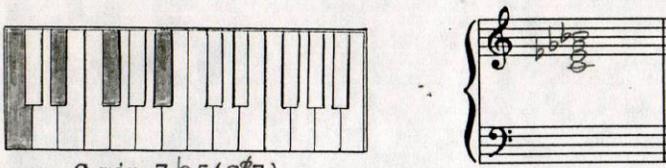


Half-Diminished Seventh: The Bernard Herrmann Chord
 by
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If there is a harmonic *flavoring* that Bernard Herrmann most preferred overall in his musical diet or *oeuvre* (especially later in his career), it would most likely be the half-diminished 7th tonality.

Chord Number 53 : minor 7^b 5 (half-diminished)
 Chord Formula : 4-4-5



C min 7^b 5 (C[#]7)

C - E ^b - G ^b - B ^b	G - B ^b - D ^b - F
C [#] - E - G - B	G [#] - B - D - F [#]
D - F - A ^b - C	A ^b - C ^b - E ^{bb} - G ^b
D [#] - F [#] - A - C [#]	A - C - E ^b - G
E ^b - G ^b - B ^{bb} - D ^b	A [#] - C [#] - E - G [#]
E - G - B ^b - D	B ^b - D ^b - F ^b - A ^b
F - A ^b - C ^b - E ^b	B - D - F - A
F [#] - A - C - E	

This contention that there is a “Herrmann Chord” is somewhat a playful one. Unless it can be documented that Bernard Herrmann himself said (most unlikely!) that he preferred one chord as being most representative of his style, then obviously this contention cannot be *proven*. Moreover, just as an artist uses more than one or two pigments to “bring to

life” on two-dimensional canvass the subject of his painting, a composer also relies on a diverse range of tonal “colors” to best convey the musical picture he or she is creating. This picture is not simply a harmonic one. Orchestral color or timbre was Herrmann’s musical forte throughout his career. Herrmann had a unique *atmospheric* style in his career, enhanced enormously by his unusual orchestrations.

Categories of mood (romance, drama, humor, etc.) can be conveyed musically with various instruments and their special effects. For instance, the descending gliss of a trombone or harp was often employed by film composers (the “mickey mousing” of Max Steiner, for instance) to convey a comedic musical effect if a light-hearted scene on the screen showed someone falling or slipping to the ground. Not as obvious but just as important in the overall musical picture are the harmonies used. Certain chord tonalities were traditionally associated with certain moods. Minor chords, for instance, tend to be perceived as introspective, melancholy, and emotionally “darker” as compared to the more “cheerful,” brighter or relaxed quality associated with, say, the major 6 chords.

After simple triads (minor and major, especially), seventh chords are considered most common in terms of frequency of use. The simplest chord is a triad (three tones). A triad with an added third is called a seventh. Examples of the six most common seventh chords with their respective structure of minor and major interval thirds are as follows:

- Major 7 (maj-min-maj) 1-M3-P5-M7 (C/E/G/B)
- Dominant 7 (maj-min-min) 1-M3-P5-m7 (G/B/D/F)
- Minor 7 (min-maj-min) 1-m3-P5-m7 (D/F/A/C)
- Half-Diminished 7 or min7 flat 5 (min-min-maj) 1-m3-d5-m7 (B/D/F/A)
- Minor-Major 7 (min-maj-maj) 1-m3-P5-M7 (C/Eb/G/B)
- Diminished 7 (min-min-min) 1-m3-d5-d7 (B/D/F/Ab)

Seventh chords traditionally have been regarded as “dissonant” chords requiring resolution, although major 7th chords may be an exception since it is often regarded as the most “stable” seventh tonality despite the normally regarded strong dissonance implied in the maj 7 interval between the root and the 7th note (Ex., C up to B in the C maj7 chord). However, there is a Perfect 5th interval between the 3rd and the 7th (Ex., E up to B) and of

course between the Root and the 5th (Ex., C up to G). Fully diminished 7ths are considered the most strongly dissonant seventh chords because there are two tritone intervals inherent in the interval structure (B to F, and D to Ab). A tritone (augmented 4th or diminished 5th interval) is considered the most dissonant interval between notes that nevertheless offers a good deal of “spice” or dynamism to the sound. So two tritones superimposed in the diminished 7th chord structure simply intensifies the dissonant effect inherent in that chord.

Somewhere between those “most stable” and “most dissonant” seventh chords is the half-diminished seventh. In terms of tonal harmony (tertian or “stacked thirds”), it is constructed the same as a minor seventh except that the 5th is flat (Ex., the diminished 5th Gb note in C-Eb-Gb-Bb). In this example, there is also a tritone interval between the root (C) and that diminished 5th (Gb) that bestows tension or dynamism, while the minor 2nd interval between the root and 3rd (C-Eb) and the Perfect 5 interval between the third and 7 (Eb-Bb) provides consonance and solid stability. The minor chords overall were Herrmann’s “favorite” chord modality in terms of frequency of use. The half-diminished 7th is an extended version of the structure of the minor 7th chord (altered with the flattening of the 5th). Subjectively, it can suggest restlessness or overall dramatic tension. Herrmann used it as a richer way to express himself musically.

Note, however, that it is not necessarily a “dissonant” tonality that needs to be “resolved.” Debussy was one of the first composers (if not the first) who regularly used half-diminished 7ths rather as consonances, not necessarily as dissonant appendages to triads, so they were freely approached, whether “resolved” or not (in traditional terms). His French Impressionism style allowed chords like the dominant 7th and half-diminished 7th to digress from traditional or conventional harmonic use in relation to the tonic in order to simply function as its own musical color. Thanks to the experimentation of composers such as Debussy, constant exposure to new ways of expressing half-diminished 7ths changed others’ perception of them. What used to be labeled as consonant or dissonant expanded into a less rigid framework of perception. Dissonance tends to seek resolution, but when the comfort level of accepted dissonance expands, then “resolution” in the same old ways is discarded. Most traditional resolution centers on the return to the stability of the tonic or key. Yet the only constant in life (including music) is change, and change implies stretching one’s “stable” boundaries with the “tension” of new (if only

temporary) imbalance that tests status quo limits. Herrmann excelled as a musical dramatist, and the principal harmonic tools he used involved tonalities of unease (dissonant imbalance).

Why use them? Herrmann used, most particularly, the minor chords and half-diminished 7ths (diminished and minMaj chords less commonly) because they were harmonic tools of the trade that probably best resonated with his urge to best materialize his musical temperament. These tonalities tended to best approximate on an outer (hearing) level what he felt within himself, especially in how he musically interpreted the drama of the screen he was commissioned to compose music for. While structurally (in part) stable, it is not the relative stable mild consonance of the minor triads. While structurally (in part) unstable, it is not as tonally unstable as the fully diminished 7th, nor as dissonant (possessing one tritone interval instead of two as in the dim 7th chord). The half-diminished 7th tonality appears to have a good creative balance (or *imbalance* if you prefer) between stability and change. This quality actually lends itself quite well to the Romantic musical idiom and its tension inherent in desire (yearnings for love, sexual fulfillment, etc.). Thus the chord lent itself well to Debussy's *impressionistic* style of music that I believe Herrmann borrowed or adopted to some extent. In fact, Herrmann once stated that he felt Debussy the greatest composer of the twentieth-century.

Realize that Herrmann heard this chord in many familiar works during his formative years of musical training or exposure. It was already quite prominent decades before the turn of the century in the works of Wagner. Perhaps the reader has heard of the famous *Tristan* chord from the Prelude to Act 1 of *Tristan und Isolde* (1857-59). Wagner notates the F half-diminished 7th sonority (F-Ab-Cb-Eb) as its enharmonic equivalent F-G#-B-D# (Tristan chord). It was "forever" afterward associated with Late Romantic yearnings for love or fulfillment of desire. In the next few generations the sonority was used frequently in romantic/harmonic language. For instance, Holst used it in a rather sweet way in the *Venus* movement of *The Planets*, but he also used it in a non-Romantic idiom in the contrasting *Saturn* movement. The chord was even used in transitional early atonal music that sought to make itself heard in twentieth-century music.

So the chord developed into various musical associations (whether romantic yearnings or unrequited desire, mood of "strangeness," free-standing moderate dissonance) by the time Herrmann came into the scene.

And Herrmann rather interestingly combined the richly Romantic and the idiosyncratic Impressionistic styles, although it would tend to lean more heavily toward the impressionistic focus of individualistic color (especially orchestral color or timbre in Herrmann's case). Romantic-era music rebelled against the reasoned structure of Enlightenment-era music and sought to express *emotion* in as intense experience musically. In a sense, there was an "irrational" quality of Romanticism because of its focus on intense emotion and ambiguity of desire. Herrmann did not, however, espouse the obvious *leitmotiv* principle (as certainly Max Steiner & Erich Wolfgang Korngold did in their pure Late Romantic stylistic approach) evident in German symphonic music. His music was often quite lyrical but not particularly melodic (Max Steiner was particularly famous for assigning a specific melody for each of the major characters of a movie).

As an aside regarding Max Steiner, he too used half-diminished sevenths in his scores (as did nearly all notable film composers) but certainly not as often as Herrmann. Max tended to favor Dominant sevenths in his scores. But he prominently used half-dim 7ths in, for example, the "Letter to Lucy" cue (Reel 11 pt 1) in *The FBI Story*. Here is my rundown of that section from my paper on the score:

[11/1] [Letter To Lucy] 3/4 time, 26 bars, 3 pages. Dvd location: Chapter 22 at 4:10. Note: Reprise of 7 pt 2 in Bars 1-16 (lifted from Bars 21-36 of the earlier cue). Scene: Lucy reads the letter Chip intended for her on her return "home," but then the moving truck arrives (*Moderato* in C time section)!

Bars 17 thru 23 are quite interesting. This is the scene when the moving truck arrives but Lucy wants to stay put on the couch! The cue sheets call this section "Surprise Move" (No. 94). Herrmann---oh, I should say, Steiner---writes a series of half-diminished seventh chords in those seven bars. If readers do not realize it already in my rundowns, Herrmann's favorite (or most used) seventh chord is precisely the half-dim 7th. Max also has the strings *sords* (muted), and Herrmann typically had his strings muted. So there is a minor Herrmannesque flavor in these bars.

Bar 17 = Bb half-dim 7th (Bb/Db/Fb/Ab).

Clarinet I plays *sfp* rinforzando Line 1 Ab [written Bb] whole note, while clarinet II plays Fb [written Gb]. Bassoon I plays

Line 1 Db rinforzando whole note *sfp*, while Fag II plays small octave Bb whole note. *Div* muted violins play *sfp* > (decrescendo hairpin) Line 1 Fb/Ab rinforzando whole notes in bowed tremolo fashion (three slightly diagonal short horizontal lines above the notes) while violas play small octave Bb (bottom staff) and Line 1 Db (top staff) bowed trem whole notes.

Bar 18 = A half-dim 7th (A/C/Eb/G).

Clarinets play *sfp* > on Eb/G [written F/A] rinforzando whole notes, while Fags play small octave A/middle C (c') whole notes. Violins are bowed trem on Line 1 Eb/G rinforzando whole notes *sfp* >, while violas are bowed trem on small octave A/ middle C whole notes.

Bar 19 = Ab half-dim 7th (Ab/Cb/Ebb/Gb).

This tonality is not *written* completely as the Ab/Cb/Ebb/Gb A flat half-dim 7th although it *sounds* it since enharmonic equivalence is used for the Ebb (D) and Gb (F#). Clarinet I plays the F# [written G#] rinforzando whole note *sfp* > while clarinet II plays D [written E] whole note. Fag I plays middle Cb whole note, while Fag II plays small octave Ab. Violins are bowed trem on D/F# whole notes, while violas are bowed trem on Ab/Cb.

Bar 20 = G half-dim 7th (G/Bb/Db/F).

Clarinets play Db/F [written Eb/G] rinforzando whole notes *sfp* >, while Fags play small octave G/Bb. Violins are bowed trem on Db/F whole notes, and violas on small octave G/Bb.

Bar 21 = F# half-dim 7th (F#/A/C/E).

Clarinets play C/E [written D/F#] whole notes, and Fags play F#/A. Violins are bowed trem on middle C/E rinforzando whole notes, and violas on small octave F#/A.

Bar 22 = F half-dim 7th (F/Ab/Cb/Eb).

Clarinets play middle Cb/Eb [written Db/F] whole notes, and Fags play F/Ab. Violins are bowed trem on middle Cb/Eb whole notes, and violas on F/Ab.

Bar 23 = E half-dim 7th (E/G/Bb/D).

FBI mod to act in front you're not going to be home very long!! (transferred to Wash D.C.)
 Chip
 1 Chorus 4:58 PVD
 Ch 22

2 Cls
 B.C.L.
 2 Fags
 HP
 Piano
 VL
 Snds
 " "
 " "
 VC
 S-D
 CM

Musical notation with various notes, rests, and dynamics. Includes a section with a diagonal line and the word "Solo".

(17) (18) (19) 20 21 22 (23) (24) (25) (26)
 G7 A7 A#7 G#7 F#7 F7 E7
 Sighting and

Now (Max digression aside): The Romantic musical style did, however, also espouse short *germ* or *cell* motifs (short pattern of tones) signifying a mood, idea, or even a character. Herrmann was particularly fond of this stylistic approach to music. Most of his themes were of the one-bar or sometimes two-bar variety that were often times repeated (usually by various orchestral choirs), not unlike the use of the repeating ostinato rhythmic device he also enjoyed. His written scores are full of repeat signs for such cell-patterns, and so his music was far more structured or had “form” unlike much of Debussy’s music. Yet Herrmann apparently found elements of Debussy’s style very appealing to him, including the drive to use sonorous chords and colorful instruments to create *atmosphere* or generalized mood. I think Herrmann was a pragmatic eclectic, “borrowing” what he liked from various musical styles and incorporated them into his own fiercely strong musical style or “identity.”

As a result, it is not easy to label Herrmann’s style precisely. Could he overall be described as “impressionistically romantic” in style? A “neo-romantic modernist” or “American Neo-Romantic Impressionist” perhaps? I do not believe he ever concisely labeled himself! His music, however, was not as “ambiguous” as Debussy’s or “formless” as Satie’s pure impressionism style, not as elusive and harmonically hazy. It was instrumentally as colorful as Debussy but far more tonal or centered (hence, less ambiguity). He employed soloistic writing as Debussy, but he also eagerly embraced climatic and high dynamic level music (unlike Debussy but much like Romanticism). Herrmann’s music, though often “meditative” and mood setting, was also intense, climatic and loud, unlike Debussy’s characteristically subdued, even detached and discontinuous (anti-Wagnerian) style. Yet Herrmann wanted the listener to *savor* the sonorities of his instrumental choirs and combinations so that he was often minimalist in design (as Debussy) so that each tone can be luxuriously audible and thoroughly enjoyed. He usually did not make his scores “too busy” with profuse accompaniment figures and tutti symphonic over-statements of themes. Instead, he employed various orchestral choirs to restate a theme. Herrmann’s particular style tended to exploit various instrumental resources to reinstate lyrical phrases or chord passages so that, for instance, he might have two brass choirs play a one or two-bar phrase of parallel seventh chords, followed by a different pairing of brass, followed by a pairing of woodwind on the same phrase, and so forth (he did this in several cues of *Journey To The Center Of The Earth*). Also like Debussy, he relished in the

use of the harp(s) and certain percussion instruments (vibraphone especially). These musical instruments especially lent themselves to *impressionistic* devices.

Herrmann also had an intense focus on harmony, especially the slow-moving, richly sonorous variety. So his music was overall homophonic but often devoid of even a single lyrical passage (let alone a “melody”) so that you hear simple block chords often in parallel motion (Ex., “The Bridge” cue in *Journey To The Center of the Earth*). Debussy’s music (Ex., “Nuages”) was famous for non-functional (traditionally) parallel chord movement, and Herrmann “borrowed” this device for his own scores. The normal “melody-and-chord accompaniment” of the homophonic (harmonic style) texture was also utilized often by Herrmann.

Now: The half-diminished 7th was evident in Herrmann’s early scores in the Thirties, but it was not used in great frequency until later in his professional career (starting in the late Forties) when his stylistic maturity took final shape. His music evolved from the youthful experimentation of strange chords before 1935, then it formed more succinctly in the next 10 years while he worked for CBS radio writing scores dominated by simple triads and min 7/maj 7 sonorities. In the “Prelude” of *Citizen Kane* (1941), for instance, 46% of the chords were minor triads, 44% were maj 7ths, and 10% were simple major triads. In my next paper I plan to write about the chord profile of Herrmann’s scores, tabulating the percentage frequency of various chords used. Similarly, at least in part, I would like to show the frequency of the half-diminished 7ths in Herrmann’s later scores. It is substantial enough, in my opinion, that I would playfully label it the “Herrmann Chord” as being the chord most fitting his style and “sound.”

There is a precedence of a sort for this. Royal Brown in *Overtones and Undertones* (1994) made claim to a “Hitchcock chord” (the minMaj 7th, perhaps especially the Eb minMaj 7th) that in his opinion seemed to typify Herrmann’s musical association with Hitch (“music of the irrational”) in harmonic terms. While initially an interesting notion, it is not well supported in terms of frequency of use in all Herrmann-scored Hitchcock films for the notion to be of enduring interest or validity. For instance, the fully diminished 7ths are used more frequently in *Psycho* than the minMaj 7ths. Besides, the Eb minMaj 7th was significantly associated in prior scores, especially *Wuthering Heights*. That chord was also very dominant in contemporary non-Hitchcock films as well, especially *Cape Fear* (1962) and

later in *Obsession* (1975). However, the minMaj 7th emphasis has a certain degree of validity in the more “disturbing” Hitchcock films (especially *Psycho* and, to a lesser degree, *Vertigo*). As will be shown, the half-diminished 7th is used far more frequently by Herrmann than even that other colorful (and more dissonant) seventh, the minMaj 7th. Some scores, because of the nature of the movies themselves, did not lend to frequent use of half-diminished 7ths. An example is *The Three Worlds of Gulliver* (1960), but you can still hear instances of the so-called “Herrmann chord” in the few “darker” or suspenseful cues/scenes. Overall the movie itself was rather upbeat in nature and so Herrmann scored it predominantly with major chord tonalities.

Regarding *Ghost & Mrs. Muir*, the tonality in Bar 1 of the Prelude actually shows a half-dim seventh at least as a secondary or implied tonality.

Bar 1 = Eb min [Eb/Gb/Bb]

David Cooper [“Bernard Herrmann’s *The Ghost and Mrs Muir*: A Film Score Guide”] describes the tonality as Eb minor in the opening bar of this Sea Theme/motif, but I note that at the end of the first bar the harps pluck the small octave C quarter note that followed the previous Great octave Eb-Gb-Bb quarter notes (moreover, the "Pos" or Trombone I sounds small octave C quarter note in this 4th beat position). If you view this in terms of horizontal or string harmony (distinct from the conventionally-view vertical or stacked thirds harmony), we find the C half-diminished 7th (C/Eb/Gb/Bb) ending statement (for that bar) tonality. The half-dim 7th was Herrmann’s favorite or most employed seventh, and seems to lend poignancy and dramatic restless to the basic Eb min harmony. It is no accident that this implied secondary tonality is there. Herrmann purposefully and subtly) put it there. I think it lends itself quite well in the romantic genre with the added element of, say, unfulfilled desire/love and the yearning for completion.

See the first three bars of the Prelude in my hand-copy immediately below:

The Ghost + Mrs. Muir B. Herrmann

allegro moderato Prelude

[Hand-copied by Bill Washel]

Let us now examine many more usages of the “Herrmann chord.”

(1) An obvious example of a feature film dominated by half-diminished 7th sonorities is *Blue Denim*, a 1959 score of the “romantic drama” vein (such as *Joy In The Morning*, *Tender Is The Night*, *Ghost & Mrs. Muir*, etc.). *Allegro Impetuoso* in 3/4 time signature, the

violins/flute/oboe/clarinets in the Prelude play *ff* (*sempre*) repeated figures of six 8th notes per bar. From Bars 1-6, they play the C# half-dim 7th (C#/E/G/B). A two-bar “melody” phrase commences in Bars 3-4 by four horns. In Bars 7-10, the ostinato pattern of 8th notes continues but on the A half-dim 7 (A/C/Eb/G) chord. In Bars 11-12, the woodwinds and now the horns play the pattern on F# half-dim 7 (F#/A/C/E) while the violins take over the “melody line.” In Bars 13-16, they play on the D half-dim 7 (D/F/Ab/C). See my hand-copied image of Bars 1 thru 14 immediately below:

#1
①

Prelude "Blue Penim"

Allargo Impetuoso

Sl
Ob.
1
cls
b.c. b.s.
F.H.s.
Horn

[Hand-copied by Bill Weichel]

Allargo Impetuoso

19

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯

C#dim7 A#dim7 F#dim7 Ddim7

No sevenths or even triads are used in a climax-building developmental section in Bars 17-24, except perhaps a C augmented triad (C/E/G#) in Bar 24. In Bar 25 (:17), the harp plays an ascending arpeggio in 16th notes on the F# half-dim 7 tonality (horizontal harmony) or notes F#-A-C-E F#-A-C-E F#-A-C-E (Line 3 e’’’). Various chords are used in the next lengthy development, including the arpeggiando (vertical wavy line rolled chord) of the harp in Bars 36 and 38 (A min/9 and G min/9 respectively). In Bar 31, the horns play the F# half-dim 7. An A min 7 (A/C/E/G) chord is seen in Bar 40. Starting in Bar 42 (:39), we come to the consistent use of the half-dim 7ths again, first with the C# half-dim 7 to (Bar 43) A half-dim 7. The G maj 7 (G/B/D/F#) is heard in Bar 44 to (Bar 45) the D half-dim 7 (D/F/Ab/C), then the C maj 7 (C/E/G/B) to (Bar 47) the D Dom 9 (D/F#/A/C/E). Note that if the root D note was not present, we would hear instead the F# half-dim 7th (F#/A/C/E).

Another build-up development occurs for the next several bars. In Bar 55 (:54) the horns play the B half-dim 7th (B/D/F/A) to (Bar 56) the fully diminished G# 7th in its 1st inversion (B/D/F/G#). The strings are arpeggiated harp plays the fully diminished 7th as well. After further climax-building development, we hear the C# half-dim 7th in Bar 72 to the A half-dim 7 in Bar 73 (1:15), accompanied in this bar by the harp playing an ascending 16th note arpeggio. In Bars 76-77, we hear the G maj 7 (G/B/D/F#) to (Bars 77-78) the D half-dim 7 (D/F/Ab/C). Then we hear in Bars 79-80 the A min 7 (A/C/E/G) to (Bar 81) the F# half-dim 7 (F#/A/C/E). We hear a few major sevenths and then, in Bar 84, the A half-dim 7th. The end bars are simple triads of Eb maj (Eb/G/Bb) to G maj (G/B/D).

Nearly 60% of the chords in the “Prelude” are half-diminished 7ths

The next cue is “The Boy” (no sevenths here). “The Playroom” starts with simple Eb maj to D maj chords. In Bars 9-10, we find the F Dom 9 (F/A/C/Eb/G) followed in Bars 11-12 with the A Dom 9 (A/C#/E/G/B). No half-dim 7ths are evident in this cue, but remember that without the root note of the Dominant 9th, you would have the half-dim 7th. “The Girl” (R2/2) is min7th dominated starting with A min 7 in Bar 1 to the D min 7 in Bar 2. “The Girl” (R2/3) is largely min 7th dominated. In “First Embrace” (R2/4), the first seven bars is a fast-paced *Allegro* build-up that climaxes in Bar 8 with the whole note hold of the C# half-dim 7th (the harp is arpeggio) tied to next bar. In Bar 10, we hear the A half-dim 7th tied to next bar, then the G

maj 7 in Bars 12-13. In Bar 15, the strings are soli playing the C# half-dim 7th. In the end Bar 16, three clarinets and one bass clarinet are soli on the Bb maj triad, held fermata.

The next cue, “Adoration” is dominated by minor seventh chords starting in Bar 2 with the E min 7 to (Bar 3) A min 7. The cue ends on Eb major (Eb/G/Bb) played by the soli strings.

In the next cue, “Proposal” (R3/3), we find more half-dim 7ths starting in Bar 15 with the C# half-dim 7th. Skipping to end Bars 47-52, the clarinets and bass clarinet play the C# half-dim 7 to (Bars 49-50) A half-dim 7 to (Bars 51-52) the F# half-dim 7th. The short cue “The Tree” (R4/2) ends on the C# half-dim 7th. Following this cue is “The Compact” (R4/3) that is half-diminished dominant, starting with the C# half-dim 7 to (Bar 2) C half-dim 7. The G maj 7 is the tonality in Bar 3 to (Bar 4) A minMaj 9 (A/C/E/G#/B). Skipping to end Bar 27, we hear the celli and viole playing the combined F# half-dim 7th. In the next cue titled “Confession,” we hear the lower strings bowed tremolo on quarter note half-dim chords. So we find C# to A half-dim 7ths to (Bar 2) F# to C to A half-dim 7ths to (Bar 3) the full bar F# half-dim 7th. Etc.

“The Shame” in Reel 6 is a wonderful example of Herrmann’s fascination with the half-diminished chord. Indeed it is a continuous run starting with Bar 1:

C# half-dim 7th to (Bar 2) A to (Bar 3) F# to (Bar 4) D to (Bar 5) B to (Bar 6) C# to (Bar 7) A (2nd inversion) to (Bar 8) A (root position) to (Bar 9) F# to (Bar 10) A to (Bar 11) C# to (Bar 12) F# to (Bar 13) C# half dim 7ths, etc. Only the end Bars 30-34 are absent the “Herrmann chord,” so 85% of the cue is half-dim 7th in chord structure. See my hand-copy of the music immediately below:

The image shows a handwritten musical score on aged, yellowed paper. At the top, the title "Shame" is written in blue ink, and "Blue Denim" is written in a larger, bold blue font. The score is for a brass and woodwind ensemble, with staves for Trumpet (T), Clarinet (C), Bass Clarinet (B.C.), Horn I (I), and Horn II (II). The music is written in a key signature of one flat (B-flat major or D minor) and a 3/4 time signature. There are numerous annotations in red ink, including circled numbers 1 through 13 at the bottom, and various chord symbols and dynamic markings throughout the score. A red box highlights the title "Blue Denim".

“The Bank” cue (R7/2-7/3) is also “Herrmann Chord” dominated. *Lento* in $\frac{3}{4}$ time signature, the celli and viole play the C# half-dim 7th dotted half note chord. In Bar 2, the clarinets and bass clarinet play the A half-dim 7th. This alternation occurs in the next four bars with the F# half-dim 7th to (Bar 4) D half-dim 7th to (Bar 5) C# half-dim 7 to (Bar 6) C half-dim 7th. In Bar 34 (1:05 on the score or 1:40 on the cd track # 25). This continues in the next final four bars.

“The Waiting” cue follows with the D half-diminished 7 chord played in the first two bars, then the C maj 7 in Bars 3-4. We hear the A half-dim 7 in Bar 8 to (Bar 9) C# half-dim 7, and so forth. The cue ends in Bar 25 with the B half-dim 7th (B/D/F/A).

In the ominous cue “The Summons” (R7/6) we find more Herrmann chords such as played by the horns in Bar 4 (D half-dim 7) and Bar 6 (F/Ab/Cb/Eb). But the cue ends on E min (E/G/B) in Bar 9.

I do not have the complete notes on “Farewell” (R7/7) but this sad cue begins with the horns playing the F min (F/Ab/C) quarter note triad to the A min (A/C/E) half note chord to (Bar 2) Fb min 1st inversion quarter note chord to A/C/E half note chord again. The cue ends on the D half-dim 7. “Breakdown” begins on the D half-diminished 7th and ends on the F half-diminished 7th. In the exciting cue “The Chase” (R8/4), the horns bellow the C half-dim 7ths (C/Eb/Gb/Bb) three times successively in Bars 25-17. The cue ends on the Eb min (Eb/Gb/Bb) played by the clarinets.

I only have fragmentary notes on the final three cues, but I think my analysis of most of the score shows the predominance of the “Herrmann chord” in this emotionally disturbing film about teenage sexual involvement (but it has a “happy ending”!).

(2) As an example of Herrmann’s Early Works, we come to the July 1933 “Aubade” (re-titled and slightly revised as “Silent Noon” in September 1975). In Bar 1, two solo violins play Line 3 register F whole note tied through Bar 3. The “Ancient cymbals” are struck on F whole note (repeated next two bars). After a half rest in Bar 1, the harp plucks on Line 1 Bb half note (let vibrate) to (Bar 2, after a half rest) Ab half note to (Bar 3, after a half rest) back to Bb half note.

In Bar 4, altri strings play two variously pitched quarter note to the combined D half-diminished 7th (D/F/Ab/C) half note chord tied to whole notes through Bar 8. In Bar 11, we hear the C half-dim 7 (C/Eb/Gb/Bb), repeated next bar. In Bar 13, we hear the D Dom 9th tonality (C/E/G/Bb/D). Note that without the root C note, you would hear the E half-diminished 7th. Skipping to Bar 32, we hear the Db Dom 9th (the F half-dim 7th if the root was absent). Etc.

(3) Moving forward over 40 years, we come to the 1975 feature film *Obsession*. Starting with the “Prelude,” it opens with the C maj 7 chord in Bars 1-2, then A min 7 in Bars 3-4. The women’s chorus repeats this in Bars 6-8. In the next two bars the orchestra plays the Bb minMaj 7 (Bb/Db/F/A, and so forth. Skipping to Bars 29-31, the harps are arpeggiando on the C maj 7 quarter note chords (C/E/G/B) while the women’s chorus sings “Ah” on descending half note dyads Gb/Bb to (Bar 30) F/A to (Bar 31) D/F#. After a quarter rest in Bar 32, the harps are arpeggiando on C half-diminished 7th (C/Eb/Gb/Bb).

The C half-dim 7th is also present in several succeeding cues, including II “Valse” and IV “Kidnap.” Cue XIII “Sandra” has several E half-diminished 7ths (Bars 30, 31, 36, etc.) or E/G/Bb/D played by the strings and women’s chorus. In Bars 44-46, muted horns play the G# half-dim 7 (G#/B/D/F#) in various inversions. Then the strings in Bar 47 play the E half-dim 7th. Etc. That G# half-dim 7 is also featured in cue XVI “Court Meets Sandra” (M51) starting in Bars 9-10 played by the horns and arpeggio harp.

“The Wedding” (XXXI, M92) has the E half-dim 7 as a return visitor. The same applies to the ever driving cue XXXX (M127) “Airport” in the later part of the cue. Initially, however, you first hear the harps playing the G# half-dim 7 in Bars 8 & 10 (with a full bar rest in Bars 9 & 11). In Bar 12 they are now arpeggiando on the B half-dim 7. This is repeated further down the line (Bars 53 & 55, etc). In Bar 98 the horns play the C half-dim 7. Starting in Bar 123 through 126 we find the G# half-dim 7 again. In Bar 146, the organ and chorus sounds the E half-dim 7, and so on.

(4) In *Sisters* (1972) the Herrmann chord is even far more active. In “The Ferry” (R1/5) the first seventh chords heard are in the final Bars 13-16 in the end scene of a soft yet strange romantic interlude. The strings play the D half-dim 7 (D/F/Ab/C) whole note chords in successive inversions. See my hand-copy image immediately below:

In the following mysterious cue V “Breton” (R2/2), muted horns play *moderato* in C time the root C (C/Eb/Gb/Bb) to B half-diminished 7th (B/D/F/A) half note chords (repeated in Bar 2). The violins are pizzicato on quarter notes in Bar 1, and then the celli & viole take over in Bar 2 (repeat this two-bar pattern in Bars 3-4). The vibe strikes the F/A half note dyad

after a half rest in each bar. In Bars 5-6, the clarinets/bass clarinets/C.B. clarinets take over the pattern (horns now silent). In Bars 7-8, the violins now take over the C to B half-diminished half note pattern. Then the celli and viole play the pattern in Bars 9-10. In Bars 11-12, the clarinets and the timp combined play that pattern. Only the final bar has no half-diminished tonality, so 92% of the cue is “Herrmann chord” dominated.

Skipping to cue XXVI “The Couch,” we start off in Bar 1 with the C half-dim 7 (C/Eb/Gb/Bb) played by muted violins I and tied thru Bar 3. Interestingly, Herrmann writes polytonality because violins II play the D min (D/F/A) chord tied to next two bars. The celli play the F Dominant 7th (F/A/C/Eb), and so forth. In Bars 4-5, violins I again play the C half-dim 7 but as arpeggiated 8th notes. The horns, however, play the full note version. In Bars 7-9, violins I play the B half-dim 7th sustained chord. In Bars 13-14, the strings are pizzicato C half-dim 7th on descending 8th notes. In Bars 16-17, they pluck on the B half-dim 7 tonality. In Bars 20-21, they pluck ascending C maj 7 notes. The cue actually ends in Bars 23-24 on the E maj triad (E/G#/B) played by the clarinets/bass clarinets/contrabass clarinet.

The next cue XXVII “The Siamese Twins” (R7/3) also ends on the E maj played by the horns and woodwinds, but the lower strings add the bitonality of the C maj (C/E/G) triad. “The Solutions” (XXVIII) is an eight-bar cue that has no seventh chords.

Next is the dynamic cue XXIX “The Clinic” (R8/1) that is Herrmann Chord driven. *Allegro* in C time, we hear the strings playing rising to falling 8th note figures. In Bar 1, the violins and viole play an ascending 8th note figure (crossbeam connected) of middle C-Eb-Gb-Bb (C half-diminished 7th) to descending figure 8th notes (crossbeam connected, also now played by the celli) A-F-D-B (B half-dim 7). This is repeated in Bar 2. In Bar 3, the arpeggio of the strings continue with the Bb half-dim 7th (Bb-Db-Fb-Ab) to reverse sequence A half-dim 7 (G-Eb-C-A). Repeat in Bar 4. In Bars 5-6, we hear ascending 8th notes Ab-Cb-D-F# to descending F-Db-Bb-G (reverse sequence G half-dim 7). In Bars 7-8, we hear ascending figure notes F#-A-C-Eb to descending D-Bb-G-E (reverse sequence E half-dim 7). In Bars 9-10, we hear the C to B half-diminished 7ths, and in Bars 11-12, Bb to A half-dim 7ths. In Bars 13-14, the G# to G half-dim 7ths are played. In Bars 15-16, the strings play F#-A-C-Eb (F# dim 7th) to D-Bb-G-E (reverse sequence E half-dim 7th).

In Bar 17 (repeated in Bar 18), the English horns/clarinets/bass clarinets play rising 8th notes C-Eb-Gb-Bb (C half-dim 7th) and then the strings pluck pizzicato descending 8th notes A-F-D-B (B half-dim 7th). In Bars 19-20, we hear the Bb half-dim 7th (Bb-Db-Fb-Ab) to descending G-Eb-C-A (reverse sequence A half-dim 7th). In Bars 21-22, we hear G# to G half-dim 7ths, and then B to E half-dim 7ths in Bars 23-14.

Bars 24-32 repeats Bars 1-8 but with the addition of notes by the bass clarinets and C.B. clarinet (Cb whole note to Bb dotted half note in Bar 26, etc.). In Bar 33, the stopped horns play, after a quarter & 8th rest, F/A/C/Eb (F dim 7th) 8th note chord to E/G/Bb/D (E half-dim 7th). After two 8th rests, they again play the F dim 7th to (Bar 34) E half-dim 7th, followed by two 8th rests and another F dim 7 to E half-dim 7th pattern. We hear the half-diminished tonality again in Bar 43 with the violins I playing 16th note arpeggio figures of C-Eb-Gb-Bb (four figures per bar) or the C half-dim 7th in Bar 46.

Approximately 50% of this cue consists of half-diminished 7^{ths}, but they clearly dominate the first 34 bars (nearly 80% of that sequence).

Cue XXXI “The Dream” (R9/2) ends with a polytonality of the C maj 7 and also the F half-Dim 7th (played by the horns).

The “Finale” begins with the horns and pizzicato strings playing the G# half-diminished 7th.

(5) In Herrmann’s television works, *The Twilight Zone* episodes he scored hold many examples of half-diminished 7^{ths} being used to great effect. Starting with “The Eye of the Beholder” episode composed August 1960, cue I (“Patience”) is a short five-bar introductory cue played by two soli vibes. In 3/2 time signature, vibe I plays ascending quarter note G-B-C#-E-G-B (C# half-dim seventh 2nd inversion). In Bar 2, vibe II takes over softly striking with soft mallets rising quarter notes Gb-Bb-C-Eb-Gb-Bb (C half-dim seventh 2nd inversion). Originally the first two bars were repeated but later crossed out, the vibe II Bb quarter note tone tied to dotted whole note in the next bar.

Cue II (“The Nurse”) repeats the first two bars of the previous cue. These in turn are repeated through Bar 16. In Bar 2, the solo horn begins a double dotted whole note to next bar’s whole note pattern (E to Eb, then C#

to C, etc.). Cue III (“The Hospital”) repeats the same pattern of the vibes. Starting with Bar 5, alternating harps join in with descending quarter notes, C# half-dim 7th for harp I, and C half-dim 7th for harp II. Other brass choirs join in with the horns’ pattern (as given in the previous cue). Cue IV (“The Doctor”) is like cue II, except that in Bar 5 the first vibrate plays rising quarter notes F#-Bb-D-F# to Bb half note (Bb augmented). In cue V (“The Plea”), *agitato* in ¾ time, the four stopped horns alternate in a dyad ostinato pattern. In Bar 5, harp I plays rising 16th notes arpeggio on C# half-diminished notes, and in Bar 5 it plays on C# half-dim 7th starting an octave higher. In Bars 7-8, harp II plays this pattern on the C half-dim 7th notes. This continues thru Bar 16. In Bars 17-18, vibrate I plays ascending quarter notes G-B-C# to (Bar 18) E-G-B (C# half-dim 7th). In Bars 19-20, vibrate II plays this pattern on C half-dim 7th. Cue VI (“Lead-In”), *Lento* in 3/2 time, shows both soli vibes playing respective C# and C half-dim 7ths as rising half notes. Cue VII (“Declaration”) is a two-bar cue featuring 3 “C” trumpets and 3 trombones (“Pos”), both choirs in hard mutes playing a declaratory phrase, ending with the snare drum’s three-note figure.

Next is a famous cue/scene cue VIII titled “The Bandage” featuring only two harps and two vibes. *Molto Moderato* in C time, harp I plays descending 16th note figures to (Bar 2) ascending figures, while harp II plays contrary motion ascending to (Bar 2) descending 16th note figures (four figures per bar). So harp I plays descending 16th notes Line 3 B-G-E-C# (reverse sequence C# half-dim 7th) to Line 2 register to Line 1 register to small octave register. Then it plays ascending notes B-C#-E-G (etc.) in Bar 2. Harp II plays ascending Bb-C-Eb-Gb (C half-dim 7th). This pattern repeats thru Bar 24. The vibes begin to play triads in Bar 5. Starting in Bar 21, vibrate I plays descending quarter notes on the C# half-dim 7th notes followed in Bar 22 by the rising notes of vibrate II on C half-dim 7. This is repeated in the next two bars. See hand-copied image immediately below:

TZ: Eye of The Beholder
 molto Majesto

VIII The Bandage

Bernard Herrmann

[Hand-copied by Bill Wrebel] etc

1 2 3 4

In cue IX (“The Last Bandage”) the same pattern of the harps is repeated except that here harp I is descending to ascending on C half-dim 7th notes, while harp II is contrary motion on C# half-dim 7th. Vibes play the arpeggiated chords as quarter notes in Bars 7-8. Horns play C half-dim 7th half note chords (“vertical” or simultaneously sounded notes) in Bars 11-12, etc.

In cue X (“Hysteria”) the half-dim 7ths are heard again starting in Bar 36 with the harps playing rising C# and C half dim-7ths in polytonality fashion. The final cue XI (“The Revelation”) is basically a repeat of cue III “The Hospital.” Based on a quick calculation, 89% of the score’s chords are half-diminished 7ths. The rest are simple triads.

(6) The cue Herrmann composed that immediately preceded the first cue of “Eye of the Beholder” was cue # 3056 “New Twilight Zone Theme.” It was designed to replace Herrmann *Twilight Zone* used in the first season, but it was never used as the official new theme for the second season. Instead, the now-famous and more recognizable TZ theme composed by Maurius Constant was used.

C half-diminished 7ths are heard by the harps playing contrary motion arpeggios in Bars 3-4, and then Bars 7-8. The complementary TZ Closing Theme (#3056-B) has the same harp figures in Bars 3-4, 7-8, and 11-12.

(7) In the “Ninety Years Without Slumbering” episode (starring Ed Wynn) of *The Twilight Zone*, the Bb and F half-diminished sevenths are featured strongly in the climatic cue XI. In Bars 22, 24, 28, 29, 36, and 42, the harp is rising & falling arpeggio 16th note figures in C time (four 16ths per figure, four figures per bar). In each case, the Bb half-dim seventh (3rd inversion) is played (Ab-Bb-Db-Fb as written). In Bars 44 & 47, the harp plays arpeggio the F half-dim seventh (2nd inversion) is played (Cb-Eb-F-Ab as written). The vibe in those bars plays the Ab min (Ab/Cb/Eb) whole note chord. The cue ends in Bar 53 with the vibe very softly (ppp) striking the Ab min whole note triad, held fermata.

(8) Much more prominently, half-diminished sevenths are featured in the “Living Doll” episode of *The Twilight Zone*. Cue I (“Tina Arrives”) is simply a soloistic passage (*Lento* in 4/2 time) of the bass clarinet. In cue II (“Eric Talks”) in Bar 22 (*Presto* in 3/8 time), harp I plays three 32nd note rising figures of A-C/Eb/G (A half-dim 7th) followed in Bar 23 by harp II playing C half-7th figures (C-Eb-Gb-Bb) starting on the Line 1 register (middle C). Bars 24-25 repeat the previous two bars. In cue III (“Eric Throws Tina”), the same pattern is played by the harps in Bars 27-28, then starting an octave lower in Bars 29-30. In cue V (“Tina Talks Again”) the celeste plays the C half-dim 7th in Bar 16 in arpeggio fashion, repeated in Bar 18. In Bar 19, it plays rising arpeggio 16ths on the C# half-dim 7th (C#-E-G-B) to (Bar 20) C half-dim 7th again. This is followed shortly by harp I playing the C half-dim 7th, then the C# half-dim 7th played by harp II. The Celeste returns with this pattern in Bars 33-34 but now reversed as C# to C half-diminished sevenths (repeated next two bars). Then the C half-dim 7th is heard in Bars 44 & 46 by the Celeste. The cue ends in Bars 47-48 with the bass clarinet on the lowest D tone. In cue VII (“In The Cellar”) the A to C half-dim sevenths pattern is heard again in Bars 45-46 played by the harps. In cue XI (“Eric Finds Tina”) harp I plays the rising arpeggio figures in A half-dim 7th notation, followed in Bar 20 by harp II playing on the C half-dim 7th notes.

(9) In the “Lonely” episode (starring Jack Warden) of *The Twilight Zone*, we see more examples of the use of half-diminished sevenths. In cue II (“Intro”) we see in Bar 10 (*Lento* in Cut time) harp II playing rising triplet quarter notes Gb-Eb-Bb-C-Eb-Gb (C half-dim 7th tonality), repeated in Bar 12, and so on. In cue IV (“The Box”) we see starting in Bar 8 (*Allegro* in C time) harp I playing rising to falling “6” sextuplet 16th note figures on F half-

dim 7th notes 2nd inversion (Ab-Cb-Eb-F). Harp II plays, however, the G min 7th (G-Bb-D-F) arpeggios. This pattern is repeated through Bar 12. In the memorable cue/scene “The Stars” (cue VIII), harp II plays rising to falling 16th arpeggio figures in Bars 3-4 on the C half-dim 7th notes (C-Eb-Gb-Bb). In Bars 15-16, harp II plays on the D half-dim 7th notes (D-F-Ab-C). The cue ends in Bar 17 with a polychord effect of the Pos playing Ab maj (Ab/C/EB) whole note triad held fermata while the trumpets play on G min (G/Bb/D). The “Finale” (cue XI) is similar to cue I (“Intro”). While harp I plays rising triplet value quarter notes (in Cut time) of G-D-Bb-C-F#-A in Bar 1, harp II plays Gb-Eb-Bb-C-Eb-Gb (C half-dim 7th) in Bar 2. This pattern is repeated through Bar 18.

(10) Although the pilot episode full score of *The Twilight Zone* (“Where Is Everybody?”) is still unaccounted for at the CBS Collection at UCLA, the two-stave sketch score available (not Herrmann’s writing) indicates half-diminished sevenths as well. For example, in the cue “The Film” (M28-M31), the strings (I believe) play at the end of Bars 19 & 20 the rising 16th notes C-Eb-Gb-Bb (C half-dim 7th).

(11) In “The Walking Distance” episode of *The Twilight Zone*, the very first bar of cue I (“Intro”) has the harp playing the C# half-dim 7th (C#/E/G/B) quarter note arpeggiando. This is followed in Bar 2 by the C Dom 7th, then the A Dom 7th in Bar 3, etc. In cue IX (“Martin’s Summer”), the ending Bar 5 of Section A (just before the next section’s *molto agitato*) shows the strings playing the F half-dim 7th (F/Ab/Cb/Eb) whole note chord held fermata. In Bar 14, the harp plays the 3rd note arpeggio of the C# half-dim 7th. In cue XI (“Finale”), the harp once again (as in the “Intro”) plays the C# half-dim 7th arpeggiando (followed by the C Dom 7th in Bar 2, and so forth).

(12) In the “Little Girl Lost” episode of *The Twilight Zone*, we find the F half-dim 7th in Bar 2 of cue #3992 or R 2/1 (“Hole In The Wall”) played by the vibe in arpeggio fashion. In Bar 4, it then plays the F# half-dim 7th first inversion (E/F#/A/C). However, this particular episode (as in “Walking Distance”) is not dominated by the half-diminished sevenths (unlike “Eye of the Beholder” especially).

(13) In the December 1957 CBS score *Studio One*, the second cue (A Pt II) features a common harp effect notated by Herrmann; namely, the contrary motion arpeggios of two harps. Harp I plays descending 16th note

arpeggios (*Allegro Moderato* in C time) in Bar 1 to ascending arpeggio figures in Bar 2, while harp II plays ascending to descending. The harps both play the C half-diminished 7th notes. Harp I starts on Line 3 register descending 16th notes Bb-Gb-Eb-C, while harp II starts on Great octave register rising notes Gb-Bb-C-Eb. This is repeated in Bars 3-4 and then Bars 5-6. With eight bars in this cue, 75% of the cue (first six bars) is half-dim seventh dominated. In the next cue (A Pt III), the same pattern is repeated by the harps. Harps and vibe are soli in Bars 1-2 (the vibe plays descending quarter notes Bb-Gb-Eb-C to next bar's Gb-Eb-C-Bb). The harps repeat the C half-dim 7th arpeggios through Bar 8, and then they play the B min/9 notes in Bars 9-14. They return to the C half-dim 7th arpeggios in Bars 15-19, 25-32. So 62% of the cue is half-dim seventh dominated.

(14) In the “Trailer” short cue (listed in the cue sheets as “Hitchcock”) for *The Wrong Man*, the cue ends in Bar 6 with the clarinets playing the E half-dim 7th first inversion (G/Bb/D/E) held fermata. On the screen we see in the distance the familiar Hitchcock figure silhouetted in the night by a light that projects a long shadow of Hitch as he preludes his comments on his new upcoming movie. Although Herrmann did not write “Hitch” on the cue sheets obviously, his music is evidently Hitchcock focused (if one considers the opening scene of the trailer). So we have in Herrmann’s music a clear indication of the half-diminished seventh being associated with both Hitch and, in part, the nature of the scene setting up the ominous tone of the coming attractions. Interestingly, the score itself for the movie has relatively few half-dim 7th significances. We see again, for instance, in “The Mirror” cue (R9/2) the E half-dim 7th chord second inversion (Bb/D/E/G) played in Bar 2 by the horns and trumpets. Otherwise half-dim sevenths are relatively few and far between in the score.

(15) We see the E half-dim 7th also in the “Litany of Death” cue (R10/M101) of the 1941 feature film *All That Money Can Buy* (more commonly known as *The Devil & Daniel Webster*). Specifically in Bar 4, the clarinets/bass clarinet/Fags/C.F. play the half note chord. In Bar 5 they play the Bb half-dim 7th tonality (Bb/Db/Fb/Ab) but it is written with the E as the enharmonic substitution for Fb. This habit of enharmonic exchange of notes (especially E for Fb and less so B for Cb) was common in Herrmann’s earlier works before 1947 (see my online paper “Enharmonic Substitution in Bernard Herrmann’s Earlier Works”). The E half-dim 7th reoccurs in Bar 15. In the “Prelude & Pastorale” cue of Reel 1, the F# half-dim 7th (F#/A/C/E) is featured starting in Bar 9. The half-diminished tonality

commences “Hataway’s Warning” (M119). Three muted trombones, a bass clarinet, and a contra bassoon play the A half-diminished 7th. However, as was typical in that earlier work (as in the 1941 film *Citizen Kane*), the rest of the cue was dominated by major seventh chords starting in Bar 5 (of the twelve-bar cue).

(16) There are instances of half-diminished seventh chords in various Early Works (I already discussed *Aubade*). It was present in *Dauber* (composed October 1936) sporadically. For instance, the F# half-dim 7th was played arpeggiando by the harp in cue XV at the end of page 41 (Bar 15). The E half-dim 7th (E/G/Bb/D) was played in cue IX in Bars 10-11. In *American Trilogy I* (Carl Sandburg) written in June 1944, we find occasional inclusions of the half-dim sevenths. For instance, in Bar 2 of cue X, the harp is arpeggiando on the C half-dim 7th. In *We Hold These Truths* (December 1941) we find occasional use of these seventh chords. For example, in cue X, Bar 13, we find the F# half-dim 7th played by the strings. So we do find them in his Early Works, but they did not develop into the familiar Herrmann “sound” until the start of the Fifties when Herrmann moved to California and firmly developed his feature film and television works (and conclusion of his later radio works).

(17) As examples of later radio scores, we first visit very briefly the 1950 Red Cross Show, “Across The Street, Across The Nation.” The very first chord head (Bar 2 of cue I) is the C half-diminished 7th played by the brass as a whole note chord.

In his many *Crime Classics* radio half-hour shows in 1953-4, Herrmann employed half-dim 7ths rather commonly, especially played by the harp. Normally only three or four players per episode were used. For instance, in “Mr. Thrower’s Hammer” (August 3, 1953) we find the bass clarinet, horn and harp ensemble (the clarinet doubling occasionally for the bass clarinet). In cue X, we hear the harp playing rising 8th note arpeggios notated as C half-dim 7th notes (C-Eb-Gb-Bb) in Bars 3, and 5 through 10. In “Coyle & Richardson” (12-30-53) the harp plays the C half-dim 7th in cue XIII. It also plays in arpeggiated fashion the F half-dim 7th in opening cue I and also in cue IV (end Bar 6). In “Assassination of Leon Trotsky” the F# half-dim 7th is featured. For example, in the end Bar 8 of cue II, three English horns and single bassoon play that chord. In the first *Crime Classics* show he scored in December 1952 (aired June 15, 1953) titled “The Crime of Bathsheba Spooner, we find the first two cues dominated by the C half-

dim 7th played as rising and falling 32nd note arpeggios by the harp. Every bar except the final bar features that seventh chord. “The Bloody Bloody Banks of Fall River” (Aug 30, 1953) has the Hammond organ playing the C half-dim 7th as well (Ex., cue XIII, Bars 1-3). In “The Good Ship Jane: Why She Became Flotsam” (Feb 24, 1954) we find the piano playing in Bars 1-8 of cue II falling to rising 8th note arpeggio figures on C half-dim 7th notes starting on Line 3 Bb-Gb-Eb-C. This is a highly distinctive cue, enough so that Herrmann self-borrowed it for the 1957 cue “Dark Valleys” in his so-called *Western Suite* for CBS-television. In that cue, the harp plays the arpeggiated C half-dim 7th notes instead of the piano. See my hand-copied image below starting Bar 15:

457 Travel II (Western Suite)
Lento (♩=60) "Dark Valleys"

CBS VII 56
7-17-57 - Paris
#457 mtr. R-III

Bernard Herrmann

Hand-req'd by Bill Warhol

3 Fls
3 Obs
3 Cls
B. Cl.
2 Fags
C. Fl.
Horn
Trp
C. Fl.
S. Fl.
Harp

10 11 12 13 14 15 16 17 18

(18) Also in the *Western Suite* we find in cue # 460 (cue VIII or “The Waiting”) the harp playing arpeggios of descending quarter notes Eb-Cb-Ab-F (F half-dim 7th). In his *Desert Suite* score for CBS television (also used as “stock” music), various cues utilize the half-dim seventh tonalities. In cue VIII “Sandstorm” the horns play quite prominently the F half-dim 7th full note chords in Bars 2-4, 7-9, 12-14, 16-18, 42-43, 45-49, and 53-54. In cue XV “Red Rocks” the horns and trombones play the F half-dim 7th in Bars 2, 8, 13, and 17-18. In cue XVI “Bad Water” the stopped horns play the whole note F half-dim 7th in Bar 6, then the C half-dim 7th in Bar 13. Pos & tuba play in Bar 18 the C half-dim 7th as well.

In the *Police Force* suite also composed for CBS in 1957, we find the familiar F half-dim 7ths used throughout the score. For example, in “Openings” D, the Pos play Ab/Cb/Eb while the tuba plays the root F note in Bar 5. Previously in Bar 3 the four horns played that chord. In “Openings” C (cue # 359-C) the horns start off in Bar 1 with the E half-dim 7th. In “Openings” E, we again find the F half-dim 7th in Bar 2. In “Lead-Ins” E (cue # 361-E), the horns in Bar 3 play the E half-dim 7th first inversion (G/Bb/D/E) while the Pos play second inversion. In Bar 5, the Pos & tuba play the F# half-dim 7th. In cue XII (cue # 370) “The Jail” we find the horns playing the F half-dim 7th first inversion (Ab/Cb/Eb/F). I believe these examples should suffice for *Police Force*.

(19) Herrmann’s famous score to the pilot (“Three Bells To Perdido”) of *Have Gun Will Travel* (starring Richard Boone) features “attack” or punctuation half-dim 7th chords in the “Main Title I” opening cue. We hear the piano playing the B half-dim 7th (B/D/F/A). In Bars 7-12, sordini horns play the E half-dim 7th first inversion chords (G/Bb/D/E). In “Middle Lead-In” the horns are heard playing the F half-dim 7th chord (F/Ab/Cb/Eb).

(20) In the 1954 CBS television special *Christmas Carol* (starring Frederic March), we find the choir singing “Ah” half-dim 7th tonalities in the “Marley” cue. They sing in Bars 1-3 the F# to C half-dim sevenths, then in Bars 6, 11, 14, 16, 18, and so forth. In “The Spirit’s Lament” we hear the F# to C# half-dim 7ths in Bars 1-3, 6-8, 11-13, 22-24, and Bar 26.

(21) Fifteen years later in the atmospheric *Cimarron Strip* episode titled “A Knife In The Darkness” we encounter a story about Jack-the-Ripper in Old West Oklahoma. In cue I (“Dancing”) Herrmann features the

C half-dim 7th played by the bassoons. In “Angry Look” (cue VII or CIM 194), the cue ends on the F half-dim 7th chords (similarly played by the bassoons). In cue XX “Open Ceiling” we hear the B half-dim 7th being played (see image immediately below).

Handwritten musical score for "Open Ceiling" by Bill W. Robel. The score is for five instruments: Bass Clarinet (12 and 34), C.B. Clarinet, Fagot (12 and 34), and C. Fagot. It shows five measures of music with various chord symbols and dynamics. A "50%" tempo marking is present. The bottom staff is labeled "C B" and contains circled measure numbers 11 through 15. Red annotations include "Bb7" and "C maj7".

(22) In the 1954 feature film *Prince of Players* (starring Richard Burton), the E half-dim 7th is featured in the “Prelude.” It is first encountered in Bar 4 played by the strings and last heard in final Bar 57. We also hear the half-dim 7th in the “Hamlet” cue (Reel 9 part 1).

(23) In the 1968 feature film *Twisted Nerve*, the half-diminished seventh is also strongly present in the opening cue I (“Main Title”). We first hear the C half-dim 7th played in Bar 4 by the clarinets and bass clarinet followed shortly by the horns playing the G# half-dim 7th. Later, in Bar 57, we hear the Bb half-dim 7th. In Bars 63-4, vibrate II strikes the Bb half-dim 7th,

followed in Bars 65-66 by vibe I. In cue III (untitled), the harp plays the C half-diminished 7ths in bars 2, 6-9, etc.

(24) In the 1951 feature film *Five Fingers* (starring James Mason), the F half-dim 7th finalizes end Bars 140-1 in “The Pursuit.” Earlier in that cue we hear in Bars 114-6 the F# half-dim 7th plays by the combined horns and timp. In “Escape” the horns & timp sound the F# half-dim 7th at end Bar 28. In “The Boat” the cue also ends (Bar 17) with a half-dim seventh (this time the C half-dim 7th).

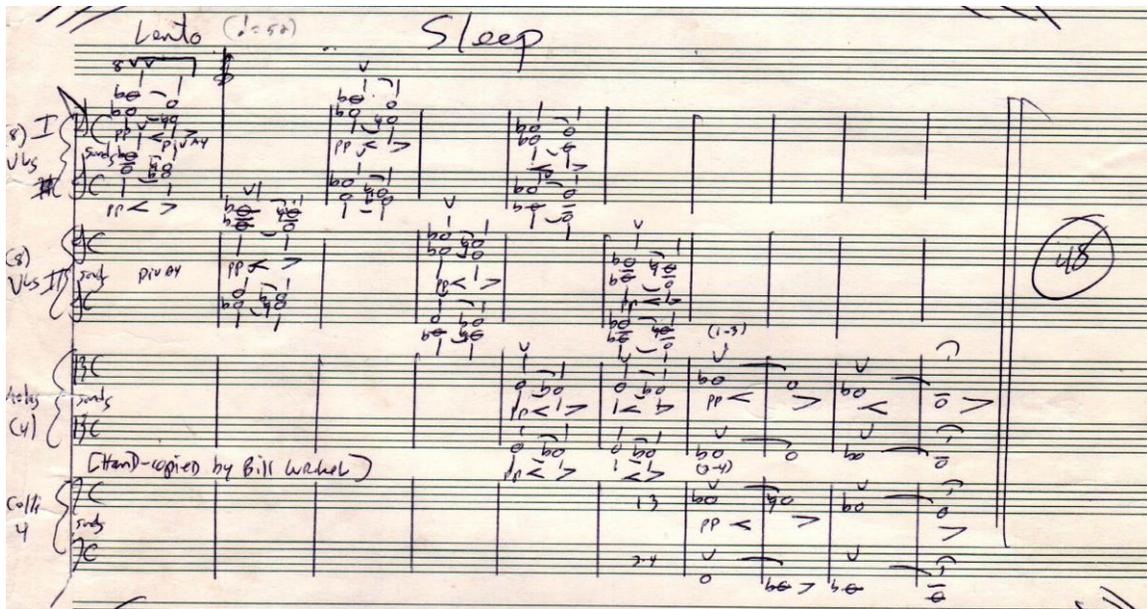
(25) In the 1953 film *Beneath the 12 Mile Reef* we see “The New Boat” cue concluding (Bar 9) on the C half-dim 7th. This specific chord is also featured in “The Octopus” (Ex., starting in Bar 6), later self-borrowed for “The Hydra” cue in *Jason & the Argonauts* (see my paper “Self-Borrowing in the Music of Bernard Herrmann”). You also hear the F half-dim 7th tonality in other cues in *Reef* including “The Search” in Bar 6 played by the horns.

(26) Speaking of the F half-dim 7th, it opens “The House” cue in the 1951 film *On Dangerous Ground*, and repeats later on. It also is heard in the “Pastorale” cue (Ex., Bar 19). It also largely opens (Bars 2-7) the “Fanfare” cue of *Battle of Neretva* (1971). In Hitchcock’s *Marnie* (1964), that chord is featured in several cues. In “Encounter” (pages 51-2), it is played by the viole/VC/CB in Bar 9 as a whole note chord. In “The Nightmare” the strings ply the whole note F half-dim 7th chord in end Bar 36 (page 85). Specifically, the VC/CB (and bass clarinet) play F; divisi viole play F/Ab; violins II play Ab/Eb, and violins I play Cb/Eb. In “The Money” (page 117) the strings play that chord as fingered tremolos while the horns and woodwinds play it as well. It is, incidentally, highlighted in end (final) Bar 44. In the 1947 film *Ghost & Mrs. Muir*, I noticed this specific chord used in “The Spring Sea” cue (R8/1-8/2) on page 93 (Bar 36) and also earlier in Bar 7. Viole play the F note; the harp is arpeggio on Cb-Ab-Cb-Eb, and two horns play Cb [written Gb a perfect 5th above]. This chord is heard in the 1958 film *Naked & the Dead*. For example, in “The Return” (R15/2), the first seventh chords you hear are the F half-dim 7ths in Bar 16 (*Allegro Pesante* in ¾ time) played by eight horns in root position (written C/Eb/Gb/Bb a perfect 5th above in transposed notation), repeated next two bars. In “Title B” (R1/pt 1) the F half-dim 7th is heard in Bars 4-5. Pos/horns/trumpets/clarinets play the Ab/Cb/Eb triad while the tubas/bass clarinets/Fags/Contra Fag play the deep bass/root F note.

(27) The F half-dim 7th is not highlighted in the 1960 Harryhausen film *Three Worlds of Gulliver*. However, we find other half-dim 7^{ths} present throughout the score. In “The Oath” we find in Bar 6 the Bb half-dim 7th first inversion (Db/F/Ab/Bb). In “The Contest” (R4/D), the cue ends with the C half-dim 7th third inversion (Bb/C/Eb/GB) played by the horns to (Bar 35) the A half-dim 7th (A/C/Eb/G). The opening two bars of “The Tightrope” cue (R4/DA) highlights the harp arpeggios on the A half-dim 7th to (Bars 3-4) the C half-dim 7th (descending figure notes Bb-Gb-Eb-C). Back in Bar 1, the horns play the A half-dim 7th 8th note punctuation chord. In Bars 3-4, the flutes/oboes/clarinets play the C half-dim 7th. “Reunion” features more of our Herrmann chords, and in “The Girls” stopped horns play in Bar 14 the C half-dim 7th.

(28) The C half-dim 7th is heard also in “The Skull” cue (R5/C) of *The 7th Voyage of Sinbad* (1958) in Bar 3 played by the horns. In Bar 6 we hear the C to D half-dim 7^{ths}. In “The Nest” (R7/F) the G# half-diminished 7th (G#/B/D/F#) is played in Bar 25 by the strings. In “The Swing” (R9/C) the celeste plays the linear (arpeggiated) C half-diminished 7th. What is interesting about the “The Skull” cue is that there is this two-chord pattern of D min/9 (D/F/A/E) to C half-diminished 7th (C/Eb/Gb/Bb) that duplicates the pattern given in the opening cue (“Prelude—Outer Space”) of the 1951 science fiction feature film *The Day the Earth Stood Still*. There the Hammond organ and harps play 16th note arpeggio figures in the notes of those chords. In Bar 2, a descending arpeggio commences on the inverse of the C half-dim 7th (Bb-Gb-Eb-C). This is repeated again later on (such as in the R3/1 cue “Escape”).

(29) In *Vertigo* there is no great emphasis on half-diminished sevenths, although they are highlighted in several cues. In the R5/D cue “Sleep” the F half-diminished 7th dominates, first played by high register violins I, followed in Bar 2 by violins II, and so forth (see image immediately below):



The next cue “By The Fireside” follows in the same pattern. Similarly the next cue (“Exit” R6/B) opens with the violins on F half-dim 7th. Further along the movie (R10/C-10/D) we come to “Dawn.” The scene is a wide sweep of San Francisco at dawn that appears idyllic or pastoral in nature (musical effect) but it precludes the unsettling emotional state of the protagonist (Jimmy Stewart) as he tries to recover from his nervous breakdown. So Herrmann starts off the cue with the D# half-diminished 7th (D#/F#/A/C#) to imbue an unsettling inner framework beneath the outer splendor of the San Francisco scenery. This unsettled effect cleverly indicates the off-balanced emotional state of the still-recovering flawed hero.

(30) *Joy In The Morning* (1965) is similar in certain respects to the earlier film already discussed, *Blue Denim*. It too is of the “romantic” vein, although both stories are heavily dramatic and highlight emotional and circumstantial dilemmas needing resolution. The music shows a strong presence of half-diminished sevenths as well, but not as overwhelmingly evident as in *Blue Denim*. In the opening cue “Hallway,” the first chord we hear in Bar 1 is the F maj 7 (F/A/C/E). This is followed in the next two bars with the D half-dim 7th (D/F/Ab/C). After other instances in the cue, we come much more prominently (in terms of ending emphasis) to the final bar (Bar 53) where the horns play the rinforzando (accented) C half-diminished 7th (C/Eb/Gb/Bb) chord. See image immediately below:

(cont) "Hallway" [Joy in the Morning]

music by Bernard Herrmann
rehearsal by Bill W. Rebel

(p.5)
Lento

completed Monday, Sept 28, 2015 4:12pm 86°F clean

Check out the link below of my video of Wagner's influence in the "Hallway" cue:

<https://youtu.be/vZ3et5Xilvo>

In the next cue (“Stairway”), the opening two bars highlight the F half-dim 7th, followed in Bars 3-4 with the C# half-dim 7th. In “The Cottage” the C# half-dim 7th is again highlighted in the opening bars (Bar 2, 5-6, etc.). “The House” is similar and once again the C# half-dim 7th is featured starting in Bars 12-13. In “Compassion” the cue opens in Bar 1 with the C half-dim 7th played by the horns. In Bar 2 we hear the D# half-dim 7th (D#/F#/A/C#) followed by the C half-dim 7th in Bar 3. In Bars 8-11 we hear the F half-dim 7th sustained tonality. In “Search For Love” we hear in Bar 3 the C half-dim 7th. The cue ends in Bar 25 on the F half-dim 7th chord.

(31) The F half-dim 7th is heard at times in *Journey To The Center Of The Earth* (1959). In my opinion, it was featured most strongly within “The Mountain Slopes” cue, ending Bar 7. *Lento assi* in 3/2 time signature, the cue opens with two vibes playing off each other, usually on F minor to A minor triads. In Bar 7 in 4/2 time, “sords” (muted) horns sound in a break of the sequence when you see the majestic slopes of a mountain peak. Here the horns play four F half-diminished 7th half note chords in various inversions. So we first hear the second inversion (Cb/Eb/F/Ab) to first inversion (Ab/Cb/Eb/F) to root position (F/Ab/Cb/Eb) back to first inversion (Ab/Cb/Eb/F) half note chord. See image of my hand-copy below:

The image shows a handwritten musical score for the cue "The Mountain Slopes". At the top, it is marked "Lento assii (JTTCOTE)" and "The Mountain Slopes". The score is written for Vibraphone (Vib) and Horns (F. Hds). The Vibraphone part consists of two staves, with notes and rests. The Horns part is written on a single staff with notes and rests. There are several handwritten annotations: "Hand-copied by Bill Washel" is written across the bottom of the score, and "REST deleted" is written in the right margin. The score is numbered 1 through 7, corresponding to the bars mentioned in the text. The time signature is 3/2.

Why did Herrmann decide to use F half-dim 7th inversions instead of, say, F maj 7 inversions? With tongue in cheek, this is because they sound far more “Herrmannesque”?? Herrmann probably did not want the “major” strength emphasis, and one must consider the minor chord dominance of the

previous six bars (especially with the “family” resemblance or shared notes of the F min triad that opens the cue). However, he did indeed use maj seventh chord sequences (parallel 7ths) in later cues (especially “The Bridge” and “The Vines”). I discuss this at length in the enharmonic substitution paper. We again hear the F half-dim 7th chord in the R7/3 cue “The Sign” opening Bar 2 and played by the Fags and C. Fags.

(32) The relatively light-hearted tone of Hitchcock’s *North By Northwest* did not seem to lend itself to a strong half-dim 7th emphasis. You do hear it occasionally in certain cues, especially the E half-dim 7th (E/G/Bb/D). You see the horns playing it in Bar 1 of "The Question" cue; Bar 29 of "Airport" cue; Bars 114-115 in "Match Box" and Bar 15 of "The Station" cue (see immediately below):

The image shows a handwritten musical score for the film Psycho. The score is written on aged paper and includes several staves:

- Hr (Horns):** Four staves with complex chord diagrams and fingering for measures 12-15.
- Tps (Trombones):** Two staves, mostly empty.
- Vc (Violins) and Cb (Celli):** Two staves with simple chord diagrams and fingering for measures 15-18. Measure numbers 15, 16, 17, and 18 are circled in red.

The score includes dynamic markings such as *pp* and *ppp*, and a tempo marking *(pizz)*. The notation is dense with chord diagrams and fingering, characteristic of a working draft.

(33) *Psycho* is another Hitchcock film that Herrmann decided not to emphasize half-dim 7ths. It was the darkest and creepiest of Hitch movies, and Herrmann predominantly focused on the more dissonant diminished chords (especially fully diminished sevenths) and minMaj 7ths, with some augmented chords. The “Prelude” opens in fact with the Bb minMaj 7th

(Bb/Db/F/A) attack/punctuation (stabbing) 8th note chords. In the next cue (“The City”) we find an emphasis on diminished 7ths. Opening with the fully diminished B 7th chord (B/D/F/Ab). However, occasionally you find the half-diminished seventh tonality. For instance, the D half-dim 7th opens the R4/2 cue “The Window.” Once again, it appears that Herrmann felt that this highly disturbing film lent itself to a far more dissonant treatment of chords, so he did not rely on the mildly or moderately dissonant half-dim 7th tonalities. *Vertigo* is another such “disturbing” film, but far less so than the black & white stark effect of *Psycho* (especially if you consider the terror of the “Shower” scene).

(34) Although in *Jason & the Argonauts*, Herrmann tends to work primarily with the traditional minor and major modes (with a special emphasis on perfect 4th and perfect 5th intervals), he did employ sevenths chords that include the half-diminished seventh. You find the horns playing in Bar 6 the F half-dim 7th in "Hera's Temple." You find the F# half-dim 7th in Bars 41042 of "Riverbank" and the B half-dim 7th in "Ascension." Trumpets start off with the D# half-dim 7th (D#/F#/A/C#) in "Olympic Games." Half-dim sevenths are prominently employed in "Sailing" (R6pt 4) since all of the clear cut chords are half-dim 7ths!

Bar 5 = C half-dim 7th (C/Eb/Gb/Bb)

Bar 6 = C# half-dim 7th (C#/E/G/B).

Bar 7 = C# half-dim 7th

Bars 8-10 = F half-dim 7th (F/Ab/Cb/Eb). *Molto Rall*

Rb my moderato Sailing (13) Piu mosso [Jasom]

12 CUs
 34 CUs
 A CL
 C. A. CL.
 12 Fags
 34 Fags
 20 C. Fags
 8 Hns
 6 Pos
 Timp

① ② ③ ④ ⑤ ⑥

with call
 12 CUs
 34 CUs
 B. CL

Hand-compiled by Bill Wachel

JASON & THE ARGONAUTS

R 6 m 4
Sailing *Moderato*

4 Clars	(live) E ^b F ^b G ^b A ^b B ^b C ^b E ^b D ^b E ^b F ^b G ^b A ^b B ^b C ^b E ^b F ^b G ^b A ^b B ^b C ^b	A ^b G ^b A ^b F ^b E ^b F ^b A ^b G ^b A ^b F ^b E ^b F ^b A ^b G ^b A ^b F ^b E ^b F ^b	5 4 3 2 1 C ^b 7 small octave live	5 4 3 2 1 C ^b 7 small octave live	3	3	3	3
Brass clars	C ^b G ^b F ^b E ^b D ^b C ^b	C ^b G ^b F ^b E ^b D ^b C ^b	5 4 3 2 1 C ^b 7 live	5 4 3 2 1 C ^b 7 live	3	3	3	3
C.B. Clars	C ^b G ^b F ^b E ^b D ^b C ^b	C ^b G ^b F ^b E ^b D ^b C ^b	5 4 3 2 1 C ^b 7 live	5 4 3 2 1 C ^b 7 live	3	3	3	3
4 Fags	COL Clars	COL Clars	5 4 3 2 1 C ^b 7 small octave live	5 4 3 2 1 C ^b 7 small octave live	3	3	3	3
2 C. Fags	C ^b G ^b F ^b E ^b D ^b C ^b	C ^b G ^b F ^b E ^b D ^b C ^b	5 4 3 2 1 C ^b 7 small octave live	5 4 3 2 1 C ^b 7 small octave live	3	3	3	3
8 Horns	C ^b G ^b F ^b E ^b D ^b C ^b	C ^b G ^b F ^b E ^b D ^b C ^b	5 4 3 2 1 C ^b 7 live	5 4 3 2 1 C ^b 7 live	3	3	3	3
1-3 Bas	C ^b G ^b F ^b E ^b D ^b C ^b	C ^b G ^b F ^b E ^b D ^b C ^b	5 4 3 2 1 C ^b 7 live	5 4 3 2 1 C ^b 7 live	3	3	3	3
4-6 Bas	C ^b G ^b F ^b E ^b D ^b C ^b	C ^b G ^b F ^b E ^b D ^b C ^b	5 4 3 2 1 C ^b 7 live	5 4 3 2 1 C ^b 7 live	3	3	3	3
Temp	C ^b G ^b F ^b E ^b D ^b C ^b	C ^b G ^b F ^b E ^b D ^b C ^b	5 4 3 2 1 C ^b 7 live	5 4 3 2 1 C ^b 7 live	3	3	3	3

CLS 1-2	3 E ^b C ^b A ^b F ^b E ^b D ^b C ^b	E ^b C ^b A ^b F ^b E ^b D ^b C ^b	C ^b G ^b F ^b E ^b D ^b C ^b	5 4 3 2 1 C ^b 7 small octave live	3	3	3	3
CLS 3-4	COL Clars	COL Clars	COL Clars	5 4 3 2 1 C ^b 7 small octave live	3	3	3	3
B-CL	F ^b E ^b D ^b C ^b B ^b A ^b G ^b F ^b E ^b D ^b C ^b	F ^b E ^b D ^b C ^b B ^b A ^b G ^b F ^b E ^b D ^b C ^b	C ^b G ^b F ^b E ^b D ^b C ^b	5 4 3 2 1 C ^b 7 small octave live	3	3	3	3
C.B. CL	F ^b E ^b D ^b C ^b B ^b A ^b G ^b F ^b E ^b D ^b C ^b	F ^b E ^b D ^b C ^b B ^b A ^b G ^b F ^b E ^b D ^b C ^b	C ^b G ^b F ^b E ^b D ^b C ^b	5 4 3 2 1 C ^b 7 small octave live	3	3	3	3
4 Fags	F ^b E ^b D ^b C ^b B ^b A ^b G ^b F ^b E ^b D ^b C ^b	F ^b E ^b D ^b C ^b B ^b A ^b G ^b F ^b E ^b D ^b C ^b	C ^b G ^b F ^b E ^b D ^b C ^b	5 4 3 2 1 C ^b 7 small octave live	3	3	3	3
2 C. Fags	F ^b E ^b D ^b C ^b B ^b A ^b G ^b F ^b E ^b D ^b C ^b	F ^b E ^b D ^b C ^b B ^b A ^b G ^b F ^b E ^b D ^b C ^b	C ^b G ^b F ^b E ^b D ^b C ^b	5 4 3 2 1 C ^b 7 small octave live	3	3	3	3
8 Horns	F ^b E ^b D ^b C ^b B ^b A ^b G ^b F ^b E ^b D ^b C ^b	F ^b E ^b D ^b C ^b B ^b A ^b G ^b F ^b E ^b D ^b C ^b	C ^b G ^b F ^b E ^b D ^b C ^b	5 4 3 2 1 C ^b 7 small octave live	3	3	3	3
Pos 1-3	F ^b E ^b D ^b C ^b B ^b A ^b G ^b F ^b E ^b D ^b C ^b	F ^b E ^b D ^b C ^b B ^b A ^b G ^b F ^b E ^b D ^b C ^b	C ^b G ^b F ^b E ^b D ^b C ^b	5 4 3 2 1 C ^b 7 small octave live	3	3	3	3
Pos 4-6	F ^b E ^b D ^b C ^b B ^b A ^b G ^b F ^b E ^b D ^b C ^b	F ^b E ^b D ^b C ^b B ^b A ^b G ^b F ^b E ^b D ^b C ^b	C ^b G ^b F ^b E ^b D ^b C ^b	5 4 3 2 1 C ^b 7 small octave live	3	3	3	3

Bill Wrobel
June 28, 2015
4:048m

To conclude this paper, hopefully these examples will suffice to show that overall the special coloring of seventh chords that seemed to best characterize the Herrmann "sound" is indeed the half-diminished seventh.

Completed Friday May 17, 2002 9:00 pm PDT

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