing music. Music's ability to become meaningful is, perhaps, its most powerful aspect; is *anyone*, musically-inclined or otherwise, disinterested in how

---

[50] This allows, not only more precise analyses that delve into far greater detail than previous musical semiotics, but also for the variability of context to become an integral part of the theory itself. Context in this theory is part of the theory itself - not some amorphous unknown that we must mostly discount out of fear that it undercuts the analysis.

[51] Doing so removes the limitations of tonal pitch/harmonic/rhythmic structures while simultaneously removing any need to present the topics of topic theory *a priori* to a reader; being versed in the musical idioms of the time is no longer a pre-requisite, and the theory is able to account for all possible understandings of a particular musical phenomenon. It also allows for a much wider "reach" of the theoretical apparatus, in that all topics are metaphors, but not all metaphors of topics. Thus, topic theory might even be considered but a small subset of metaphor theory, which can account for the arising of topics with ease (while topic theory is severely limited in its dependence on particular musical structures).

music can move us so intensely? Furthermore, representation (along with the acquisition of “meaning” itself) has been radically re-evaluated in the 21st century in the writings of post-modern philosophers and even cognitive psychologists, leading to revolutions in understanding how communication arises and occurs. Semiotic analyses of music can help us understand this change in meaning-making and the ways in which it occurs, and can help elucidate the various ways in which music, particularly music of the twentieth and twenty-first centuries, embodies meaningfulness.

Chapter 2
Theory

2.1: Metaphor Theory

In place of topic theory, which often relies on the traditional pitch, rhythmic, and formal structures of tonal music, this analysis invokes metaphor theory as a complement to the semiotic analysis.

The fundamental principle of the "metaphor" is that we experience and understand one kind of thing in terms of another. George Lakoff and Mark Johnson, in their well-known work *Metaphors We Live By*, open with an example of how "argument" can can be understood in terms of "war":

> Arguments and wars are different kinds of things - verbal discourse and armed conflict - and the actions performed are different kinds of actions. But ARGUMENT is partially structured, understood, performed, and talked about in terms of WAR... The normal way for us to talk about attacking a position is to use the words "attack a position."[52]

The process, then, involves some kind of isomorphy between two conceptual domains, and the creation of a "conceptual metaphor," distinct from the "linguistic metaphors" we use to describe them.[53]

---

[52] George Lakoff and Mark Johnson, *Metaphors We Live By* (Chicago University Press, 1980), 5.

[53] I term this perceived isomorphy the "Rhematic Bridge," discussed at length in Chapter 2, section 2.4.

The domain from which we draw concepts is termed the "source domain," (domain B) while the domain we are trying to understand in terms of the source domain's concepts is the "target domain" (domain A).[54] Some source domains are more common than others; the most common source domains are: the human body[55], health/illness, animals, plants, buildings/construction, machines/tools, games/sport, economics, cooking/food, heat/cold, light/darkness, physical forces, and movement/direction.[56]

In the case of this study, the conceptual domain of more concrete concepts, assembled by the use of composer interviews, musicological research, textual interpretation, etc., is the source domain while the music and its structures is the target domain. This study seeks to analyze the relationship of the Signs of the source domain (non-music) with the Signs of the target domain (music) and what kind of metaphors are constructed. Target domains are generally populated by more abstract concepts while source domains generally make use of concrete, more easily understood concepts.[57] In taking the "argument is war" example from above, "war" is the more concrete concept of the source domain while "argument" is the more abstract concept of the target domain.

Zoltan Kovecses, in his book *Metaphor: A Practical Introduction*, elucidates three distinct kinds of conceptual metaphors: structural metaphor, ontological metaphor, and orientational metaphor.

---

[54] Zoltan Kovecses, *Metaphor: A Practical Introduction*, 2nd ed. (Oxford University Press, 2010), 4.

[55] The human body is far and away the most common source domain for metaphoric expression; this makes sense, given that it is the medium through which we (if "we" is "the mind") experience and embody every physical stimulus. Kovecses describes a survey done by his colleague, Reka Benczes, over a collection of "figurative idioms" created by George Nagy. Out of 12,000 figurative idioms, well over 2,000 were based on the human body. Corporeal embodiment is a central theme throughout Ojala's work.

[56] Kovecses, 28.

[57] Ibid., 7.

Structural metaphor is the most complex kind of metaphor, in which "the source domain provides a relatively rich knowledge structure for the target concept.... the cognitive function of these metaphors is to enable speakers to understand target A by means of the structure of source B."[58] Structural metaphors "...can elaborate spatialization metaphors in much more specific terms... Structural metaphors provide the richest source of such elaboration... They allow us... to use one highly structured and clearly delineated concept to structure another."[59] Structural metaphors are complex metaphors that compare the structures of Domain A and Domain B; those structures between the source and target that we deem similar in makeup are exchangeable, and form the metaphor.

The ontological metaphor "provide[s] much less cognitive structuring for target concepts" than structural metaphors. In ontological metaphors, we "conceive of our experiences in terms of objects, substances, and containers... Their cognitive job seems to be to 'merely' give a new ontological status to general categories of abstract concepts..."[60] Ontological metaphors, then, consist of discretized elements compared against one another to produce "shapes." While ontological metaphors are certainly more basic than fully-formed structural metaphors, they are important to our conceptual system: "Once we can identify our experiences as entities or substances, we can refer to

---

[58] Kovecses, 37.

[59] Lakoff/Johnson 61.

[60] Kovecses, 38.

them, categorize them, group them, and quantify them - and, by this means, reason about them"[61] (ostensibly to prepare for the formation of structural metaphors).

Finally, the most fundamental type of metaphors are orientational metaphors. These types of metaphors "provide even less conceptual structure for target concepts than ontological ones. Their cognitive job... is to make a set of target concepts coherent in our conceptual system."[62] Orientational metaphors use extremely basic spatial concepts, many of which are in opposition: up/down, in/out, on/off, deep/shallow, light/dark, etc.[63] Two important points must be made in regard to orientational metaphors: the first is that they are non-arbitrary, and the second is that this non-arbitrariness arises mostly from the spatial orientations of our physical bodies. In the "consciousness is up/unconsciousness is down" metaphor, the physical basis of the orientation is grounded in the fact that humans sleep lying down and are erect when awake.[64]

These types of metaphors would seem to be in a kind of subset/superset relation: orientational metaphors are the most basic, and give simple spatial orientations to abstract concepts. These orientations are a prerequisite to ontological metaphors, which combine the spatial dimensions of orientational metaphors to create "objects, substances, and containers."[65] Finally, ontological metaphors form the constituent parts of structural

---

[61] Lakoff/Johnson, 25.

[62] Kovecses, 40.

[63] Lakoff/Johnson, 14.

[64] Ibid., 15.

[65] Orientational metaphors might be conceptualized merely as individual points, while ontological metaphors might be conceptualized as these points being connected to create a two- or three-dimensional shape.

metaphors, in which the structures of "shapes, containers, and substances" of the source domain and target domain

are compared and exchanged.

This process of conceptual exchange that forms these basic metaphor types arises from "systematic correspondences" between the source domain and target domain, often referred to as "mappings." These mappings must only be partial; otherwise, domain A and domain B would be the same domain. This begs a few questions: what makes the concepts of these domains "similar enough"? How do we account for the selection of source concepts when comparing two domains that do not have obvious similarities (as is almost always the case with music)?

> Can anything be a source domain for a particular target? If similarity cannot be taken as a general account of the basis of metaphor, what can? Or, to put the same question differently, what limits the selection of particular source domains for particular targets? For example, there is a large number of source domains for the concept of love...but it is still a limited number. Not anything can function as a source concept for love. Quite simply, then, the question is why we have the sources we do.[66]

[66] Kovecses, 79.

The questions raised by Kovecses are especially important in dealing with the abstractness of music and metaphor. What Kovecses seeks to describe is the process of metaphoric "motivation" that decides which particular source domain will be better suited to understand a target domain. Kovecses argues for four primary types of metaphoric motivation:

- **Experiential correlation**: [MORE IS UP] "If event E1 is accompanied by event E2 (either all the time or just habitually), E1 and E2 will be... events that are correlated in experience. For example, if the event of adding more fluid to a container is accompanied by the event of the level of fluid rising, we will not say that the two events are similar... Rather, we will say that the occurrence of one event is correlated with the occurrence of another. "[67]

- **Structural similarity**: [LIFE IS A GAMBLING GAME] "People perceive certain similarities between life and gambling games... We view our actions in life as gambles and the consequences of those actions as winning or losing... When we see a similarity between the structure of one domain and that of another, we have cases where there is a perceived structural similarity in the conceptual metaphor."[68]

- **Ontology:** [IDEAS ARE FOOD] "It was observed that ontological metaphors are extremely basic ones, in that they give object, substance, or container "shape"... to

[67] Ibid., 79-80

[68] Ibid., 82.

entities and events that are not physical objects, substances, or containers. If two concepts (one abstract, the other concrete) share this basic shape or status, this can induce the perception of certain structural similarities between the two."[69]

- **Source-as-root:** [LOVE IS A BOND/SPORT IS WAR] "In some other cases of conceptual metaphor, experiential basis is provided by a situation in which the source was the origin, or the "root" of the target. This kind of experiential basis comes in two versions: biological and cultural."[70]

As shown above, metaphors are "motivated" and are not "predicted," the implication here being that most metaphors are primarily formed from non-objective, non-literal, pre-existing similarity between the source and target domains. In particular, the more complex the metaphor, the more non-objective its (potential) motivation. The main exception to this view is the orientational metaphor, which would seem to be primarily motivated by objective, experiential correlation (e.g., MORE IS UP), since it stands to reason that fundamental spatial concepts between individual humans are highly similar. We experience fundamental aspects of our physical world in largely the same manner: directionality, the effects of gravity, dichotics (more/less, in/out), etc.

2.2: Ojala's Semiotic Theory

This thesis takes as its main source material Juha Ojala's cognitive-psychologically based model of Peircean semiotics from his work *Space in Musical*

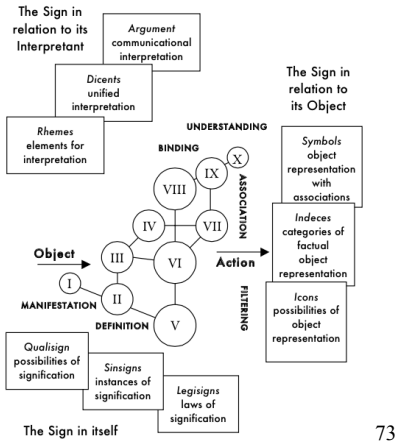
[69] Ibid., 83.

[70] Ibid., 86.

Semiosis.[71] Ojala's work is massive, extensive in scope and intensive in depth. Ojala combines semiotics, philosophy, linguistics, cognition, and psychology into what he terms an abductive theory[72] of the semiotics of the music composition process.

Figure 2.1 below is taken from Juha Ojala's work, and summarizes the process of how Peirce's Sign-classes are "built" from non-arbitrary possibilities (Qualisign) into arbitrary understandings (Arguments):

Fig. 2.1



73

Ojala's theory uses all ten of Pierce's Sign-classes. The process of "moving" through the ten Sign-classes involves six "transitions," A-F:

Transition A: Transition A from the Qualisign to the Rhematic Iconic Sinsign corresponds to the implemental embodiment of the sign, in that

---

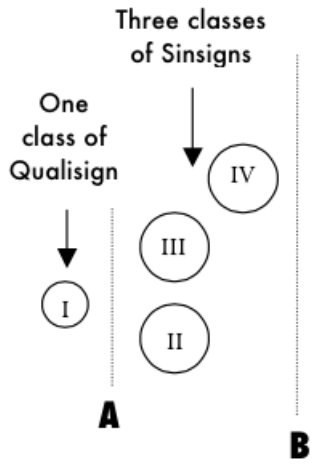
[71] Juha Ojala, *Space in Musical Semiosis: An Abductive Theory of the Music Composition Process* (Imatra, Finland: International Semiotics Institute, 2009).

[72] While "deduction" is a type of logic that employs equalities (moves from general to specific) and "induction" is a type of logic that employs probabilities (moves from specific to general), "abduction" is a type of logic that employs possibilities. Abduction provides a *possible* explanation, induction provides *the most likely* explanation, and deduction provides *the true* explanation.

[73] Note that Ojala uses the spelling "Indeces" in place of the more typical "Indices"; there is no semantic difference.

the Qualisign as a possibility for signification becomes actually *manifested* in the sinsign..."[74] "...in music, as in semiosis in general, the transition A between the Qualisign and other rhemes corresponds to the beginning of the actual process of representation.[75]

Fig. 2.2



Transition A accounts for the movement between the "manifestation" of music in a purely *qualitative space* (as a non-manifested Qualisign[76]) to the "definition" of music in *a phenomenal space* (as a manifested Rhematic Iconic Sinsign). The Qualisign, which is a complete First,[77] is an almost entirely abstract concept; as Ojala puts it, "the example

[74] Ojala, 431.

[75] Ibid., 434.

[76] Note Ojala is not using the term "Qualisign" as an individual instance of the Ground, but as a Sign-class. Sign-class I, the "Rhematic Iconic Qualisign," is often shortened to simply "Qualisign," since it is the only class that utilizes pure qualities as Qualisigns. Qualisigns as Grounds are certainly capable of actual existence (as necessary preconditions for Sinsigns), insofar as qualities are actual things. Though, this disambiguation is largely theoretical and conceptual, as only the Rhematic Iconic Qualisign makes direct use of Qualisigns in signification. All other Sign-classes necessarily contain Qualisigns as "building blocks," but these are not actively part of the semiotic process in these significations.

[77] By a "complete First," I mean that all aspects of the Sign (Ground/Object/Interpretant) are in Firstness (Qualisign/Icon/Rheme).

of 'feeling of red' should be taken as Qualisign only as far as it is a possibility, *without manifestation...*"[78] [emphasis mine]. It is purely the qualities of a Sign, in complete Firstness; the features are not coordinated into a whole *thing* and are (at least in theory) completely non-arbitrary.

It is difficult to define what a true Qualisign might be in music (or anything else); Peirce's example of a "feeling of red," however, illustrates the Qualisign nicely.[79] Ojala muses that while the inclusion of the Qualisign might make Perice seem "overly meticulous," the necessity of the Qualisign "seems justified for the simple reason that if there were no possibilities... both semiosis and the process of inquiry would seem logically impossible."[80] It would seem that the Qualisign is less a Sign that is ever actually experienced, and is more a "scaffolding" of all possible qualities capable of representing (grouping) an Object as a Ground.[81] In this sense, the Qualisign of music, in the most general sense of the word (ie., at its maximum possible isotopy), might be all possible sound stimuli and all their possible combinations at any given moment.[82]

---

[78] Ibid., 311.

[79] What does red *feel* like? It is difficult to describe what one even means by the question. And yet, we are able to understand what one means by "a feeling of red" on some strange, abstract level; as a kind of mental quality that gives us some elusive intuition that we actually know what a "feeling of red" is. But, at the end, we do not really grasp what it is we are "experiencing." In this respect, Peirce's example is quite clever!

[80] Ibid.

[81] Recall that Objects determine their Grounds.

[82] We can continually sharpen and refine the Qualisign in a similar manner as the isotopy: a string quartet would "have" a wholly different Qualisign than, say, a standard rock band; that is, a string quartet and rock band have the capability of producing quite different qualities that may initiate the process of representation. We might also conceive of the Qualisign as the "opposition" of isotopy: whereas isotopy defines theoretical maxima for Symbolic representation, the Qualisign defines the theoretical minima for Iconic possibility.

Sinsigns, on the other hand, are "...particular instances. They are actually existing Signs."[83] It is here that Ojala makes a crucial point in explicating his theory:

> The Rhematic Iconic Sinsign represents the possibly interpretable object by virtue of its characteristics, by virtue of the embodied Qualisigns. Yet, the Rhematic Iconic Sinsign, although actually existent, is insufficient for semiosis, since alone it stands in relation to nothing, *except for the qualities it embodies*.[84] [emphasis mine]

This is precisely the issue encountered earlier when discussing Tarasti's conception of the Beethoven piano excerpt as an Icon, and a point that must again be emphasized.

Signs that signify as Icons indeed have Objects (as they must), *but these "Objects" are merely reflections of the qualities of the Sign itsel*f; the Icon stands only for the thing(s) that it is. It is for this reason that the Beethoven piano excerpt may not function as an Icon for the horn calls; the Icon of the piano excerpt is simply the qualities of the piano excerpt itself. It *cannot* be related to any Object beyond its own features.

---

[83] Ibid.

[84] Ibid.

Icons are an indiscrete collection of qualities; if the musical Sign represents its Object as an Icon, it may only represent the qualities that it possesses.[85]

This conception of the musical Icon significantly alters the generally understood use of Peirce's Icon in musico-semiotic theory. From horn calls to galloping horses to raindrops to bird calls, we must dramatically rethink our use of the classification "Icon" and how it relates to musical semiosis. The Signs of music are incapable of any Iconic representation that lies beyond music's domain of possible features; that is, beyond its own Qualisigns. At the moment that any part of the musical Sign is understood as signifying *beyond the qualities of itself* (as a Dicent or Delome), it necessarily becomes an Index or Symbol.

Ojala's second transition:

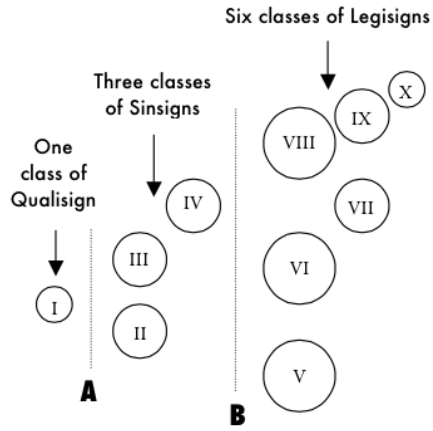
> **Transition B**: Transition B, or rather, the mutual relation between the sinsigns (as Seconds) and the legisigns (as Thirds) consists of the dynamic interplay of legisigns as the law-like general types..."[86] "...the relation between the sinsigns and the legisigns (transition B) accounts for the *spatial embodiment* of music... particular objects and

[85] This helps to explain the limitation of Icons as Rhemes and gives reason to Peirce's insistence that a Firstness in one of his categories may not become a Secondness in another. Take, for example, someone who has never heard a piano before; they don't hear a "piano"; they hear "this set of qualities," because they lack an Interpretant that would allow them to recognize the source of the sound (ie., there is no equivalent sign ["piano"] in their cognitive repertoire that they may group the qualities into). As explained below, the movement from a Rheme to a Dicent involves "binding" features into a coherent whole; in this case, that would mean recognizing "this set of qualities" (a Rheme) as a "piano" (a Dicent).

[86] Ibid., 431.

constructs can be thought of as dynamic constructs of points in spaces and spaces consisting of those points...[87]

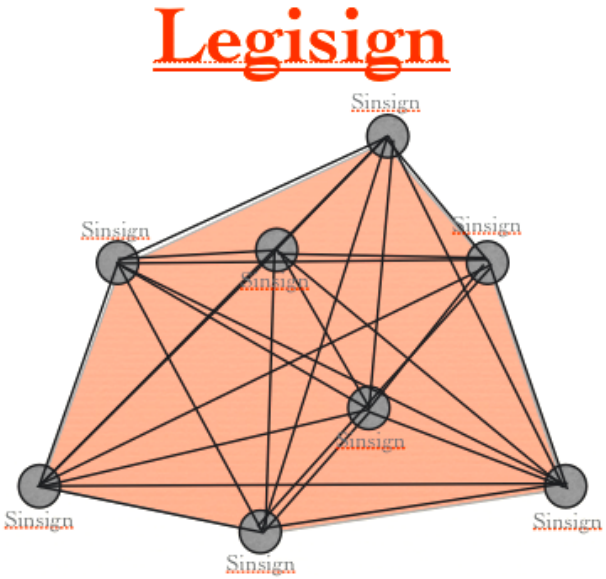
Fig. 2.3



Transition B accounts for the creation of Legisigns as conceptual spaces of Sinsigns compared against one another. Fig. 2.3 from Ojala shows transitions A and B while Fig. 2.4, created by this author, shows the conceptual space of a Legisign created by comparing the phenomenal spaces of Sinsigns against one another (Fig. 2.4 is meant only as an illustrative hypothetical of how a Legisign is built from the comparison of Sinsigns).

[87] Ibid., 434.

Fig. 2.4



The Sinsign can be analogous to the concept of "token" while the Legisign can be analogous to "type."

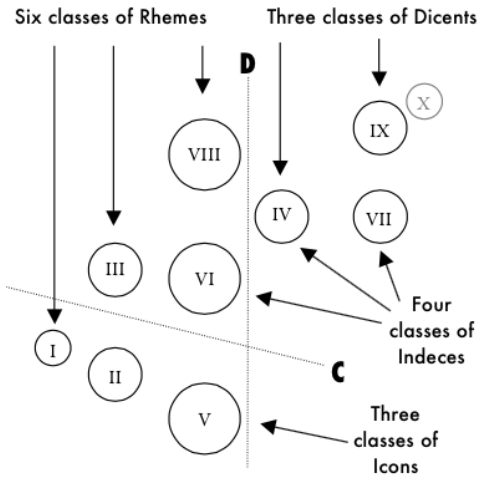
Concrete examples are quite easily imagined: Sonata Form is a convention-based musical form (Legisign) that came about from the comparison of actual instances of music (Sinsigns) based on their common qualities (Qualisigns). The generalized *qualities* (Qualisigns) of music (such as thematic exposition with multiple tonal areas, transition, an unstable development with new material, retranstition, recapitulation that recalls original ideas) were compared across a variety of *individual pieces* (Sinsigns) to create the *convention* (Legisign) that we now call "sonata form."

Ojala's third transition:

> **Transition C**: Transition C from icons to indices seems to account for feature extraction and categorization... efficient

> filtering and discretizing of the continuous... dimensions of quality spaces eases the cognitive load... in transition C, the causally evoked representation in an Icon (a First) becomes a factual representation of the Object's features in an Index (a Second).[88]

Fig. 2.4



In transition C, the "causally evoked" Icon (pure quality) becomes a "factual representation" of some Object as an Index. Icons might be thought of as quality in and of itself while Indices might be thought of as quality that *represents a whole*. As previously discussed, in the Icon, quality and Object are indivisible; the Object *is* its qualities. In the Index, the two are separate: the qualities are a "factual representation," and, as such, must represent an Object whose features are bound into a coherent "thing."

[88] Ibid., 432-433.

In considering the differences between Icon and Index, one might eventually arrive at the concept of "shape" from Gestalt psychology. Particularly useful are the considerations by Leonard Meyer in his book, *Emotion and Meaning in Music*. In it, Meyer introduces the terms "sound stimulus" and "sound term," classifications that relate directly to Ojala's conceptions. For Meyer, a "sound term" is "[a] sound or group of sounds (whether simultaneous, successive, or both) that indicate, imply, or lead the listener to expect a more or less probable consequent event..." while the "sound stimulus" is "[T]he actual physical stimulus which is the necessary but not sufficient condition for the sound term..."[89] Both of these concepts relate to his idea of shape:

> The apprehension of a series of physically *discrete stimuli* as constituting a pattern or shape results form the ability of the human mind to relate the constituent parts of the stimulus... to one another in an intelligible and meaningful way. For an impression of *shape* to arise, an order must be perceived in which the individual stimuli become parts of a larger structure and perform distinguishable functions within that structure. A *shape* or pattern... is a *sound term*..."[90] [emphasis mine]

---

[89] Leonard Meyer, *Emotion and Meaning in Music* (University of Chicago Press, 1956), 45.

[90] Ibid., 157.

One need not stretch the imagination to see the relation between "sound stimulus" as Icon and "sound term" as Index in Ojala's theory. Ojala and Meyer even use the same cognitively-based, Gestalt-psychological concept of "discreteness" in describing the transition from Icon (sound stimulus/non-discrete, continuous quality dimensions) to Index (sound term/discretizing of quality). Indeed, just as the "sound term" is dependent on the causality inherent in expectation, so, too, is the Index.[91]

Ojala's next transition:

> **Transition D**: Representing the Object as an Object (as opposed to representing merely different, uncoordinated features of the Object) requires *binding* of the separate features into a coherent whole. This takes place in the transition D from rhemes to dicents, when the elements of interpretation (a First) are unified into a genuine interpretation (a Second)...[92]

Transition D is primarily concerned with the role of the Interpretant, and so concerned with how we understand the Object in some system of Signs. Instead of our

---

[91] The "sound term" presents some difficulties outside of tonal music, within which concepts of "expectations" are fundamental. Expectation in modern music cannot depend on the tonal system; what, then, constitutes "expectation" in atonal music? Skilled musicians can learn to recognize particular set-classes, timbres, etc., and are even able to account for their recurrences in a piece of music. We are also able to pick out fragments of motives, their transformations and returns. But, there is no syntactic boundary rules of when or where there should occur, making the listening to modern music a much more associative experience than previous eras.

[92] Ojala, 433.

understanding of features being disunified and merely elemental (a Rheme, as a "first"), they are *bound* together into a coherent whole to provide a "genuine interpretation" (a Dicent, as a "second").

An example of this might be the difference between "_____ is" (a First/Rheme) and "_____ is _____" (a Second/Dicent). In the Rheme, we can only say that quality exists; in the Dicent, we can say that quality exists *as some thing.* The "information" afforded by a Rheme is minimal, in that it presents only the possibility that uncoordinated, indiscrete features might eventually become bound and discretized as a Dicent.

A Dicent is a Sign of actual existence:

> With the dicent signs, the interpretation of the Object in the semiotic system reaches a truly phenomenological level... It also reaches a level of intentionality, in the sense that the representation is truly about something, not just in terms of features or characteristics that are perceived irrespective of each other, but in terms of representations of (relatively) complete objects... In the dicent signs, the different feelings of qualities that have succeeded in the transition to indices are unified into a complete experience...[93]

[93] Ibid., 314.

Recall that Interpretants are equivalent Signs that "translate" the original Sign into some particular Sign system. For example: the collection of notes "D-F-A ," a "D minor chord," and a "supertonic of C major" are different understandings of the same Object. The Rheme is merely a qualitative description ("D-F-A")[94], while the understanding that these notes create a "D minor chord" (a coherent whole) is a Dicent and the understanding of how a D minor chord functions as a supertonic in a system of arbitrary convention (tonality) is a Delome.

Ojala's penultimate transition:

> **Transition E**: Without transition E, the factual object representation (in its Secondness) does not comprise a full Sign. The particularity of the Sign reaches its limits in indexical sinsigns, but the indexical legisigns, that is, the categorized conceptual spaces... can be further correlated with other legisigns... In other words, symbolic legisigns...[95]

Transition E accounts for the creation of "Symbolic Legisigns" out of "Indexical Legisigns." Just as Indexical-Legisigns were the conceptual space created by the comparison of Sinsigns, Symbolic-Legisigns are the conceptual space created by the

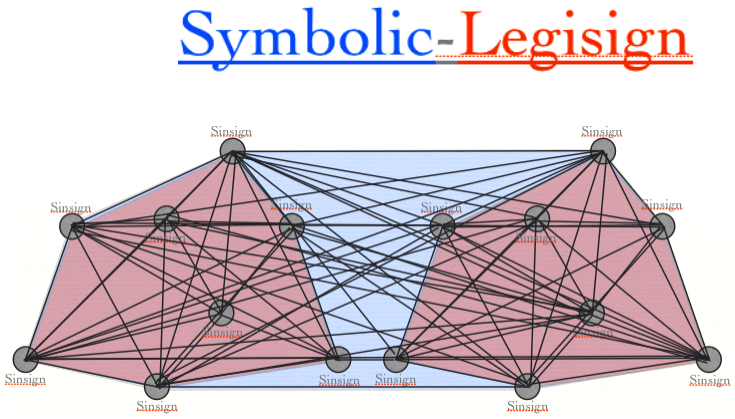
---

[94] Once again, we must take care not to fall into the "isotopy trap"! Of course, knowing that D, F, and A are notes in the first place could certainly make their Interpretant a Dicent and their individual features Rhemes. But, in this case, the isotopy is defined so that the Legisign is the functionality of chords in the tonal system, and so the individual notes as Qualisigns are our semiotic "minimum."

[95] Ibid.

comparison of Legisigns. The author's schematic of a Symbolic-Legisign is given in Fig. 2.5 below (Fig. 2.5 is a hypothetical illustration of how Legisigns are compared to form Symbols).

Fig. 2.5



The Dicentic-Symbolic-Legisign[96] represents a "complete conceptual space"; that is, we have an understanding that the existence is not merely of qualities, but of a concatenation of those qualities into a rudimentary interpretation. Only after we reach a Dicentic understanding of the Symbolic-Legisign can we traverse transition F and create an associative space of the Delomic-Symbolic-Legisign.

> **Transition F**: Finally, the transition to the Argument (transition F), is the acknowledgement of the semiotic situation... the Argument (a Third) extends the association of conceptual spaces of the situation to include those representing self..., the subject's conception of her own

[96] Symbolic-Legisigns play a crucial part in the formation of ontological metaphors; see Section 2.3 below.

> phenomenal world... and habits of thinking... as elements of communication and semiosis.[97]

In transition F, we are finally able to reach an "understanding" of the complete "semiotic situation"; that is, we are able to compare Symbolic-Legisigns *across domains.*[98] In the case of Ojala's theory, the Symbolic-Legisigns of the domain "music" are compared to the Symbolic-Legisigns of the domains of: the subject's conceptions of "Self," its "phenomenal world," and its "habits of thinking."[99]

Thus, the sign reaches Class X as an Argument.

2.3: Combining the Theories

We have examined and summarized the metaphor theories of Lakoff and Johnson/ Kovecses and the Peircean semiotic theory of Juha Ojala. But, the question remains: how do these theories relate to each other, and how can they be combined? Which Sign-classes can be involved in metaphor formation, and which cannot? What kinds of metaphors do those metaphoric Sign-classes create?

In order for a Sign-class to be capable of reaching the level of metaphor, it must meet two requirements.

The first requirement a Sign-class must meet is that it must be a "complete" Second; by "complete," I mean that all of the Sign's aspects (Ground, Object, and Interpretant) must *at least* be at the level of Secondness (*at least* Sinsigns, Indices, and

---

[97] Ibid.

[98] The result of this is a fully-formed structural metaphor.

[99] Ibid.

Dicents). Metaphors, as described previously, rely on some kind of equivalence between the source and target domains. This most generalized conception of metaphor, extant at its minimal requirements, makes apparent that there must be *at least* a two-part relationship: that between the phenomena of the target and source domains (since something cannot be a metaphor for itself). As such, *any* Sign-class that contains a First in *any* of Perice's semiotic trichotomy cannot be metaphoric[100], namely those Sign-classes containing Qualisign(s), Icon(s), and/or Rheme(s).[101]

Recall that each of these, as a First, is monadic; exchange between distinct domains is precluded entirely. Any Sign that contains a First is only its qualities, and its Interpretant cannot generate an "equivalent Sign" in another Sign system, since there is no "grouped" Object to exchange in the first place.[102] Even if the Object and its Ground are a Third (Symbolic-Legisign) and the Interpretant is a Rheme, this "constricts" the Sign to a single system.

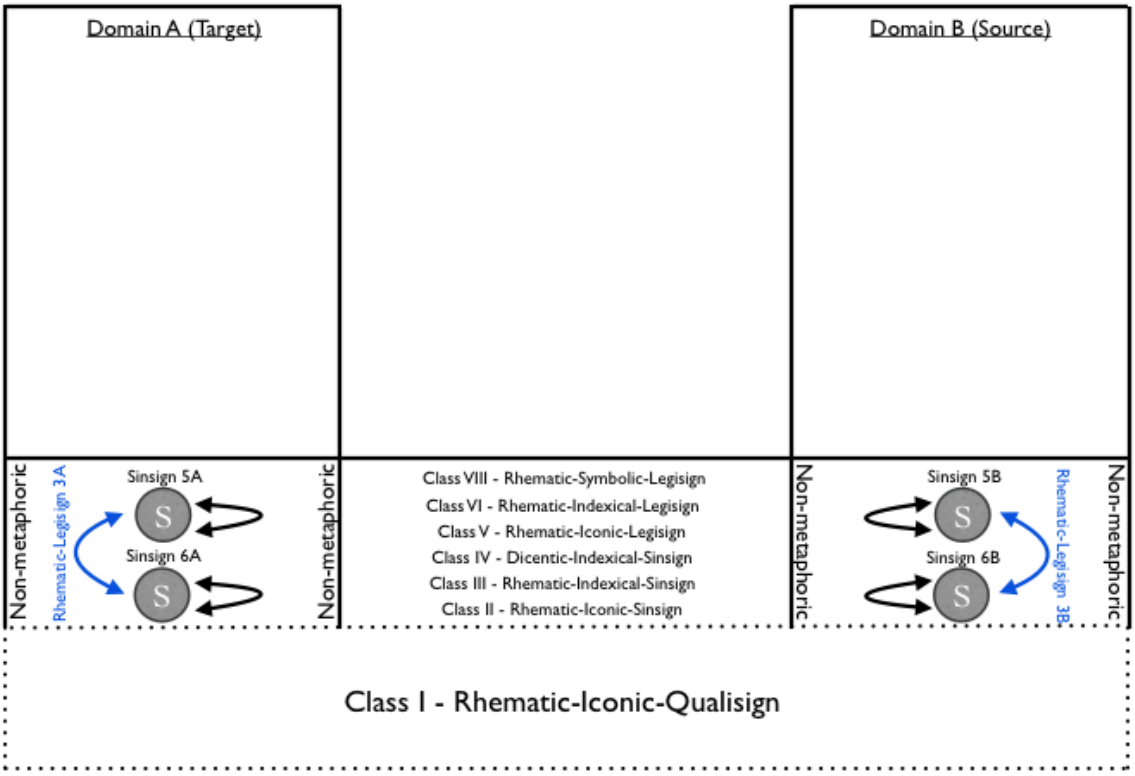
---

[100] These Sign-classes, however, are still crucially important to metaphor formation. See part 2.4, "The Rhematic Bridge," below.

[101] This can be further refined to simply include the Rhematic Sign-classes, since any Sign-class that contains a Qualisign or Icon necessarily has a Rheme as its Interpretant.

[102] Instead, it generates the same Sign in the same system.

Fig. 2.6



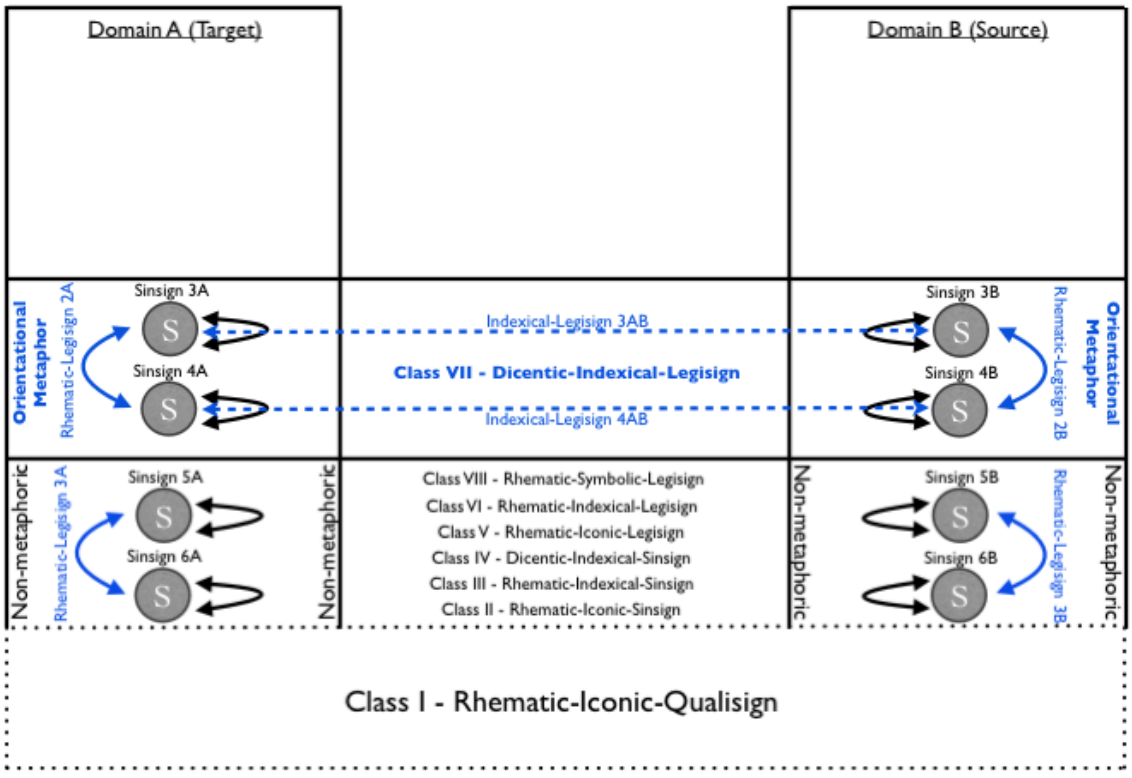
Thus, Sign-classes I-VI and Sign-class VIII are non-metaphoric Sign-classes, as they contain at least one aspect of the Sign that is a First. Note that the Sinsigns of these six classes can be compared against themselves or against each other (to form "intra-domain" Legisigns [Rhematic-Legisigns]), but that neither of these comparisons take place across domains. And so, these "intra-domain" exchanges are non-metaphoric.[103]

The keen observer might note an exception here: Class IV, the Dicentic-Indexical-Sinsign. It is unique to the first seven Sign-classes in that all of its aspects are, indeed, Seconds. So, why its exclusion from the possibility of standing as a metaphor?

[103] All intra-domain Legisigns are Rhemes, since the only "exchange" available as a Rhematic Interpretant is its own qualities within its own domain.

This question brings us to our second requirement for metaphoric mapping of semiotic Sign-classes: any Sign that participates in a metaphoric mapping must have, as its Ground, a Legisign. *Metaphoric* mappings are the comparison of two or more Signs *across domains*; thus, metaphoric mappings are necessarily Legisigns, since Legisigns are a comparison of at least two distinct instances (Sinsigns) and, in the case of metaphor, these Legisigns are between domains. It is for this reason that Sign-class IV is non-metaphoric, since there is no comparison between grouped structures (Sinsigns).

Fig. 2.7



Thus, we can posit that, in order for a Sign to act as a metaphor, the Sign must fulfill both obligations: it must not have any of its aspects in Firstness, and it must have, as its Ground, a Third.[104]

Note the difference in Legisign formation in Fig. 2.6 and Fig. 2.7; in contrast to the "intra-domain" *Rhematic*-Legisigns of Fig. 2.6, created when Sinsigns in a single domain are compared, the metaphoric Legisigns of Sign-class VII in Fig. 2.7 are created through an "*inter*-domain" exchange, as *Dicents*. This inter-domain exchange is permitted (demanded?) because neither Rhemes nor Icons are present in Class VII, and so the equivalent Signs in different Sign-systems *must* be exchanged (the fundamental basis of metaphor).

Recall that Legisign formation corresponds to the "spatial embodiment" of music. And so it also corresponds to the creation of the most basic kind of metaphor: the orientational metaphor.[105] It is these Signs that are present in the most common metaphorical expressions of music, such as "The *melody* goes *up*," "That *high note*," "The *orchestration* is *heavy*," "The *double bass* is *low*," etc. Each of these are Dicentic-Legisigns.

Also note that, in Fig. 2.7, we form Legisigns by comparing *single* Sinsigns; thus, these Legisigns are Indexical, since the mapping is between single, individual instances in each domain ("feeling and struggle/cause and effect"). The orientational metaphor of

---

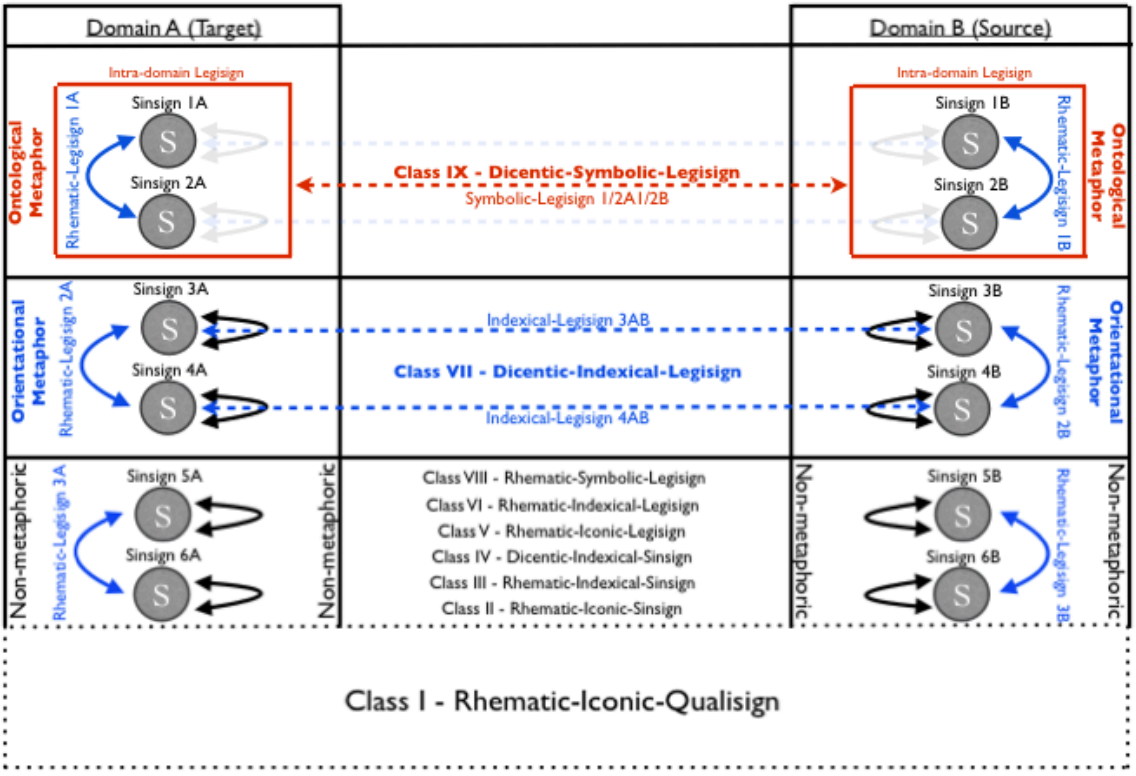
[104] For those thinking ahead, these requirements leave us with 3 possibilities: Class VII, Class IX, and Class X. Class VIII is excluded

[105] This is the case when Legisign formation is the result of Sinsigns compared *across* domains, as opposed to *within* domains. This can be viewed as a refinement of Ojala's theory; Legisign formation within a single domain (Rhematic) is not metaphoric and does not create an orientational metaphor, and so does *not* account for the spatial embodiment of music, since that process must involve metaphoric mapping of some kind.

"that *high note*" compares the Sinsign "high" of the source domain (spatial concepts) with the Sinsign "note" of the target domain (music) to produce a simple orientational metaphor; that is, a metaphor of simple comparison that draws from spatial orientations as a source in order to understand the target.

It is at the next stage that Legisigns move from Indexical to Symbolic: we are no longer comparing *Sinsigns* across domains (as Indices), but *Legisigns* across domains (as Symbols). We are now comparing the *Legisign(s)* of the source domain to the *Legisign(s)* of the target domain. The result is a Symbolic-Legisign,[106] quite distinct from an Indexical-Legisign.

Fig. 2.8



[106] Recall that this is *the* requisite for *Symbolic*-Legisigns; the comparison of Legisigns themselves.

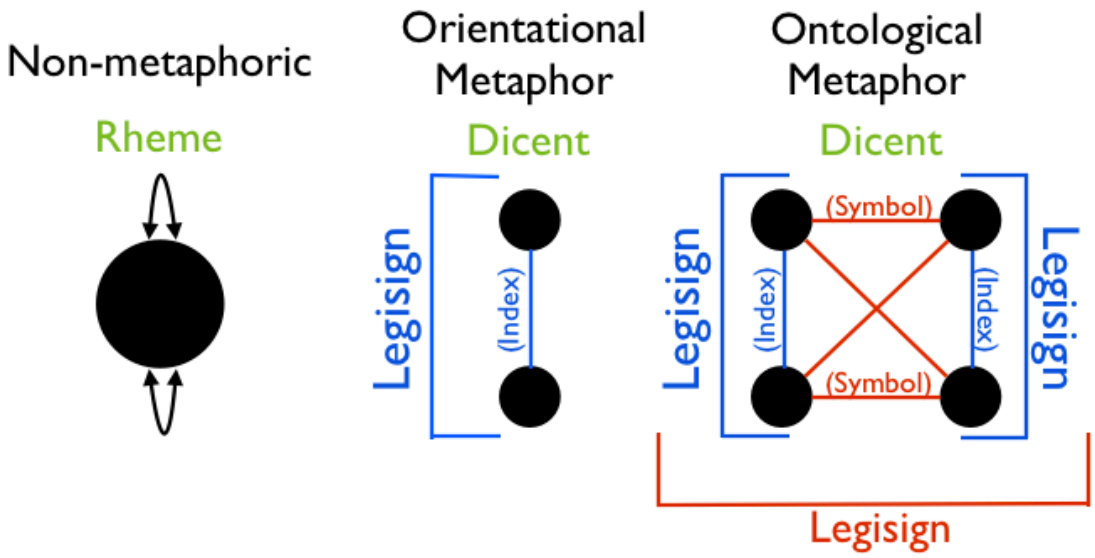
Signs of Sign-class IX (Dicentic-Symbolic-Legisign) form the basis of ontological metaphors, or those metaphors which combine simple spatial orientations to create "objects, substances, and containers." Conceptually, this might be difficult at first, but some elucidation might help.

First, consider non-metaphoric Signs as qualities. There is no conceptual exchange between systems at this level, and so, these might be thought of as metaphoric "Firsts": the *possibilities* of metaphoric exchange.

Secondly, consider an orientational metaphor: it consists of a single Legisign derived from one phenomenal concept of the target domain that is compared to one spatial concept of the source domain ("that *note* is *high*"). If we were to visualize these in space, there is only "length and width," so to speak: a two-dimensional line.

Finally, consider the ontological metaphor as a combination of orientational metaphors: if we were to compare two of these orientational "lines," we might create a square, which is a "container." It is in this manner that orientational metaphors might combine to create ontological ones. A (conceptual) square, a triangle, a cube, a cylinder, a tesseract, a pentagon, or any other shape that is a comparison of individual lines that constitute edges, borders, and boundaries has the ability to function in an ontological metaphor.

Fig. 2.9



Finally, if we have managed to build ontological metaphors (Symbolic-Legisigns/ containers) out of the comparison of orientational metaphors (Indexical-Legisigns/ spaces), we are able to actually compare the complete structures to each other to create a fully formed conceptual metaphor.

Fig. 2.10

It is Class X, the Delomic-Symbolic-Legisign (or Argument), that constitutes a fully-formed structural metaphor. When we combine orientational metaphors to create ontological metaphors and compare these ontological metaphors (as wholes) to each other, we compare their structures and seek out which aspects of the structures (that is, which orientational and ontological metaphors) are similar enough that they can be exchanged for one another in their respective conceptual- and Sign-systems.

Ojala's theory of musical semiotics and linguistic metaphor theory combine surprisingly well. As can be seen, many of Peirce's Sign-classes are, indeed, non-

metaphoric; this, however, does not mean that they are not integral to the creation of musical metaphors.

2.4 The Rhematic Bridge

Metaphors require some kind of similarity to function as such; there is some aspect between the Object of the target domain and the Ground of the source domain that is shared, and so is capable of some kind of isographic mapping from one onto the other. Perice deduced this when constructing his semiotic theory, but struggled to explain it. He knew that metaphors, along with "images" and "diagrams," contained some aspects of Firstness within them; that they were, in some sense, Iconic. However, he also knew that metaphors were a kind of Third. This created a problem for Peirce, so much so that it forced him to give these kinds of Signs a special designation, which he termed "hypoicons":

> Those hypoicons which partake of simple qualities... are *images*; those which represent the relations, mainly dyadic... of the parts of one thing by analogous relations in their own parts, are *diagrams*; those which represent the representative character of a representamen by representing a parallelism in something else, are *metaphors*. (2.277)[107]

[107] Charles S. Peirce, *Collected Papers*, Charles Hartshorne and Paul Weiss eds., Cambridge University Press, 1921-1935.

We can clearly see Perice's semiotic trichotomy at work here: images are representations using simple qualities (Firsts), diagrams represent using analogous, dyadic relationships (Seconds), while metaphors represent their representamen by utilizing a parallelism taken from something else (Thirds). Yet, Peirce felt a keen sense of Firstness inherent in each of these, enough that he felt it apropos to give them the special distinction of "hypoicon."

Peirce's term "hypoicon" is a curious one to use, since it seems obvious Peirce is aware that metaphors are a kind of Third. As shown above, metaphors, by their very nature, cannot be Firsts. However, it seems equally clear that metaphors contain some enigmatic sense of First*ness*. Douglas Anderson writes:

> Still, Peirce is at least clear in subsuming metaphors, together with images and analogies or diagrams, under the class of icons. However, he also maintains that icons... are not signs, but pure firsts or possibilities. Therefore, metaphors are hypoicons rather than pure icons... 'An *iconic* sign,' as Jospeh Randall aptly puts it, "is anything whatever which does or can function as a sign in virtue of its embodiment of some icon proper." Metaphors, then... are no less symbolic in a fundamental sense than any other sign; rather, a metaphor is a *symbol whose iconicity dominates*.[108] (second emphasis mine)

[108] Douglas Anderson, "Peirce on Metaphor," *Transactions of the Charles S. Peirce Society*, Vol. 20, No. 4 (Fall, 1984): 456.

Perhaps it is that Perice was unable to reconcile the combination of Thirdness and Firstness inherent in metaphors, and was forced to create the ostensibly *ad hoc* category of "hypoicons" to account for them. But, what is this Firstness that Peirce sensed in metaphors? Why do metaphors require it to function?

I believe the solution to this problem lies, not in the category of the Object, but of the Interpretant. This elusive sense of Firstness is what I have termed the "Rhematic Bridge" of a metaphor.

The Rhematic Bridge is a Sign that represents a shared quality between the target and source domains. It is a Sign(s) held in common between the target and source domains that has, as its Interpretant, a Rheme (Sign-classes I-VI and VIII). In the context of metaphor, it is a Sign(s) whose qualities are shared by both domains. These Rhemes function to form a qualitative "bridge" made of shared features, a "bridge" through which we are able to exchange the non-Rhematic Signs of the target and source domains and create a metaphor.[109]

The Rhematic Bridge allows us to maintain one or more qualitative aspects of a metaphoric interpretation while simultaneously exchanging other Signs that are Indices, Symbols, Dicents, and/or Delomes. It is what we are able to "hold on to," so to speak, while metaphoric exchange occurs; otherwise, we would lose any sense of similarity and

[109] For a clear example of how a Rhematic Bridge is constructed, along with how it functions in metaphor creation, refer to the "Revisiting Beethoven" analysis in section 3.2 in Chapter 3 of this thesis.

would be left to arbitrarily create metaphors between any two things.[110] Without the Rhematic Bridge, that "perceived similarity" borne of some "dominate iconicity," the metaphor would cease to function, and the target domain would have no way of relating to the source domain metaphorically.

> I suggest that the materiality of the metaphor ("the field smiles" or "the smiling field") is a feeling, a first, a pure icon which its creator perceives. The iconicity of metaphor lies neither in field nor in smile, but in the unity of the two: *a third thing which they somehow constitute*... a metaphor, like an image or analogy, is what it represents - but not because of an antecedent identity of similarity, not as a reminiscence, but in virtue of a *similarity which it creates*. [emphasis mine] [111]

---

[110] This, it would seem, is theoretically possible, but only in an isotopy-less vacuum, within which semiosis cannot take place. Once a target and source domain are established, context is generated and the arbitrariness of metaphoric construction is severely limited. It seems rather unlikely that a piano key itself (Source) can be a metaphor for life (Target), since finding a non-arbitrary, qualitative "Rhematic Bridge" between these two would seem difficult (if not impossible; do the piano key and life share corners? Are they the same color? Dimensions? Are they both made of ivory?). The action of pressing and releasing a piano key, however, might form a Rhematic Bridge by virtue of its movement up and down, since, in life, one often experiences "a series of ups and downs" (a linguistic metaphor in and of itself!), thus providing an opportunity to construct a Rhematic Bridge; we can see how context contributes to the limitation(s) of its possible realization(s).

[111] Ojala, 459.

Here, it is the shape of a smile and the shape of the field that act as the Rhematic Bridge. If the shape of the field is not qualitatively similar to the shape of a smile, it would not make sense to construct the metaphor "the field is smiling," since, in the context of this particular metaphor, there would be no Rhematic Bridge. Gestalt psychological principles, beyond the scope of this thesis, are apropos to discerning how/at what point this similarity is able to manifest.

This "similarity that it creates" is closely tied to Peirce's conception of the Interpretant; that is, it as an equivalent Sign used to translate the Ground and the Object. The metaphor in and of itself, abstract as it may be, is its own kind of Sign.[112] The Rhematic Bridge is this created similarity, and its identification and description should be the first step in any semio-metaphoric analysis of music.[113]

We are now well-equipped to begin the analysis of actual music and put forth taxonomic explanations for which Sign-class a particular musical Sign belongs to and what kind of metaphors the musical Signs are capable of creating.

[112] Peirce makes explicit that Signs can be wholly mental objects and are not limited to physical manifestations of the material word. Interpretants are almost always mental Signs (or, at least, are largely abstract and not literally present in the physical world [i.e., the tonal system of music]).

[113] For example, the extremely common "sound is high" metaphor.

Chapter 3
Analysis

Now that the theoretical mechanisms of metaphor theory, Ojala's semiotic theory, and their interactions have been elucidated, let us turn from theory to application in an effort to break down musical signs into detail. Beginning with an analysis of one of the most common metaphors employed in music description, we will then briefly revisit Tarasti's semiotic analysis of Beethoven's *Les Adieux* sonata before performing a more advanced analysis on Karola Obermueller's string quartet, *xs*.

3.1 A (Very) Common Musical Metaphor

Often, we speak about music through metaphor without even realizing it. In fact, one could make the argument that music is spoken about almost *entirely* using metaphors; music, after all, is often considered to be an immensely abstract artistic medium (owing to its primary usage of sound instead of light). Let us first consider what might be the most fundamental of all musical metaphors:

"That note is high."

This is a very important musical metaphor, and one that we all use nearly every day without giving it a second thought. The literal statement would be "that note is fast," since notes are neither up nor down, but rather are fast or slow (spatialized music notwithstanding).

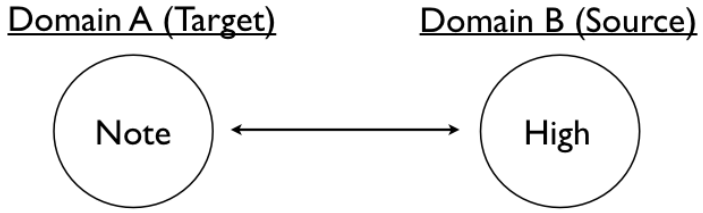
That the human brain non-arbitrarily maps pitch phenomena onto spatial representations had been conclusively demonstrated as far back as 1930 by Carroll Pratt, who found that four octave transposition of "middle C" (256 Hz/512/1024/2048/4096)

were mapped spatially in the brain from "low" to "high."[114] Termed the "SMARC effect" in 2007 by Rusconi, et al., the automatic spatialization of pitch on a continuum of "high" and "low" (with intermediates of "descending/ascending") has shown to be true across a wide variety of musical cultures and languages, including English, Chinese, French, German, Italian, Polish, and Spanish music traditions. Even as early as 1883, Carl Stumpf, in his book *Tonpsychologie*, sought to elucidate the psycho-cognitive mechanisms that resulted in consistent pitch-height associations.

Setting aside the neurological mechanisms, let us analyze the metaphor of pitch height itself.

Fig. 3.1

"That note is high."



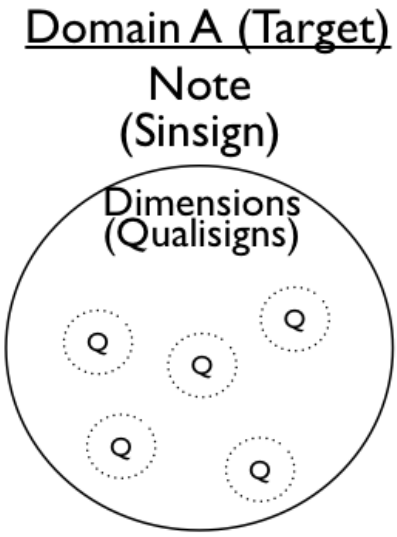
We can see the basic format of the metaphor here: an attempt is made to understand the more-abstract "target" (frequency) in terms of the less-abstract "source" (space).

We can first analyze the Signs of the Domains individually; for example, is the individual note a Qualisign, Sinsign, or Legisign? The note, as presented here, cannot be a Qualisign; if it were to be a Qualisign, the note would appear within some overarching

[114] Pratt, C.C., "The Spatial Character of High and Low Tones," *Journal of Experimental Psychology* vol. 13, no. 3, June 1930; 278-285.

structure (i.e., be a constituent [Qualisign] of a scale [Sinsign] that functions in a key [Legisign]).[115] Classifying the note as a Legisign is also problematic: if the note were a Legisign, its dimensions of amplitude, duration, and timbre would be its compared Sinsigns; but, what would be the Qualisigns of these individual Sinsigns?[116] It seems that, in this context, the most appropriate label for the individual note is a Sinsign: the tone as a single instance of grouped Qualisigns presents no issues here.

Fig. 3.2



While a single, out-of-context "note" is a Sinsign, what of "high"? Is "high" here a Qualisign, Sinsign, or Legisign?

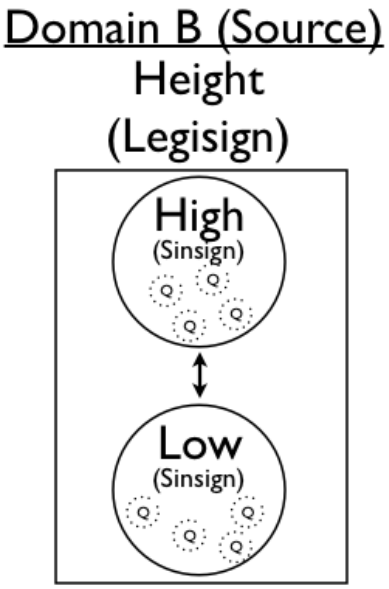
Can "high" act as a Qualisign? Indeed, it can, *if* three-dimensional space is considered a Legisign. The *x-,y-,* and *z*-coordinates (length, height, and width) are the

[115] If we were to substitute the term "note" with the term "leading tone," it would indeed be capable of functioning as a Qualisign.

[116] The Qualisigns of timbre are rather straightforward: overtones. But the Qualisigns of amplitude and duration are more abstract; is the Qualisign of duration the amount of milliseconds it lasts? Is not that duration *itself*? The same goes for amplitude: is the Qualisign of amplitude some measurable distance? Or is that measurable distance amplitude *itself*? It seems that duration and amplitude are fundamental, in the literal sense: they cannot be broken down into qualities, because *they are quality itself*. It is for these reasons that a single, acontextual tone cannot act as a Legisign. The isotopy is too "large" to implement Qualisigns at such a level.

Sinsigns of three-dimensional space, and each contain their own unique Qualisigns: the *z*-coordinates' Qualisigns are near/far, the *x*-coordinates' are left/right, and the *y*-coordinates' are high/low. In this simple metaphor, however, we are not considering all three-dimensions of space; the note is merely situated in the single dimension of height, high/low. And so, if the isotopy is adjusted accordingly so that the Legisign is not a three-dimensional space, but merely the dimension of height, the concept "high" becomes a Sinsign: one of the compared instances (along with "low" [or, in Griemassian terms, "not-high"]) that form the Legisign "height."[117]

Fig. 3.3



The Legisign formed here is within a single Domain, and so recall that "height," as an isolated Domain (*not* in three-dimensional space!) is a *Rhematic*-Legisign.

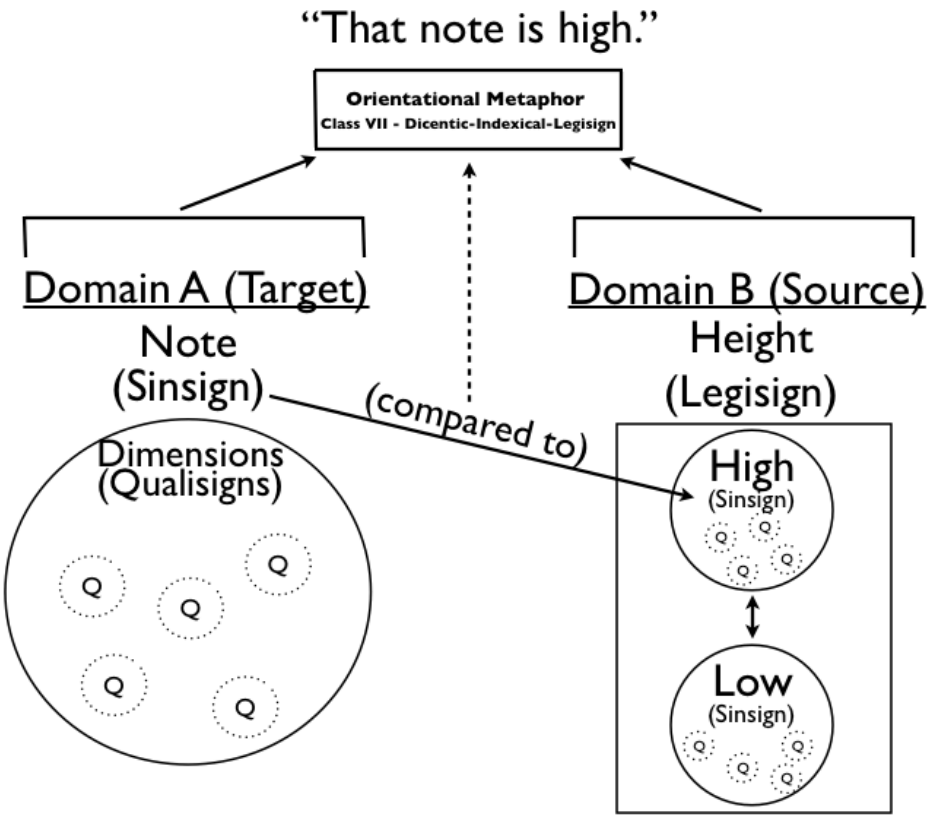
It is clear, then, that in the metaphor "that note is high," we are comparing a Sinsign, "note," with another Sinsign, "high," across two separate Domains. The result is

[117] What are the Qualisigns of "high" and "low"? We might say that, in the most general sense, "distance" itself is a Qualisign of these concepts.

an Indexical-Legisign - or a Legisign that compares *individual instances* in a one-to-one isography. And, because this comparison takes place *across* two separate Domains, as opposed to *within* a single Domain, the Indexical-Legisign is also Dicentic (as opposed to Rhematic).

The result is a metaphoric Sign of Sign Class VII, the Dicentic-Indexical-Legisign. In other words, the "orientational metaphor."

Fig. 3.4



This analysis of this most basic type of metaphor lacks an important aspect of metaphor creation previously discussed: the Rhematic Bridge.

In some cases of more complex metaphors (as in the Beethoven analysis below), the Rhematic Bridge is inherent in the Signs being analyzed. Rhematic Bridges for

orientational metaphors, however, can be abstract and difficult to discern, in part due to the extremely basic nature of these kinds of metaphors. In the particular instance above, there is some perceived qualitative isomorphism between fast frequencies and "high" that creates the Sign Class VII orientational metaphor.

If, as stated earlier in this thesis, the human body is the most common source domain for metaphoric expressions (orientational metaphors in particular), we might conjecture about the nature of the Rhematic Bridge constructed in the orientational metaphor "that note is high." The author here proposes that the human voice is largely responsible for creating the Rhematic Bridge of this metaphor: as the pitch of the voice rises and falls (metaphorically!), the larynx follows suit with its physical movement (*not* metaphorically!).

Perhaps the orientational metaphor of the vertical dimension of musical space (and sound in general) arises from the physical movements of vocal chords. As the voice rises (metaphorically), the larynx physically rises to stretch the vocal chords (literally). The indexical nature of the rise in frequency coupled with the rise in the larynx might form a truly *fundamental* Rhematic Bridge of how any sound is perceived in vertical space.

3.2 Revisiting Beethoven's "Les Adieux"

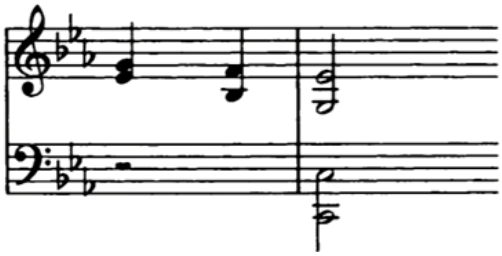
Consider a small excerpt of Tarasti's treatment of the opening motive from Beethoven's "*Les Adieux*" sonata from his work *Signs of Music*: "It is an iconic sign in

the sense that, although played on piano, it imitates the horn signals of late eighteenth-century huntsmen."[118]

As is often the case when applying semiotics in an analysis, the focus lies exclusively on only one of Peirce's three divisions of the Sign - that of the "object" (Icon/ Index/Symbol). The result is the common taxonomic description of the Sign as a single, homogenous unit. The reality is that different aspects of a single Sign can function semiotically in unique ways. It is for this reason that musical semiotics must embrace Peirce's other categorizations (the "ground" and the "interpretant"), so that we may provide deeper analyses that explore the nuances of the musical Signs that facilitate the semiotic process.

Let us first look at Tarasti's claim that the piano excerpt is Iconic. Below is the musical sign to which Tarasti refers:

Fig. 3.5



We might say that there are two relevant subdivisions of the piano theme as it relates to its Iconicity of horn calls: intervals and timbre.[119] As demonstrated in Part I of

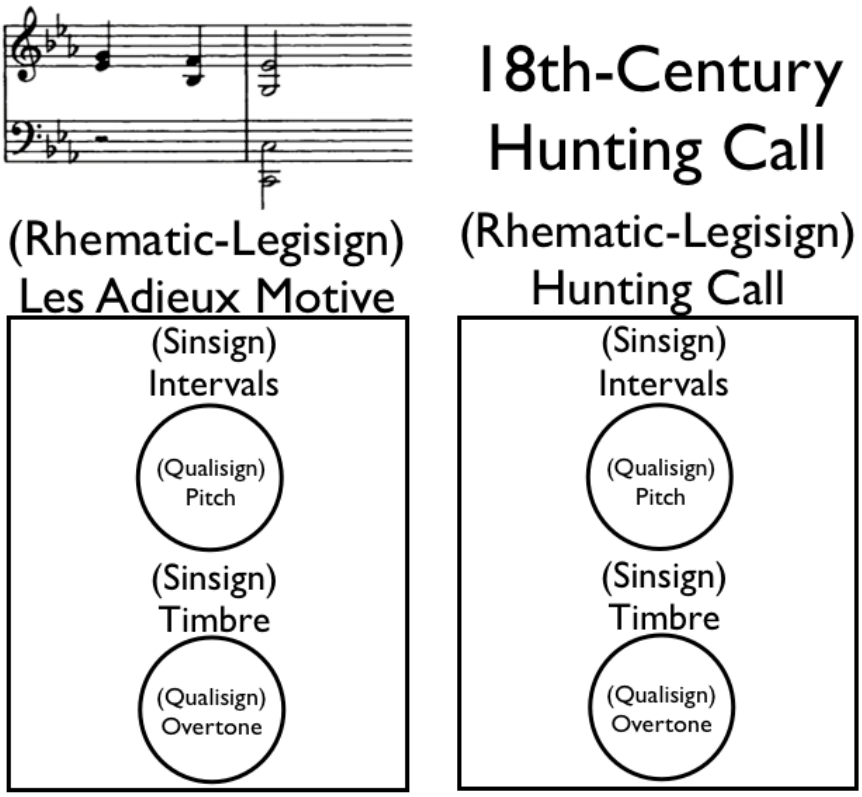
---

[118] Eero Tarasti, *Signs of Music: A Guide to Musical Semiotics* (Berlin: Mouton de Gruyter, 2002): 11. It is that seemingly innocuous word, "although...", that is the aforementioned caveat discussed at the beginning of this thesis.

[119] It would seem that two other fundamental aspects of sound - dynamic and duration - are not relevant in this particular case; of course, that is not to say that they are unimportant in other semiotic analyses of music!

this thesis, these two aspects of the theme are sinsigns, containing qualisigns (for timbre, the presence of overtones, and for intervals, the individual pitches used) that combine to form a legisign (the entirety of the theme itself). We can make schemata for these individual parts of the sign, for both the piano excerpt and its object (the hunting call).[120]

Fig. 3.6



Recall that these particular legisigns are rhematic; they are understood as their own "self-contained" qualities and may not stand for anything beyond those qualities in

[120] It is unclear how the "horn fifths" sequence (major third-perfect fifth-minor sixth) of the piano sonata "imitates the horn signals of late eighteenth-century huntsman," as Tarasti purports. For the sake of this analysis, let us take the literal similarity between the intervals of the piano excerpt and those used in hunting calls for granted (indeed, these are the exact intervals of the "horn fifths" progression; perhaps it is to this that Tarasti is actually referring).

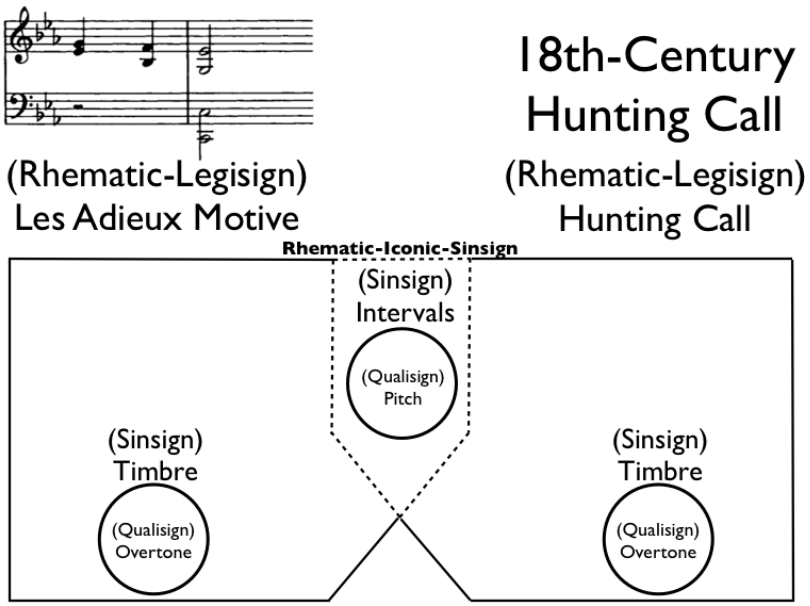
and of themselves. The piano excerpt, as a rhematic-legisign, is merely the piano excerpt (the same is true, of course, for the horn call). Indeed, any aspect of a sign in firstness may not act as a signifier for anything except itself (as a rheme, its interpretant is its very own qualities, mirrored with precision "in the mind," so to speak).

It is this understanding of firstness - that anything that represents its object as an Icon *is the qualities of that object itself* - that jeopardizes Tarasti's assertion that the piano excerpt is Iconic. The intervals used here (again, taking for granted that the intervals of the piano excerpt are the same intervals of the horn calls to which Tarasti refers) are, indeed, Iconic to one another: a major third is a major third, regardless of what instrument plays it. Tarasti's language here ("imitates") is also slightly problematic; insofar as the intervals go, there is no "imitation," there is only their literal representation. *The intervals are the intervals*.[121]

We might amend the above figures to reflect the literally shared (and so Iconic) quality of the intervals:

[121] This might lead us to state that intervals (but not necessarily the notes that produce them) are Iconic across musics that use the same tuning systems.

Fig. 3.7



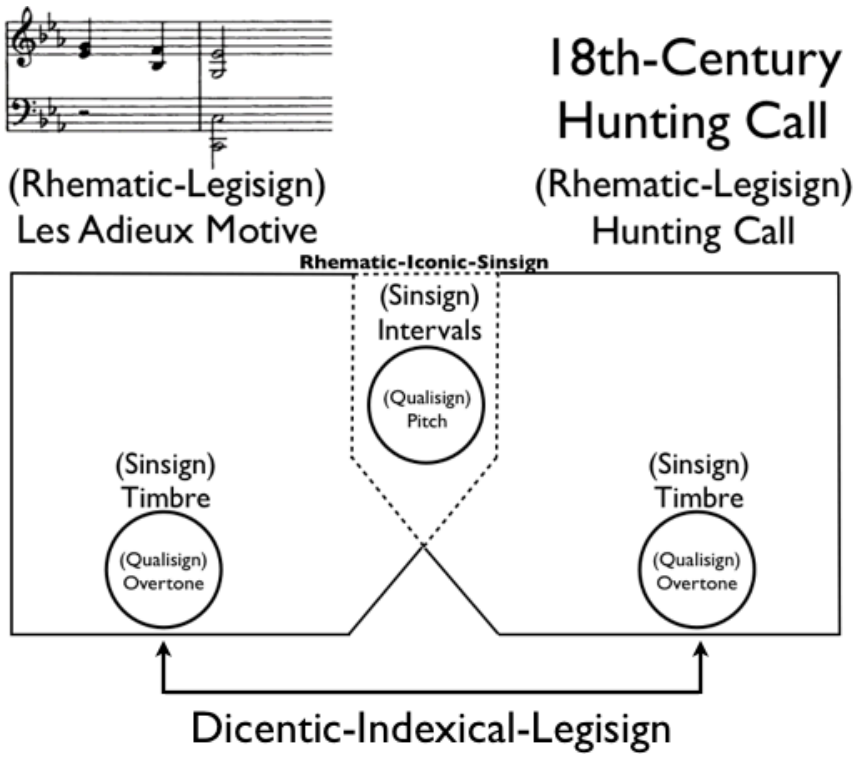
Thus, when Tarasti explicates the musical Sign as an Icon, he is partly correct. He is intuiting the intervallic pattern as the link between the piano excerpt and the horn call; in terms of this theory, the intervals act as the "Rhematic Bridge" that allows for one to stand for the other (after all, if there was not some basic, shared relationship, there would be no reason to purport that the piano excerpt stands for the horn calls at all). In this particular case, the shared Sinsign of the intervallic pattern is a sign of Sign Class II, the Rhematic-Iconic-Sinsign. A sinsign in that it is still a structural part of the legisign(s), iconic in that the exact similarity of their qualities (the intervals) are shared between both legisigns, and rhematic in the sense that we understand "these intervals" as merely "these intervals" (also recall that any icon is necessarily a rheme).

Let us now examine the other sinsign participating in the semiotic process here: timbre.

Unlike the sharedness of the intervals, the timbre of a piano and the timbre of a horn are not shared in exactitude; otherwise, of course, there would be no difference in sound between a horn and a piano. The reason for this timbral difference is (mostly) the presence and strength of the various overtones for each instrument. And so, we can say with certainty that the sinsigns of timbre between the piano and horn are not iconic to one another. Tarasti is at least intuitively aware of this: "Is it an iconic sign in the sense that, *although played on piano...*" (emphasis mine).

So, what kind of semiotic sign is formed between these two parts of the overarching legisigns? Compared in this way, they form a Sign of Sign-class VII, the Dicentic-Indexical-Legisign.

Fig. 3.8



The timbral sinsigns are compared to one another, forming a "cross-domain" legisign (hence the non-iconity) between a *single* sinsign in one domain (piano excerpt) and a *single* sinsign in another (horn call), thus creating an indexical-legisign; indexical in the singularity of the sinsigns and a legisign because sinsigns are being compared (similar to the "note is high" metaphor). If more than one sinsign from each domain was compared, the sign would be symbolic, since we would move from comparing single sinsigns to comparing multiple sinsign (as legisigns themselves). The indexical nature of this legisign limits the possibilities of the interpretant to either a rheme (a first) or a dicent (a second). We do not understand the piano timbre to literally *be* the horn timbre (ie, their qualities are not exchanged), but we *do* understand them in a 1:1 relationship as entire units (ie, their qualities that are grouped into a cohesive unit ["timbre"] *are* exchanged).

It is here, in consort with the "Rhematic Bridge" between the shared intervals, that metaphor creation occurs: Sign-class VII, the Dicentic-Indexical-Sinsign, in which single sinsigns of separate domains (in this case, the unique timbres of piano and horn) to form an inter-domain legisign, is the sign of an orientational metaphor. The timbre of the piano (a sinsign) is mapped in a 1:1 ratio (as an index) to the timbre of the horn (a sinsign) to form a cross-domain legisign within which we understand the two are standing for one another in a one-to-one mapping (dicent).[122]

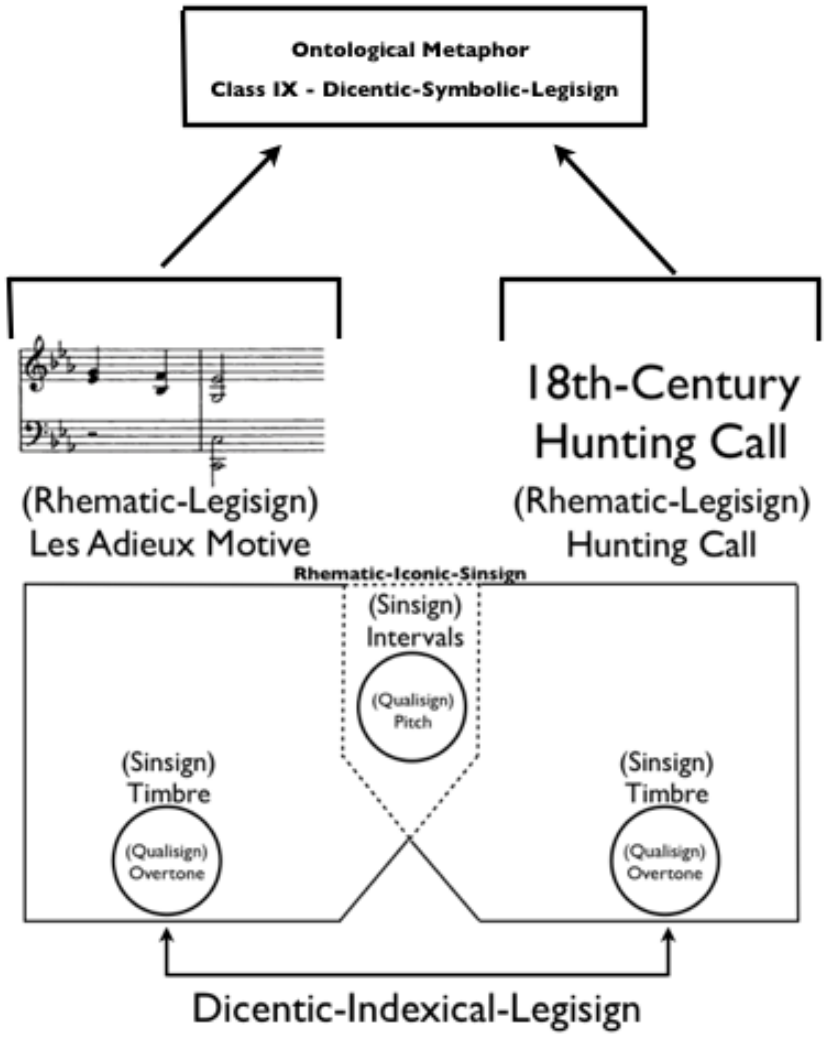
We have seen how these two signs of different domains, the piano excerpt and the horn calls, are made of constituent sinsigns that act individually. The sinsign of the intervals, a sign of Sign-class II (Rhematic-Iconic-Sinsign) functions as the Rhematic

[122] Should we be unaware that these two Sinsigns are meant to be exchanged, and do not understand them as such, the Interpretant moves from a Dicent to Rheme - and the metaphoric exchange is precluded.

Bridge that relates the piano excerpt to the horn call at all, allowing for the possibility of metaphoric mapping. Contrastingly, the sinsign of timbre functions quite differently: as a Sign of Sign-class VII (Dicentic-Indexical-Sinsign), which acts as a metaphoric exchange.

But, what of the piano excerpt *as a whole*? It is, after all, still a Sign itself (as is the whole of the horn call Sign). If we compare the entirety of the rhematic-legisign that is the piano excerpt and the entirety of the rhematic-legisign that is the horn call to each other, we are comparing *legisigns* across domains (in contrast to comparing *sinsigns* across domains), forming a symbolic-legisign. We are comparing a *single* legisign from one domain to a *single* legisign to another domain, and understand them as one being capable of standing for another as dicents - creating an equivalent sign that is of Sign-class IX: the ontological metaphor.

Fig. 3.9



To reiterate, note the difference between the Dicentic-*Indexical*-Legisign (a Sinsign-to-Sinsign comparison) and the Dicentic-*Symbolic*-Legisign (a legisign-to-legisign comparison). Each compares a single instance, and so both are Dicentic, but one compares individual elements (sinsigns) as *indices* while one compares *groups* of

elements (legisigns), as *symbols*. The result is a fairly complex metaphor, an ontological metaphor, built between the piano excerpt and horn call.[123]

3.3 xs by Karola Obermueller

Karola Obermueller is an active composer who currently teaches composition at the University of New Mexico in Albuquerque, New Mexico. Dr. Obermueller received her PhD in Music Composition from Harvard University, and holds multiple degrees from esteemed schools of music in Europe, including the University Mozarteum Salzburg and the Meistersinger-Konservatorium Nürnberg. Working with a wide variety of ensembles such as Ensemble Modern, International Contemporary Ensemble, and Nouvel Ensemble Moderne, she has had commissions and performances from multiple prestigious organizations, such as the National Endowment for the Arts, New Music USA, and Bayerischer Rundfunk.[124]

Obermueller's work *xs*, written for string quartet, offers an intriguing opportunity for application of a metaphorically-based theory of musical semiotics. The work explores themes common to Obermueller's music, which she herself describes as "constantly searching for the unknown, often with layers... of obscured material buried deep beneath a surface which is at times sumptuous and at times crackling with rhythmic energy."[125] Obermueller's compositions are often influenced by physical phenomena, and *xs* presents a prime example of how she uses music to reflect physical processes.

---

[123] The piano excerpt and horn excerpt do *not* form a complete structural metaphor (Sign-class X). In order for this to happen, the comparison must be between *multiple* Legisigns to construct a Delome. In this case, we are merely comparing one Legisign (the piano excerpt) to one Legisign (the horn excerpt).

[124] Karola Obermueller, "Bio," Karola Obermueller, accessed March 20, 2019, http://www.karolaobermueller.net.

[125] Ibid.

Xs, and in particular its first movement (analyzed here), represents "pressure and the newness of the body."[126] Physical actions and/or states, such as "compression," "extension," "pressure," and "entity," are some of the main extra-musical themes that shape the musical form and content.[127] Obermueller links particular musical processes and contents to these specific physical concepts. For example, the physical concepts of "extension and compression" are reflected in the music using "glissandi and incremental glissandi..." and "a single tone."[128] The concept, however, is not relegated to merely pitch; the durations of the quarter-tones that form the incremental glissandi continually become smaller (as compression), the ranges of the instruments themselves are continually expanded and compressed, and changes in articulation/sound activation provide changes in density. The result is a continual increasing and decreasing of "pressure." As Obermueller herself puts it:

> This pressure manifests itself in compact rhythms and the rebounding... action of the bow on a string instrument when struck hard against the strings. The gestures of *xs* compress and expand from within, the tight intervals between instruments mounting a density the comprises a sense of body. The interior pressure creates a corporeality... Entity

[126] Karola Obermueller, email message to author, February 25, 2018.

[127] Ibid.

[128] Ibid.

> implies agency... [and] music is... *an entity or body*.[129]
>
> [Emphasis mine]

It seems Obermueller's compositional strategies in *xs* reflect two particular kinds of metaphoric constructions: orientational and ontological metaphor. The concepts of "expansion," "compression," and "pressure" might correspond to the creation of (relatively) simple spatial concepts (the orientational metaphor), while her assertion that the consort of these aspects results in music that is "an entity or body" hints at the possible construction of a container/space (the ontological metaphor).

Let us examine the contents and processes of the music with these physical concepts in mind, and describe the various ways in which the music might build metaphors to reflect them.

First, let us establish some of the entities of the source and target domains. Here, the source domain is the physical concepts, while the target domain is the music. As listed above, some of the source domain concepts recognized by Obermueller to be examined here are extension, compression, pressure and body. Some of the musical

---

[129] Ibid.

phenomena to be considered are interval/interval-class, duration, rhythm[130], and register.[131]

Let us first examine the "extension and compression" metaphor and the various ways in which it manifests in the music.

Fig. 3.10 below shows measures 8 through 15 of the first movement of *xs*. In an email, Obermueller describes the processes occurring during these measures and how they relate to the source concepts of extension and compression:

> from bar 8:
>
> e flat to f sharp: ric. get slower / 21 events:
>
> 3,3,2,2,2,2,1,1,1,1,1,1,1
>
> "steps" become more... and total duration grows: *expansion*
>
> *overall duration of each interval-class grows, resulting in that interval-class traversing a successively-larger overall interval*
>
> ...
>
> "duration" of individual steps become smaller: *compression*
>
> *overall duration of each individual pitch-class shortens*

[130] Keen readers might be confused about differences between "duration" and "rhythm," and/or whether or not some of the source domain concepts are in opposition; these concerns are clarified later in the analysis. As a quick preamble: "Duration" and "rhythm," as presented here, are distinct, and are mapped to distinct source domain concepts: "duration," linked to the concept "expansion," is a very general category applied to how long individual interval-classes are employed. On the other hand, "rhythm," linked to the concept of "compression," is a category that pertains specifically to the ricochet bowings that begin disparate before compressing to a rhythmic unison.

[131] Source domain categories are not necessarily in opposition; the source concept "compression" might occur within one target category while the source concept "extension" might occur simultaneously within another. Ie., "register" may "compress" while "duration" may "expand."

bar 12: ... sound opens up to lower register... *expansion* in range

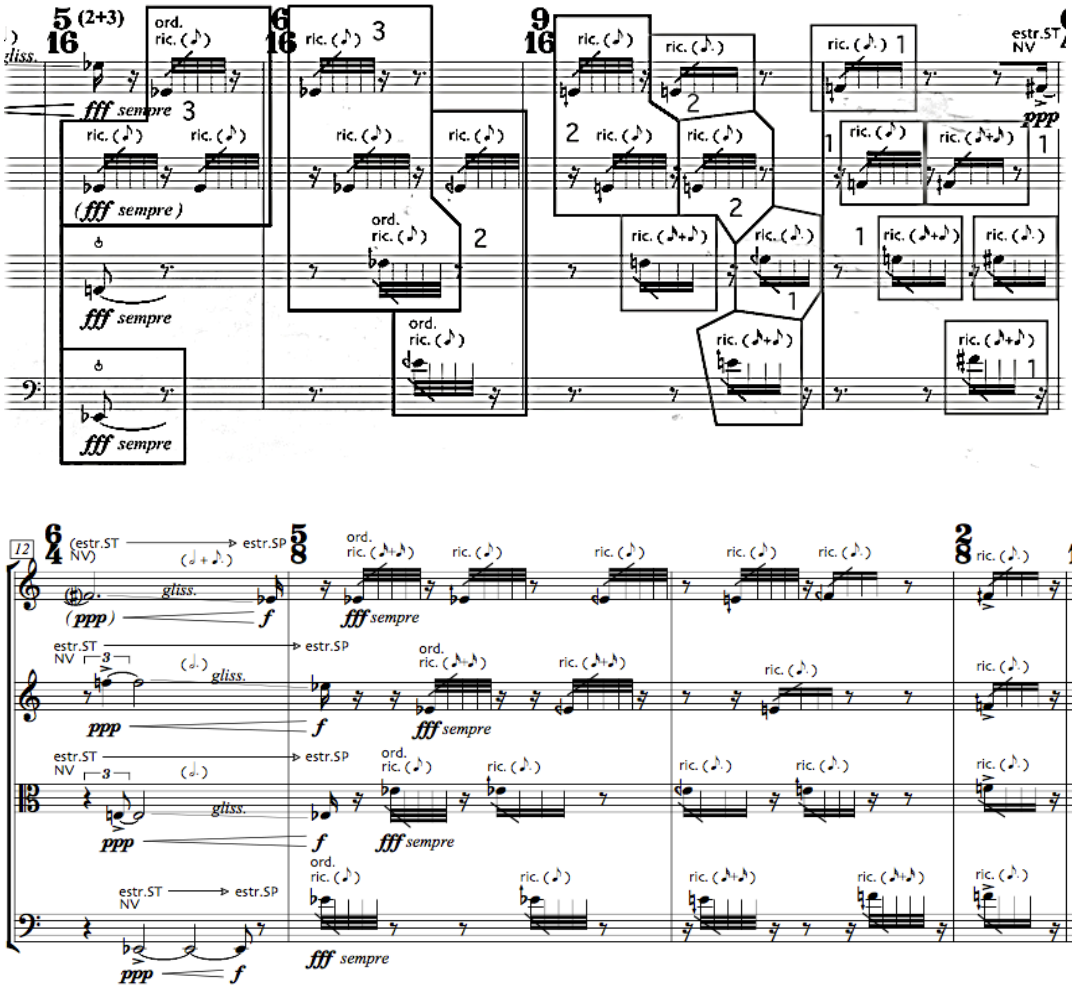
bar 15: sudden *compression* to rhythmic unison[132]

NB: <u>*added by author for clarity*</u>

NB2: a "step" here is equal to one eighth-tone

Fig. 3.10

m. 8-15

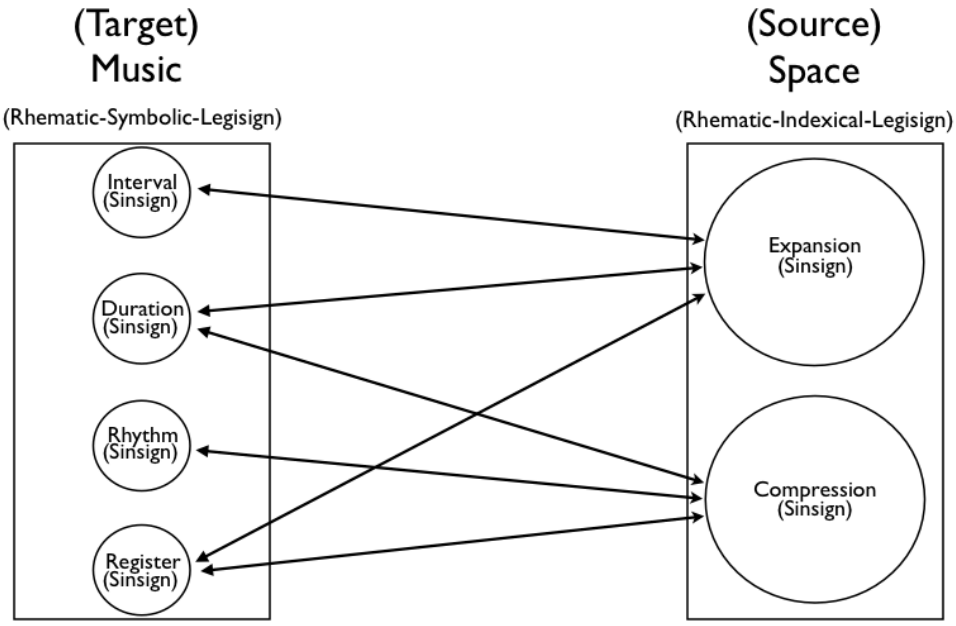


[132] Ibid.

Here, the source consists of the two spatial concepts of *extension* and *compression*, while the target consists of the four musical concepts of *duration*, *interval*, *rhythm,* and *register*.

Fig. 3.11 shows each of these domains and the Sign-classes they occupy individually. The space of "compression/extension" is a Sign of Sign-class VI, the Rhematic-Indexical-Legisign: Rhematic, as its "equivalent sign" is its own qualities (it is understood only as itself), it is a Legisign, as it consists of compared Sinsigns (compression compared to extension), and it is Indexical, as this comparison is in a one-to-one ratio (one Sinsign is compared to one Sinsign). The music, however, is a Sign of Sign-class VIII, the Rhematic-Symbolic-Legisign: Rhematic, as its "equivalent sign" is its own qualities (it is understood only as itself), it is a Legisign, as it consists of compared Sinsigns (Interval, Duration, Rhythm, and Register), and Symbolic, as all of its Sinsigns are grouped to form various Legisigns that are compared against each other. Recall that neither of these Sign-classes (VI and VIII) are metaphoric, as both of these Sign-classes contain a First of some kind (in this case, a Rheme).

Fig. 3.11



Notice that two of the target domain Sinsigns, “Interval” and “Rhythm,” are in a one-to-one relationship with the source domain Sinsigns of “Expansion” and “Compression,” respectively. Conversely, the target Sinsigns “Duration” and “Register” are mapped to *both* Sinsigns of the source domain.

Let us first examine those target Sinsigns that are mapped in a one-to-one ratio (“Interval” and “Rhythm”).

The Sinsign “Interval” of the music acts as a metaphor for expansion by increasing the distance between successive melodic intervals. For example, the cello’s first melodic interval (m. 8-9) is from E-flat to E-1/4-flat - two “steps” (recall that a “step” is the interval of one 1/8-tone). It then moves (m. 9-10) from E-1/4-flat to E-1/8-sharp - 3 “steps” - before moving (m. 10-11) from e-1/8-sharp to f-3/8-sharp - 6 “steps.”

Similarly, the Sinsign "Rhythm" in the music also acts to create a metaphor by mapping in a one-to-one ratio, but maps to "Compression" instead of "Expansion." As explicated by Obermueller, the rhythms of the individual ricochet bow-strokes begin disparate before compressing to a rhythmic unison - the "closing" of the rhythmic space.

Fig. 3.12 below shows m. 8-11, where "Interval" expands, while Fig. 3.13 below shows m. 13-15, where "Rhythm" compresses.

Fig. 3.12

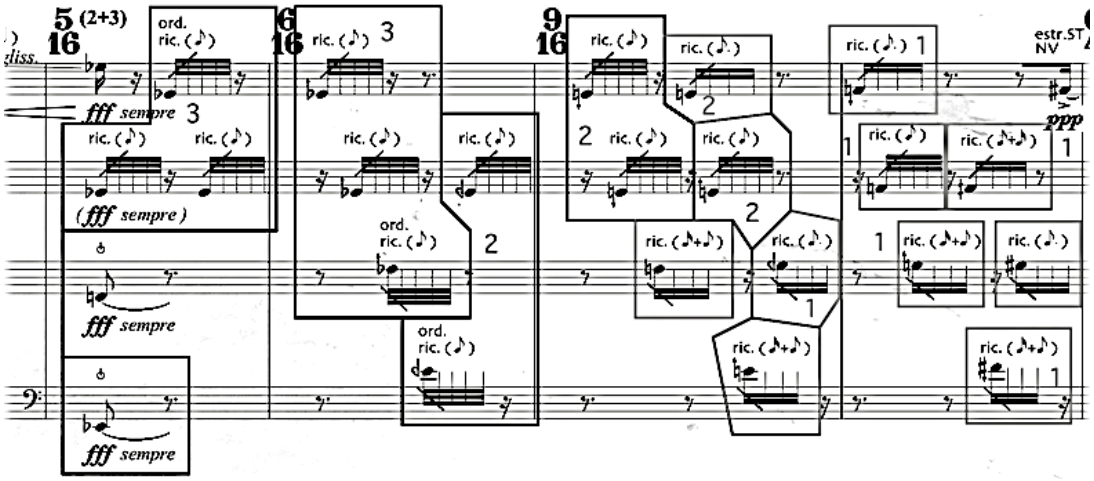
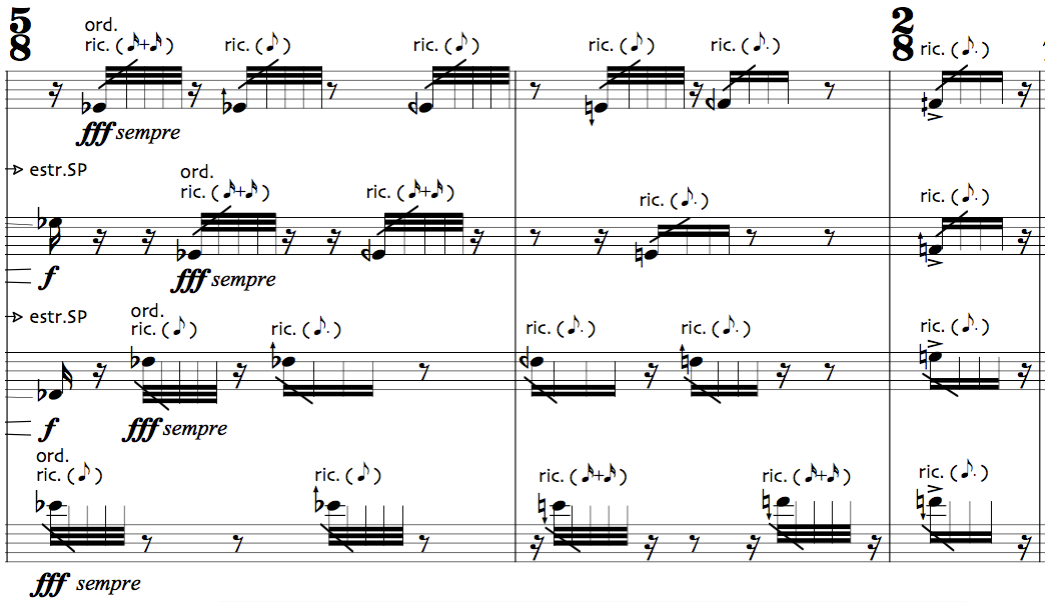
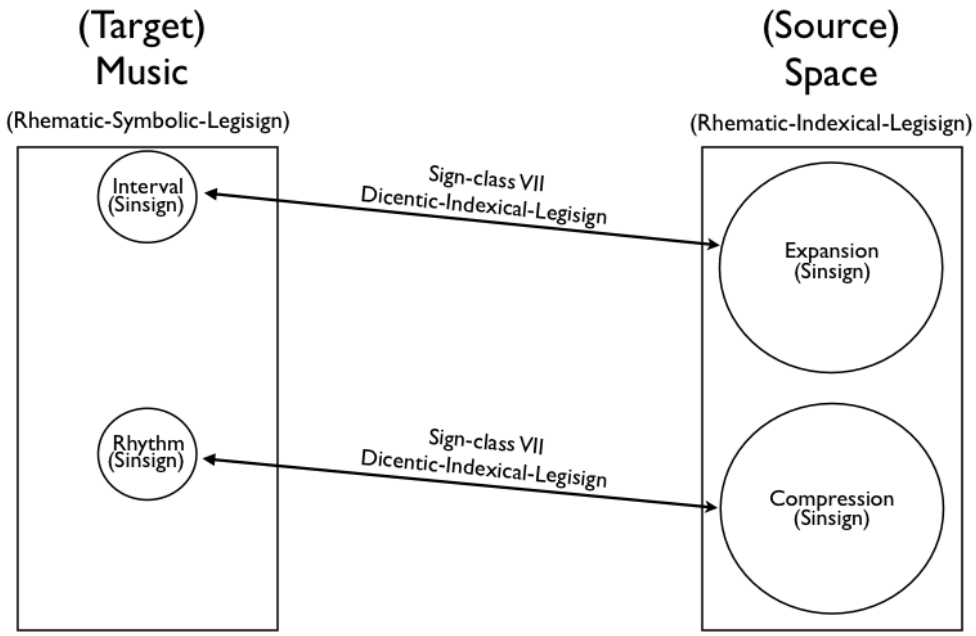


Fig. 3.13



Considering these musical elements individually ("Interval is Expansion" and "Rhythm is Compression") results in the creation of of two Signs that can be classified as the same Sign-class - Sign-class VII, the Dicentic-Indexical-Legisign - that create very basic orientational metaphors. They are Legisigns because Sinsigns are compared to one another (to form the Legisign), Indexical because this comparison is in a one-to-one ratio, and Dicentic because there is an exchange of Sinsigns across domains (as opposed to an exchange of structures comprised of Symbolic-Legisigns across domains, which would result in a Delome).

Fig. 3.14



But, what of the other target domain Sinsigns, "Duration" and "Register?"

These Sinsigns, as individuals, function slightly differently than "Interval" and "Rhythm," as the Sinsigns of "Duration" and Register map to *both* Sinsigns of the target Domain - that is to say, "Register" functions to represent both compression (pitch-classes are moved toward each other, to the same octave) and extension (pitch-classes are moved away from each other, to different octaves), while "Duration" acts similarly (interval-class duration grows [extension] while the duration of pitch-classes shorten [compression]).

Fig. 3.15 below (the same as Fig. 3.12) recalls measures 8-11 ("Duration" compression/expansion) while Fig. 3.16 shows measures 25 and 26 ("Register" compression/expansion).

Fig. 3.15

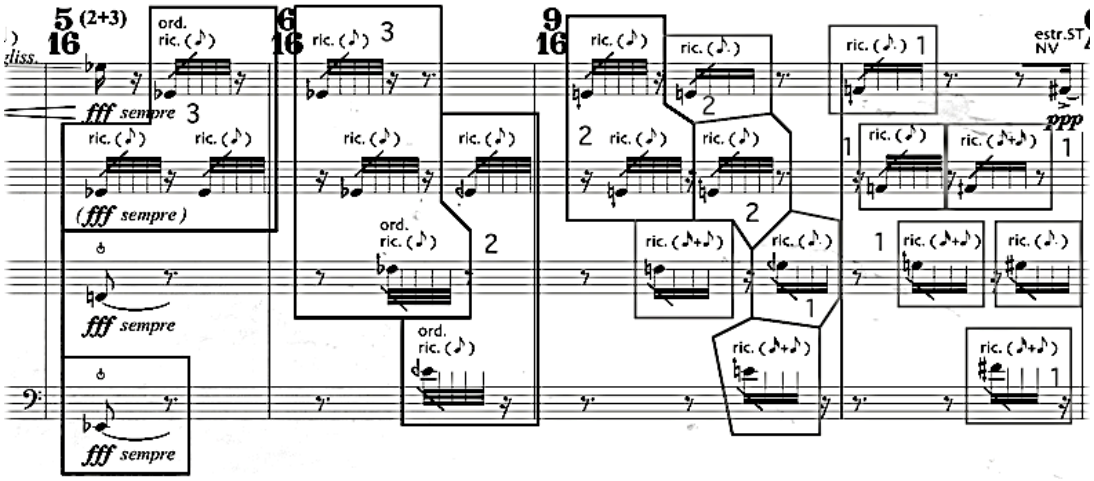
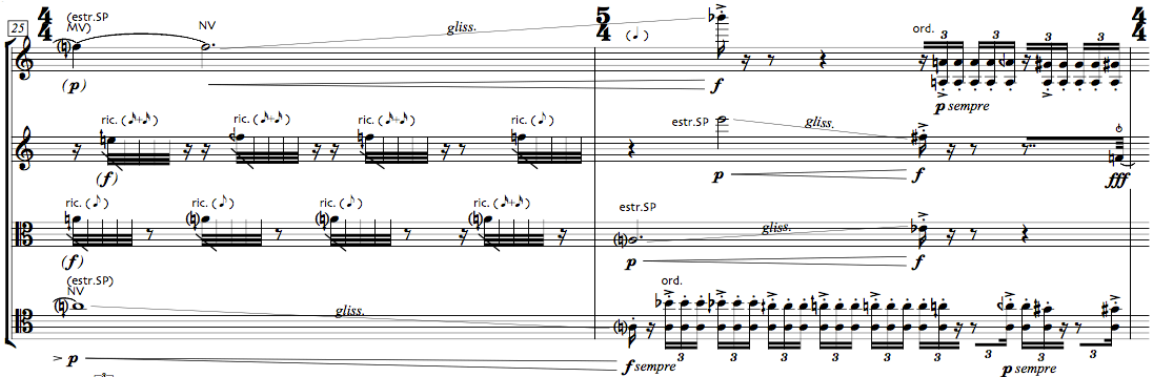


Fig. 3.16



The Sinsign "duration" of the music represents expansion through duration of the interval-class changes (m. 8-11). The boxes marked "3," "2," and "1" show how many attacks occur on that particular pitch-class. The E-3/8-flat in m. 9, marked with "3," is attacked thrice, and so the intervallic change from E-flat to E-3/8-flat lasts for a total of 4/16 (one quarter-note). The E-1/4-flat, the E-1/8-flat, the E-nat, and the E-1/8-sharp in m. 9 and m. 10, marked with a "2," are each attacked twice, and so the total intervallic change from E-1/4-flat to E-1/8-sharp lasts a total of 9/16 (two quarter-notes and a

sixteenth). The remaining pitch-classes are attacked only once apiece (marked with a "1"), and so the total intervallic change from E-1/8-sharp to F-sharp lasts a total of 13/16 (three quarter-notes and a sixteenth).

"Duration" also signifies compression. As stated by Obermueller, while the duration of the presence of a particular *interval-class* grows/expands, the duration of each individual *pitch-class* shrinks/compresses.

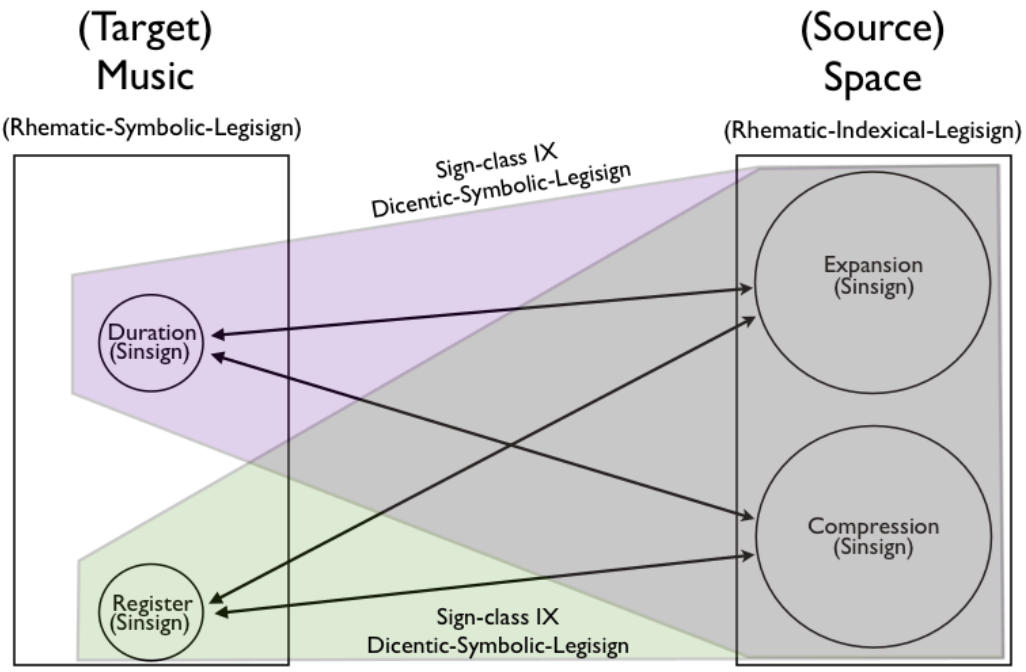
Similarly, the Sinsign "Register" of the music is also involved in the representation of "expansion" and "compression"; Fig. 3.16 above shows how registral changes both expand space (violoncello and violin I in m. 25, pitches moving away from each other) and compress it (viola and violin II in m. 26).

As stated above, these target Domain Sinsigns are unique in that they each map to *both* Sinsigns of the source domain. In other words, there are individual Sinsigns mapping to a Legisign. The Legisign formation, then, cannot be Indexical - it must be Symbolic. Thus, taken individually, the Sinsigns of "Duration" and "Register" form a slightly more complicated metaphor, the ontological metaphor - Sign-class IX, the Dicentic-Symbolic-Legisign. A Legisign because Sinsigns are compared to one another, Symbolic, because the comparison is not in a one-to-one mapping between these Sinsigns, and Dicentic because the exchange takes place between two distinct conceptual domains.

This would seem to be in line with metaphor theory's conception of the ontological metaphor as "objects and containers"; after all, while Indices (one-to-one mappings) might refer to individual concepts (such as "high" or "low" and "expansion"

or “compression”), and so are unidimensional, Symbols (one-to-many or many-to-many mappings) imply multidimensional concepts that combine to create the aforementioned “objects and containers.

Fig. 3.17



We have broken down the Sinsigns of the target Domain individually to see how they relate to the Sinsigns of the source domain. As was seen, some target Sinsigns (“Interval” and “Rhythm”) form extremely basic orientational metaphors of Sign-class VII, as they are mapped in a one-to-one ratio to the Sinsigns of the source domain (“Expansion” and “Compression”). Conversely, the Sinsigns “Duration” and “Register” form more complex ontological metaphors of Sign-class IX, as each of these target Sinsigns map to both Sinsigns in the source domain.

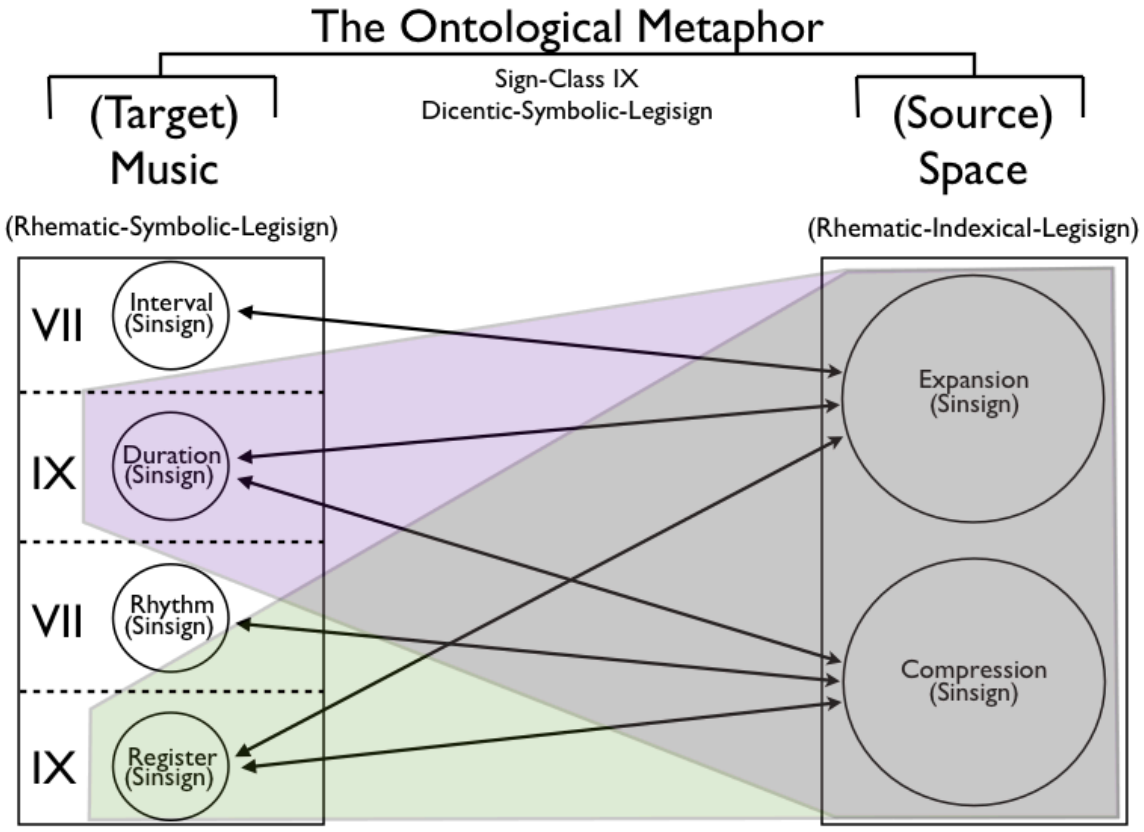
But, what of the whole? What kind of metaphor does the entirety of the music (or, at least, those aspects considered here) create? Does music here achieve the status of a complete "structural metaphor" as Sign-class X, the Delomic-Symbolic-Legisign?

Of course, it *can,* but, recall that the theory constructed in this thesis is meant to analyze particular interpretations, not build them. One might say that this piece recalls some distinct memory, or one might build some esoteric narrative involving crises and resolutions. But, again, this theory is meant to analyze interpretations themselves, not add or take away from them. The analysis here has worked only with the interpretive information supplied by Obermueller; based on the conceptions provided, the music here is limited to the ontological metaphor, Sign-class IX.

In theoretical terms, the music is limited to the ontological metaphor (as a Symbolic-Dicent) because there is but a single Legisign present in the source domain - "Expansion/Compression." Delomes, which are a Third, require the exchange of *multiple* Legisigns in the source domain with *multiple* Legisigns in the target domain (similar to how Symbols require *multiple* Sinsigns [as a Legisign] to be exchanged with *multiple* Sinsigns [as a Legisign]).

Thus, *xs*, at least in terms of the musical material under consideration and their interpretation supplied by the composer, Karola Obermueller, represents as a musical Sign of Sign-class IX, the ontological metaphor.

Fig. 3.18


The Ontological Metaphor
Sign-Class IX
Dicentic-Symbolic-Legisign
(Target)
Music
(Rhematic-Symbolic-Legisign)
(Source)
Space
(Rhematic-Indexical-Legisign)
VII
Interval
(Sinsign)
IX
Duration
(Sinsign)
VII
Rhythm
(Sinsign)
IX
Register
(Sinsign)
Expansion
(Sinsign)
Compression
(Sinsign)

Conclusion

Summaries

In summary, musical signification is enormously complex. It occurs at a seemingly infinite number of levels in a seemingly infinite number of contexts. Even the most fundamental of musical understandings imparts a diverse webs of associations and connotations, resisting even our best attempts to isolate and study them individually. Even within a single musical Sign, different aspects of the music function differently; and, should the isotopy shift even minutely, these functions might change dramatically.

But, the task is not impossible. This thesis has presented a new theory of musical semiosis that might act as a first step in disentangling the dense web of meanings that arise with the perception of even "simple" musical objects. It does so first by employing all aspects of Peircean semiotics - the "Ground," "Object," and "Interpretant" - that, if nothing else, recognizes the complexity of the musical sign. The addition of the "Ground" acts as a mediator for establishing isotopy - what musical Sign(s) are we considering, and at what level are we considering it/them? The "Object," the most familiar and historically employed aspect of Peirce's trichotomy, describes the way(s) in which the Ground forms actually-existing musical phenomena. Finally, the "Interpretant" accounts for the various ways in which an individual can (or cannot) exchange the musical Sign for another Sign in another system of understandings, incorporating the dynamism of personal context as an integral part of musico-semiotic analysis as a whole.

Secondly, this theory helps elucidate a clearer understanding of musical Signs by substituting metaphor theory in place of topic theory. Not only does doing so release

musical semiotics from the constraints of the tonal system, but also allows for an accounting of a variety of musical experiences - from largely qualitative, objective experiences (the orientational metaphor) to largely associative, subjective experiences (the structural metaphor). Metaphor theory does not pre-empt a musical understanding by forcing one upon a listener *a priori*, as is the case with topic theory, which requires knowledge of a topic's existence before the analysis may even begin. Instead, metaphor theory allows individuals to experience music simply *as they experience it*, and allows them to perform an analysis of that experience as a wholly genuine one. This further refines and even personalizes the theoretical apparatus so that it may be expanded to include multiple kinds of musical understandings.

Musical semiotics is in need of a new theory, one that simultaneously contains a high degree of rigor while allowing for extreme flexibility in its application. I believe the theory presented above satisfies both of these needs, and provides a strong starting point from which musical semiotics can begin to mature into a legitimate theoretical tool that can be used in the analysis of the structures of music. Doing so might open new avenues of musical understanding previously unknown, allowing us to dive deeper into the ways in which the mechanics of sound can give rise to incredibly complex experiences.

But, there is still work to be done.

Next Steps

This theory, like all others, is in need of refinement. One of these refinements is elucidating how musical Signs are formed in the first place, something this theory (and other semiotic theories) takes for granted. Gestalt psychology offers one potentially

productive avenue to explore how musical Signs are grouped to begin with, but there are other sources as well. How can this theory be paired with, say, Dora Hanninen's theory of musical segmentation? Doing so might allow for an even *more* precise theoretical tool that not only explains how musical Signs mean, but how those Signs are formed/grouped in the first place; her categories of the "sonic," "contextual," and "theoretical" domains would seem to match surprisingly well with the categories of "Firstness," "Secondness," and "Thirdness," and combining these two theories might yield even more interesting insight into meaning formation and grouping structure.

Perhaps the most interesting avenue for further research is pairing the various aspects/steps of this theory with the neurological processes (in contrast to the psychological ones) that underpin them during music listening/interpretation. Is there a neurological difference we can empirically observe between someone experiencing a musical Sign as a Rheme versus a Delome? Where/how does that occur? How do neurological processes evolve over time as someone gains knowledge about representation in a particular piece? Where in the auditory pathway, from outer ear to neocortex, do the various changes in object formation and interpretation occur?

There are myriad disciplines musical semiotics may draw from to expand its capabilities. But it must first establish for itself its own strong, independent methodology; otherwise, it risks making merely superficial connections between disparate domains in an attempt to justify its own usefulness. I believe this new theory may start music semiotics down a path of establishing such a methodology and might spark a renewed

interest in the analysis, composition, and even performance of music as an activity driven as much by the creation of meaning as anything else.

References

Agawu, Kofi. *Playing With Signs*. Princeton University Press, 1991.

Anderson, Douglas. "Peirce on Metaphor." *Transactions of the Charles S. Peirce Society*, Vol. 20, No. 4 (Fall 1984): 453-468.

Eco, Umberto. "Two Problems in Textual Interpretation." *Poetics Today* 2, no. 1a (1980): 145-161. Accessed August 20, 2018. https://www.jstor.org/stable/1772358

———. *A Theory of Semiotics*. Indiana University Press, 1979.

Greimas, Algirdas. *Structural Semantics: An Attempt at a Method*. Translated by Daniele McDowell, Ronald Schleifer, Alan Velie. Lincoln, Nebraska: University of Nebraska Press, 1966.

Hartshorne, Charles and Paul Weiss, eds. *Collected Papers of Charles Sanders Peirce*. Vol. I, *Principles of Philosophy.* Cambridge, MA: Belknap Press of Harvard University Press, 1965.

Kovecses, Zoltan. *Metaphor: A Practical Introduction*. 2nd ed. Oxford University Press, 2010.

Lakoff, George and Mark Johnson. *Metaphors We Live By*. Chicago: Chicago University Press, 1980.

Lewin, David. "Behind the Beyond: A Response to Edward T. Cone." *Perspectives of New Music* 7, no. 2 (Spring/Summer 1969): 59-72.

Meyer, Leonard. *Emotion and Meaning in Music.* Chicago: University of Chicago Press, 1956.

Obermueller, Karola. "Bio." Karola Obermueller. Accessed March 20, 2019. http://www.karolaobermueller.net.

———. Email message to author, February 25, 2018.

———. *xs for String Quartet*. Score, 2012.

Ojala, Juha. *Space in Musical Semiosis: An Abductive Theory of the Music Composition Process*. Imatra, Finland: International Semiotics Institute, 2009.

Peirce, Charles S. *Collected Papers*. Charles Hartshorne and Paul Weiss eds. Cambridge University Press, 1921-1935.

Pratt, C.C. "The Spatial Character of High and Low Tones." *Journal of Experimental Psychology* 13, no. 3 (June 1930): 278-285.

Sebeok, Thomas. *A Perfusion of Signs.* Bloomington: Indiana University Press, 1977.

Tarasti, Eero. *Signs of Music: A Guide to Musical Semiotics.* Berlin: Mouton de Gruyter, 2002.

Tarasti, Eero, ed. *Musical Signification: Essays on the Semiotic Theory and Analysis of Music*. Berlin: Walter de Gruyter, 1995.