## Harmonic Mechanisms

Exercises for Improvisation and Composition

Dan Siegel

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## Harmonic Mechanisms Exercises for Improvisation and Composition

## Introduction

For the last three decades of writing, playing, and studying music, I have been compiling information on my observations and discoveries on the way notes interact with each other when they are combined linearly in sequence and vertically into chords. Some of these observations are superficial, some not. Relationships can be diatonic or avoid diatonic principles altogether and abide only by the logic of symmetry. Once a structure is identified, it can be analyzed and applied as a mechanism in composition and improvisation. The process of observation, analysis, and documentation is how this work came to be.

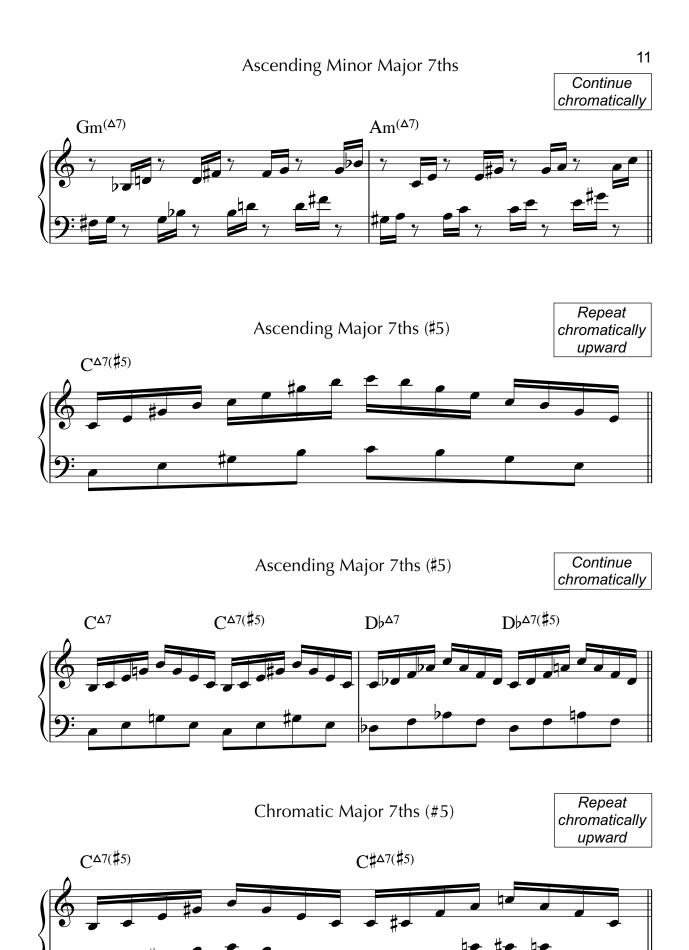
This material can serve multiple purposes. Some of the exercises could be vehicles or inspiration for improvisation and composition, or they could function simply as practice regimens. Some of the exercises are duplicated in different sections, due to the overlap of their content. While it is written from a pianistic perspective on two staves, the information can easily be applied and played on any instrument.

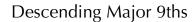
Playing through these exercises, new observations, patterns, and structures will reveal themselves. The goal is to transpose the exercises to keys that you're less comfortable in, by melodically and harmonically analyzing the numeric relationships between the notes. Thinking numerically will free you to see all keys equally and allow you to form a deeper understanding of the way the components fit together. Some of the exercises will require more calculation than others and therefore require more concentration and focus, and perhaps a slower tempo.

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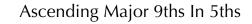




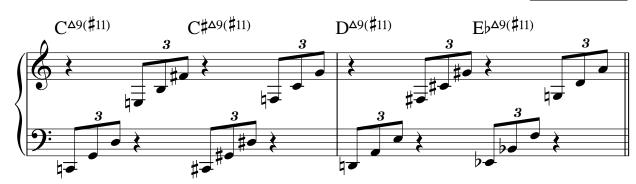


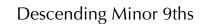
Continue chromatically





Continue chromatically





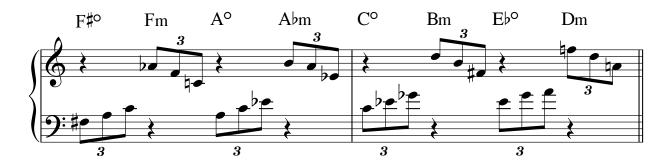
Continue chromatically





Continue chromatically





Ascending Major Triads in 1st Inversion | 69 on the Bottom

F/F#	$A\flat/A$	B/C	$\mathrm{D}/\mathrm{E}\flat$	F/Gb
( A har Major	120	uo u	U O	8
8 Major Triad	8	##8	# O	1
Minor 3rd		•	<u> </u>	Þ <u>↔</u>
9.10				

Ascending Major Triads in 1st Inversion (Built on the 6th) 7th on the Bottom

$B_{\flat}^{6(\flat9)}$	$D_{b}^{6(b9)}$	$\mathrm{E}^{6(\flat 9)}$	$G_{e(bb)}$	$B_{b}^{6(b9)}$
	20	PO	0	10 8
R Major	8	<b>8</b>	#8	
Tritone	0	Ω	<u>o</u>	<b>₽<u>Ω</u></b>
9:50				

Descending Major Triads in 2nd Inversion (Built on the \beta3) 3rd on the Bottom

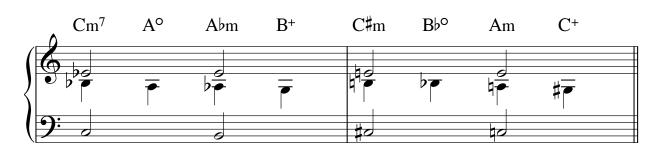
E <sup>7(#9)</sup>	Db <sup>7(#9)</sup>	Bb <sup>7(#9)</sup>	$G^{7(\sharp 9)}$	
8 Major Triad	#8	<b>№</b>	β <del>1</del> <del>Ω</del> <del>•</del>	
9:#0-11116116	О	О	О	

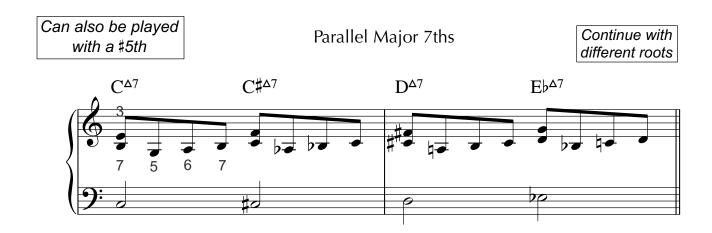
Cm	$A\flat$	C#m	A	Dm	$\mathbf{B}\flat$	D#m	В	
6	1	10		O	1	# 0	1.	
• • • • • • • • • • • • • • • • • • •	Þ	# =	<del>  </del>	7	pp	#7=	40	
9:0		#0		0		‡o		

Minor To Major

Cm <sup>7</sup>	Aβ	C#m <sup>7</sup>	A	Dm <sup>7</sup>	Вþ	D#m <sup>7</sup>	В	
	h <del>o</del>	110	7	0	حر	#**	HP	
9: 0		#0	 	О		‡o		

Minor To Major



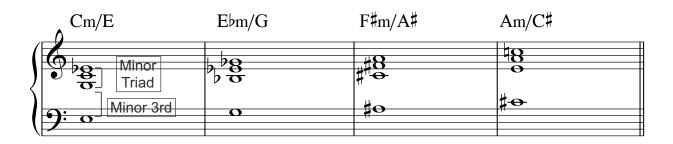


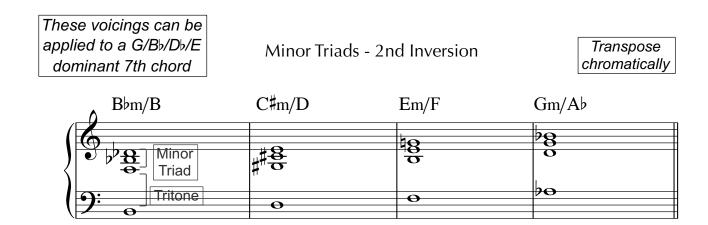
C/F#	Eb/A	F#/C	A/Eb	C/F#	
	ÞΩ	##8	#8	18	
	8	## 8		#0	
) <del>9: #0</del>	О	•	Þ <u>←</u>	# <u>Q</u>	

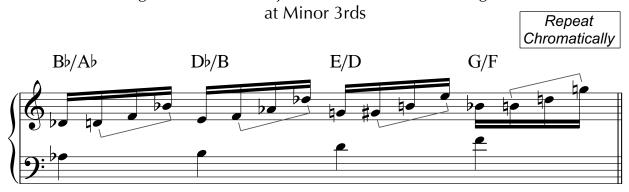
Minor Triad Variety - 2nd Inversion

ρ Cm/C#	Ebm/E	F#m/G	Am/B♭	
Minor	98	#8	48	
Tritone		T O	20	

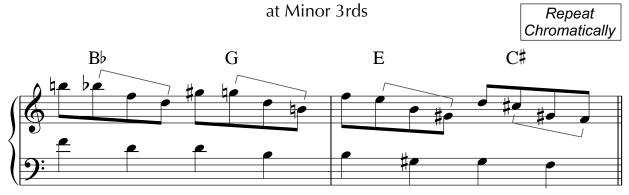
Minor Triad Variety - 2nd Inversion



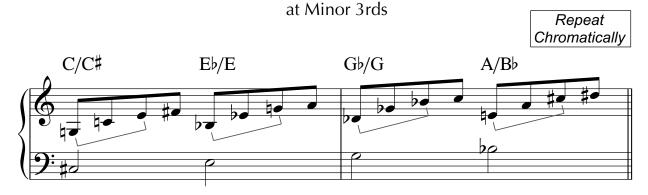




Descending Major Triads - with Upper Neighbor Tone



Ascending 2nd Inversion Major Triads - with Whole Step Upper Neighbor



Descending 2nd Inversion Major Triads - with Whole Step Upper Neighbor

