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STRAVINSKY'S PETROUSHKA:

A Unified Theory of Harmonic Progression

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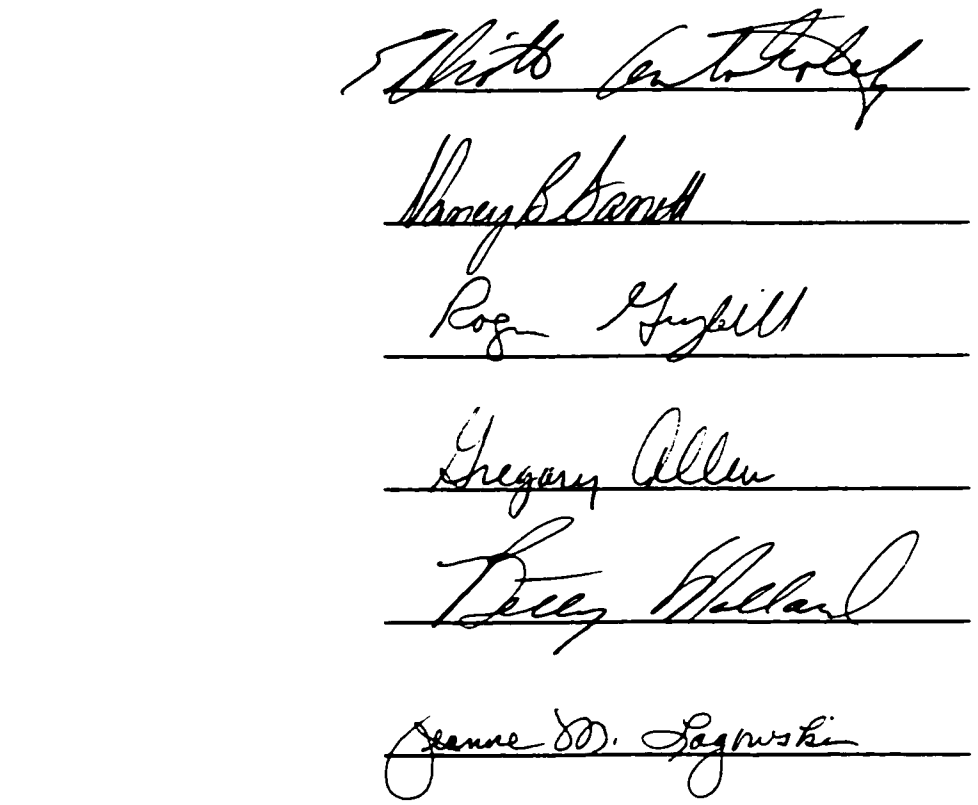

STRAVINSKY'S PETROUSHKA:

A Unified Theory of Harmonic Progression

by

Bradley Cordell Bolen, B.M., M.M.

TREATISE

Presented to the Faculty of the Graduate School of

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for the Degree of

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FOR MY FATHER

Acknowledgments

I would like to thank my advisor and co-chairman, Dr. Elliott Antokoletz, for his guidance in preparing this dissertation. In addition, Dr. Roger Graybill and co-chairman Nancy Garrett were of great inspiration during the early stages of this project. I would also like to thank the remaining members of my advisory committee, Gregory Allen and Betty Mallard, for their assistance in revising the final document. I would also like to thank Jeanne Lagowski, Gregory Partain, Jody Nagel, and James Vernon for the lively conversations that helped refine the ideas contained in this treatise.

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Stravinsky's Petroushka:

A Unified Theory of Harmonic Progression

Publication No._____

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Throughout the twentieth-century music theorists have searched for a unified theory to describe tonal progression in the music of Igor Stravinsky. This dissertation takes as its point of departure the belief that if one is truly interested in developing and codifying such a theory of the inner workings of Stravinsky's style, there are provocative reasons why a closer look at *Petroushka*, the second ballet of his famed *Ballet Russe* period, is warranted.

In spite of a growing acceptance of the importance of *Petroushka* in Stravinsky's oeuvre, musicologists overlooked critical elements of the score that have major implications on the ballet's specific meaning. Unraveling the theoretical mysteries specific to *Petroushka* will provide greater insight into the

enigmatic compositional processes at work in other compositions of Stravinsky's early period. An understanding of these processes will benefit musicologists, theorists, and performers alike.

Within the context of a discussion of previously accepted pitch theories, for example, discussions of the nature of octatonicism such as those provided by Pieter van den Toorn and Richard Taruskin, this dissertation describes a profound and substantial background structure that is responsible for musical coherence and harmonic progression in *Petroushka* which, in addition to its importance in other Stravinsky works, is consistent with the compositional methods found in the works of other great composers of the same period. Evidence is presented which suggests that the interval cycles play an overlooked role in providing Stravinsky with this background means of progression.

Most importantly, this dissertation shows that certain leading theories surrounding Stravinsky's music—specifically theories of octatonic/diatonic interaction, the historical roots of octatonicism, and the interval cycles—are not mutually exclusive, but symbiotic. By doing so, this study brings greater definition and focus to the theoretical ideas and terminology now commonly associated with *Petroushka* and with Stravinsky's method in general.

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CHAPTER 1

INTRODUCTION

Throughout the twentieth-century music theorists have searched for a unified theory to describe tonal progression in the music of Igor Stravinsky. This dissertation takes as its point of departure the belief that if one is truly interested in developing and codifying such a theory of the inner workings of Stravinsky's style, there are provocative reasons why a closer look at *Petroushka*, the second ballet of his famed *Ballet Russe* period, is warranted. I proceed from three basic suppositions:

— Perhaps no work better demonstrates the need for a unified theory of harmonic progression more concisely than *Petroushka*. To understand its grand harmonic plan—containing all of the elements of the octatonic/diatonic interaction to be discussed below, and so typical of Stravinsky's early writing—is to bring to light its rich musical and dramatic meaning.

— Musicologists and theorists have suggested that in *Petroushka* one will find the roots of Stravinsky's compositional methods. Musicologist Richard Taruskin writes, "it is the work in which Stravinsky at last became

Stravinsky." [1] Unraveling the theoretical mysteries specific to *Petroushka* will provide greater insight into the enigmatic compositional processes at work in other compositions of Stravinsky's early period.

— As one of the most important and often discussed twentieth-century masterpieces, *Petroushka* has, at least from the theoretical perspective, resulted in a plethora of analytical speculation and misinformation. A definitive study is needed to bring greater definition and focus to the theoretical ideas and terminology now commonly associated with this work.

In spite of the growing acceptance of the importance of *Petroushka* in Stravinsky's oeuvre, musicologists such as Richard Taruskin, and many others, have overlooked critical elements of the score (for example, comparisons between the piano and orchestral scores, cyclic interval relationships, and essentially the entire last tableau) that have major implications on the ballet's particular dramatic meaning, and the development of pitch theories describing Stravinsky's compositional method. In addition, certain misused terminology surrounds the many analyses of Stravinsky's music, and in particular *Petroushka*. Terms such as

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[1] Richard Taruskin, Stravinsky and the Russian Traditions: A Biography of the Works Through Mavra. (University of California Press, 1996), p. 662

"polarity" and "bitonality" are frequently tossed about in a vague or inconsistent manner, and require greater clarification for the sake of meaningful analysis. Most importantly from the theorist's perspective, I will discuss a profound and substantial background structure that is responsible for musical coherence in a Stravinsky work that does not contain both the octatonic and diatonic collections. Within the last tableau of *Petroushka*—essentially *diatonic* in conception—the processes responsible for the movement's long-range harmonic plan lie in overlooked aspects of the interval cycles. Evidence suggests that the interval cycles play a role in providing Stravinsky with a means of progression and unification, and that certain characteristics of his utilization of them bear striking similarity to, and are consistent with, methods found in the works of other great composers of the same period. Foremost, this study of *Petroushka* offers an opportunity to grasp how important a theoretical perspective can be in the discovery of aesthetic meaning in great music. The results of this study will benefit musicologists, theorists, and performers alike.

In order to understand more fully the scope of the problems inherent to a theoretical approach to *Petroushka* or Stravinsky's work in general, it is first necessary to trace the underpinnings of past analytical perspectives and discuss how they have influenced modern musical perception. Beginning with a discussion of theorist Arthur Berger's seminal evaluation of octatonicism's role in Stravinsky's language, it becomes evident that a fundamental understanding of

Stravinsky's music has emerged relatively late. And, despite of the onset of a theoretical consensus concerning Stravinsky's methods, certain ideas surrounding Stravinsky's language in *Petroushka* are to this day being met with opposition rooted in archaic musical terminology and philosophy.[2]

[2] For instance, Joseph Straus's opposition to Pieter van den Toorn's focus on Stravinsky's use of octatonicism. In the *Journal of Music Theory* , vol. 28/1 (Spring 1984); or the persistent use of terms such as "bitonality" or "polytonality" in reference to Petroushka's harmonic scheme.

CHAPTER 2

PREVIOUS THEORIES—SOME HISTORICAL BACKGROUND

As we begin the new millennium, modern scholars of the various disciplines will begin to assess and reassess the contributions of the past century made by those whom we consider most significant to our fields of study. To musical scholars such as Richard Taruskin—whose recent exhaustive tome on the life and music of Igor Stravinsky has been cited as definitive in revealing the Russian source history of Stravinsky's aesthetics, and will necessarily be a particular focus of scrutiny in this study of *Petroushka*—it is a foregone conclusion that history will record Igor Stravinsky as the dominating figure of twentieth-century music. [1] While such statements certainly need clarification, it is true that Stravinsky's art has impacted a wide spectrum of our culture, even drawing the attention of the popular media, as was recently suggested by an article in *Time Magazine*, which described him as one of the 100 most influential people of the last hundred years. [2]

Such attention to Stravinsky and the importance of his music is by no means a new phenomenon. His musical output has been the focus of intense study

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[1] Taruskin, Stravinsky and the Russian Traditions

[2] "Artists and Entertainers of the Twentieth Century," Time Magazine, June 8, 1998, vol. 151 no. 22.

ever since the scandalous premiere of his third ballet, *The Rite of Spring*, in 1913, some eighty-six years ago.[3] During these years, musicians—composers, theorists, and performers—have enjoyed and examined, in great detail, the attributes and compositional processes that we believe make *The Rite*, and the others from its period, the musical masterpieces they are.

How ironic then, that even with such intense interest in Stravinsky's music—some of which is now nearly a century old—we have yet to develop the tools necessary to understand its musical language, either analytically or aesthetically, with the same in-depth awareness we now expect of, for example, works of the classical period. Theorists are frequently ill-equipped to discuss intelligently Stravinsky's musical language in terms of its "internal relations of structural significance."[4] This is particularly true of the works of his early ballet period—specifically, the period of *The Firebird*, *Petroushka*, and *The Rite of Spring*—or even of the later non-serial works from his neo-classical period. We are better able to understand Stravinsky's later works than his earlier output. As a result, in discussing Stravinsky's early ballets, we all too often hear explanations,

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[3] For some early comprehensive descriptions of Stravinsky's life and works, see Igor Glebov (Boris Asafiev), Kniga o Stravinskom, Leningrad, 1929, Republished, Moscow 1977. Translated by Richard French. Ann Arbor, Michigan, 1982; Roman Vlad, Stravinsky, Translated by Frederick and Anne Fuller, (London: Oxford University Press, 1960).; Eric Walter White, Stravinsky: The Composer and His Works, (Berkeley and Los Angeles: University of California Press, 1966)

[4] Arthur Berger, "Problems of Pitch Organization in Stravinsky," *Perspectives of New Music*, (1963), p. 123

sometimes endorsed by Stravinsky himself, that his early writing is simply too new, intuitive, or eclectic to benefit from any form of rational analysis.

It was not until 1963, approximately a half-century after Stravinsky's famed *Ballet Russe* period, that Arthur Berger, in addressing the music of Igor Stravinsky, initiated of a "significant body of theoretical writing" by which to deal with "the nature of twentieth-century music that is centric but not tonally functional."[5] Frustrated by the limited explicative powers of earlier "wrong-note" and "pitch set" theories of the past, Berger called for a "new branch of theory", seemingly long overdue, to analyze the music of Stravinsky in a way analogous to which we now associate with music of traditional harmonic function.[6] Berger's observations, while avoiding the daunting task of codifying an all-encompassing theory, centered on the identification and characteristics of Stravinsky's use of what is commonly called the "octatonic" scale (Messiaen's "second mode of limited transposition", or what was referred to among the Rimsky Korsakov circle as the "Korsakov Scale").[7] Berger presented and classified four particular aspects of Stravinsky's pre-twelve-tone writing:

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[5] Ibid., p. 123

[6] For examples of "wrong note" theories that may have frustrated Berger, see, Nicholas Slonimsky, Music Since 1900 (New York: W.W. Norton and Company, Inc., 1937); Roy Travis, "Toward a New Concept of Tonality?" Journal of Music Theory vol. 3 (1959)

[7] The octatonic scale is defined as an eight-note scale of alternating whole step and half steps. See Olivier Messiaen, Technique de mon langage musical, Paris: A. Leduc, 1944), in which the octatonic scale is one of his "modes of limited transposition".

I. Diatonic writing in which a tonal center is not functionally 'tonic'.

II. A symmetrical scale used in such a way as to emphasize tritone relations. [i.e. octatonic]

III. The same scale with minor-third emphasis. [another partitioning of the octatonic scale]

IV. Interaction between these diatonic and symmetrical [octatonic] scales.

Berger's article, by unveiling Stravinsky's use of the octatonic/diatonic pitch sets and their behavior, presented a point of departure for several of the world's best musicologists and theorists, some taking his or her unique perspective on what may constitute the "new theory". Pieter van den Toorn, who elaborated on the octatonic/diatonic interactions highlighted by Berger, put forth one of the most direct extensions of Berger's thesis. Rightly motivated by the tacit acceptance that Stravinsky's music is compositionally coherent (the belief that some other mechanism(s) must be at work which bestow cohesion and direction, even in the absence of traditional harmonic function or serialism) van den Toorn refined the analytical models necessary in discussing Stravinsky's octatonic and

diatonic relationships.[8] Van den Toorn's writings, to mention but one distinction from Berger's work, point out meaningful differences in the use of these harmonic elements in each of Stravinsky's style periods, Russian, Neo-classic, and Serial.

> Critical, however, is the fact that this octatonic, diatonic, octatonic-diatonic reference classification overlaps the familiar 'Russian,' neoclassical, and serial orientation categories. This may be in keeping with current trends in analytic-theoretical, historical, and critical discourse. ...Thus in regard to Stravinsky's octatonic writing: consistency, identity or distinction may be defined in this work 'considered as a whole' by means of two models of Partitioning. [Russian and neoclassical][9]

Van den Toorn suggested that the importance of the scale in example 2.1 (model A) is that it relates to the music of Stravinsky's Neo-classic period. This significance lies in the relationship of the scale's perfect fifth to its tonic. Thus works of this period are subject to more "classical" tonic-dominant harmonic implications, whereas the relationship of the tritone to the 'tonic' in the scale in example 2.2 (model B) accounts for the more abstract 'Russian' harmonic tendencies of Stravinsky's earlier period.[10]

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[8] Pieter C. van den Toorn, The Music of Igor Stravinsky (New Haven, 1983)

[9] Ibid., p. xvi-xvii

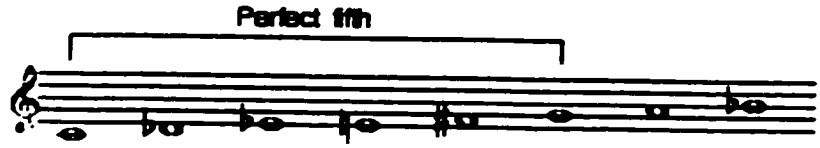
[10] Pieter van den Toorn, "Some Characteristics of Stravinsky's Diatonic Music", *Perspectives of New Music*, (Fall-Winter, 1975) pp. 111-112

Example 2.1

Pieter van den Toorn's octatonic

MODEL A

	i	ii	iii	iv	v	vi	vii	viii	(i)
Collection I:	E	f	G	ab	Bb	b	Db	d	(E)
Collection II:	F	f♯	Ab	a	B	c	D	eb	(F)
Collection III:	F♯	g	A	bb	C	db	Eb	e	(F♯)
pitch numbers:	0	1	3	4	6	7	9	10	(1)
intervals:		1	2	1	2	1	2	1	(2)



Model A scale on pitch C

Example 2.2

Pieter van den Toorn's octatonic

MODEL B

	i	ii	iii	iv	v	vi	vii	viii	(i)
Collection I:	E	d	C♯	b	Bb	ab	G	f	(E)
Collection II:	F	eb	D	c	B	a	C♯	f♯	(F)
Collection III:	F♯	e	Eb	db	C	bb	A	g	(F♯)
pitch numbers:	0	2	3	5	6	8	9	11	(1)
intervals:		2	1	2	1	2	1	2	(1)

Model B scale built on the pitch C

Whereas the 1,2,1,2 ordering of the octatonic scale (ex.2.1) had already been acknowledged by Berger, his previous work had completely ignored the 2,1,2,1 ordering concept put forth in van den Toorn's model B.[11] This was important because without the recognition of the model B form of the scale, the important stylistic distinction van den Toorn made concerning the Russian Ballets and Neoclassic works would not have been possible. In addition, without drawing on the Model B form of the scale for a reference, Berger was forced into interpreting certain tritone and major-seventh intrusions (those implied by the fifth and eighth notes of van den Toorn's descending form of the Model B scale) as "tendency tones" analogous to those used in traditional harmonic practice.

Van den Toorn further developed Berger's idea that octatonic scales, with all the tonal implications inherent in their structures, interact with diatonic elements, either in alternation or in combination, to create harmonic interest and tonal progression within Stravinsky's music. It is this octatonic/diatonic framework by which he believes that Stravinsky establishes tonal centricity and a means of harmonic direction, at least within a large body of his non-serial works.[12]

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[11] Musicologist Elliott Antokoletz writes: "The octatonic 'Models', which refer to special rotational and partitioning schemes of the set (essential for defining the octatonic-diatonic interactions contained in [van den Toorn's] the "Lists"), are in my opinion the single most significant contribution of van den Toorn's book." In Antokoletz's review of van den Toorn's *The Music of Igor Stravinsky*, Journal of the American Musicological Society, vol. 37, Summer, (1984) p. 433

[12] For a list of works which van den Toorn cites as containing octatonic references, see: The Music of Igor Stravinsky, p.42-48

framework by which he believes that Stravinsky establishes tonal centricity and a means of harmonic direction, at least within a large body of his non-serial works.[12]

But as Richard Taruskin pointed out little more than a decade ago, "up to now no critic has managed to analyze any complete Stravinsky composition along these lines, in such a way as to account for the long-range direction and coherence we now routinely demand to be shown in analysis of tonal or serial pieces."[13] Taruskin argues,

> "Too often [van den Toorn's] analysis merely establishes local referability to the octatonic collection [to which I would add diatonic] along, perhaps, with a description of various partitioning devices...The fact that his [van den Toorn's] analyses are as a rule confined to short passages has given rise to skepticism as to the explicative power of these analytical models..."[14]

Of course, a large percentage of traditional functional analysis works to "merely" establish "local referability". But much of the lack of success in utilizing these octatonic/diatonic models to find meaningful long-range harmonic relationships in Stravinsky is due to the fact that many of his works, or large sections of them, do not contain both the octatonic and diatonic collections. Given

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[12] For a list of works which van den Toorn cites as containing octatonic references, see: The Music of Igor Stravinsky, p.42-48

[13] Richard Taruskin, "Chez Petroushka: Harmony and Tonality Chez Stravinsky," Nineteenth Century Music (Spring, 1987): pp. 265-286

[14] Ibid., p. 266

direction and coherence." For example, given a work or movement that is wholly diatonic (but not functional), we are limited to simply identifying the local context of various collections, "perhaps along with a description of various partitioning devices". Thus, we are in danger of missing insights into the music's most meaningful, long-ranged, and organic unifying elements.[15]

We know this to be precisely the problem inherent to any theoretical discussion of *Petroushka*. Van den Toorn writes:

> Curiously, the octatonic beginnings of *Petroushka*--as a *Konzertstück*--were to become part of a framework that is overwhelmingly diatonic. There are no blocks or passages of explicit octatonic reference in the lengthy first tableau. And in the final appearances of the (referentially octatonic) "Petroushka chord" toward the close of the (ostensibly diatonic) fourth tableau, its referential complexion is altered from that at Nos. 48-52 in the second tableau [which is essentially entirely octatonic]. Hence, this continued discussion of Petroushka inevitably becomes a discussion of the diatonic collection, and of the partitioning --perhaps typically 'Russian'--that may be inferred on its behalf. [16]

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[15] The concept of organic compositional elements in Stravinsky's early music is not taken lightly here. Taruskin points out that a sort of "write for the moment" method permeates early kuchkist, and correspondingly Stravinsky's early compositional style. Taruskin writes, "The kuchkist position had always valued the piquancy and the separate integrity of the individual moment over the generalized impression, even the coherence, of the whole...It was what Russians call *drobnost*, the quality of being the sum of parts...". And it is a trait of *Petroushka*, which Stravinsky overcame via harmonic unification procedures. See Stravinsky and the Russian Traditions, pp. 137-138.

[16] van den Toorn, The Music of Igor Stravinsky, p. 73

> of the diatonic collection, and of the partitioning --perhaps typically 'Russian'--that may be inferred on its behalf. [16]

By contrast, it was precisely this intriguing problem--the fact that it is essentially, if not wholly octatonic in conception-- that captured Richard Taruskin's attention in his analysis of *Petroushka's* second movement, *Chez Petroushka.*

> Nonetheless, there are Stravinsky compositions in which an octatonic *complexe sonore* is maintained as a stable point of reference governing the whole span of a composition, whatever the vagaries of digressions along the way...The second tableau of *Petroushka* (titled *Chez Petrouchka*) is such a composition, and I propose to attempt an analysis...[17]

Taruskin surmises that, "a key to Stravinsky's tonal (or centric) system may yet lie in 'a wildly Schenkerian-derived kind of theory of pitch-class set prolongation in various pitch-structural and rhythmic-structural levels.'" [18] To use the term "Schenkerian" at all in conjunction with a theory of harmonic progression in Stravinsky's music might at first seem misplaced. Schenkerian analysis is by its very nature a study of the long-range *linear* aspects of contrapuntal prolongation

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[16] van den Toorn, The Music of Igor Stravinsky, p. 73

[17] Taruskin, "Chez Petroushka" p. 267

[18] Ibid., p. 266.

or traditional harmonic tonal progression. This characteristic of Stravinsky's music is, at the surface at least, notably absent from his use of large areas of harmonically static music which is based on block juxtaposition. But we will see that Stravinsky recognized and synthesized special characteristics of the octatonic scale in order to overcome problems idiomatic to his block style, and unified *Petroushka* harmonically in ways we might more commonly associate with more organically conceived compositions. In light of this, it seems appropriate that in order to resolve Taruskin's criticisms of the various analytical approaches to Stravinsky's Russian works, what is needed is a theory of global harmonic reference.

However, the search for this global reference has on occasion been derailed by certain comments made by Stravinsky himself, and a brief examination of this topic is warranted.

CHAPTER 3

STRAVINSKY'S WORD AND THE PETROUSHKA CHORD

Stravinsky's views towards the music of his first period evolved dramatically in sympathy with changes in his compositional style. "My attitude toward my first period", he wrote, "has changed radically and it is as though someone else had composed [the early music]."[1] How true, that the later Stravinsky's radical shift in musical aesthetics would be hard to match in the life and works of any other composer. Stravinsky, as the serialist, at times bordered on obsessive. In one humorous but particularly revealing anecdote, Stravinsky expressed his exasperation to singer Richard Robinson, exclaiming that he had found a mistake in the printed score. Noting that the score was a library copy that was stamped with a message stating that the library would fine anyone marking in it, Stravinsky took a red marker and circled the error and then signed his name.[2] Such a deliberate, almost mathematical, desire for things to add up bears stark contrast to our perception of the self-proclaimed instinctual composer of the *Rite of Spring*. In reference to the elusive nature of his compositional style in *Le*

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[1] Taruskin, Stravinsky and the Russian Traditions, p. 12

[2] Richard Robinson, the singer involved, and a singer who has recorded Stravinsky's music under Stravinsky's baton told this story to Elliott Antokoletz.

Sacre, and the difficulties any subsequent attempts at its rational analysis may involve, Stravinsky explained:

> I was guided by no system whatever . . . When I think of other composers of that time who interest me—Berg, who is synthetic...Webern, who is analytic, and Schönberg, who is both—how much more theoretical their music seems than *Le Sacre*... I had only my ear to help me. I simply wrote what I heard". [3] Stravinsky made a concerted effort to make it clear that when it came to *The Rite*—and we can just as well assume the same of his other early works—he was simply "the vessel through which it passed."

Such was the image he promoted regarding his early music.

These kinds of remarks seem better suited to a Greek speaking of the muses than a notoriously analytical thinker. Such descriptions led the distinguished French musicologist Paul Collaer to consider that Stravinsky was so "sparing in his explanations, and what he did consent to say was so different from what musicians generally say about their art that his clarifications were often badly misinterpreted."[4] But in such statements lies the crux of a serious problem in the development of any successful approach to Stravinsky's music. What can we make of the composer's remarks regarding his own music? How do we reconcile the

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[3] Igor Stravinsky and Robert Craft, Expositions and Developments, (London: Faber & Faber, 1981), pp. 147-48

[4] Paul Collaer, A History of Modern Music. (World Publishing Company, 1955), p. 116

attitudes of the earlier composer with those of the later? And, with what significance can we apply those attitudes to an analysis of his music? Can we take his remarks at face value?

This question is of such magnitude that it makes up the entirety of the first chapter of Taruskin's tome. To summarize Taruskin, the chasm between the attitudes of early and late Stravinsky results from a composer "embarrassed by his past and [who] did all he could to force it down an Orwellian memory hole." He did so by "withholding or suppressing information"—his "embarrassment" stemming from the necessity of his "belated" and "retroactive" acceptance into the Germanic traditions of the New Vienna School (serialism)—having come from a Russian tradition manifestly hostile to the Germanic "Mainstream". As a result of this "embarrassment", "all that Stravinsky would allow with respect to his relationship to "Russian music," by the time he turned to memoir-dictating on a large scale, was that he had 'helped to exhaust and scuttle the limited tradition of [his] birthright."[5]

Stravinsky's accounts and contradictions have had a particular bearing on the historical development of analyses of *Petroushka*. To this end, perhaps one of Stravinsky's most misleading remarks involved what must be the most widely misunderstood, but ultimately revealing, compositional inventions: the

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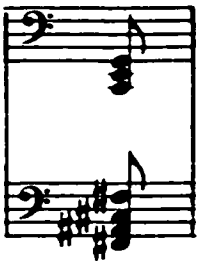
[5] Taruskin, Stravinsky and the Russian Traditions, p. 2-3

"Petroushka Chord" (example 3.1). From the onset of its creation, the "Petroushka Chord" has held a particular fascination among musical intellectuals. Surely few other musical entities in the history of music are responsible for as much analytical speculation, conjecture and debate. What specifics we hear from Stravinsky on this matter, and of his compositional plan in Petroushka, we will find hardly as enlightening as might first be inferred.

> I had conceived of the music in two keys at the end of the second Tableau as Petroushka's insult to the public, and I wanted the dialogue for trumpets in two keys at the end to show that his ghost is still insulting the public."[6]

Example 3.1

"Petroushka Chord"



Thanks in part to Stravinsky's comments, some analysts have deemed that the "Petroushka Chord" is "Bitonal".

> ...In view of Stravinsky's well known habit of composing at the piano and the fact that in this score the piano was originally intended to play a concertante role, the combination of a black-note

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[6] Igor Stravinsky and Robert Craft, Expositions and Developments. (New York Doubleday, 1962) p. 156

> chord with a white-note chord clearly resulted from the composer's preoccupation with bitonality. The exploitation of this device accompanies *Petroushka* in all his quirks and paroxysms.[7]

The intuitive creations of Stravinsky's fingers are credited with inspiring the creation of other works as well. Collaer quotes Stravinsky:

> What delighted me most when I was composing Piano Rag music... was that different rhythmic episodes were dictated to me by my fingers. My hands took such pleasure in the piece that I set to work on it. Fingers should not be despised; they are sources of inspiration, and, in contact with sonorous material, often awaken subconscious ideas in you which would perhaps not otherwise be aroused.[8]

Taken at face value, such statements present analysts with problems in codifying meaningful theories. Collaer claims such difficulties result from an "objective and rationalist attitude [...] in opposition to the emotional basis of romanticism," concluding that "Stravinsky's technique cannot be properly discussed, since, far from being systematic, it varies in relation to the character of the work being created. We can at most indicate certain aspects of his language."[9]

But where writers such as Eric Walter White embrace the compositional processes in *Petroushka* (specifically "bitonality") as the natural result of

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[7] Eric Walter White, Stravinsky: The Composer and His Works. (University of California press. Berkeley and Los Angeles, 1969) p.161

[8] Cited in Collaer, A History of Modern Music. p.129

[9] Ibid.

Stravinsky's "intuition", Collaer balks on the issue, still acknowledging that bitonality occurs, but only rarely in *Petroushka*. Instead, he turns to the term "polyharmony" as a description of the processes most common in *Petroushka*, the distinction being that "polytonality" is "contrapuntal", whereas "polyharmony" means "a chord that forms a whole unit [and] "is not polarized, but multiple."[10]

Even within the last decade, if we are to believe the conjectures of a few recent music analysts, "bitonality" was in the air during the period of *Petroushka's* creation. After all, hadn't Ravel taken up the idea in Jeux D'eau? (example 3.2 and 3.3)

> The musical figure there [in *Petroushka*] takes a perfect triad on the white keys and sets it off against a corresponding triad on the black keys. The man in love with his materials was surrendering to a childhood reflex in response to the pleasure of exploring an instrument and, for the purpose of imagery, consciously extended this pleasure in the same way as Ravel had done a few years earlier in the Jeux d'eau, that is, with the same repeated chords in the form of a very rapid cadenza.[11]

But analysts who come to the conclusion that bitonality is a compositional method to be taken seriously in *Petroushka*, or for that matter in any of Stravinsky's opus, must assume that Stravinsky saw in it the makings of a workable compositional method. Unfortunately, with the notable exception of his

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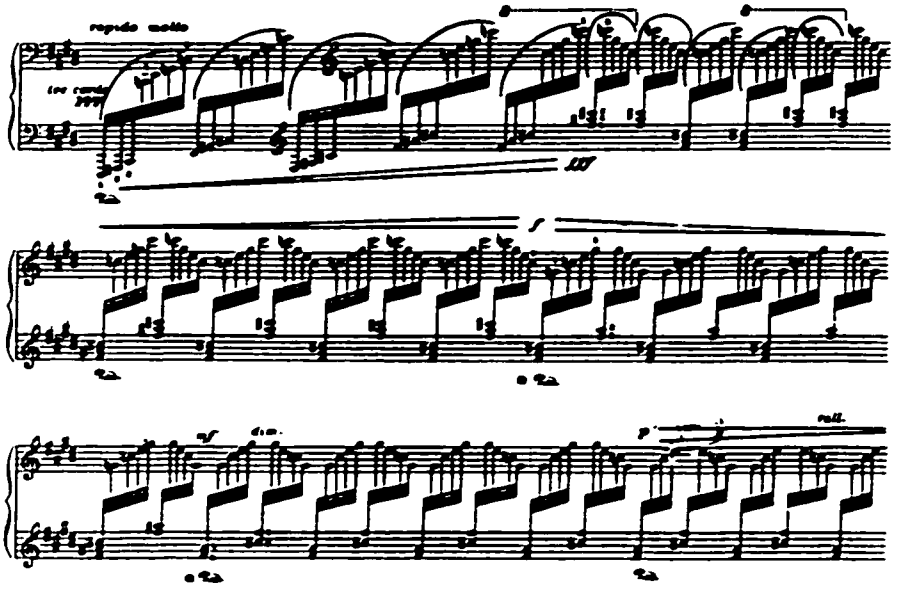
[10] See discussion in A History of Modern Music. pp. 115-155

[11] Célestin Deliege, "Stravinsky: Ideology/Language." *Perspectives of New Music*, vol. 26 no.1 Winter 1988

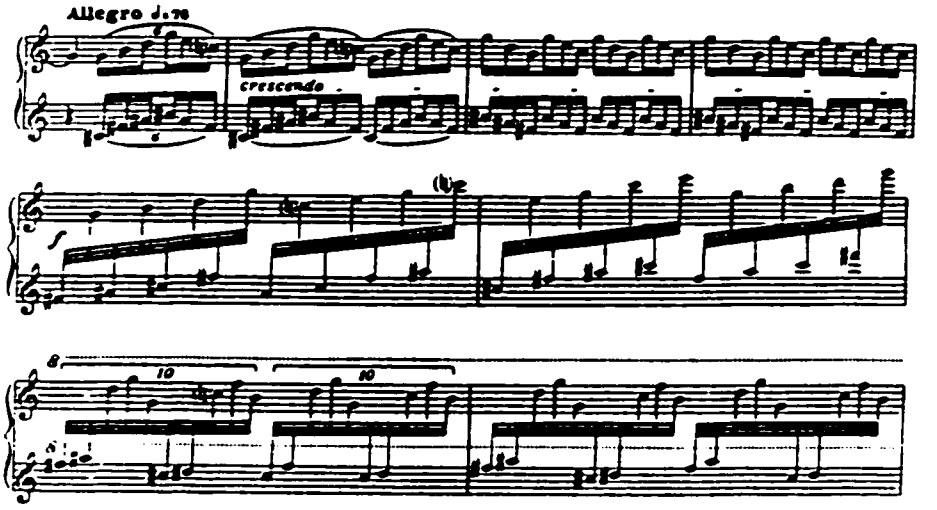
Example 3.2

Jeux d'Eau
(bar 72)



Example 3.3

Petroushka
(mov. II, bar 23)



few remarks, such as the ones cited above, Stravinsky was less than explicit on the theoretical aspects of his compositions. In the absence of additional clarification on this matter, the spirited debate survives to this day.

But is bitonality aurally perceptible? And does the evidence from the music itself suggest that Stravinsky's comments are anything more than after-the-fact observations of a superficial musical phenomenon?

We may gain some insight on the matter by examining the ideas of other composers who were more forthcoming on bitonality's aural tenability. Consider the remarks of Béla Bartók, whose compositional processes, as we will see, bears some striking similarities to those in *Petroushka*.

> When we hear a single tone, we will interpret it subconsciously as a fundamental tone. When we hear a following, different tone, we will—again subconsciously— project it against the first tone, which has been felt as the fundamental, and interpret it according to its relation to the latter. . .The same phenomenon appears when one deals with so-called polytonal music. Here, polytonality exists only for the eye when one looks at such music. But our mental hearing again will select one key as a fundamental key, and will project the tones of the other keys in relation to the one selected. The parts in different keys will be interpreted as consisting of altered tones of the chosen key.[12]

To be sure, the bitonal concept itself is suspect. In addition, evidence Berger and his contemporaries extracted from Stravinsky's work has revealed the

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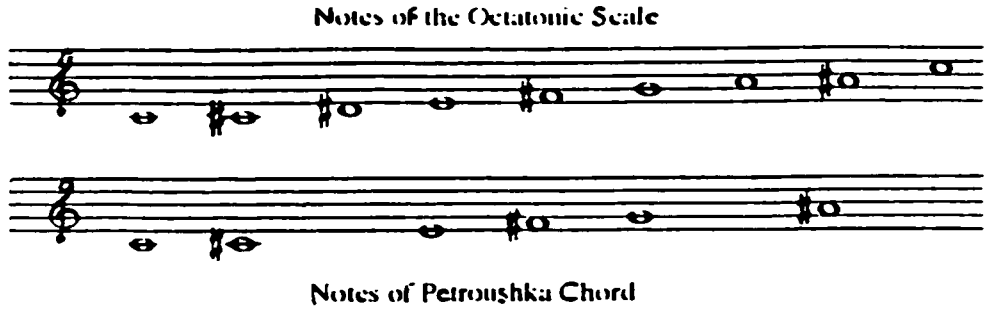
[12] Béla Bartók, Béla Bartók Essays. ed. Benjamin Suchoff (St. Martin's Press, New York, 1976): pp. 364-366.

"Petroushka Chord" to be a subcomplex of the larger octatonic collection (example 3.4). Such a view has raised serious questions as to the validity of the "bitonal" theories of the past and present and Stravinsky's stated intentions in *Petroushka.*

Example 3.4



As the evidence will show, the idea that Stravinsky was simply responding to a "childhood reflex'" while somehow inventing the "Petroushka Chord" seems appropriate only in the context of Stravinsky's cited remarks. A more suspicious view of Stravinsky's claims would be in keeping with Taruskin's assertions that such statements amount to a denial of accountability—a denial of his past, his heritage, and the very compositional practices Taruskin has shown Stravinsky to have inherited from the Korsakov tradition (see below). What one writer would regard as Stravinsky's "surrendering" was in fact a deliberate rendering of an elaborate harmonic plan to unify the ballet. Within this plan, the "Petroushka

Chord" will reveal itself as a motivic cell resulting in, or from, a long-range harmonic plan—the plan itself embedded in the very nature of the chord—rather than a reference to bitonal compositional procedures.[13]

[13] This idea gives a delightful, if not humorous, double meaning to a remark Stravinsky made in a private letter to his friend Alexander Benois during *Petroushka's* composition: "When I composed *Petroushka* [i.e. the second tableau], I did not suspect that out of his little cell three more scenes would grow..." cited in Taruskin, Stravinsky and the Russian Traditions. p.685

CHAPTER 4

OCTATONICISM AND THE PETROUSHKA CHORD

If we are to determine the true nature of Stravinsky's harmonic language, then it is necessary to trace its historical underpinnings. In this way we may better understand the character of Russian octatonicism, the harmonic implications of such entities as the "Petroushka Chord", and determine the validity of identifying certain aspects of Stravinsky's method as "bitonal." But few theorists have attempted to take such an historical perspective towards Stravinsky's particular approach to harmony. Richard Taruskin has and, in so doing, claims to have found the roots of Stravinsky's "polytonalism."[1]

In his search for a historical precedent for Stravinsky's polytonalism, Taruskin cites an example of "heretofore unprecedented Russian octatonic explorations" in the work of Rimsky Korsakov's associate Maximilian Steinberg (example 4.1).[2] Taruskin describes it as an early example of "Petroushkian bitonalism"—"superimposed vertically tritone-related triads that were so familiar as oscillations".[3] In this passage from his *Prelude Symphonique* in memory of

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[1] "Here we have the kernel of Stravinsky's 'polytonalism," leaving no doubts, if any remain, as to its historical patrimony." Taruskin, Stravinsky and the Russian Traditions. p. 406

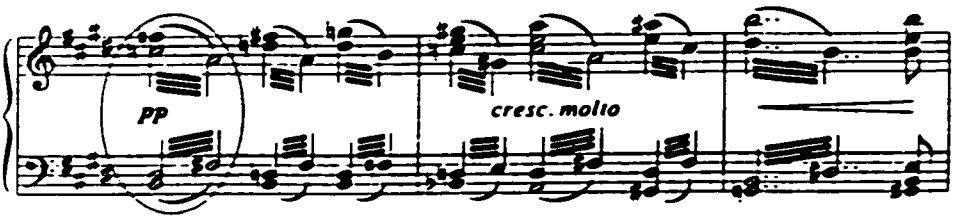
[2] Note that Steinberg was also Korsakov's son-in-law, and a Stravinsky rival. Taruskin, Stravinsky and the Russian Traditions. p.256

[3] Taruskin refers to "oscillating" minor thirds resulting from the potential of 0, 3, 6, 9, partitioning of the octatonic scale. Ibid., p. 402-406

Rimsky-Korsakov (based on borrowed material from Korsakov's own sketchbooks), Steinberg presents simultaneous B and F major triads in combination. Taruskin recognizes these triads as a subcomplex of the octatonic collection (van den Toorn's collection II), and believes them to be a direct extension of Korsakov's own compositional practices. "Korsakov", concludes Taruskin, "had traveled a longer journey down the octatonic path than he is normally credited with, and hence the congruence between his octatonic 'routines' and those of his most eminent pupil [Stravinsky] extend at least as far as [Chez Petroushka]."[4]

Example 4.1

Steinberg, *Prélude symphonique*, mm. 103–5



But far from simply recognizing contemporary occurrences of "Petroushka-like" constructions in examples such as Steinberg's, Taruskin traces

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[4] Taruskin, "Chez Petroushka," p. 268

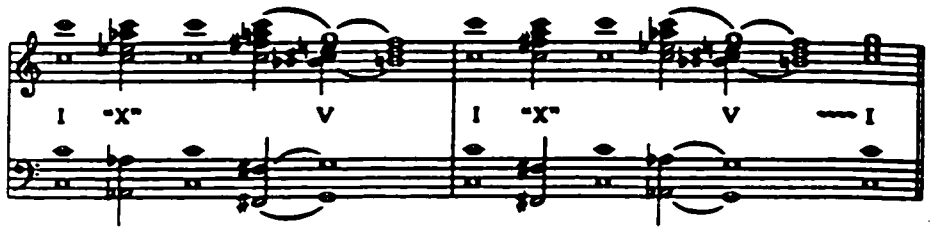
the evolution of the octatonic routines responsible for them back as far as the works of Schubert and Beethoven.

Taruskin relates an episode in which Stravinsky sat down at the piano with his teacher's wife (Korsakov's wife) to play a late Schubert symphony, the C-Major, for members of the Korsakov circle of composers. A member of the circle had been quite taken with a particular passage for its "unexpected modulations" and pointed it out. Taruskin suspects that the specific passages were those such as the one given below (example 4.2).

> It is easy to guess as to the passages in Schubert that made him, for Rimsky, the father of modern music and the Godfather of the New Russian School; they can only have been those that prominently display the mediant progressions that are the very essence of early Romantic harmony. These third relations operate in Schubert at every structural level...[5]

Example 4.2

Schubert, Symphony in C Major, D 944, IV. (mm. 1057–1105), abstract



[5] Taruskin, Stravinsky and the Russian Traditions. p.255

Taruskin's specific fascination with the passage (and presumably Stravinsky's and Korsakov's) is that the diminished chord marked with the "X" "no longer really functions at all, structurally speaking—its root simply bisects the octave."[6] That is, that the root progression is simply that of the tritone.[7] The importance is that the marked chords lie along a path suggested by Taruskin to be a romantic tendency for harmonic progression to move via the "cycle of mediants", and the tritone lies along this path. Such progressions, Taruskin asserts, allowed Schubert and his contemporaries an "alternate course of harmonic navigation that bypasses the circle of fifths." Such a "Romantic color chord par excellence"...is yet another example of "how composers increasingly availed themselves of these new harmonic paths that short-circuited the traditional key system."[8]

We can presume that the kind of cyclic "navigation" Taruskin is speaking of is exhibited in this example from the second movement of Tchaikovsky's Symphony no. 4, op. 36 (example 4.3). In this example, the music ascends through a complete minor-third cycle, resulting in what is essentially a progression up the octatonic scale.

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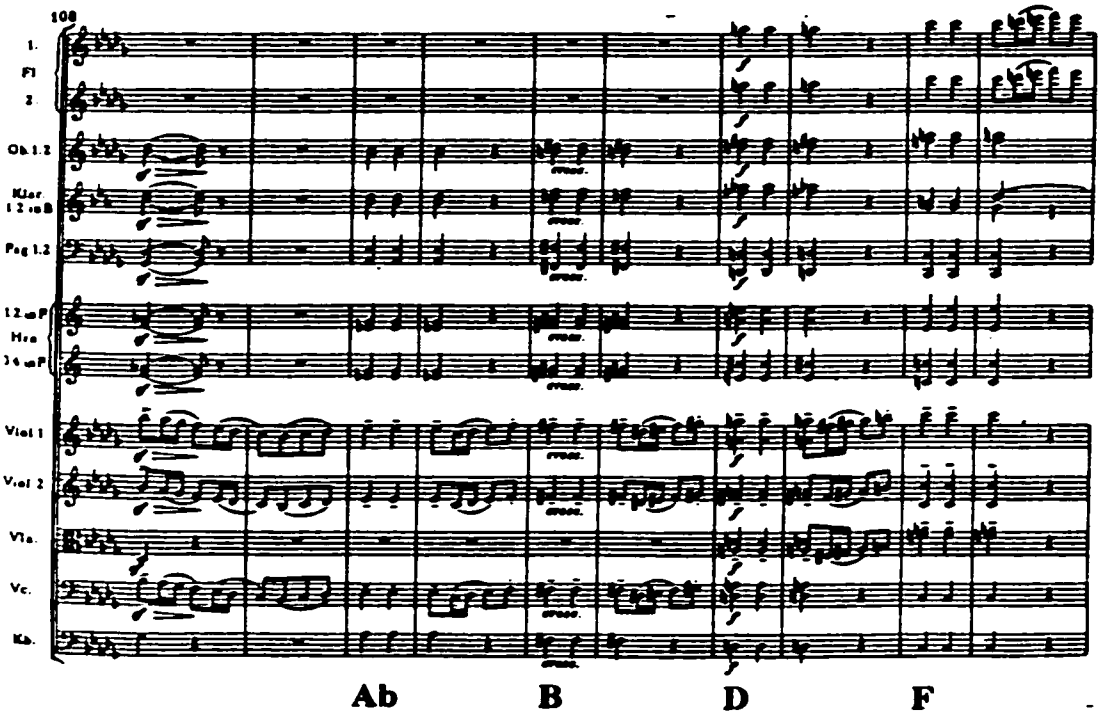
[6] Ibid., p. 256

[7] In this specific example, I would argue as to just how "nonfunctional" the second marked chord is. Thought it is true that both marked chords interact in "brusque fashion with the tonic ", the second marked chord is easily heard as an incomplete secondary dominant of G—the secondary dominant being the most common of non-diatonic chords.

[8] Ibid., p. 256

Example 4.3

Tchiakovsky Symphony no. 4 op. 36 (movement 2, bar 108)



Taruskin regards these historical precedents as the chief aspect distinguishing the nature of the "polytonality" exhibited in *Petroushka* from that evident in Ravel's *Jeux d'eau* or Strauss's *Elektra*, which he cites as "having very different historical backgrounds and different functional explanations."[9] To Taruskin, this "circle of minor thirds... foreshadows the use of the scale of

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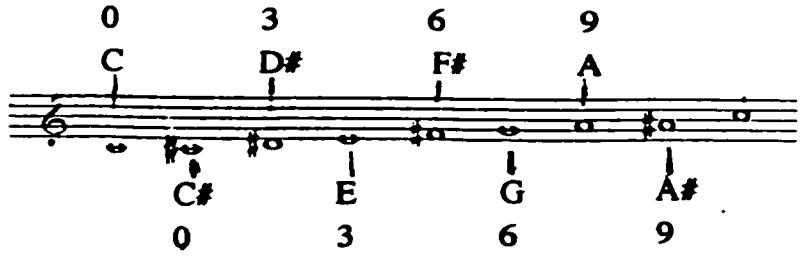
[9] Ibid.

alternating whole-steps and half-steps—the octatonic scale—that looms so large in Stravinskian harmonic practice."[10] Since the octatonic scale contains two minor thirds cycles (0, 3, 6, 9) (example 4.4), Taruskin asserts that the evolutionary remnants of the "cycle of thirds" harmonic progression is embedded within the 0, 3, 6, 9 partitioning of the octatonic scale. "True octatonicism," he writes, would eventually "preempt functions normally exercised by the circle of fifths, whether by a rotation of thirds or, more radically, by a tonally stable diminished harmony."[11]

Example 4.4

octatonic partitioning in thirds



Taruskin's historical perspective on the nature of 0, 3, 6, 9

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[10] Ibid., p. 257

[11] Ibid., p. 269

octatonicism puts to rest certain criticisms forwarded by Joseph Straus as recent as 1982. In his article Stravinsky's Tonal Axis, Straus criticizes the proliferation of certain "octatonic fallacies" concerning Stravinsky's music. Straus writes:

> Both Berger and van den Toorn ...consider the symmetrical 0, 3, 6, 9 partitioning with its 'four potential tone-centers' to be the essence of harmonic polarity in octatonic works...there are problems with this view, ...not the least of which is that it appears to conflict with the way Stravinsky actually used the scale in important compositions... In addition to its inability to account for specific musical usages, the octatonic model set forth by Berger and van den Toorn has an internal failing. The octatonic scale is symmetrical not only at 0, 3, 6, 9, but also at 1, 4, 7, and 10. This being so, the scale may be said to have eight potential tone-centers of equal weight and independence. If all of the notes of the scale have equal potential weight and independence, then the entire notion of 'potential tone-center' has limited usefulness. In the modal system of the Renaissance, for example, all seven notes of the diatonic scale (actually six, excluding the B) are potential tone-centers. Such an observation tells us very little about the modal system and considerably less about any particular modal piece. [12]

But it is Straus's argument that suffers from the internal failing, and it stems from his lack of recognition of van den Toorn's two models of the octatonic scale (see examples 2.1 and 2.2). The nature of this failing is worth a moment of consideration however, since it will lead to a better understanding of the musical pontential of octatonicism.

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[12] Joseph Straus, "Stravinsky's Tonal Axis". *Journal of Music Theory*, vol. 26.2, Fall 1982

The key to Straus's criticism lies in the phrase "potential tonal-center". Straus suggests that any note of the so-called modal system (also known as the "diatonic" or "white key" modes) is capable of being a tonal center. For example, if we take a white key scale beginning on D, we know it as a Dorian scale. Any work of music that encompasses the white keys and has as its tonic D would also be said, by definition, to be in the Dorian mode. If for some reason that same work, either by assertion or some other compositional process, emphasized E as its tonic, it would immediately take on the quality of the Phrygian mode. In other words, one cannot imply a different tone as the tonal center (tonic) and keep the same mode. And, unless one is prepared to suggest that each of the individual modes is indistinguishable in terms of its particular harmonic color and tonal potential, then knowing which mode is present is indeed useful. If one recognizes van den Toorn's octatonic models (A and B) then the same is true of the octatonic collection. It is fair to say that each of the two octatonic models, the one that begins with the whole-step (model B), and the one that begins with the half-step (model A) each contain different harmonic characteristics, color, and thus compositional potential. This being the case, let us examine each of the two octatonic scales in terms of their potential tonal centers.

The model B (Russian) scale on C (see example 2.2) would be C D Eb F F# G# A B. If we take Straus at his word, then D is also a potential tonal center. Then what happens if D is asserted as the "tonic"? In this case, if we do not

change the pitch content, we would have D Eb F F# G# A B C. But now, we no longer have the octatonic model that begins with the whole-step (model B). Instead we have the Model A (Neoclassical) scale (see example 2.1). If we begin on D, but change the pitch content in order to keep the same model, we get D E F G G# A# B C#. In this case, the D now becomes pitch 0, and what Straus called 1, 4, 7, 10 has by definition become 0, 3, 6, 9. In other words, one cannot transpose the octatonic scale and keep the same model and pitch content unless it is transposed at 0, 3, 6, 9. This is no small point. It is in agreement with van den Toorn's concept of Stravinsky's neo-classical and Russian models of octatonicism, and it is borne out by Taruskin's historical investigation into the evolution harmonic progression by minor thirds.

Straus ultimately faces this reality, when he reveals the tonal emphasis in his analysis of the third movement of the *Symphony of Psalms*. Straus writes, "The overall tonal scheme of the third movement of the *Symphony of Psalms* can be briefly described. It involves a central triad (CEG) which is mixed with the notes of a triad either a minor third above or a minor third below."[13] He adds, "the addition of the pitch class F# would complete a form of that [octatonic] scale. While the foreground of this movement is apparently not octatonic, the background structure thus shows a close relationship to the octatonic frame of reference of the first movement of the same piece." He concludes that the

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13 Straus, "Stravinsky's Tonal Axis". p. 279

harmonic structure of the movement "completes a self-contained tonal world... thus [creating] a closed tonal circle"[14] (example 4.5).

Example 4.5

Straus's background tonal scheme to the Symphony of Psalm's (mov. III)

C E G

A C# E Eb G Bb

F# A# C#

As a natural result of the potential of minor-third cycles inherent to the octatonic scale, it is easy to see how triadic progression by alternate minor thirds, (adding triads to pitch classes 0, 6 or 3, 9) results in "Petroushka Chord" constructions such as those in Steinberg's example.[15]

It is clear then, that Taruskin sees the polytonal (bitonal) implications of this harmonic language as an integral byproduct of Russian octatonicism as it was handed down to Stravinsky.

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[14] Ibid., p. 281

[15] Taruskin calls this "triadic symmetrical octatonicism." Taruskin, "Chez Petroushka," p. 268

However, regardless of Taruskin's (and Stravinsky's) assertions, the suggestion that Stravinsky actively cultivated bitonal compositional procedures is not taken for granted in theoretical circles. Only a few years have passed since both Berger and van den Toorn made "pertinent and valuable observations" as to the [non-bitonal] nature of "Chez Petroushka". "To Berger", praises Taruskin, "we owe the first analysis of the illustrious 'Petroushka chord' [who] subsumed [it] under a single collection with a single referential order, i.e. the octatonic scale, [so that] the dubious concept of 'polytonality' need no longer be invoked."[16] But to Taruskin, a view of the "historical evidence" suggests that "polytonalism" arguably is a compositional *a priori* in Stravinsky's work. "Despite the octatonic interpretation of its genesis," he argues, "there may be some validity after all in regarding the Petroushka Chord as polytonalism."[17]

What is troubling in Taruskin's argument is that the application of the term polytonality takes on the quality of a war of semantics. Whereas the terms "polytonality" or "bitonality" might imply a purposeful self-contained method, Taruskin's work suggests that Stravinskian "bitonality", as in the Steinberg

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16 Taruskin, "Chez Petroushka," p. 268

17 Taruskin's assumption that Stravinsky may have held 0, 3, 6, 9 octatonicism (and the polytonalism he says Stravinsky ultimately implies) at level of "*a priori* conceptual status" stems in part from van den Toorn's demonstration that the chord not only appears in *Petroushka* at the C/F# configuration, but later at Eb/A, thus completing the 0, 3, 6, 9, (C, Eb, F#, A) reference. This demonstrated, to both van den Toorn and Taruskin, that Stravinsky's had an in-the- act awareness of the construction.

example, is but a consequence of the larger harmonic spectrum octatonicism has to offer. The "Petroushka Chord" is an end, not a means. Nothing in Taruskin's analysis of the roots of Stravinsky's compositional practice necessarily leads to acceptance of polytonality as an important *a priori* concept in *Petroushka*, or in any other Stravinsky composition for that matter.

To be sure, it is the search for a unified theory that most interests historians such as Taruskin. But Taruskin's work does, somewhat stealthily, suggest a more far-reaching feature of Stravinsky's octatonic writing. That feature resides in the cyclic nature of Stravinsky's harmonic progression. By emphasizing this aspect of Stravinsky's harmonic practice, Taruskin's historical perspective suggests that "bitonal" references in *Petroushka* are not important at all, but are superficial consequences—musical effects—resulting from the same long-ranged "harmonic navigation" Taruskin himself traces.

Despite the underlying importance of the octatonic 0, 3, 6, 9 implications pointed out by Berger and van den Toorn, and historically traced by Taruskin, the octatonic scale relates to yet another interval cycle in a way that truly brings to light the deeper structural meaning in Petroushka. As we will see, the interval of the fifth will show itself to be the most global unifying structure of all. It is with this interval, used in a cyclic (non functional) context, that Stravinsky unifies *Petroushka*, furthers its program, and "short circuits the traditional harmonic system."

CHAPTER 5

PRECEDENTS FOR FIFTH CYCLES

At the turn of the century, composers faced a musical crossroads. Were they to continue down the path of the Wagnerian harmonic tradition, or abandon it as an exhausted legacy? By the time of *Petroushka*, many composers had already staked out their aesthetic ground. To Schoenberg, the logical extension of Wagnerian chromaticism inevitably led to the birth of serialism. Others, such as Bartók, who never adopted strict serial methods as did Stravinsky in the 1950's, found a contrasting mode of expression via the ancient folk idioms. In Stravinsky we ultimately find a fascinating mixture of both serial and folk elements.

Like Bartók, Stravinsky explored and applied elements of folk music to his own, often even to the dissatisfaction of his peers. Certainly, the influence of folklore on *Petroushka* is now well documented. But less discussed are the "serial tendencies" of his earlier music. These "tendencies" had a particular bearing on his approach to *Petroushka* and its program, and would foreshadow his future musical evolution. Stravinsky himself suggested these "serialisms" as being a point of curiosity in music as early as his *Firebird*.

> ...if an interesting construction exists in *The Firebird*, it will be found in the treatment of intervals. . . . When some poor Ph.D. candidate is obliged to sift my early works for their 'serial

> tendencies,' this sort of thing will, I suppose, rate as an *Ur*-example.[1]

Elliott Antokoletz used this comment as a point of departure in an important article on Stravinsky's use of the interval cycles in his early ballets. In this article, Antokoletz rightfully asks what Stravinsky may have meant by "serial tendencies". To view the comments from Taruskin's angle, one might argue that Stravinsky was drawing on revisionist history to ally his early ideas with those of the Germanic school that he later embraced.[2] But Antokoletz furthers the argument that evidence of such serial-like organizing principles exists and can be "inferred from a study of certain passages themselves."[3] That is, though Stravinsky did not necessarily follow strict ordering procedures in the music of his early period—those strict ordering procedures that we now typically associate with serialism—many of his compositions show these serial [read cyclic] tendencies in their harmonic disposition and mode of progression. Antokoletz suggests that these procedures, while being "very different from [Alban Berg] in style, aesthetic,

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[1] Igor Stravinsky and Robert Craft, Expositions and Developments (Berkeley and Los Angeles, 1962), pp. 132-33

[2] See the Introduction of Taruskin, Stravinsky and the Russian Traditions.

[3] Elliott Antokoletz, "Interval Cycles in Stravinsky's Early Ballets." Journal of the American Musicological Society (JAMS) (Fall 1986); 578-614

and, supposedly, approach to technical matters," do play a similar "fundamental role in the musical language of Stravinsky's three early ballets."[4]

Indeed, various forms of cyclic progression show up not only in Stravinsky during this period, but in a variety of works from other non-serial composers, such as Debussy and Bartók. In particular, progressions based on the interval of the fifth (also called the interval 5/7 cycle) are especially common in the works of these composers.[5] Cyclic progression derived from this interval offers a few advantages. First, it allows for an illusory relationship with the traditional tonic/dominant relationships of the past. Second, it generates itself through all twelve tones of the octave before pitches repeat.

Consider two short examples from composers who were familiar to Stravinsky, and the unique character of their particular application of this idea.

Debussy's Engulfed Cathedral

Debussy's plan for his piano prelude *La Cathédrale engloutie* was straightforward enough: to create an atmosphere suitable for the telling of the legend of the Cathedral of Ys. This cathedral, the legend suggests, was engulfed

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[4] George Perle, "Berg's Master Array of the Interval Cycles," *The Musical Quarterly*, LXIII (1977), cited by Antokoletz, "Berg's Master Array..."

[5] The inverval numbers used here are calculated in semitones. For example, a minor third contains three half steps, so it is considered an interval 3. A perfect fifth contains seven half steps and is thus an interval 7. An interval 5/7 refers to the fact that the perfect fourth and the perfect fifth are inversions of each other, and as such represent the same interval class.

under the waves of Brittany 1500 years ago as punishment for the impious population. Once a year it ascends from the bottom of the sea to remind the population of their sins. For the musical portrayal of the scene, Debussy uses harmonies rooted in the primal progression of the circle of fifths (example 5.1).

Debussy begins the first phrase with a simple 5-note diatonic collection partitioned in fourths and fifths (note that in any complete diatonic collection, a major scale for example, the pitches can be reordered as a segment of the fifths cycle). In this work, it takes a mere page of the score to see that Debussy's imagination calls for a much vaster harmonic canvas than traditional diatonicism can accommodate.

The first phrase of the piece, reordered into fifths, yields the pitch content:

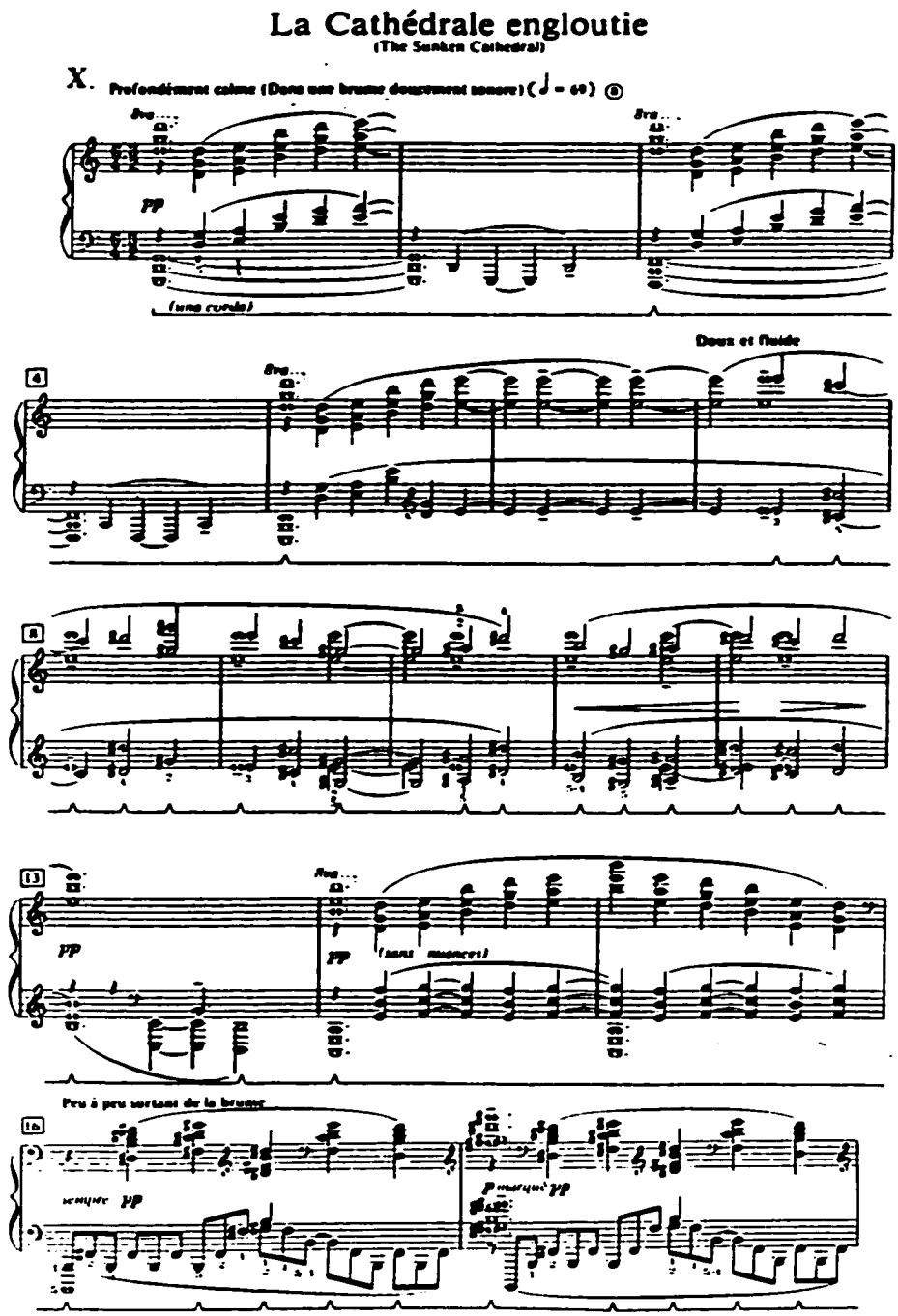
G-D-A-E-B

The next phrase, beginning at bar 3, extends this cyclic segment by adding pitch classes F and C. Thus we have a cycle extended to:

F-C-G-D-A-E-B

At this point, the cycle could be subsumed under one major scale. But immediately Debussy extends the cycle further, ending any illusion that traditional

Example 5.1


La Cathédrale engloutie
(The Sunken Cathedral)
X. Profondément calme (Dans une brume doucement sonore) (♩ = 69)
Doux et fluide
Peu à peu sortant de la brume

diatonic function is operating. Spelled enharmonically, the added notes at the section beginning at bar 7 are Bb-Eb-Ab-Db. The resulting cycle is thereby extended to include all but one of the twelve pitch classes, F#.

Db-Ab-Eb-Bb-F-C-G-D-A-E-B

In addition, it is worth noting that the background bass progression (the dotted whole notes in the lowest voice) up to bar 13 is that of a descending 5^{th}, thus adding into the background a remnant of dominant/tonic progression G to C.

The missing F# then becomes an important structural feature which enhances the work's musical program. With its arrival at bar 16 we feel as if we have ended an introduction, and the drama commences. Once all twelve tones have sounded, the Cathedral begins to rise as the bells toll which to remind the people of their sins.

Béla Bartók's Ostinato from Book VI of Mikrokosmos

In this example, Béla Bartók uses the fifth cycle within with his now-familiar idiom of utilizing double-tritone (Z-cell) constructions derived from the

Slavic folk idioms.[6] Like the octatonic scale, an interesting feature of the Z-cell is the way it lends itself to various forms of progression. Each Z-cell consists of a variety of pairs of interval couples, each of which permits easy cyclic reinterpretations of the desired interval. For example, the cell consists of two perfect fourths separated and interlocked by a semitone, as in C, F, F#, B; tritones separated by a semitone as in B, F, F#, C; or two semitones separated by a perfect fourth, as in F, F#, B, C. Different arrangements of this cell allow for different avenues of progression.

Consider the following table (example 5.2) of all of the possible Z-cells one can construct within an octave. In this example, it is easy to see the chromatic relationship that exists in the vertical aspect of the matrix.

But considering the same matrix (example 5.3), this time partitioned in such a way that every other Z-cell is in reverse order, it is easy to see the potential for common-tritone progression.

Partitioned in yet another way, the fifths are emphasized vertically (ex. 5.4). Here the matrix makes apparent the 5/7 cycle. In this arrangement, every other Z-cell is inverted.

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[6] A Z-cell is a construction consisting of two interlocking tritones, for Example, C, F#, F, B. See Elliott Antokoletz, "The Music of Béla Bartók." (University of California Press. Berkeley and Los Angeles, 1984)

Example 5.2

Z-Cells arranged into vertically chromatic alignment

C	F#	F	B
C#	G	F#	C
D	G#	G	C#
D#	A	G#	D
E	A#	A	D#
F	B	A#	E

Example 5.3

Z-Cells arranged to show common tritones vertically.

C	F#	F	B
C	F#	G	C#
D	G#	G	C#
D	G#	A	D#
E	A#	A	D#
E	A#	B	F

Example 5.4

Z-Cells arranged to show the interval 5/7 cycle.

C	F#	F	B
G	C#	C	F#
D	G#	G	C#
A	D#	D	G#
E	A#	A	D#
B	E#(F)	E	A#

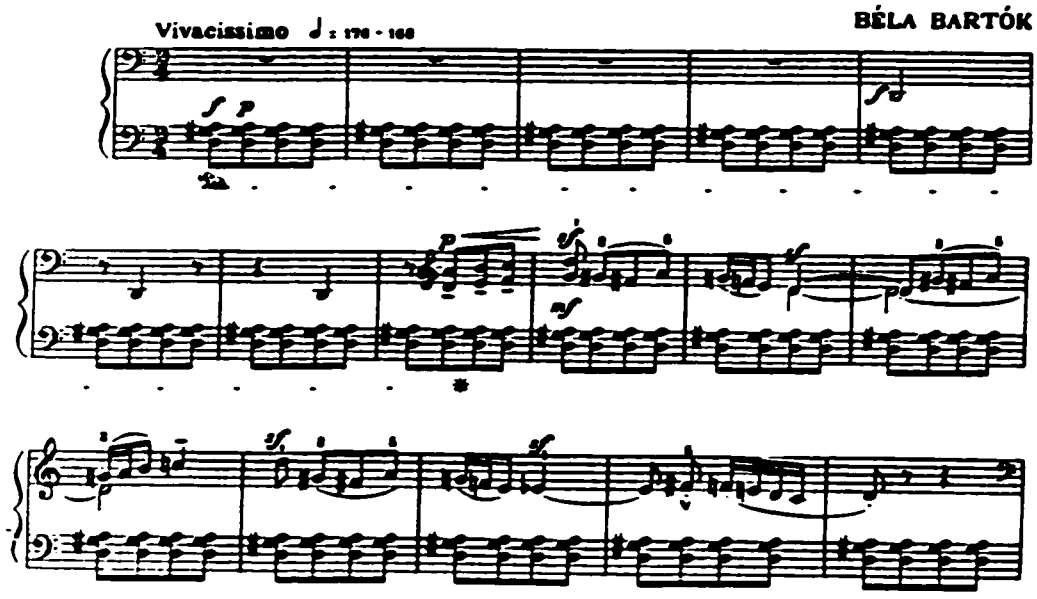
It is this fifth-related orientation that Bartók emphasizes in the *Ostinato* from Book Six of the Mikrokosmos.

In this work, Bartók opens with a typically structured folk melody (four phrases) presented over an ostinato bass line (example 5.5).

Once we have been introduced to the melodic material, a long transition passage ensues. This transition is in four sections, each shorter than the preceding (as is consistent with the common practice of accelerating harmonic rhythm towards an arrival) and each with a new modality which extends the tonality via the cycle of fifths.

Example 5.5

Ostinato from Book Six of the Mikrokosmos (opening bars)



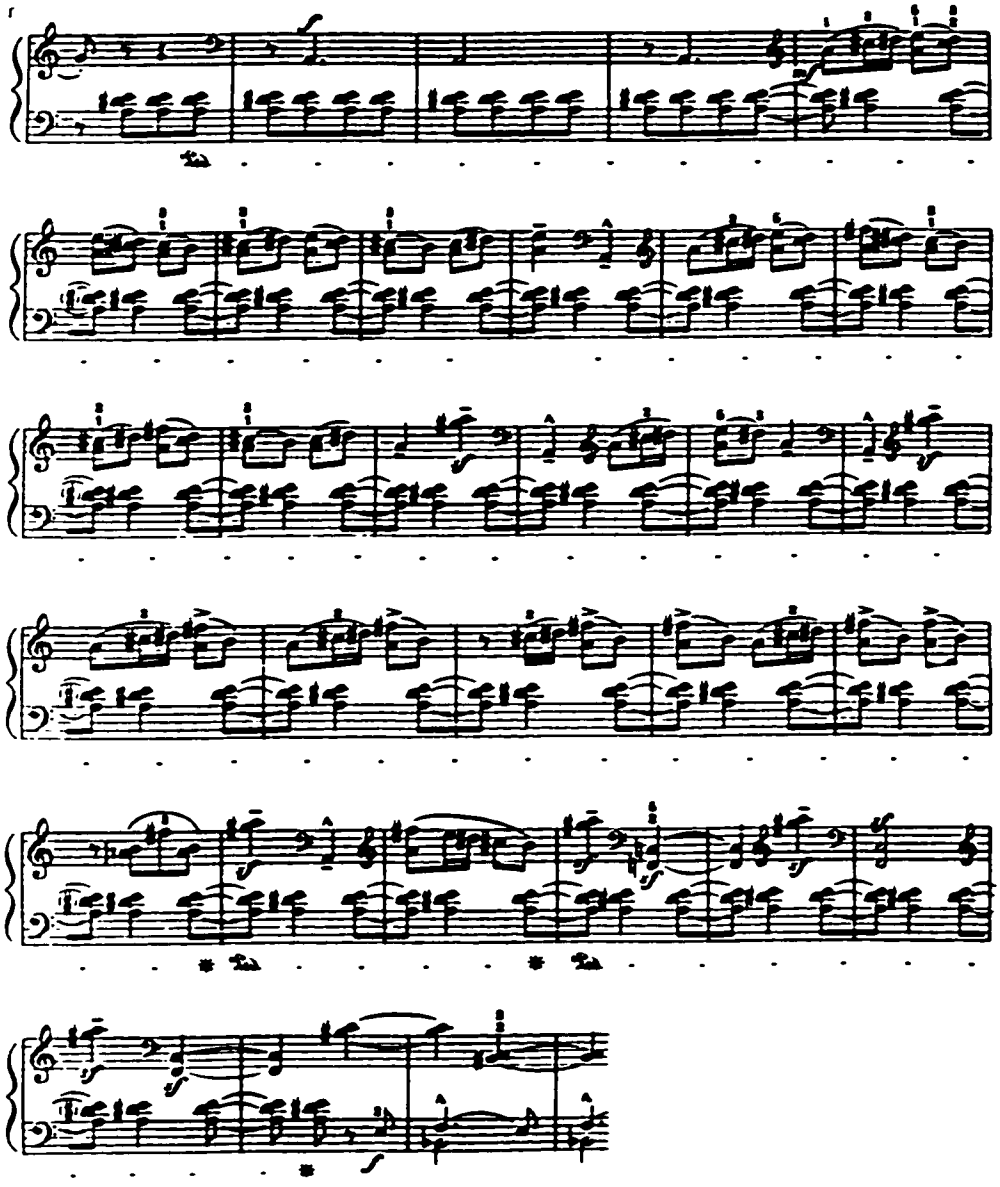
The first section of this transition, beginning at m. 28 (example 5.6), is in A Lydian.

Ordered in fifths, the pitch content is:

A-E-B-F#-C#-G#-D#.

Example 5.6

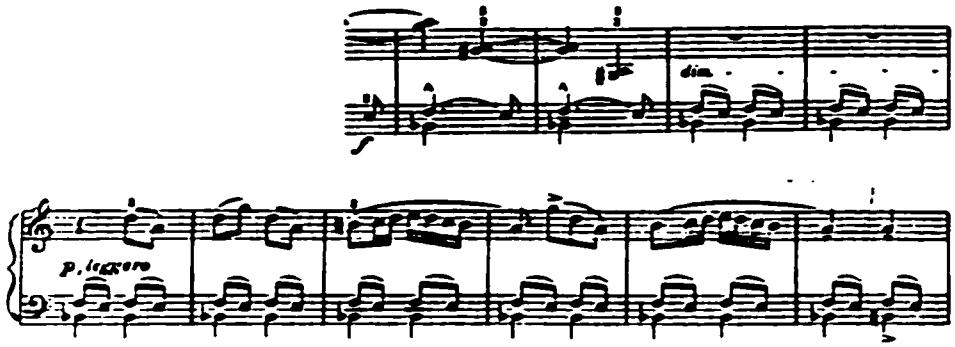
Ostinato (section one, bars 28-58)



Towards the end of this section, the intrusion of the fifth F-C (bar 53 of example 5.6) foreshadows the modulation to the second section in Bb Lydian (example 5.7)

Example 5.7

Ostinato (section 2, bars 58-67)



This second section, while taking advantage of a rising chromatic relationship in the bass line from the previous section (as implied by the matrix in example 5.2), can also be ordered into fifths.

Bb-F-C-G-D-A-E.

The combination of section one (see example 5.6) with section two

(see example 5.7) results in a complete 5/7 cycle containing all twelve pitch classes.

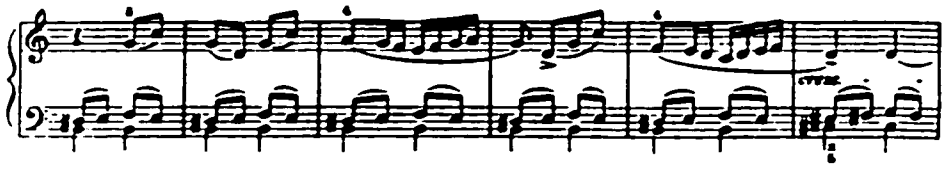
(Section two)(Bb-F-C-G-D-[A-E) B-F#-C#-G#-D#] [Section one]

The third section of the transition (example 5.8) at m. 67 (again up a semitone) contains the pitch content B, C, D#, E, F, G, A. When ordered in fifths, this expands the cycle from section two by the addition of a fifth to each side of its pitch content.

(Eb/D#)+Bb-F-C-G-D-A-E+B

Example 5.8

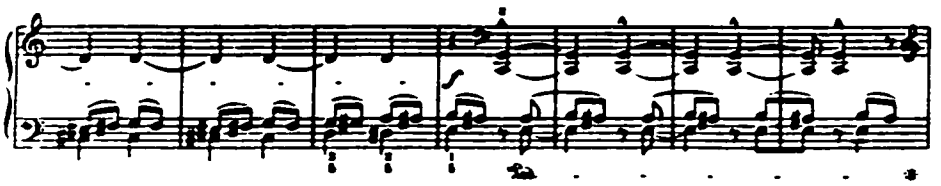
Ostinato (section three, bars 68-73)



Section four at m. 72 (example 5.9) moves quickly through a progression of Z-cells, taking advantage of the common-tone techniques mentioned above. This accomplishes a notable bass arrival on the pitch E in m. 77.

Example 5.9

Ostinato (section four, bars 74-80)



Here, as in example in the Debussy, the background bass progression of the four sections combined has progressed up a fifth from the root A (bar. 28), to the arrival on E at m. 77. In this way Bartók, like Debussy, sought after a newer and more versatile means of harmonic progression so desired by many composers of the era.

Stravinsky uses a similar method of harmonic progression in *Petroushka.* But in this case, Stravinsky's method is derived from the recognition and utilization of specific attributes of octatonicism and the compositional routines handed down to him by Rimsky Korsakov, as mentioned in the previous chapter.

Stravinsky's practice of adding notes by fifths has not gone totally unnoticed. Other authors have commented on the interval's importance in Stravinsky's music. But thus far, analysts' citations are too often indirect, fleeting, or misguided. Consider this discussion by Célestin Deliege:

> In discussing the works from his Russian period, he [Stravinsky] had mentioned the absence of any system and referred to his ear as the final arbiter. However, this was only part of the truth, and a biased part at that. The retention of the triadic system, the continued presence of a chromatic relation in the case of simultaneously occurring phenomena, the opening out of diatonic relations in successions and the organization of the temporal structure into autonomous moments that give predominance to the one modality, all go to make up the many underlying elements of a suggested but not fully codified grammar which nevertheless remains accessible to a certain level of description and therefore to a certain level of rationality[7]

And then, this observation, closer still to *Petroushka's* particular situation:

> A rational explanation of the phenomenon that critics and musicologists would incorrectly call polytonality can be obtained from the fundamental grammatical system of tonality, i.e., from the generation of harmony by successive fifths from any sound taken as an initial fundamental. Beyond the fifth fifth which occurs in a diatonic relation with the initial tone, the sixth and seventh fifths give intervals of an augmented fourth and an augmented octave respectively. It was these intervals that would allow Stravinsky the double chromatic polarizations which characterize the harmony of *The Rite of Spring* and the other works written in Switzerland during World War I."[8]

This comment is, of course, a roundabout reference to the "Petroushka chord" itself (the F# and C# in relation to C, and implying the complete chord). But then Deliege adds: "...If Stravinsky had no difficulty in prolonging his

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[7] Célestin Deliege, "Stravinsky: Ideology/Language." *Perspectives of New Music*, vol. 26 no.1 Winter 1988. p. 92-93.

[8] Ibid., p. 87

discourse, he did have difficulty in creating true mobility or continuity in the world he had created."[9]

On the contrary, Stravinsky's recognition of certain characteristics of the octatonic pitch set allowed him ease of mobility within the confines of his harmonic plan, as we will see.

Another writer asserts that: "While the octatonic penetrations of the 'chromatic' category produce tonally foreign pitches in seemingly random order, the progression of pitch collections in the diatonic subsystem is often much more orderly."[10] But in *Petroushka* at least, the "wrong-note" pitch additions are quite orderly, especially when subsumed into the larger tonal (cyclical) spectrum implied by one particular partitioning of the referential (octatonic) scale.

For Stravinsky the important cyclic 5/7 implications inherent to the 0, 2, 3, 5 (van den Toorn's model B form of the octatonic scale) octatonic collection in *Petroushka*—those which allow ease of mobility and order—come from an overlooked partitioning of the scale's pitch content. For example, if we take the octatonic scale C, D, Eb, F, Gb, Ab, A, B (van den Toorn's Model B), it can be

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[9] Ibid., p. 88

[10] Marshall Malone Thomason, "Neo-Tonality: A unified approach to Stravinsky's Neoclasssical Music." (Ph. D. dissertation, University of Texas, 1987), p. 68

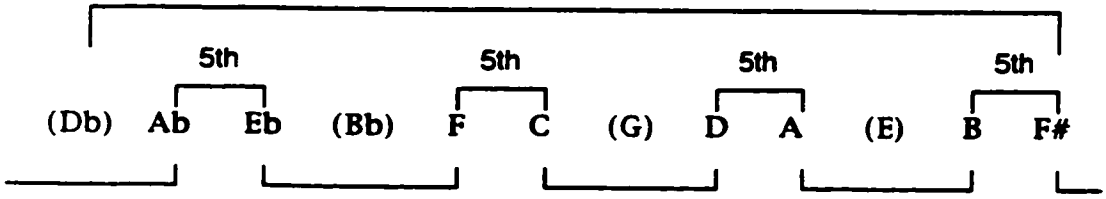
reordered into a cycle of fifths which omits every third pitch class, resulting in a collection of fifth dyads (example 5.10).[11]

Example 5.10

Octatonic Scale

C D Eb F F# Ab A B

As Diatonic Fifths



As Whole Tones

In examining *Petroushka*, we will find this attribute of the scale to be of great importance. It allows movement of large-scale areas of diatonic material—themselves completing cyclic 5/7 segments—while ultimately allowing the context of the large-scale diatonic areas themselves to remain referable to the octatonic collection. As part of aforementioned compositional practices, it

[11] The model A octatonic scale can be partitioned this way as well.

provided Stravinsky with a powerful means of unifying *Petroushka* both technically and psychologically.

As we have seen, Stravinsky's uses of cyclic compositional procedures are consistent with harmonic practices adopted by other composers of the era. And, as was the case in the works of Bartók and Debussy, it would be a breakthrough in the development of his style.

CHAPTER 6

ANALYSIS PART I.

Interval Structures

Analysis of Stravinsky's method has become particularly intense in recent years, with *Petroushka* often taking center stage as the work under examination. In general, theorists tend to focus on the first tableau, as the work's opening movement, or the second tableau, as the octatonic movement derived from the Konzertstück for which it was originally intended. These analyses are often undertaken at the neglect of the last tableau, which is perhaps due to assumptions that the movement is simply too diatonic and non-systematic to benefit from any observations not already made in the other movements. But, in at least one respect, the last tableau is unique among the four, and in so being, it is perhaps the most enlightening movement concerning Stravinsky's intentions in the ballet. For this reason, the last tableau will be the focus of my discussion.

Whereas the first three movements are more or less static within the confines of their harmonic dispositions, the last tableau contains a deliberate plan to progress towards an intended harmonic goal. That is, that whereas the first tableau is essentially diatonic, and the middle two tableaus are solidly octatonic, the harmonic design of the last tableau encapsulates and unifies these two harmonic poles via a logical progression from the diatonic towards the octatonic.

Besides serving as a significant compositional feature of Stravinsky's overall harmonic plan, this also serves as an important musical correspondence to the ballet's plot. The first and middle tableaus distinguish and formalize the polarity present between diatonicism (the realm of reality, where in the first tableau Petroushka is seen as just a puppet), and octatonicism (the mystical realm of the middle tableau, where Petroushka magically appears as a human). The last tableau mirrors Petroushka's role as a puppet at the tableau's beginning, and a ghostly apparition at its end via its harmonic motion.[1] Thus the last tableau represents Stravinsky's unification of two worlds via large-scale harmonic progression from the diatonic towards the octatonic.

This progresssion takes place at the background level via the cycle of fifths, and with implications of the dyadic aspect of the gapped octatonic scale mentioned above (see example 5J).

The dyadic tendency, which can be observed in many Stravinsky works of the period, is evident from the very beginning of the ballet.

Elliott Antokoletz writes in his published analysis of the opening of the *Petroushka's* first tableau:

> At the opening of scene 1 (to no.1), the white-key area is established by the diatonic segment D-E-G-A. This segment in the flute is explicitly partitioned into two types of cyclic intervals:

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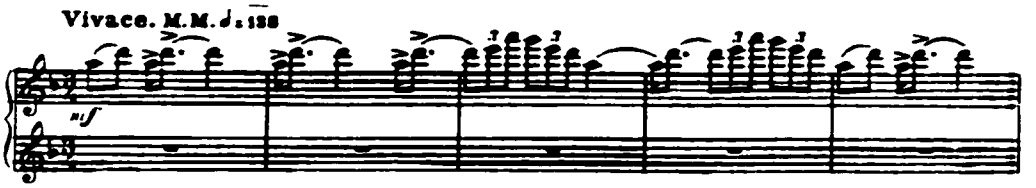
[1] For a reference to Stravinsky's us of harmonic symbolism in the representation of the supernatural and natural realms, see Eric Walter White, Stravinsky: The Composer and His Works. p. 186

interval 5/7 (A-D/E-A) and interval 2/10 (A-G/E-D). The latter, bounded by the 5/7 dyad D-A, forms the basis of the accompanying layers, so the cyclic-interval interpretation (G-D-A-E) is prominently suggested from the beginning (example 6.1).[2]

Example 6.1

opening motive of *Petroushka* (Tableau I)



Antokoletz then shows that the interval of the fifth goes far beyond a mere motivic gesture in *Petroushka*, and suggests that the interval is a pivotal characteristic of the interaction between diatonic and octatonic spheres. He writes:

> The closing passage... that leads to "The Magic Trick" is significant in the transformation to the octatonic realm. Here we find the first prominent increase in the interaction between diatonic and octatonic sets within the framework of interlocking cyclic [fifths] components... this passage does suggest a cyclic source for these two basic pitch collections. In the succession of diatonic scales, diatonic (interval 5/7) components are interlocked with octatonic components in correspondence with the drama.[3]

Notably, Antokoletz explains that this passage (see example 6.2) exhibits fifth dyads that occur at pitches D-A, F-C, Ab-Eb, and B-F# which corresponds to

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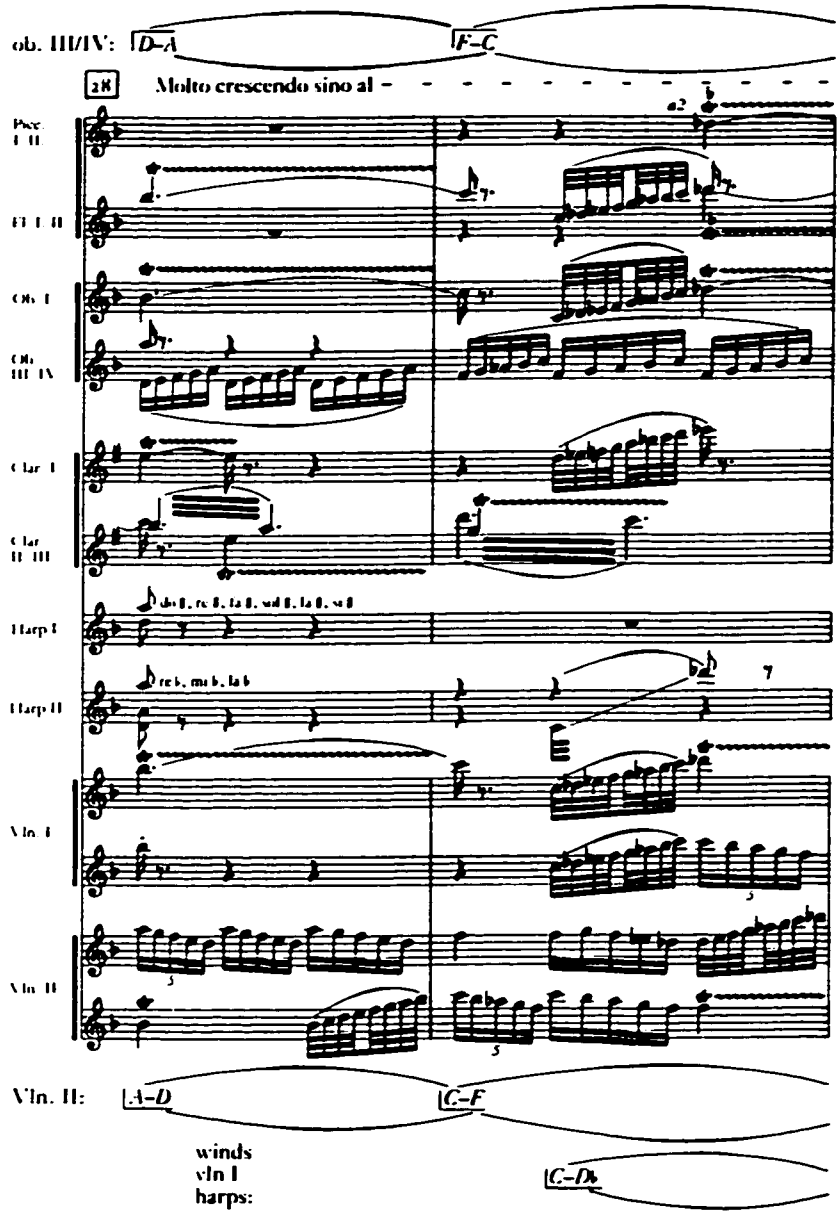
[2] Elliott Antokoletz, "Interval Cycles in Stravinsky's Early Ballets." p.594

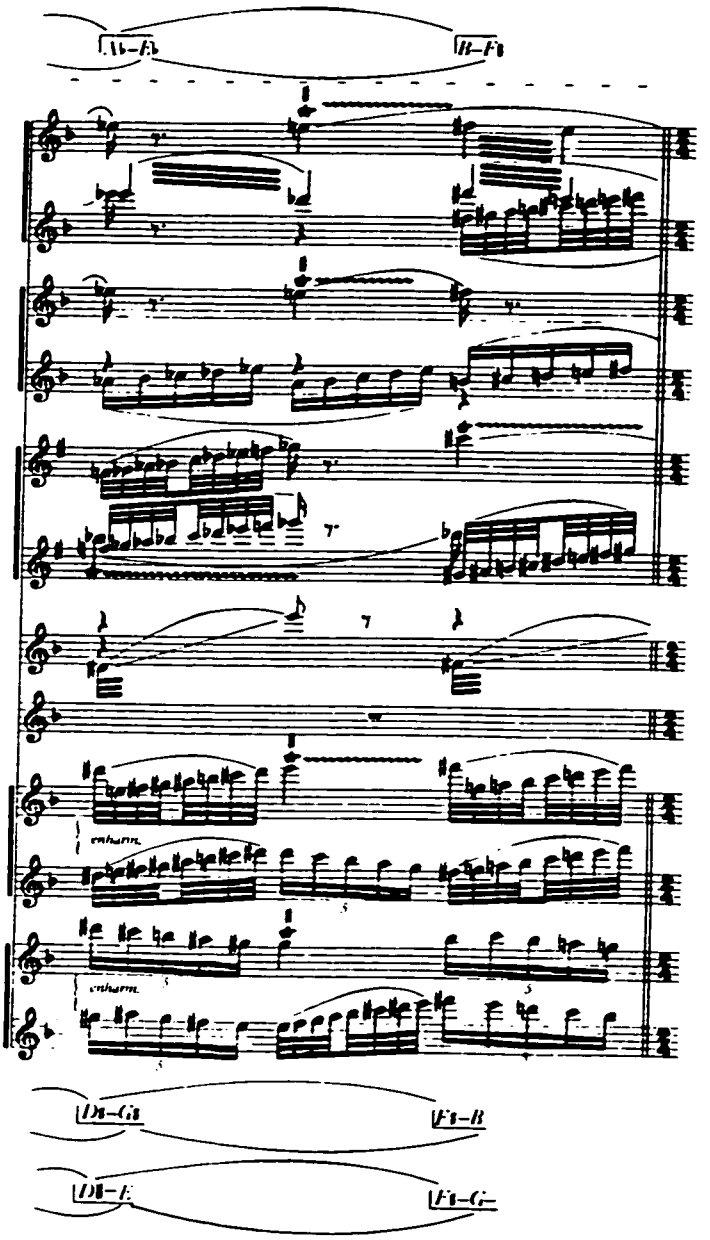
[3] Ibid., p. 591

Example 6.2

***Petroushka*, Tableau I (bar 28)**



Example 6.2 (cont.)



the 0, 3, 6, 9 ("cycle of mediants") partitioning of the octatonic scale discussed by Taruskin. Taken together, these pitches add up to a complete octatonic scale, and can therefore be represented as a set of gapped fifth dyads (example 6.3).

Example 6.3

As fifths

D – A	F – C	Ab – Eb	B – F#
0	3	6	9

As a complete scale:

D – Eb – F – F# – Ab – A – B – C

As gapped fifth dyads within the partitioned octatonic scale:

B F# (C#) Ab Eb (Bb) F C (G) D A

Of course, it is a common technique for composers to map intervallic relationships into the background that are present in their foreground motivic material. No less is true in the last tableau of *Petroushka*, and the technique can be shown to be present from its onset.

For a moment, let's take a close look at the intervallic relationships that make up the first two diatonic areas of this last tableau, and see which relationships are present, and how they relate to the opening motive.

This tableau ("The Shrovetide Fair") opens in solidly in D-major (example 6.4).[4] Within the context of the D-major tonality Stravinsky introduces a melodic fragment in bar 13 (the pervasive melodic fragments in *Petroushka* are derived from folk sources and are well documented).[5] This melodic fragment (as with others we will find in the tableau) is heavily suggestive of the fifth component present in the first tableau's opening motive (example 6.5). In addition, the whole-tone component, such as in the whole-tone related triads of the accordion-like accompaniment (example 6.6) results from the "pivoting" of fifths around a central pitch. That is, where the melodic fragment in example 6c implies the fifth D-A, the E in the oscillation implies D-(A)-E. The fact that the melodic fragment begins on A only enforces this relationship.

At the arrival at bar 27, still within D major, the same relationship is present, but here the whole-tone G-A oscillates in the RH, while the bass hammers out D, suggesting G-(D)-A. This important whole-tone relationship is also

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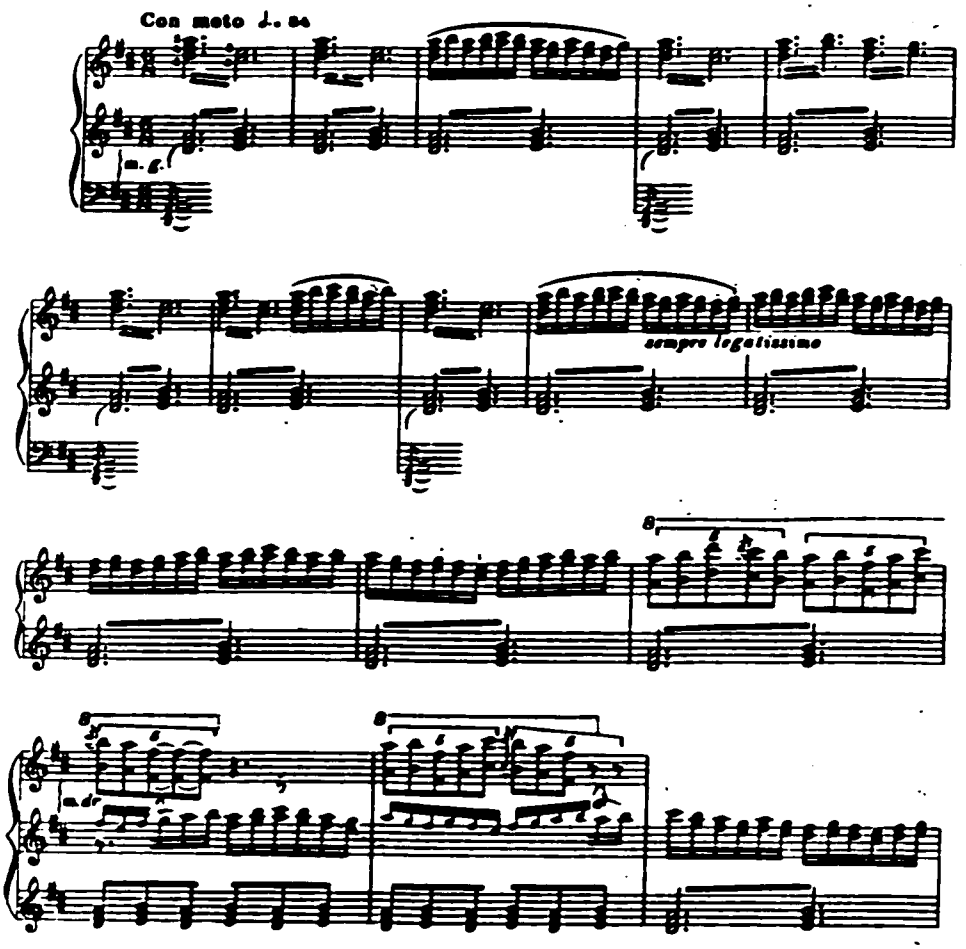
[4] For the sake of space and clarity, I have chosen to use the Piano Score for the majority of the examples. This score, written by Stravinsky for pianist Artur Rubinstein in 1921, makes explicit certain aspects of the score that I feel are important to this thesis. As we will see, a comparison of the original orchestral version to the later piano version sheds light on Stravinsky's musical priorities in the score.

[5] See Taruskin, Stravinsky and the Russian Traditions. p .695-717

Example 6.4

Petorushka opening of Tableau III (piano version)

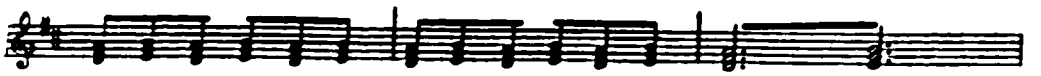


Example 6.5

Melodic Fragment (bar 13)

Example 6.6

Whole-tone related triads



derived from the gapped partitioning of the octatonic scale mentioned in the last chapter (see example 5.10).[6] And thus, it is a characteristic that further links the diatonic and octatonic spheres.

In the next diatonic key area, at the "Dance of the Wet Nurses", the harmony suddenly shifts to G dorian (example 6.7). Notably, this is a fifth below the D of the first key area, thus mapping the fifth dyad presented in the opening motive of the ballet into the background key structure of the tableau. In addition, the melodic fragment present in this section is also bounded by the fifth, just as the fragment of the previous section (example 6.8). In this case, the melodic fragment also functions as a tonal foreshadowing to the next major key area about to unfold. (Note that this is the same foreshadowing technique as in the Bartók Mikrokosmos example mentioned earlier).[7]

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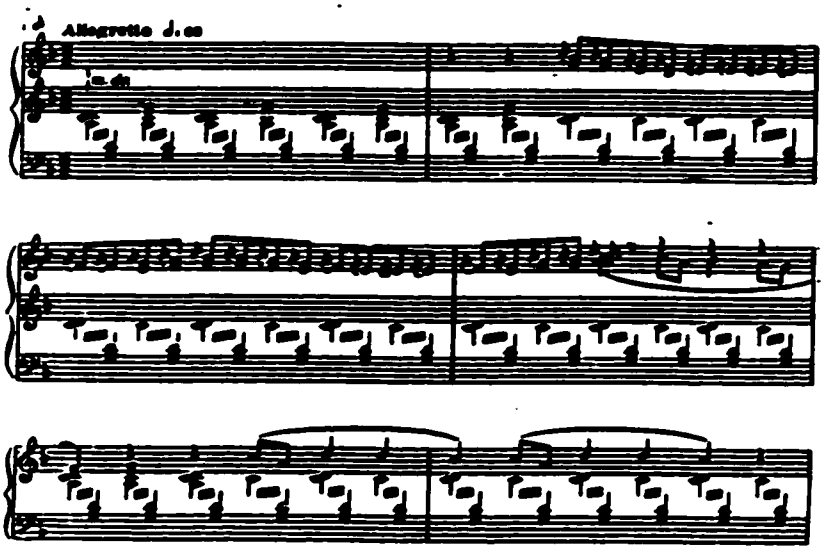
[6] The marked pitches in ex. 5.10 which are on opposite sides of the gaps are whole-tones.

[7] Though the melody in this section is clearly in F, the harmonic implications of G dorian in the accompaniment render it harmonically unstable. Edward Cone pointed out that the process of introducing a compositional element early is a foreshadowing technique used frequently by

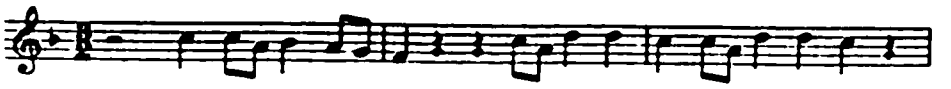
Example 6.7

"Dance of the Wet Nurses" (bar 35)



Example 6.8

melodic fragment (bar 38)



According to Straus, "a theory for this [Stravinsky's] music would have to have two principal components. The first would describe the tone-centers themselves. What are they? How are they formed? How do they relate to one

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Stravinsky. See Edward T. Cone, "Stravinsky: The Progress of a Method." *Perspectives of New*

another? The second component would show how the tone-centers are connected. What is the means of progression between the tone-centers? How are the tone-centers prolonged? How are they established as centers? "

The intervallic relationships I have just described are the most salient features of the first two sections. To satisfy Straus's first component, the tone-centers themselves are diatonic (in this case D major and G Dorian). The second component resides in the fifth relationship between the background progression between the two sections. It is via the fifth that Stravinsky binds the blocked sections of the movement. Continuing with an examination of the part of the movement brings this premise into better focus.

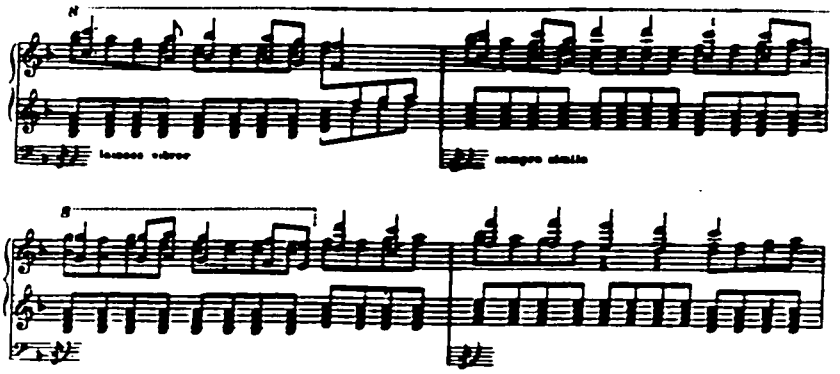
The in G dorian section of the "Dance of the Wet Nurses" gives way to an arrival into a new key area. At this arrival, solidified in orchestra version by the Stravinsky's rich instrumentation, the accompaniment vacillates between B-flat and F major seven chords, each vying for supremacy, and again suggesting a fifth dyad (example 6.9). The importance of this is that the salient harmonic features presented thus far suggest fifth dyads on opposing sides of C. The C, a key area that has not been presented yet, represents the gap between the two fifth dyads.

Bb - F - (C) - G – D

Music 2 (1962)

Example 6.9

"Dance of the Wet Nurses" (bar 49)

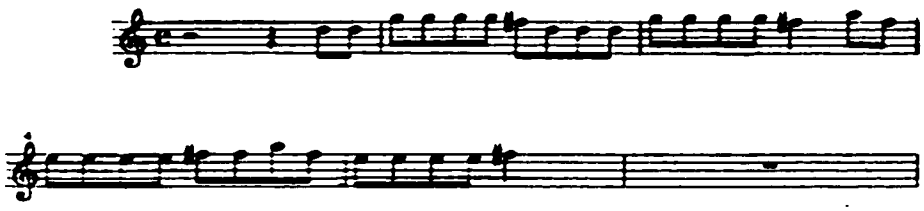


In this way, Stravinsky has begun a slow but sure move away from C via a fifth cycle, ultimately referable to the diatonic collection, while keeping the background key areas referable to the octatonic collection by way of the dyadic implications in the gapped octatonic scale. The whole-tone relationships so prevalent in the oscillations of the accompaniment relate to the cycle by way of the gaps over every other fifth. These unifying features become even more explicit as the movement proceeds.

Next, a brief transition moves the harmony back to G, where a new melodic fragment is presented at bar 63. This new melodic fragment, as before, emphasizes the interval 5/7 D to G (example 6.10).

Example 6.10

melodic fragment (bar 62)

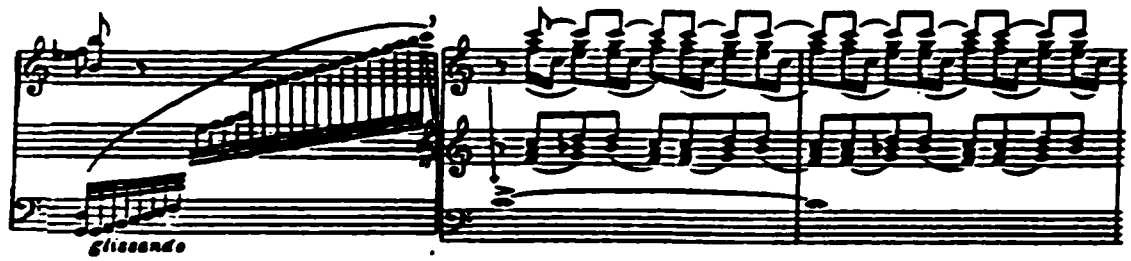


Stravinsky then makes a dramatic confirmation of his intention to use C as the key of departure in his move towards F# and the octatonic realm of the "Petroushka Chord". At bar 81, a long glissando rises to an accented C (example 6.11).[8] C is a pivot as triads on F and G (a whole-tone) oscillate on each side of it. The melodic fragment earlier presented at bar 38 (example 6.8 above) and the melodic fragment presented at bar 62 (example 6.10, in F) are united (bar 84) as the harmony oscillates between these G and F triads (example 6.12). This remarkable passage confirms the assertion of the fifth cycle as the background harmonic reference, and the whole-tone element as derivation of a gapped three-note segment of the fifths cycle.

It is evident that up to this point the emphasis is, at every level, that of the interval of a fifth. All of the background harmonic relationships presented so far,

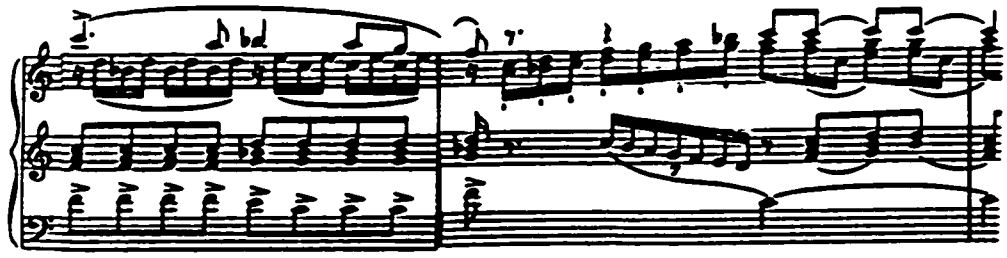
Example 6.11

Arrival at pitch C (bar 81)



Example 6.12

United Melodic Fragments (bar 84)



as well as the melodic fragments, emphasize this interval. Again, this is in keeping with the gapped partitioning of the octatonic scale mentioned earlier.

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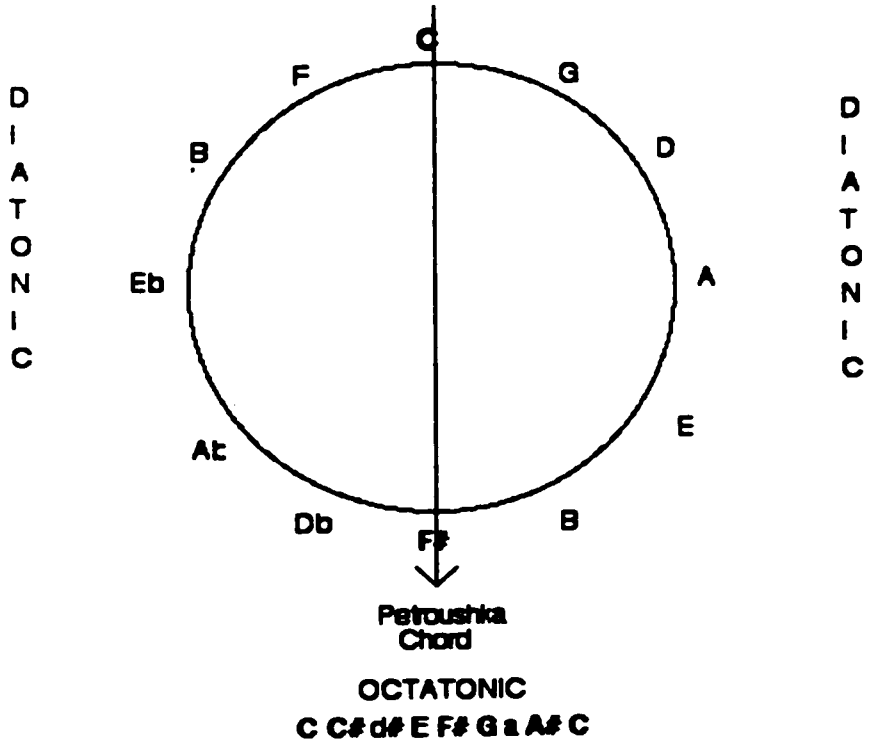
[8] Note that this is an example of a feature made more explicit by its arrangement in the piano score of 1921.

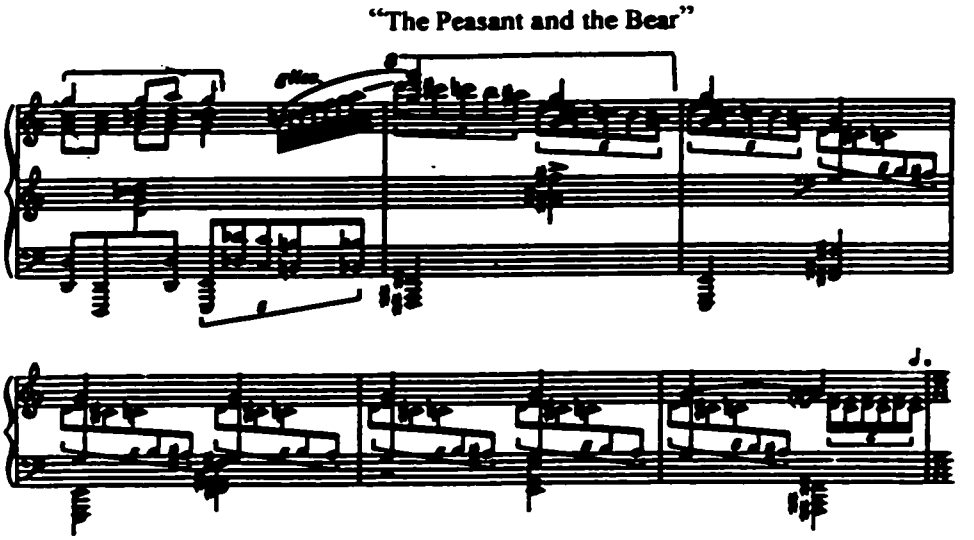
The linear progression by fifths is ingenious. For, as the overall diatonic key areas present themselves, they will progress in a general direction away from C, unfolding towards the sharp side of the cycle of fifths. Later, at pivotal section entitled "The Mummers", the key areas will shift to the flat side of the harmonic spectrum and move once again advance away from C. As illustrated in example 6.13, it is the superimposition of the opposite sides of the cycle of fifths that will result in an octatonic arrival and the "Petroushka Chord" at the end of the tableau.

Example 6.13



Stravinsky foreshadows the inevitable arrival into explicit octatonicism in the first of three purely octatonic passages in the movement. This takes place in the section at bar 94 (considerably abbreviated in the piano version) at the passage titled the "Peasant with the Bear" (example 6.14).

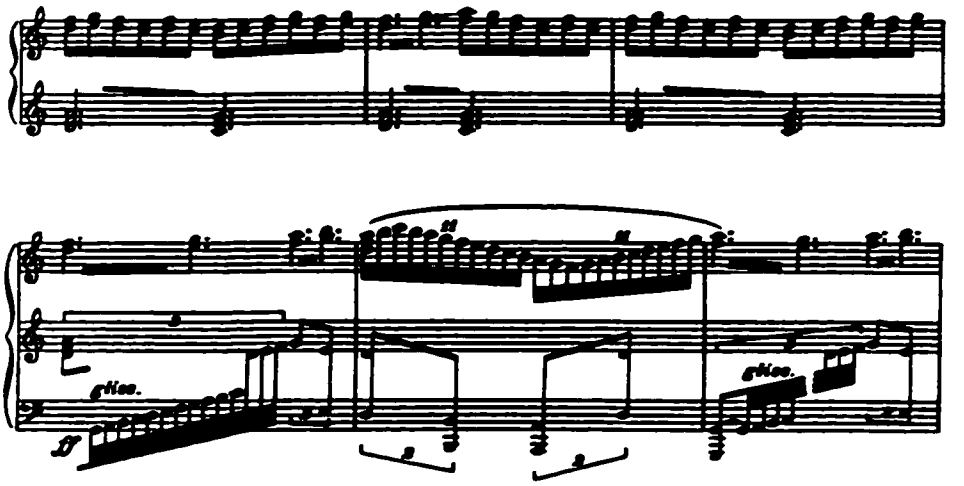
Example 6.14



As the "Peasant and the Bear" depart, the whole-tone oscillation returns, this time built on C and D. In this section, marked "A reveling Merchant and Two Gypsy Women Enter—He Irresponsibly Amuses Himself by Throwing Bank Notes to the Crowd", a new melodic fragment is presented (example 6.15). This segment is in G mixolydian, and its interaction with the accompaniment leading into it suggests the fifths segment C G D.

Example 6.15

"A Reveling Merchant and Two Gypsy Women Enter..."



So far, the background key outline has stayed within the harmonic spectrum of Bb-F-(C)-G-D). The section titled "The Gypsy Women Dance and the Merchant Plays the Accordion" is also grounded on the now familiar key of D (only now Aeolian).[9] But the "Dance of the Coachmen and the Grooms" at bar 168 makes another step away from C and the journey into the sharp side of the tonal sphere.

This section, which is written in the key signature of A, begins with the assertion of the bass note E. The melodic fragment presented in this section, bounded by the fifth from A to E, supports the dyadic role of the two pitches A

and E (Example 6.16). If we add the harmonies implied by this fifth dyad to the cycle already suggested by the background harmonic plan, we get Bb–F–(C)–G–D–A–E. Interestingly, the "Dance of the Coachmen and the Grooms" contains a small subsection written with no sharps or flats. (This subsection contains the melodic material presented in the earlier G Dorian section we analyzed. But where the melody itself implied F in its first appearance, it is up a fifth to C in this section) This subsection is full of interval 5/7 implications as well, such as the humorous interruptions of the bass (example 6.17).

Though this subsection is short-lived, it is important. If we take "The Dance of the Coachmen and Groomsmen" as a whole, it contains the pitch content of a complete cyclic segment that consolidates the entire sharp side of the fifths cycle.

C – G – D – A – E – B – F# – C#.

To this point in the movement we can see that certain attributes of the intervallic structures and harmony are ever present in their usage. First and foremost, the background key structures of the movement, those that represent the prevailing harmony of the largest sections, move via the cycle of fifths from C in the general direction of opposite side of the cycle, F#. Second, these key areas

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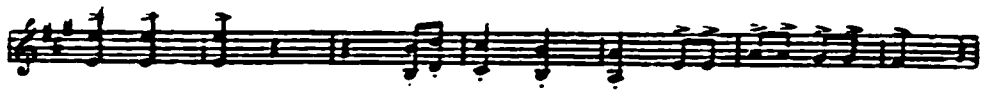
[9] The dorian mode is only implied until the late arrival of the pitch B at bar 126 of the

Example 6.16

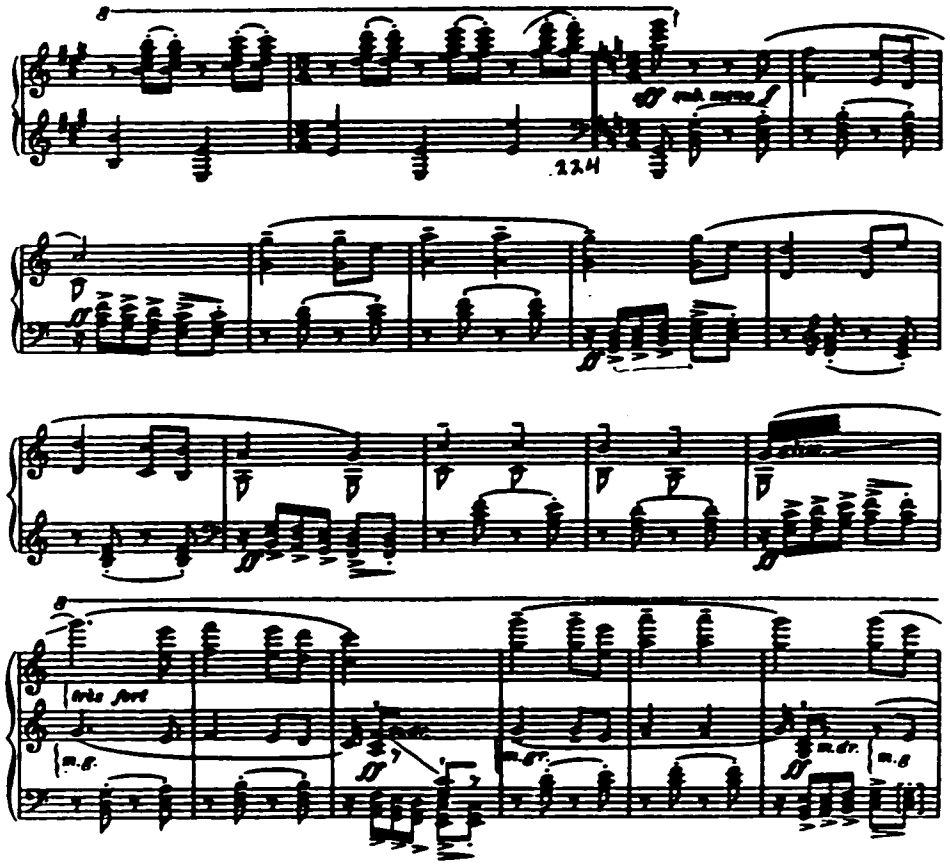
"Dance of the Coachmen and the Grooms"

melodic fragment (bar 188)



Example 6.17

Bass "interruptions" bounded by interval 5/7's (bars 224-241)



piano score makes it explicit.

have for the most part encompassed and completed the sharp side of the cycle of fifths. Third, the dyadic fifth implications of the aforementioned partitioning of the octatonic scale have been emphasized throughout the movement by way of localized harmonic or melodic structures. Fourth, the whole-tone relationships contained in the "accordion" oscillations are based on gapped fifth dyads containing a common note as the pivot. Finally, the melodic motives and fragments are themselves bound by, or emphasize, interval 5/7's.

The final section of the ballet, beginning with the "Mummers" deserves special attention for several reasons. Musically speaking, it is the onset of the climax of the ballet. Harmonically, it contains some of the most complex material in the ballet. But most importantly, it completes and confirms the background cyclic key outline thus far discussed via the flat side of the fifths cycle, and leads to the final and definitive arrival into pure octatonicism.

ANALYSIS PART II

The Mummers

The section subtitled "Mummers" deserves special attention due to its harmonic complexity and dramatic impact. It is in three parts, containing a section which progresses into octatonicism, a purely octatonic section (the "Devil Mummer"), and a transition out of octatonicism and back into diatonicism. The

section acts as a harmonic pivot, transporting the music from the sharp side of the circle of fifths to the flat side.

As mentioned above, there are three areas of pure octatonic writing in the last tableau of *Petroushka*. "The Mummers" begins with a transition that leads into the second of these purely octatonic sections: "The Devil Mummer Entices the Crowd to Frolic with Him". (Programmatically, the gradual transition into "The Devil Mummer" is in contrast to the suddenness of the arrival of the "Peasant and the Bear". Whereas the "Bear" is sudden and startling, there is a gradual transition into the approach of the "Devil Mummer") Since the octatonic writing of *Petroushka* is largely representative of the mystical aspect of the program, the supernatural affiliation of "The Devil" and his arrival is accompanied by purely octatonic writing. A new transition then leads out of this purely octatonic section and back into the diatonic sphere, but notably on the flat side of the cycle of fifths.

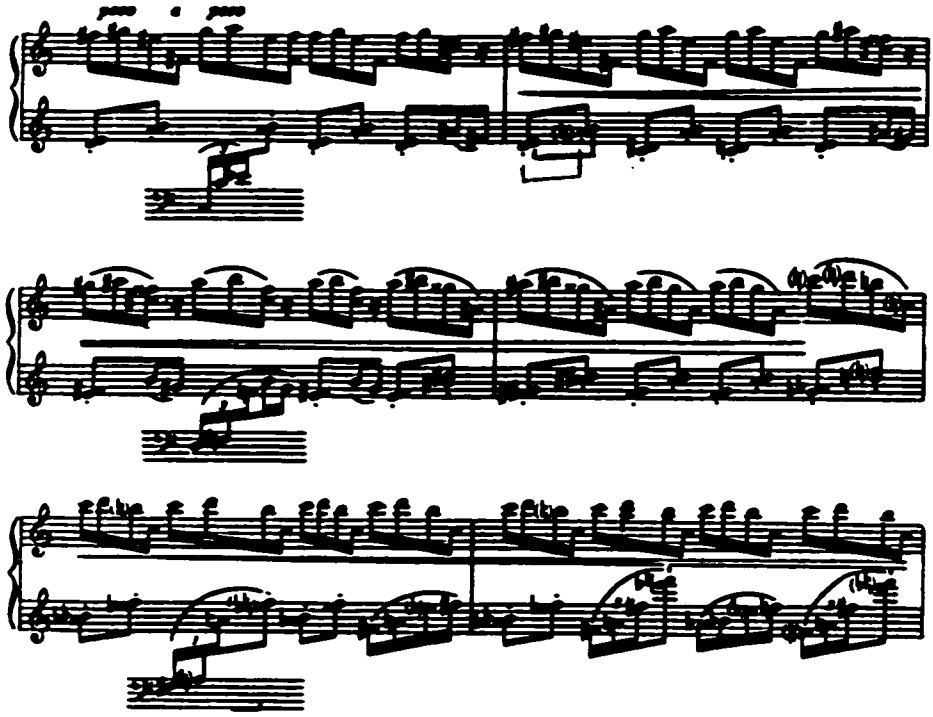
If we begin with the first two bars of the "Mummers" at bar 276, we see that this transition is whole-tone in nature. This is evident by the D – E – F# segment presented (Example 6.18). The following bars of this transition contain a complete whole tone ascent via the lowest voices in the bass. The fifth implications in the bass accompaniment are evident, as each whole tone is part of a fifth dyad (example 6.19).

Example 6.18

Beginning of "Mummers" whole-tones (bar 276)

Example 6.19

Fifth dyads in the bass (bars 279-284)



It is easy see how this whole tone ascent relates to the fifth dyads via the matrix in example 6.20.

Example 6.20

Fifth dyads with vertical whole tone implications

D	A
E	B
F#	C#
G#	D#
A#	E#
B#	F#

In this whole-tone progression Stravinsky moves from D (the key of the opening of the movement) on its way towards F#. Once the music has arrived at F#, it has arrived at the "Devil Mummer" and a purely octatonic pitch collection.

This transition at contains a particularly fascinating attribute. That is, while the bass line progresses upwards through a whole-tone collection, the treble implies an octatonic collection by way of four octatonic fragments (writer Igor

Asafiev's description as "little whirlpools of sound"), each a whole-tone above the last (example 6.21).[10] The first, at bar 278, is E# F# G# A. The second, at bar 280, is G (spelled F+) G# A# B. The third, at bar 282 is A (G+) A# B# (C#). And the fourth is B C D (Eb).[11] The importance of this transition is that it contains a whole-tone ascent with octatonic implications. This will be in contrast to the transition away from the octatonic "*Devil Mummer*", which will be whole-tone with diatonic implications.

Example 6.21

Octatonic segments

1. E# F# G# A

2. G (F+) G# A# B

[10] Igor Glebov (Boris Asafiev), Kniga o Stravinskom, p. 26

[11] In the third fragment, the C# is omitted, but is in the bass. In the fourth fragment, the Eb is omitted similarly.

Example 6.21 (cont.)

3. A (G+) A# B# [C#]

4. B C D [Eb]

As mentioned above, the "Devil Mummer" itself is purely octatonic. But there is another salient feature worth mentioning. The bass line descends through the pitches D, B#, B, A, and G#, thus again preserving the boundary of the fifth (example 6.22).[12]

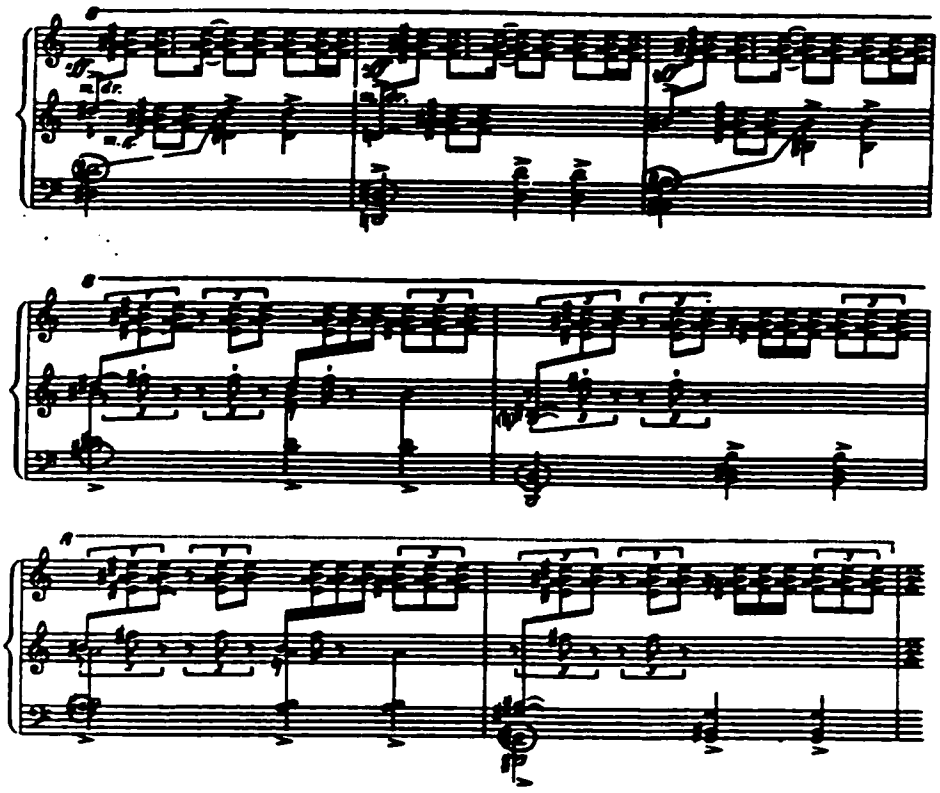
The transition away from the "Devil Mummer", subtitled the "Buffoonery of the Mummers—the Goat and Pig", is triadic in nature (example 6.23). This gives the triadic passage a traditional (diatonic) character. (as the Buffoon pretends to be something he isn't) However, in reality this section is whole-tone in

[12] It is possible that the published score of the piano version contains a mistake. It would seem logical that measure 118 from the original orchestral version (the edition published by Edition

Example 6.22

"The Devil Mummer"

Bass line descends a fifth via octatonic segment

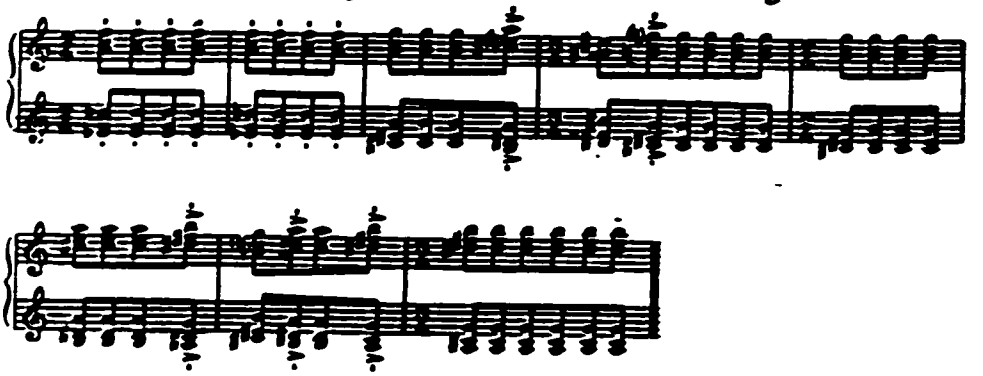


design. But, instead of four-note octatonic fragments as in the first transition, we now get four-note whole-tone fragments. If we look at each of the six voices linearly, then this characteristic becomes explicit (example 6.24).

Russe de Musique, Berlin, 1912) should be included in the piano version. This would also keep the four note motivic structure thus far discussed in the "Mummers" section in tact.

Example 6.23

"Buffoonery of the Mummers—the Goat and Pig"



Example 6.24

Linear voice leading of "Buffoonery of the Mummers"

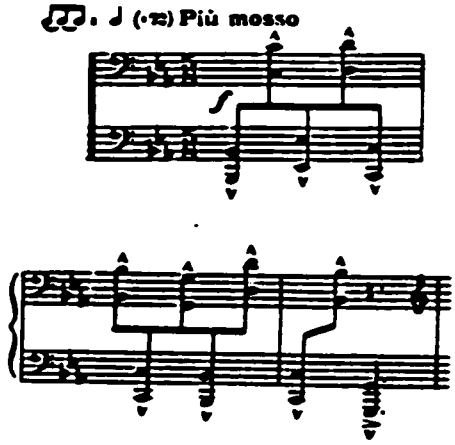
(In this example voice 1 is highest)

v.1	F	G	A	B
v.2	C	D	E	F#
v.3	A	B	C#	D#
v.4	Db	B	A	G
v.5	F+	E#	D#	C#
v.6	D#	C#	B	A

Once the "Mummers" and the second octatonic episode have concluded, diatonicism returns, and Stravinsky focuses on the flat side of the cycle of fifths. Picking up where he left off earlier in the movement, he introduces the key signature of E-flat (note that the last flat key implied in the background was B-flat during the "Wet Nurses"). This phrase begins at bar 302 with a low sounding melodic fragment starting on a Bb (example 6.25). The next phrase, at bar 305, answers in a higher range beginning on the pitch Eb in the bass voice (example 6.26). This again establishes the dyadic fifth aspect. It is also interesting that within this passage the partitioning of the chords is no longer triadic, but is expanded into fourths and fifths (interval 5/7's).

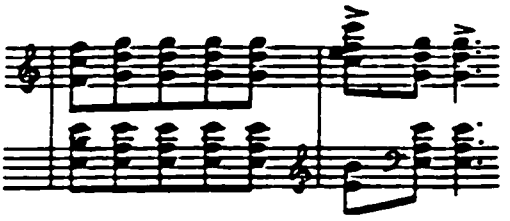
Example 6.25

"Low" fragment (bar 302)



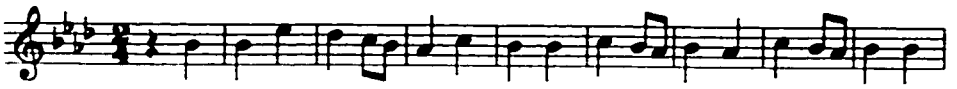
Example 6.26

"High fragment" (bar 305)



Once Bb and Eb have been asserted harmonically, the music begins a move towards A-flat. At first, this takes place by assertion, then explicitly in the key signature and the melodic material at bar 331 (example 6.27).

Example 6.27



The final completion and confirmation of the progression of fifths towards F# and the Petroushka chord takes place in the last three lines of the piano score. I will refer to this section of the work as the coda, though this is a designation only relevant to the piano score. I do so because it satisfies the requirements of a Coda

in that a) it encapsulates the harmonic motion of the tableau thus far, b) it satisfies the larger unresolved harmonic issues, and c) though it is new material, it is closely tied to the motivic elements previously heard.

ANALYSIS PART III

The Coda

The last three lines of the piano score of 1921 are particularly revealing, as much for what Stravinsky does not include in the score as for what he does include. Stravinsky himself made several references to the superiority of the final pages of *Petroushka*. He stated: "It is obvious to any perceptive musician that the best pages in *Petroushka* are the last."[13] To this end, it is worthwhile to consider Taruskin's hypothesis on the final pages of the ballet. Taruskin writes:

> ...the Petroushka chord is conceived, nay motivated, by a sense of struggle, an antagonism of order and chaos reflecting the roles of pianist versus orchestra. Again it transpires that there is practical and poetical—if not 'theoretical'—validity in the 'polytonal' idea. We are meant to hear C and F-sharp in terms of an active, not static, polarity—as competing centers, not merely as docile constituents of a single, static, octatonically referable 'hyperharmony,' to borrow an apt term from Rimsky-Korsakov's vocabulary. When it came, moreover, to synthesizing the 'Chéz Petroushka' harmonies with the street music of the outer tableaux in the coda to the ballet... Stravinsky projected that animistic opposition more starkly

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[13] Igor Stravinsky and Robert Craft, Expositions and Developments, p. 156/157

than ever, in what is surely the most inspired stroke in the whole extraordinary score.[14]

Of course, the original final pages that got Taruskin (and apparently Stravinsky) so enthusiastic are not in the piano score at all. These measures from the orchestral version are omitted from the arrangement of the piano version. The question naturally arises as to why a composer would omit his "favorite" music from an arrangement he composed a decade later. The evidence suggests that the answer lie in the fact that the music in the last three lines of the piano score contains the climactic arrival of the harmonic voyage Stravinsky intended. The final bars from the piano version confirm and complete the background fifth progression I have outlined. The passage from the orchestra version is not needed to define the true meaning of what Stravinsky meant by "polarity".

Stravinsky wrote, "All music is nothing more than a succession of impulses that converge toward a definite point of repose."[15] And he commented that, "Composing, for me, is putting into an order a certain number of these sounds according to certain interval-relationships. This activity leads to a search for the center upon which the series of sounds involved in my undertaking should

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[14] Taruskin, Stravinsky and the Russian Traditions, p. 756-757

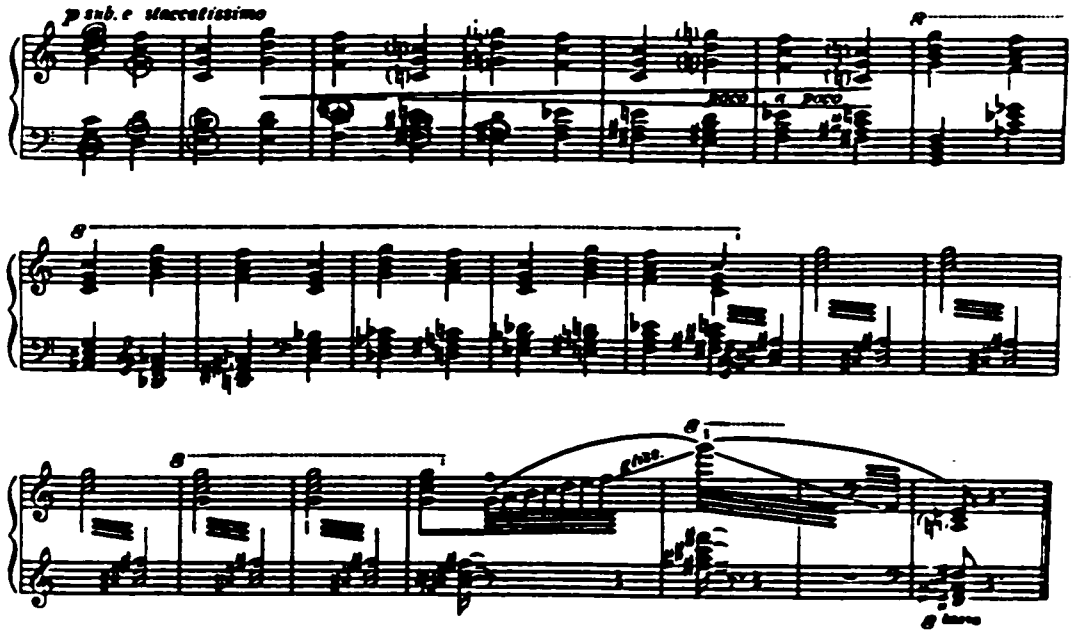
[15] Igor Stravinsky, Poetics of Music, trans. Knodel and Dahl (Cambridge: Harvard University Press, 1947), p. 35

converge."[16] It is the convergence of the opposite sides of the cycle of fifths that results in the "Petroushka Chord".

The last three lines of the piano score, beginning at bar 346, contain the material subtitled "The Crowd Joins in the Mummers Dance". In this passage, new pitches enter one by one (the joining crowd members), each at the interval of a fifth from the last, and beginning from the pitch C. The passage then begins a motion towards F# and the convergence of the final "Petroushka Chord" (example 6.28).

Example 6.28

Coda (bar 346-366)



[16] Ibid., p. 37

The first chord, at bar 346, contains the pitches C G D. The second chord introduces the pitches F and A. Thus the first two chords give us a partial fifths cycle.

F C G D A

The third chord adds the pitches E and B. Giving us:

F C G D A E B

The next new pitch, Eb, is introduced in the fifth chord of the sequence.

Eb ( ) F C G D A E B

The sixth chord adds F# and C#:

Eb ( ) F C G D A E B F# C#

The seventh chord adds the Ab (spelled G# in the score):

Ab Eb ( ) F C G D A E B F# C#

The Bb (spelled A#) is added at the 9th chord, thus completing the sequence:

Ab Eb Bb F C G D A E B F# C#

Again, this sequence adds notes from C towards F#, as did the overall motion of the movement. Stravinsky's encapsulation of the movement results in the "Petroushka Chord". The arrival of the "Petroushka Chord" is an arrival into the octatonic (magical) harmonic sphere to which the human Petroushka (seen as a ghost at the end of the ballet) belongs.

The music that was omitted from the orchestra version, and got Taruskin's special attention and is cited as Stravinsky's favorite, includes material that is largely extracted from the second (wholly octatonic) second tableau. The musical evidence above supports the assertion that Stravinsky excluded it from the piano score for more than dramatic reasons (the omitted material, soft and mystical in mood, has less of an impact than the large crash at the end of the piano version). I submit that because Stravinsky knew he had already completed his harmonic journey, and without the visual aspect of the ballet to support it, the orchestral ending was unnecessary to accomplish his goals.

CHAPTER 7

CONCLUSION

As I outlined in Chapter 2, widely accepted theories surrounding Stravinsky's harmonic language have primarily centered on the relation of octatonic and diatonic harmonic spheres and their interaction. In Chapter 3, I discussed how a literal interpretation of Stravinsky's own words complicates the understanding of these interactions. His comments on *Petroushka* and its harmonic plan often lead to erroneous conclusions surrounding the harmony of the ballet and, more specifically, the infamous C/F# relationship existing in the convergence of the "Petroushka Chord". Musicologists such as Taruskin still suggest that this relationship is the important "polarity" in *Petroushka*. It is hoped, however, that via my analysis I have convincingly shown that the real essence of the work's harmonic polarity has less to do with C and F# than the true polarity exhibited in the opposition of the diatonic and the octatonic harmonic spheres. After all, it is this polarity that corresponds with the dramatic program of the work. In terms of the plot of *Petroushka*, the C /F# "polarity" means little or nothing.

I have demonstrated my belief that these two harmonic spheres (octatonic/diatonic) are unified by their relation to the cycle of fifths. Specifically, I contend that Stravinsky recognized the potential of integrating the octatonic with

diatonic collections by the interpretation of each collection as a cycle of fifths, with the octatonic scale partitioned as a cycle of gapped fifths. This partitioning of the scale accounts not only for the fifth dyad element in the work, but also for the frequent whole-tone oscillations so often noted by analysts.[17] I have shown how Stravinsky's "serial tendencies" are evident in his use of these specific intervallic structures which are embedded within the octatonic scale, and that these tendencies are essentially in keeping with Taruskin's historical findings (outlined in Chapter IV) on the nature of harmonic progression by minor thirds and the evolution of turn-of-the-century harmonic practices. The musical evidence I have presented in support of Stravinsky's awareness of the unifying potentials of the octatonic scale resolves important issues as to the nature of Stravinsky's harmonic allegiance during this period of his life, drawing him convincingly into the realm of a "diatonic" composer.

My advancement that leading theories surrounding Stravinsky's music are not mutually exclusive but symbiotic is most important. Not only does Taruskin's historical perspective on the significance of harmonic progression by minor thirds as it relates to 0, 3, 6, 9 octatonicism support views long held by Berger and van

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[17] Consider this statement from van den Toorn: "Moreover, critical...to the role of pitch-class priority in the relevant contexts...are the encircling pitch numbers 0,2,7, and 9: whether articulated as reiterated 2s or as a series of 'fourths' or 'fifths,' they account for all manner of reiterated fragments and ostinatos, from the (D E) (AG) reiterations and flute melody in the opening blocks of Petroushka, the (F Bb C Eb (F)) and (C F G Bb (C)) diatonic fragments at Nos. 9 and 47 in *Le Sacre*, *Renard's* opening G-F-Bb-C fragment and *Histoire's* thumping ostinatos to the Eb-Bb-F-Bb-(Eb) ostinato pattern in the concluding movement of *Psalms*. "*Journal of Music Theory*" v28.2 (Fall, 1984)

den Toorn, Taruskin's historical evidence of cyclic (minor thirds) compositional routines substantiates cyclic interpretations of Stravinsky's work as well. For this reason, pioneering theories professing the importance of the interval cycles, such as those put forth by George Perle and Elliott Antokoletz, provide an additional key towards a more unified understanding of Stravinsky's musical language.[18]

Combined, these theories are a powerful tool for musicians in all aspects of the their field. For performers, the recognition of the discussed processes will provide guides to the interpretation of elements such as harmonic tension and melodic direction that transcends mere intuitive approaches. Additionally, just as performers utilize their conception of traditional harmonic function in the memorization of music of the mainstream repertoire, an understanding of Stravinsky's fundamental harmonic practices will ease the task of memorizing his works.

While each of the scholars I have discussed touched upon significant issues that provide pieces of the whole, what has been missing is a balance of the elements —octatonic, whole-tone, diatonic, cyclic, historical—their ultimate place in Stravinsky's oeuvre, and hence, a more meaningful conception of Stravinsky's musical language. By synthesizing their ideas, this dissertation provides continuity for theorists in the ongoing analytical discourse that surrounds Stravinsky's music.

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[18] See George Perle, "Berg's Master Array of the Interval Cycles", Musical Quarterly 63/1 (January 1977) and Elliott Antokoletz, "Interval Cycles in Stravinsky's Early Ballets".

It is hoped it will facilitate the application of its resources to other works of Stravinsky's early period and beyond.

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Vita

Bradley Cordell Bolen was born in Ft. Worth, Texas, on October 31, 1960, the son of Mr. and Mrs. James Cordell Bolen. He graduated from Arlington High School in Arlington Texas in 1979. He received a Bachelor of Music in piano performance from the University of Texas at Arlington in 1985, and a Master's degree from the University of Texas at Austin in 1989.

Upon entering graduate studies at the University of Texas at Austin in 1986, Mr. Bolen was awarded the Amanda Vick Lethco Scholarship and began a five-year tenure as a teaching assistant. As a University Fellow, he designed and marketed a series of highly successful lecture courses for general concert audiences. These courses included: *Ten Ways to Listen*, *The Masterpiece and the Romantic Dream*, *Beethoven to Picasso*, and *Piano!Piano!*.

In 1993 Bradley was one of five pianists, chosen internationally, to receive a fellowship to the Hartt School of Music in New Haven, Connecticut. There, he studied under the guidance of pianist Claude Frank. Mr. Bolen previously won prizes in several piano competitions, including first prizes at the Eastfield Festival

for Twentieth-century Music, The University of Texas Competition in Arlington, and the Arlington Fine Arts League Scholarship Competition.

Since his Debut with the Ft. Worth Symphony at the age of 18, Mr. Bolen has conducted solo concerts, appeared as guest soloist with several symphonies, and conducted master classes throughout the US and Mexico. He is also an active adjudicator for events throughout the US. In addition, he has arranged, composed, and recorded music for the film, including "The War at Home" and "The Spelling Bee". As a pianist, he has recorded for Touchstone Pictures.

Mr. Bolen's principle teachers have included David Stokan and Nancy Burton Garrett. He has coached with Anton Nel, Martin Canin, Menahem Pressler, and Claude Frank.

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