



### MTO 32.2 Examples: Brown and Lee, Examining Minor-Mode Scale Practice

(Note: audio, video, and other interactive examples are only available online)

[https://www.mtosmt.org/issues/mto.26.32.2/mto.26.32.2.brown\\_lee.html](https://www.mtosmt.org/issues/mto.26.32.2/mto.26.32.2.brown_lee.html)

#### Example 1. Scales required for the Level 1 Examination by The Royal Conservatory (2022, 19)

#### Technical Tests

Students must play all patterns from memory.

	Keys	Played	Tempo	Note Values
<b>Scales</b>				
Two-octave	C, G, F major A, E, D minor (natural and harmonic)	HS 2 octaves	♩ = 69	
Contrary Motion	C major	HT 2 octaves	♩ = 69	
Chromatic	Starting on C	HS 1 octave	♩ = 69	
<b>Chords</b>				
Tonic Triads				
• broken	C, G, F major A, E, D minor	HS 1 octave	♩ = 50	
• solid/blocked		(root position and inversions)	♩ = 100	

All scales are to be played *legato*.

Example 2. Clementi's practice regimen for the major and minor scales (with fingerings where 4 is the pinky and 0 is the thumb), within his op. 42 (1802, 23). Note that the minor scale is melodic minor.

The image shows a page of musical notation for Clementi's practice regimen. It consists of several staves of music, each with a key signature and a scale type indicated. The staves are numbered 1 through 6. The first two staves (1 and 2) show scales in C major and C minor. The third staff (3) shows a scale in G major. The fourth staff (4) shows a scale in G minor. The fifth staff (5) shows a scale in A major. The sixth staff (6) shows a scale in A minor. The notation includes treble and bass clefs, a common time signature (C), and various fingering numbers (0, 1, 2, 3, 4) above the notes. The paper is aged and yellowed.

1.  $\text{C}^{\text{ut}}$  Maj. 01234321 01234321 0

2. 4321 0123 4321 0123 4

3. 040 430 4

4. 040 430 4 40 40 4 04 0

5.)  $\text{C}^{\text{ut}}$  Maj. 0120 1230120123+3 2102 103210210

6. 4321021032102101 2012 3012 0123 4

A (la) Minor 43210 0 0 0 1 20 0 4

G (sol) Maj. 012 43 21 0 03210 0

E (mi) min. 0120123+

D (re) maj. 0 0 4 0 0 0120

Example 3. Czerny's introduction to the minor scales in his op. 500 (1839, 194)

The complete scale in C minor is therefore as follows.

and in descending the semitones occur between the 6<sup>th</sup> and 5<sup>th</sup> and between the 3<sup>d</sup> and 2<sup>d</sup> degrees.

§20. The signature in these minor scales is determined by the number of #<sup>s</sup> or b<sup>s</sup>, which are necessary to form the *descending* scale; and these marks of transposition which are necessary in *ascending*, are on the contrary always added in the course of the piece to each note when requisite, merely as *accidentals*.

§21. Here follow the Scales in all the 12 minor keys with the necessary signatures.

1  
C minor. has 3 b's, the same as E<sup>b</sup> major.

2  
C# minor. has 4 #<sup>s</sup>, like E major.

3  
D minor. has 1 b, like F major.

4  
D# minor. has 6 #<sup>s</sup>, like F# major.

The same key written by flats.

E♭ minor. has 6 b's, like G<sup>b</sup> major.

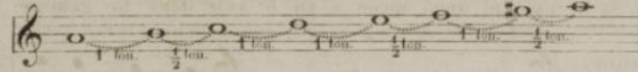
5  
E minor. has 1 #, like G major.

Example 4. Türk's illustration of the minor scale forms ([1789] 1982, 66)

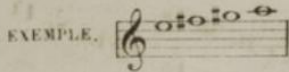


DU MODE MINEUR.

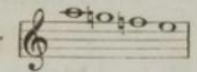
La gamme mineure n'a pas la régularité de la gamme majeure, elle diffère de celle-ci par la tierce et la sixte qui sont baissées d'un demi-ton. EXEMPLE.



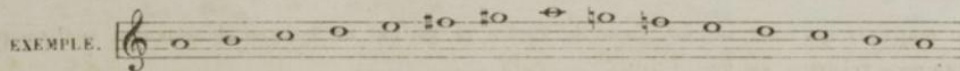
Telle est la véritable gamme mineure; cependant la difficulté de franchir l'espace d'un ton et demi qui se trouve entre le 6<sup>e</sup> et le 7<sup>e</sup> degré *fa, sol*, a mis en usage les modifications suivantes: en montant on a rapproché le 6<sup>e</sup> degré du 7<sup>e</sup>



en descendant au contraire c'est le 7<sup>e</sup> degré que l'on a rapproché du 6<sup>e</sup>.



GAMME COMPLÈTE.

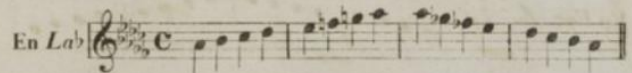
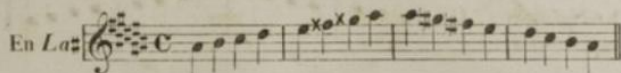
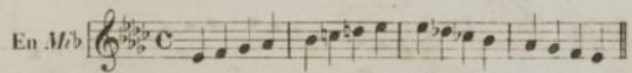
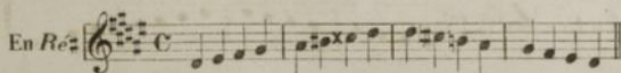
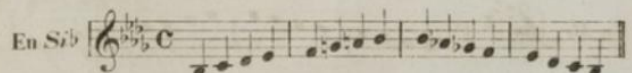
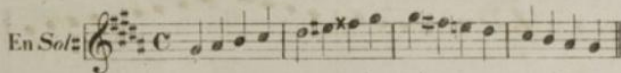
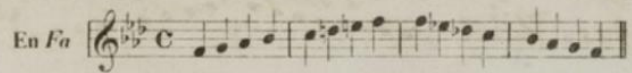
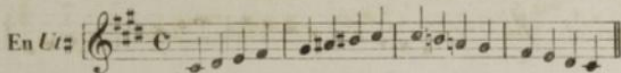
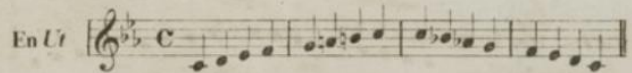
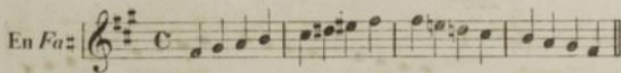
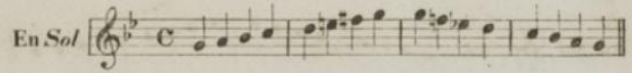
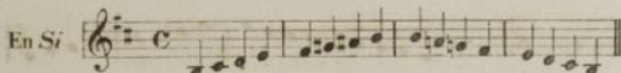
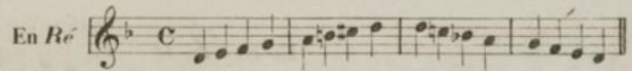
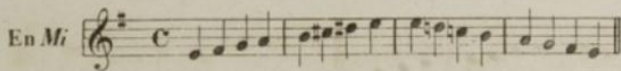
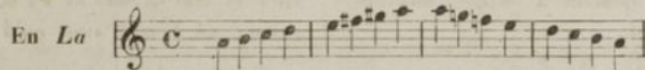


C'est ainsi que la gamme mineure est employée le plus généralement.

Le dièse qui affecte le *sol*, septième note de la gamme que l'on appelle note sensible, ne se met point à la clef parcequ'étant retranché souvent on le considère comme accidentel.

Cette gamme n'ayant point d'accident à la clef est naturellement celle qui se rapproche le plus de la gamme primitive d'*Ut* à laquelle elle est relative.

Le même rapport existe pour tous les tons, c'est à dire que chaque ton majeur a un ton mineur qui lui est relatif, qui prend la même clef et qui se trouve une tierce au-dessous. Ainsi lorsqu'il n'y a pas de signe à la clef on est en *Ut* majeur ou en *La* mineur; lorsqu'il y a un dièse à la clef on est en *Sol* majeur ou en *Mi* mineur etc.



Lorsque l'on veut monter la note d'un-ton on place devant elle le signe suivant x appelé double-dièse (ou celui-ci ♯). Lorsque l'on veut descendre la note d'un-ton, on place devant elle le signe suivant b appelé double-bémol; après le double-dièse pour rétablir la note dans son ton naturel, on se sert simultanément d'un bécarré et d'un dièse (♯) et après le double-bémol on se sert d'un bécarré et d'un bémol (♭).

Example 6. The descending harmonic minor scale in F minor over a V harmony in Beethoven's Piano Sonata op. 2, no. 1 (1795), first movement, recapitulation, with the augmented second circled in mm. 133 and 137

$Fm: i^6$      $ii^{o6}$      $Cad^{6/4}$      $V^{4/2}$      $i^6$      $ii^{o6}$

$Cad^{6/4}$      $V^7$      $i$

Example 7. Vogler's illustration of acceptable ascending minor scales (1778, Tab. IV, f. 2)

f. 2.    gut.    schlecht.    gut    f

Example 8. Vogler's illustration of acceptable descending minor scales (1778, Tab. V, f. 2)

f. 2.    gut.    schlecht.    gut.    f

Example 9. The descending F# minor harmonic minor scale over a V<sup>7</sup>/iv harmony in Chopin's Nocturne in C-sharp minor, no. 20, m. 15 (1830), with the augmented second circled

The image shows a musical score for Chopin's Nocturne in C-sharp minor, no. 20, m. 15. The score is written for piano and consists of two staves: a treble clef staff and a bass clef staff. The key signature is C-sharp minor (three sharps: F#, C#, G#). The time signature is 3/4. The score is divided into three measures. The first measure is labeled 'C#m: i' and contains a whole note chord. The second measure is labeled 'V<sup>7</sup>/iv' and contains a descending eighth-note scale. The third measure is labeled 'iv' and contains a whole note chord. The descending scale in the second measure is circled in red, and the interval between the second and third notes of the scale is circled in red, indicating an augmented second. The tempo marking 'con forza' is written below the second measure. The number '14' is written above the first measure, and the number '8' is written above the second measure.

C#m: i                      V<sup>7</sup>/iv                      iv

Example 10. The beginning of the scale regimen for practice in Beyer (1850, 66–67), which include each major scale and its parallel harmonic minor

66

**24** GAMES EN TONS MAJEURS ET MINEURS  
disposées selon la ressemblance du doigté et la comparaison des tons majeurs et mineurs.

N<sup>o</sup> 1. UT majeur. \* *UT mayor.*

2. UT mineur. \* *UT menor.*

3. SOL majeur. \* *SOL mayor.*

4. SOL mineur. \* *SOL menor.*

Example 11. Following the scales in Example 10, Beyer (1850, 67) illustrates two additional ways to play the minor scale.

Indépendamment de ces gammes mineures il y a encore deux autres manières de les faire.

I.

II.

Ademas de estas escalas menores, hay tambien dos otras maneras de hacerlas.

Example 12. Earlier in the manual, Beyer presents a warmup that consists mostly of melodic minor (1850, 49).

GAMME EN LA MINEUR.

ESCALA EN LA MENOR.

Example 13. The beginning of Exercise 39 in Hanon (1878, 32), illustrating the presentation of C major and its relative harmonic and melodic minor scales

32

**LES 12 GAMMES MAJEURES ET LES 12 GAMMES MINEURES.**

**N° 39.** Chaque gamme majeure est suivie de son ton relatif mineur.

Il y a deux manières de faire la gamme mineure; nous avons cru devoir les donner ici après chaque gamme majeure, afin de laisser au maître la facilité d'enseigner celle qu'il préfère.

Nous avons marqué du numéro 1<sup>o</sup> la première gamme mineure moderne, qu'on appelle aussi gamme mineure harmonique; et du numéro 2<sup>o</sup> la seconde gamme mineure ancienne qu'on appelle aussi gamme mineure mélodique.

On sait que la gamme mineure moderne ou harmonique, a la sixte mineure avec la note sensible en montant et en descendant; tandis que la gamme mineure ancienne ou mélodique, a la sixte majeure et la note sensible en montant, avec la sixte mineure sans note sensible en descendant. (Voir à notre méthode page 41, une observation sur ces deux gammes.)

The image displays three systems of musical notation for Exercise 39, each in 4/4 time. The first system is for C major, labeled 'Ut majeur.' It features a treble clef with a tempo marking 'M. 60 à 120.' and a bass clef. The right hand plays a sequence of eighth-note patterns with fingerings (1-2-3-4, 1-2-3-4, 1-2-3-4, 1-2-3-4) and a dotted quarter note. The left hand plays a sequence of eighth-note patterns with fingerings (5-4-3-2-1-3, 4-3-2-1-4, 3-2-1-4, 1-1-1-1-1-1-1-1) and a dotted quarter note. The second system is for C harmonic minor, labeled '1<sup>o</sup> La mineur, ton relatif d'Ut majeur.' It features a treble clef and a bass clef. The right hand plays a sequence of eighth-note patterns with fingerings (1-2-3-4, 1-2-3-4, 1-2-3-4, 1-2-3-4) and a dotted quarter note. The left hand plays a sequence of eighth-note patterns with fingerings (5-4-3-2-1-3, 4-3-2-1-4, 3-2-1-4, 1-1-1-1-1-1-1-1) and a dotted quarter note. The third system is for C melodic minor, labeled '2<sup>o</sup> La mineur, ton relatif d'Ut mineur.' It features a treble clef and a bass clef. The right hand plays a sequence of eighth-note patterns with fingerings (1-2-3-4, 1-2-3-4, 1-2-3-4, 1-2-3-4) and a dotted quarter note. The left hand plays a sequence of eighth-note patterns with fingerings (5-4-3-2-1-3, 4-3-2-1-4, 3-2-1-4, 1-1-1-1-1-1-1-1) and a dotted quarter note. Each system concludes with a final chord in the right hand.

## VINGT-NEUVIÈME LEÇON.

41

Le Conservatoire de Paris et la plupart des grands artistes, ayant adopté la gamme mineure avec la sixte mineure en montant, parce qu'elle est plus en rapport avec les lois de l'harmonie, et qu'elle offre un doigté plus régulier, nous avons cru devoir aussi lui donner la préférence pour notre méthode; cependant, comme nous ne voulons pas être exclusif, nous donnerons aussi à la page 54 la gamme mineure ancienne avec la sixte majeure en montant.

### GAMME DE LA MINEUR

avec la Sixte mineure en montant.

(1)

On répétera 10 fois cette gamme.

Après le D.C.  
ou met le pouce  
sur ce la.

### TARENTELLE.

DANSE NAPOLITAINE.

Allegro. (2)

*p* la reprise *sotto voce* *ppp*

*mf* *Cres.* *cen - do -* *f* *D.C.*  
*al segno.*

*CODA.* *p* *Cres.* *cen - do -* *f*

(1) La note sensible dans le mode mineur est toujours affectée d'un accident; voir cette règle à la page 35

(2) Quand un morceau commence par une mesure incomplète, on compte d'abord les temps qui manquent, puis cette mesure doit être complétée à la fin du morceau (3).

Example 15. Rameau's introduction to the minor mode ([1722] 1971, 265)

Re	.	.	.	Octave
Do#	.	.	.	Leading tone
Si $\flat$	.	.	.	Sixth note
La	.	.	.	Dominant-tonic
Sol	.	.	.	Fourth note
Fa	.	.	.	Mediant
Mi	.	.	.	Second note
Re	.	.	.	Tonic note

**Example III.61.** Model for minor keys.



**Example III.62**

Example 16. Rameau's octave harmonization exercises illustrating only melodic minor ([1722] 1971, 499)

Key of La minor

Key of Sol major

Key of Sol minor

Key of Fa major

Key of Re major

Example 17. The diatonic harmonies in the minor mode according to Weber (1830–32, section 149)

I    II    II<sup>7</sup>    IV    IV<sup>7</sup>    V    V<sup>7</sup>    VI    VI<sup>7</sup>    VII

INTRODUCTION.

MODE MINEUR.

Tonique.      Second degré.      Troisième degré.      Quatrième degré.

Dominante.      Sixième degré.      Note sensible.      Tonique.

La sixième et la septième note de la gamme mineure descendante, ayant d'autres affinités que dans la gamme montante, sont baissées d'un demi-ton.

Tonique.      Septième degré.      Sixième degré.      Dominante.

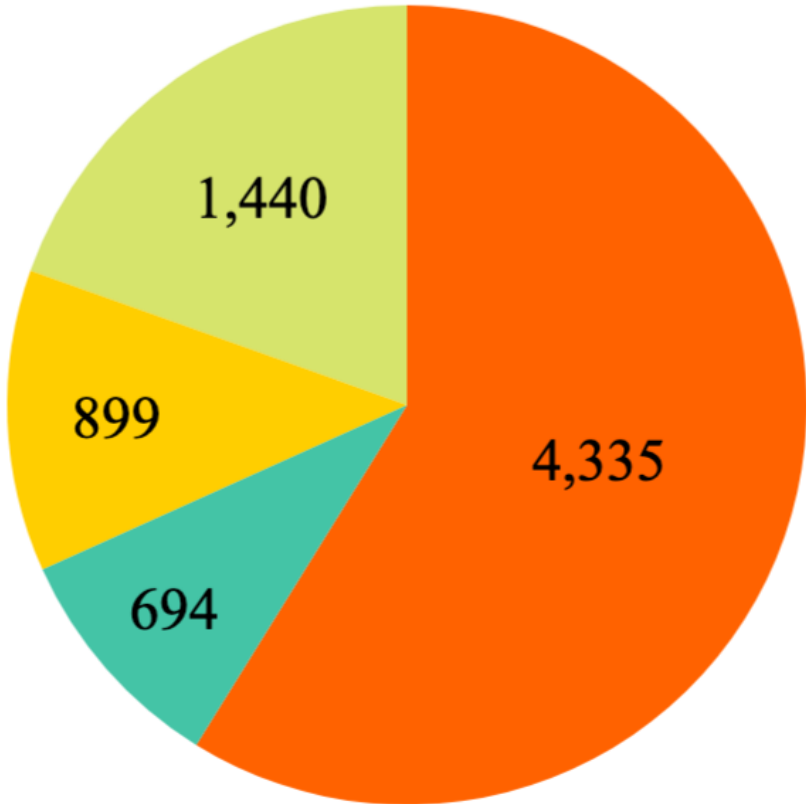
Example 19. An excerpt from the presentation of scales for practice in the piano treatise co-authored by Fétis and Moscheles, where only the major and melodic minor scales are included (1840, 33)

GAMMES MAJEURES ET MINEURES.  
de deux Octaves

M. S. 2345.

Example 20. Frequency of minor-mode fragments counted in the Yale-Classical Archives Corpus within stepwise passages when ascending to  $\hat{1}$

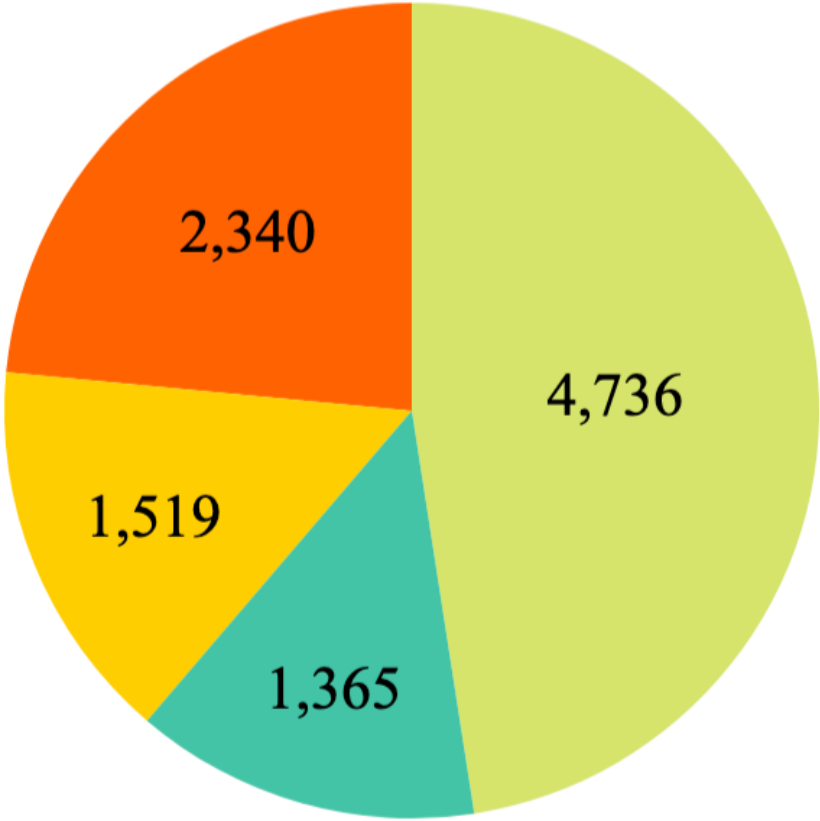
# Ascending to $\hat{1}$



●  $\hat{6}-\hat{7}-\hat{1}$    ●  $\hat{6}-\flat\hat{7}-\hat{1}$    ●  $\flat\hat{6}-\flat\hat{7}-\hat{1}$    ●  $\flat\hat{6}-\hat{7}-\hat{1}$

Example 21. Frequency of minor-mode fragments counted in the Yale-Classical Archives Corpus within stepwise passages when descending from  $\hat{1}$

# Descending from $\hat{1}$



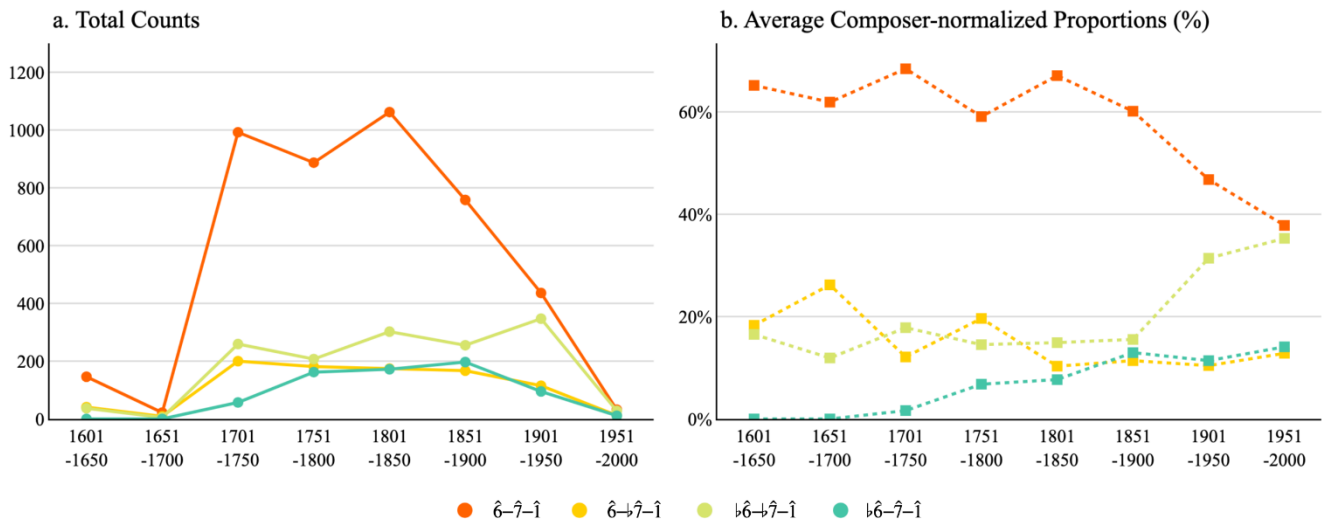
●  $\hat{1}-\hat{7}-\hat{6}$    ●  $\hat{1}\rightarrow\hat{7}-\hat{6}$    ●  $\hat{1}\rightarrow\hat{7}\rightarrow\hat{6}$    ●  $\hat{1}-\hat{7}\rightarrow\hat{6}$

Example 22. Charles Gounod's *Funeral March of a Marionette*, mm. 23–26



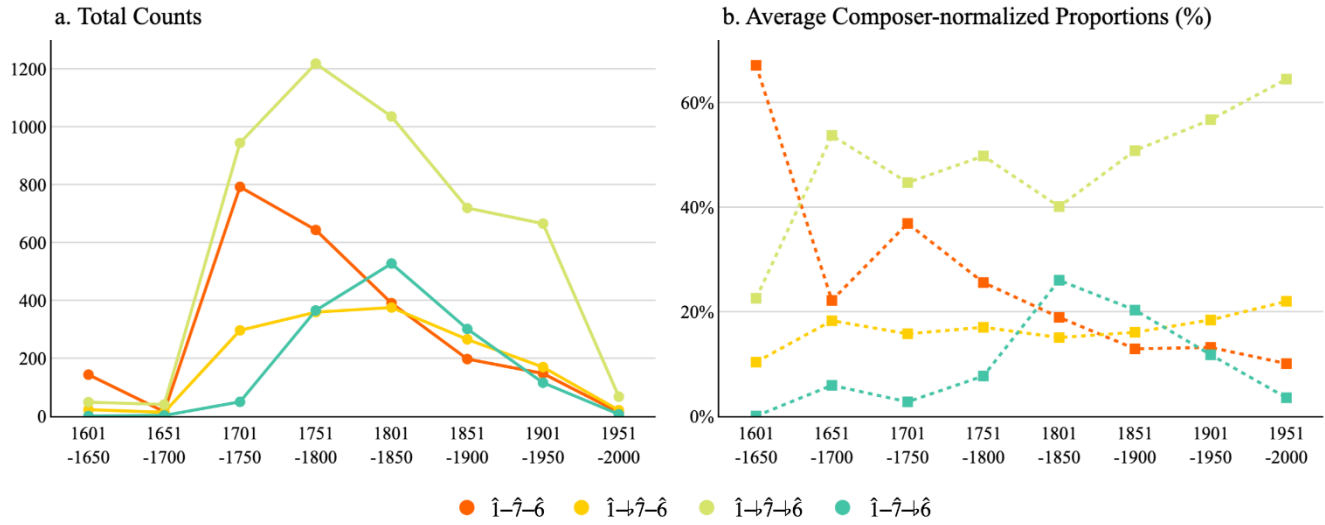
Example 23. The left panel ("a") shows the total raw counts of stepwise fragments ascending to  $\hat{1}$  in all minor-mode passages by the 166 composers from the Yale-Classical Archives Corpus, organized by composer's year of death. The right panel ("b") shows the average percentage with which each composer employed the ascending minor-mode scale forms.

Ascending to  $\hat{1}$



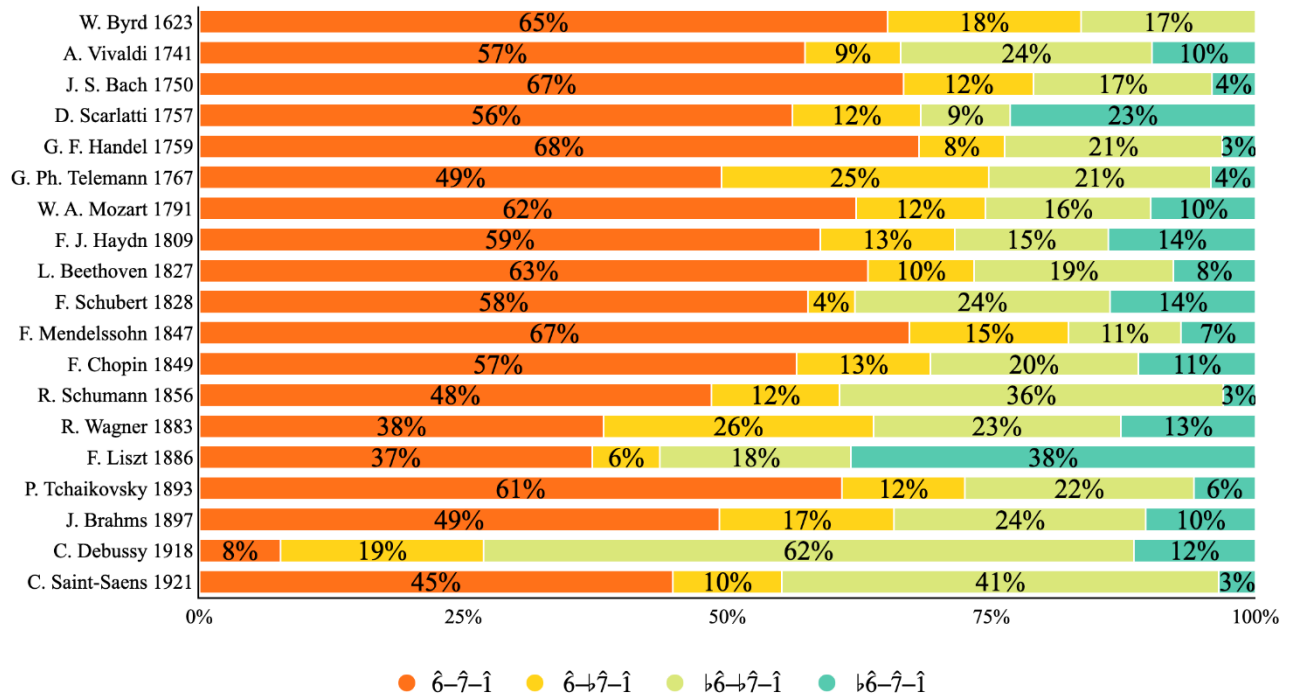
Example 24. Same as in Example 23, but now showing scale fragments that are descending from 1 in minor-mode passages

Descending from  $\hat{1}$

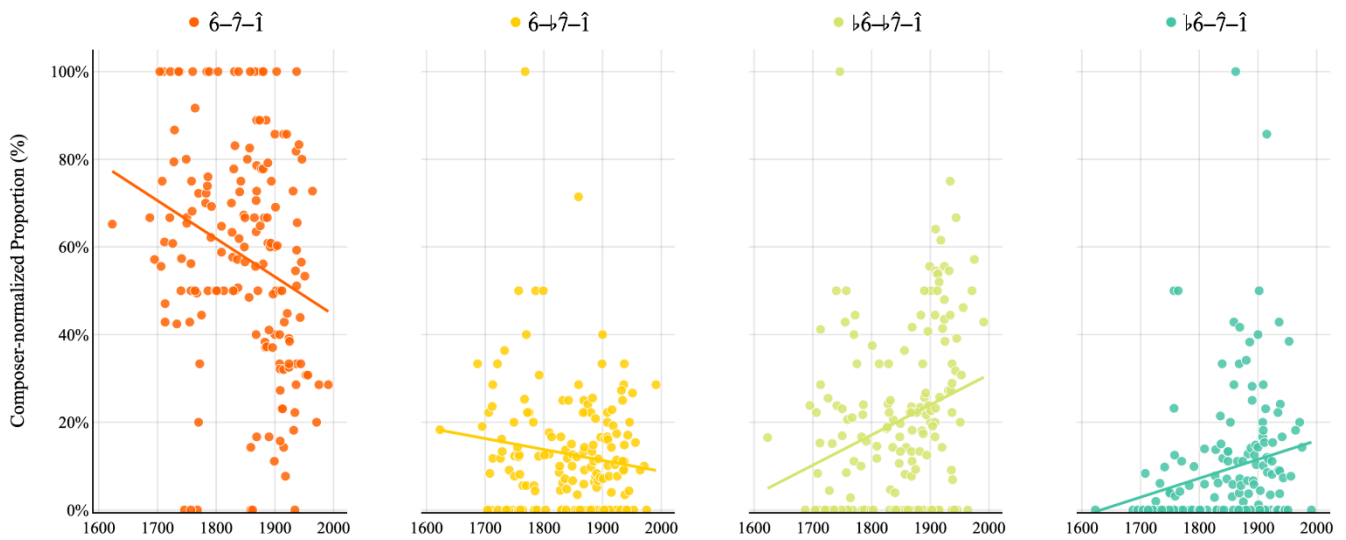


Example 25. Proportion used for each of the minor-mode ascending scale fragments containing variants of 6-7-1 by the 19 most represented composers in the corpus, presented chronologically by the composer's year of death

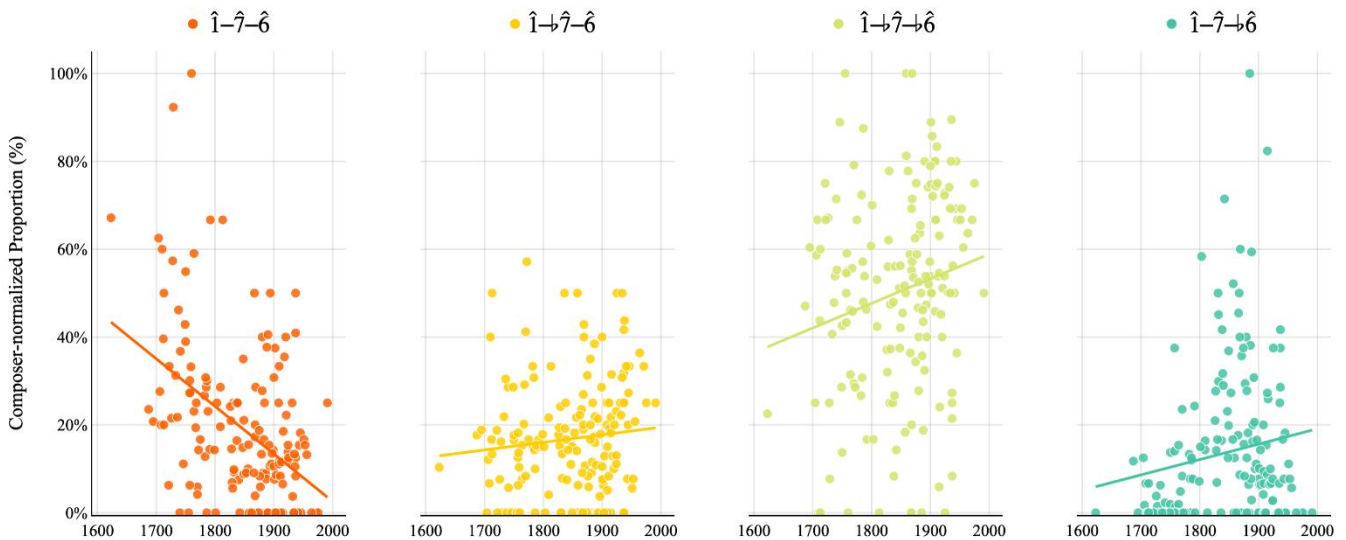
Composer-normalized Proportions of Ascending Fragments



Example 26. Average proportional use of all ascending minor-mode fragments by all 166 composers in the corpus, organized by composer's year of death with trend lines for each scale type



Example 27. Same as Example 26, but for descending minor-mode fragments

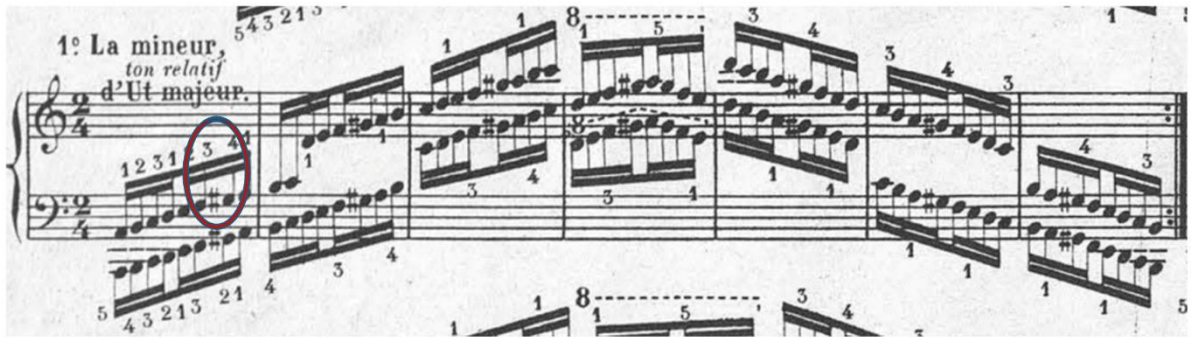


Example 28. A comparison of Liszt's scale use versus other composers in the Yale-Classical Archives Corpus

Scale Type	Liszt		Total (All Composers)	
	Count	%	Count	%
Ascending Melodic	70	37.2%	4,335	58.8%
Ascending Dorian	12	6.4%	899	12.2%
Ascending Natural	34	18.1%	1,440	19.6%
Ascending Harmonic	72	38.3%	694	9.4%
<b>Total</b>	<b>188</b>	<b>100.0%</b>	<b>7,368</b>	<b>100.0%</b>

Example 29. Fingerings of the augmented second in various passages, with the augmented second circled in each excerpt. (A) The augmented second performed with right-hand fingers 3 and 4 in an A harmonic minor scale in Hanon (1878, 32). (B) The augmented second performed with right-hand fingers 3 then 2 as part of an F minor harmonic minor scale excerpt within Beethoven's op. 2, no. 1, m. 133. (C) The augmented second performed by right-hand fingers 2 then 1 as part of a F# minor scale excerpt within Chopin's Nocturne in C# minor, no. 20, m. 15

A.



B.



C.



Example 30. All possible versions of 6 and 7 with minor-mode tonics ( $\hat{1}-\downarrow\hat{3}-\hat{5}$ )

- Natural Minor (Aeolian):  $\hat{1} \hat{2} \downarrow\hat{3} \hat{4} \hat{5} \downarrow\hat{6} \downarrow\hat{7} \hat{1}$
- Harmonic Minor:  $\hat{1} \hat{2} \downarrow\hat{3} \hat{4} \hat{5} \downarrow\hat{6} \uparrow\hat{7} \hat{1}$
- Dorian:  $\hat{1} \hat{2} \downarrow\hat{3} \hat{4} \hat{5} \uparrow\hat{6} \downarrow\hat{7} \hat{1}$
- Ascending Melodic Minor:  $\hat{1} \hat{2} \downarrow\hat{3} \hat{4} \hat{5} \uparrow\hat{6} \uparrow\hat{7} \hat{1}$

Example 31. The jazz melodic minor scale as found in jazz theory, where the melodic minor scale is played both ascending and descending with  $\uparrow 6$  and  $\uparrow 7$ : (A) Reeves (1989, 191), (B) Hughes (2015), (C) LaDisa (n.d.)

A.

Musical notation for C-(Δ7) scale in 4/4 time. The scale is shown in two lines: an ascending line and a descending line. The notes are C, D, E, F, G, A, B, A, G, F, E, D, C. There is a flat sign under the A note in both directions. The piece concludes with a whole rest on the C note.

B.

CLASSICAL MELODIC MINOR SCALE  
 1 2  $\flat 3$  4 5 6 7 8  $\flat 7$   $\flat 6$  5 4  $\flat 3$  2 1

JAZZ MELODIC MINOR SCALE  
<sup>3</sup> 1 2  $\flat 3$  4 5 6 7 8 7 6 5 4  $\flat 3$  2 1

C.

**A Natural Minor Scale**  
 1 2 3 4 5 6 7 1 1 7 6 5 4 3 2 1

**A Harmonic Minor Scale**  
 1 2 3 4 5 6  $\sharp 7$  1 1  $\sharp 7$  6 5 4 3 2 1

**A Melodic Minor Scale**  
 1 2 3 4 5  $\sharp 6$   $\sharp 7$  1 1  $\flat 7$   $\flat 6$  5 4 3 2 1

**A Jazz Melodic Minor Scale**  
 1 2 3 4 5  $\sharp 6$   $\sharp 7$  1 1  $\sharp 7$   $\sharp 6$  5 4 3 2 1

Example 32. A recommended daily scale-practice regimen, where  $\hat{1}$  represents one shared tonic in each scale. As a student progresses from one scale to the next, only a single scale degree is changed per scale (in red).

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|----|--------------------------|-----------|-----------|---------------------|-----------|-----------|---------------------|---------------------|-----------|---------------------|---------------------|-----------|-----------|---------------------|-----------|-----------|
| 1) | Major:                   | $\hat{1}$ | $\hat{2}$ | $\uparrow\hat{3}$   | $\hat{4}$ | $\hat{5}$ | $\uparrow\hat{6}$   | $\uparrow\hat{7}$   | $\hat{1}$ | $\uparrow\hat{7}$   | $\uparrow\hat{6}$   | $\hat{5}$ | $\hat{4}$ | $\uparrow\hat{3}$   | $\hat{2}$ | $\hat{1}$ |
| 2) | Jazz Melodic Minor:      | $\hat{1}$ | $\hat{2}$ | $\downarrow\hat{3}$ | $\hat{4}$ | $\hat{5}$ | $\uparrow\hat{6}$   | $\uparrow\hat{7}$   | $\hat{1}$ | $\uparrow\hat{7}$   | $\uparrow\hat{6}$   | $\hat{5}$ | $\hat{4}$ | $\downarrow\hat{3}$ | $\hat{2}$ | $\hat{1}$ |
| 3) | Dorian:                  | $\hat{1}$ | $\hat{2}$ | $\downarrow\hat{3}$ | $\hat{4}$ | $\hat{5}$ | $\uparrow\hat{6}$   | $\downarrow\hat{7}$ | $\hat{1}$ | $\downarrow\hat{7}$ | $\uparrow\hat{6}$   | $\hat{5}$ | $\hat{4}$ | $\downarrow\hat{3}$ | $\hat{2}$ | $\hat{1}$ |
| 4) | Natural Minor (Aeolian): | $\hat{1}$ | $\hat{2}$ | $\downarrow\hat{3}$ | $\hat{4}$ | $\hat{5}$ | $\downarrow\hat{6}$ | $\downarrow\hat{7}$ | $\hat{1}$ | $\downarrow\hat{7}$ | $\downarrow\hat{6}$ | $\hat{5}$ | $\hat{4}$ | $\downarrow\hat{3}$ | $\hat{2}$ | $\hat{1}$ |
| 5) | Harmonic Minor:          | $\hat{1}$ | $\hat{2}$ | $\downarrow\hat{3}$ | $\hat{4}$ | $\hat{5}$ | $\downarrow\hat{6}$ | $\uparrow\hat{7}$   | $\hat{1}$ | $\uparrow\hat{7}$   | $\downarrow\hat{6}$ | $\hat{5}$ | $\hat{4}$ | $\downarrow\hat{3}$ | $\hat{2}$ | $\hat{1}$ |