

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

KATHRYN TOWNSEND GRIFFIN, HELEN
MCDONALD, and THE ESTATE OF CHERRIGALE
TOWNSEND,

Plaintiffs,

-against-

EDWARD CHRISTOPHER SHEERAN, p/k/a ED
SHEERAN, ATLANTIC RECORDING
CORPORATION, d/b/a ATLANTIC RECORDS,
SONY/ATV MUSIC PUBLISHING, LLC, and
WARNER MUSIC GROUP CORPORATION, d/b/a
ASYLUM RECORDS

Defendants.

ECF CASE

17-cv-5221 (RJS)

**DECLARATION OF DR.
LAWRENCE FERRARA**

I, Lawrence Ferrara, declare as follows:

1. I have personal knowledge of, and am fully familiar with, the facts set forth in this Declaration. I am Professor of Music and Director Emeritus of Music and the Performing Arts at New York University's Steinhardt School. For a full recitation of my qualifications and background, I respectfully refer the Court to my curriculum vitae, attached as Appendix 1 to the report (my "Report") submitted in the above-captioned action regarding *Let's Get It On* ("LGO") and *Thinking Out Loud* ("TOL"). A copy of my Report is annexed to the Farkas Declaration as Exhibit 3; the Visual Exhibits and the Audio Exhibits annexed to my Report are annexed to the Farkas Declaration as Exhibits 4 and 5.

2. Because it is my understanding that the plaintiffs only claim to own rights in the composition of LGO (the "LGO Composition") and because it is my understanding that the scope of their purported interest is defined by the sheet music for the LGO Composition deposited with the U.S. Copyright Office (the "LGO Deposit Copy"), my Report compares TOL to the LGO Deposit Copy. Nevertheless, assuming, for argument's sake, that the Court believes

a comparison of TOL to the commercially released sound recording of LGO (the “LGO Recording,” referred to in my Report as the LGIO RP) is necessary, my Report also compares TOL to the LGO Recording as explained later in this Declaration.

A. Analysis of the LGO Deposit Copy and TOL

3. The musical elements included in the LGO Deposit Copy sheet music include the composition’s key, meter, harmony (*i.e.*, chord progressions), rhythm, melody, lyrics and song structure.

4. The LGO Deposit Copy does not include percussion/drums, bass-guitar, guitar, Marvin Gaye’s vocal performance, horns, flute, piano, strings, or any of the performance elements, such as the tempo in which to perform the composition, contained in the LGO Recording. TOL includes, among other things, the composition’s key, meter, harmony (*i.e.*, chord progressions), rhythm, melody, lyrics and song structure as well as electric-guitar, bass-guitar, piano, organ, lyrics, vocals, percussion/drums and tempo.

Key & Meter

5. The LGO Deposit Copy is in the key of E-flat major; TOL is in the key of D major. I listened to and read the deposition testimony of Dr. Alexander Stewart (“Dr. Stewart”), the musicologist of the plaintiffs, in which he testified that he did not consider the key of the two works significant in performing his analysis. Each song is in 4/4 meter (also termed “common time”), which is probably the most common meter in popular music, featured in countless songs that predate LGO, and a foundational musical building block.

Harmony

6. The LGO Deposit Copy features a I-iii-IV-V7 (or a 1-3-4-5) chord progression throughout most of the composition.¹ TOL features multiple chord progressions. Some segments of TOL feature a chord progression that is similar, but not identical, to the chord progression used in the LGO Deposit Copy while other segments of TOL feature chord progressions that are substantially different to any chord progression found in the LGO Deposit Copy.

7. The basic I-iii-IV-V chord progression used in the LGO Deposit Copy was commonplace prior to LGO. At Paragraph 19 at Pages 7-8 and Paragraph 126 at Page 44 of my Report, I identify thirteen songs that predate LGO that use this chord progression. The I-iii-IV-V chord progression also appears in at least two guitar method books. One such book noted that this chord progression is not original to LGO. (I respectfully refer the Court to my Report at Visual Exhibit E). Dr. Stewart admitted at his deposition that I-iii-IV-V is “a common progression,” that “it’s not original,” “that other songs have this chord progression,” and that “[t]hese four chords have been used in other compositions prior to Let’s Get It On.” It is my opinion that the unremarkable similarities between some of the chord progressions in TOL and the LGO Deposit Copy are not indicative of copying.

8. The harmonic rhythm of the I-iii-IV-V7 chord progression in the LGO Composition (*i.e.*, the pace at which the chords are played or change) features a four-bar chord progression with two chords in bar 1, one chord in bar 2, two chords in bar 3 and one chord in bar 4. In contrast, the harmonic rhythm in the chord progressions in TOL with any similarity to the LGO Composition features a two-bar chord progression generally with two chords per bar in

¹ A “7” denotes the addition of a pitch that is the interval of a minor seventh above the root or name of the chord.

which the second and fourth chords anticipate the third beat of their respective bars. Indeed, to achieve the same harmonic rhythm in both works, one would need to cut in half the value of the notes and chords in the LGO Deposit Copy.

Song Structure

9. Dr. Stewart testified that the LGO Deposit Copy has the following structure: (1) verse, (2) chorus, (3) verse, (4) verse, (5) bridge, (6) chorus/verse,² (7) bridge and (8) verse/outro. In contrast, in regard to TOL, Dr. Stewart states in his report that it has the following structure: (1) verse A, (2) verse B, (3) bridge/pre-chorus, (4) chorus, (5) verse A2, (6) verse B2, (7) bridge/pre-chorus, (8) chorus, (9) interlude and (10) chorus.

10. The order of the song structures is clearly different. The fact that these two works feature verses, choruses and bridges is unremarkable as countless songs in many different genres include these generic structural building blocks and is not, in any way, indicative of copying.

Lyrics

11. Dr. Stewart admitted that “few important lyrical similarities exist” between LGO and TOL. The Stewart Report does not identify any specific lyrical similarities. As Dr. Stewart concedes at pages 12-13 of his report (and as he conceded at his deposition), there are no objective, meaningful lyrical similarities between these two works and certainly none that supports an indication that TOL’s lyrics were copied in any way from the lyrics of LGO. The overall lyrics in LGO are about immediate sexual attraction and fulfillment, while the overall lyrics in TOL are about a long-term romantic love without any immediate consummation. While the two songs incorporate the commonly used idea of love for a woman, the lyrical expression in the two songs is different.

² At his deposition, Dr. Stewart described this section of the LGO Deposit Copy as “nebulous.” He could not resolve whether to identify it as a chorus or verse.

Vocal Melodies

12. On the basis of my analysis of the melodies in the LGO Deposit Copy and TOL, I found that there are no significant melodic similarities. The pitch sequences, melodic rhythms, and melodic phrase structures are significantly different in the melodies in the LGO Deposit Copy and TOL. Dr. Stewart failed to provide an analysis of the melody in the LGO Deposit Copy. The overall vocal melodies in the LGO Deposit Copy are, for the most part, substantially the same as the overall vocal melodies in the LGO Recording. Dr. Stewart analyzes three specific melodies in the LGO Recording: Melodies A, B and C (as defined below). Melody B and Melody C are virtually identical in the LGO Deposit Copy and in Dr. Stewart's transcriptions of the LGO Recording. For Melody A there are similarities and differences between the LGO Deposit Copy and the LGO Recording as transcribed by Dr. Stewart. For example, there are more pitches in the LGO Deposit Copy than in the LGO Recording, which makes Melody A in the LGO Deposit Copy even less similar to Melody A in TOL. I respectfully refer the Court to my analysis of the vocal melodies in the LGO Recording below and in my Report at Paragraphs 79-117 at Pages 28-41.

The Two Works As A Whole

13. The component elements of the LGO Deposit Copy and TOL – individually and in the aggregate – represent very different musical expression. My comparative analysis of the two compositions demonstrates that the only relevant similarity between the LGO Deposit Copy and TOL is that both feature variants of the commonplace I-iii-IV-V chord progression, a chord progression which, as demonstrated in my Report and conceded by Dr. Stewart, was commonplace prior to the LGO Deposit Copy. The key of each composition is different, no lyrical similarities exist, the vocal melodies and rhythms are significantly different, the song

structures contain many differences and any structural similarity is generic, and each composition embodies chord progressions that are significantly different to any chord progressions in the other composition. The fact that the two works are written in 4/4 meter is not remotely significant because 4/4 meter is “common time”, a musical building block, and probably the most common meter used in popular music. Even Dr. Stewart conceded that the two works, as a whole, are not “identical” or “virtually identical” to one another.

14. Therefore, on the basis of my analysis of the LGO Deposit Copy and TOL in their entirety within the context of the analysis of their component elements, individually and in combination, it is my opinion that LGO and TOL are very different compositions in their entirety. I did not find any significant similarities between the LGO Deposit Copy and TOL, and certainly nothing indicative of copying of the LGO Deposit Copy by the creators of TOL. Dr. Stewart failed to present an analysis of the LGO Deposit Copy and TOL as a whole in his report.

B. Analysis of the LGO Recording and TOL

15. Unlike the LGO Deposit Copy, the LGO Recording includes, among other things, tempo, percussion/drums, electric guitar, bass-guitar, piano, horns, flute and Marvin Gaye’s vocal performance.

Key, Meter & Tempo

16. The LGO Recording is recorded in the key of E-flat major, in 4/4 meter and at 82 beats per minute. TOL is recorded in the key of D major, in 4/4 meter and at 79 beats per minute. 4/4 meter is “common time”, probably the most common meter used in popular music, and a musical building block. Dr. Stewart testified that he did not consider the keys or tempos (*i.e.*, the beats per minute) of the two songs significant in performing his analysis.

Harmony

17. Most of the LGO Recording (like the LGO Deposit Copy) uses a I-iii-IV-V7 chord progression. As detailed above, while some segments of TOL feature a chord progression that is similar, but not identical, to the chord progression used in the LGO Recording, other sections of TOL use an entirely different chord progression. Further, the I-iii-IV-V chord progression was already commonplace prior to the LGO Recording. See ¶¶ 6-8 *supra*.

Song Structure

18. In his report at Page 2, Dr. Stewart opines as to the structure of the “single” (with a length of 4:02) and the “full” (with a length of 4:51) versions of the LGO Recording, and the structure of TOL. The song structures as presented by Dr. Stewart are distinctly different. For example, as analyzed by Dr. Stewart, TOL has pre-chorus, chorus and interlude sections, but the “single” and “full” versions of the LGO Recording do not; the only similarity is the use of bridges and verses but in a different structural order. The fact that these works incorporate verses and bridges is unremarkable because countless songs in many genres include these generic structural building blocks, which are not, in any way, indicative of copying.

The Use of An Occasional Blue Note

19. Dr. Stewart notes that the LGO Recording and TOL “occasionally” use a “blue” third note. As Dr. Stewart admitted at his deposition, the occasional use of a “blue” third note was not original to LGO and, in fact, was commonplace prior to LGO.

Vocal Melodies: Vocal Melody A

20. In Example 3 of the Stewart Report, Dr. Stewart transcribes and compares (a) the opening vocal melody of the LGO Recording and (b) the opening vocal melody of TOL

(“Melody A”). There are 9 pitches in Melody A of the LGO Recording and 11 pitches in Melody A of TOL. As transcribed by Dr. Stewart, of the 11 pitches in Melody A of TOL only 3 pitches (less than 30%) line up in the same order as the pitches in Melody A of the LGO Recording. As transcribed in Example 3 and as charted immediately below Example 3 on page 7 of the Stewart Report, pitch “3” lines up but the next three pitches are different, then pitches “3” and “2” line up but the remaining five pitches in Melody A of TOL do not line up with any pitches in the LGO Recording. The fact that only 3 pitches out of respective 9-pitch and 11-pitch melodies line up in the same order is insignificant and manifests objectively fragmentary and minimal similarities, at best.³ Dr. Stewart then alters Melody A by deleting the second scale degree “2” in Melody A of the LGO Recording to show a “3-2-1-2” order of pitches that does not actually exist. Further, Dr. Stewart creates another “version” of Melody A in TOL by deleting two more notes, scale degrees (1 and 6), at the top of Page 8 of his Report. Notably, even with these improper “deletions” of pitches, only 4 of 9 pitches line up in fragments (*i.e.*, a single pitch separated from three pitches that line up) in the same order in Melody A in the two songs; thus, the order of more than 50% of the pitches is still different. I respectfully refer the Court to Paragraphs 85-87 at Pages 31-32 of my Report which evidence the foregoing in more detail.

21. The Stewart Report also fails to analyze the melodic rhythms in Melody A of each song, presumably because the rhythmic durations of the pitches in Melody A of each song are significantly different as transcribed in Example 3 on Page 7 of the Stewart Report. I

³ In the LGO Deposit Copy, there are 14 pitches in Melody A, and only 3 (less than 22%) fragmentarily line up in the same order as the pitches in Melody A of TOL, even if one adopts Dr. Stewart’s flawed method of identifying in his charts, a “flatted 3” in LGO as the same pitch as a “3” in TOL. A flatted scale degree 3 (*i.e.*, b3) is a different pitch from a scale degree 3 that is not flatted.

respectfully refer the Court to Paragraphs 88-91 at Pages 32-33 of my Report for objective evidence of the vast differences in melodic rhythm in Melody A of the LGO Recording and Melody A of TOL.

22. In sum, there are no significant, objective similarities between the pitches in Melody A of each song and, when combined with the significantly different melodic rhythms to which these different pitches have been set, Melody A in each song (as transcribed in Example 3 in the Stewart Report) lacks any objectively meaningful musical similarities. The Court can hear the differences in these two vocal melodies in Audio Exhibit 1, Track 4 of my Report.

Vocal Melody B

23. In Example 4 on Page 9 of the Stewart Report, Dr. Stewart transcribes and compares (a) the vocal melody at the end of verse 4 of the LGO Recording and (b) the vocal melody at the beginning of the chorus in TOL (“Melody B”). In addition to the different structural placements within both songs, as charted and analyzed by Dr. Stewart, only 5 of 11 pitches in Melody B of each song line up in the same order; thus, more than 50% of the pitches are different.⁴ As transcribed in Example 4 and as charted immediately below Example 4 on page 9 of the Stewart Report, pitches “3” and “5” line up but the next five pitches are different, then pitch “3” lines up but the next pitch is different, and at the end of the melody pitches “2” and “3” line up, which is fragmentary at best. Further, one of the five similar notes is a grace (miniature) note that Dr. Stewart transcribes at the beginning of Melody B of TOL, which makes Melody B in each song appear more similar. The aforementioned grace note was not included by Dr. Stewart in an earlier report he authored dated June 2015 (I respectfully refer the Court to my Report at Visual Exhibit H), and it is not included in the published sheet music for TOL. I do

⁴ In the LGO Deposit Copy, the order of the 11 pitches in Melody B is the same as in the LGO Recording.

not believe this note actually appears in TOL. While Dr. Stewart did not chart any grace notes in his analysis of Melody A, he does so in his analysis of Melody B when it serves the purpose of making the two clearly different melodies appear more similar. I address this and other egregiously contradictory practices of Dr. Stewart at Paragraphs 95-98 at Pages 34-36 of my Report.

24. The Stewart Report also fails to analyze the melodic rhythms in Melody B, again, presumably because the rhythmic durations of the pitches in Melody B are significantly different as transcribed in the Stewart Report. I respectfully refer the Court to Paragraphs 99-101 at Pages 36-37 of my Report for objective evidence of the vast differences in melodic rhythm in Melody B of the two songs. Dr. Stewart (at Page 9 of his Report) also opines that “variants” of Melody B can be heard elsewhere in the LGO Recording at 0:17 and at 3:38. Dr. Stewart fails to transcribe or analyze the supposed “variants.” These “variants” actually have little in common with Melody B of TOL as evidenced at Paragraphs 103-104 on Pages 37-38 of my Report.

25. In sum, any similarities between the pitches in Melody B are fragmentary and objectively insignificant at best and, when combined with the significantly different melodic rhythms to which these different pitches have been set, lack any meaningful musical similarities. The Court can hear the differences in these two vocal melodies in Audio Exhibit 1, Track 5 of my Report.

Vocal Melody C

26. In Example 5 at Page 10 of the Stewart Report, Dr. Stewart transcribes and compares (a) the vocal melody at the beginning of verse 1 in the LGO Recording and (b) the vocal and guitar melodies at the interlude of TOL (“Melody C”). Dr. Stewart opines that Melody C in each song “consists of repeated notes on a descending scale,” and, as he admitted at his

deposition, repeating notes on a descending scale is not original to the LGO Recording. Moreover, as transcribed by Dr. Stewart, only 6 of 14 pitches in Melody C of the LGO Recording line up with pitches in Melody C of TOL, which evidence a lack of meaningful musical similarities.⁵ As transcribed in Example 5 and as charted immediately below Example 5 on page 10 of the Stewart Report, pitches “8” and “8” line up but the next pitch is different, then (moving down the scale) pitch “7” lines up but the next pitch is different, then pitch “7” lines up but the next pitch is different, then (moving down the scale) pitch “6” lines up, but the next two pitches are different, then (moving down the scale) pitch “5” lines up but the remaining three pitches in the LGO Recording do not line up with any of the same pitches in Melody C of TOL. I respectfully refer the Court to paragraphs 105-110 at Pages 38-39 of my Report for a more thorough analysis.

27. Now moving to the chart of the pitches in the “TOL (guitar)” and the vocal melody in the LGO Recording at the bottom of Page 10 of the Stewart report, as charted by Dr. Stewart only 7 of 14 pitches line up in the two melodies: pitches “8” and “8” line up but the next three pitches are different, then (moving down the scale) pitches “7”, “7”, and “6” line up but the next two pitches are different, then (moving down the scale) pitch “5” lines up but the next two pitches are different, and the last pitch “5” lines up. I respectfully refer the Court to Paragraphs 111-112 at Pages 39-40 of my Report for a more thorough analysis. This fragmentary and unremarkable similarity results from the fact that the guitar-part in Melody C of TOL descends down a D major scale, which is a basic musical building block.

28. Consistent with his flawed analysis of Melody A and Melody B, Dr. Stewart also fails to analyze the melodic rhythms in Melody C. The rhythmic durations of the pitches in

⁵ In the LGO Deposit Copy, the order of the 14 pitches in Melody C is the same as in the LGO Recording.

Melody C of the LGO Recording and TOL are vastly different as transcribed in Example 5 by Dr. Stewart and objectively evidenced at Paragraphs 113-116 at Pages 40-41 of my Report.

29. In sum, any similarities between the pitches in Melody C are objectively insignificant at best and, when combined with the vastly different melodic rhythms to which these different pitches have been set, Melody C in the two songs lacks any meaningful musical similarities. The Court can hear the differences in the two vocal melodies in Audio Exhibit 1, Track 6 of my Report.

30. There are no meaningful, objective similarities between the vocal melodies of these two songs that could plausibly support an indication that TOL was copied from LGO.

Lyrics

31. Apart from a few minor deviations in terms of adding or omitting certain words such as “ooh” “oh” and “whoa,” and two additional lyrical stanzas in the “full” 4:51 version of the LGO Recording (which have no similarities with the lyrics of TOL), the lyrics of the LGO Recording are substantially the same as the lyrics in the LGO Deposit Copy. As such, I respectfully refer the Court to my analysis comparing the lyrics of the LGO Deposit Copy to TOL at Paragraph 11 *supra*, and note that Dr. Stewart does not contend that any similarities exist between the lyrics of these two works that are indicative of copying.

Bass-Lines

32. While Dr. Stewart opines that similarities exist between the “bass lines” in each recording, Dr. Stewart’s report does not focus on or even identify the actual bass guitar line of TOL, which begins at 24 seconds into the song and then continues until the end of the song at

4:42 (the “TOL Bass Line”). A transcription of the TOL Bass Line beginning at 0:24 is set forth at Page 18 of my Report.⁶

33. Rather, Dr. Stewart analyzes only the bass line for the first 24 seconds of TOL, where there is no bass guitar, but only an electric guitar as explained at Paragraph 52 at Page 17 of my Report (the “TOL Opening Bass Line”). Dr. Stewart focuses on the lowest notes of the electric guitar being played for the first 24 seconds (and ignores the rest of the guitar notes played in this section), which lowest notes can be considered the “bass-line” of the song but only for the first 24 seconds of TOL. In other words, while Dr. Stewart claims that there are similarities between the bass lines of the two songs, in his Report he did not transcribe or analyze the bass line (played on the bass guitar) that begins at 24 seconds into TOL and which continues as the bass line for the remainder of TOL through the end at 4:42. Thus, the Stewart report ignores the bass line during 91% of TOL, choosing to focus on the lowest notes of the guitar during the first 9% of TOL.

34. The reason for the omission of the bass line (played on the bass guitar) during 91% of TOL in the Stewart Report is that the unremarkable similarities Dr. Stewart found between the lowest notes in the guitar during the first 24 seconds of TOL, *e.g.*, “a descending sixth”, does not occur anywhere in the bass line played by the bass guitar during the remaining 91% of TOL. Indeed, in this TOL Bass Line, instead of a *descending* sixth, there is an *ascending* third, which is not only significantly different from a sixth, it is in the opposite direction. Thus, in contrast to the bass-guitar part in the LGO Recording and the “bass-line” in the guitar present during the

⁶ At his deposition, Dr. Stewart testified that he did not hear a bass-guitar in TOL and that the TOL Bass Line is played by keyboard. In fact, as sworn to by Jake Gosling, who I understand produced the recording of TOL, the TOL Bass Line is played on an actual bass-guitar; it is not programmed by a computer or keyboard. In any event, from a musicological perspective, the TOL Bass Line, whether played by bass-guitar or keyboard, is a bass-line.

first 24 seconds of TOL, the bass-guitar part, and thereby the bass line, during 91% of TOL includes an ascending third, not a descending sixth which represents a significant difference in musical expression as explained at Paragraphs 53-54 at Pages 17-18 of my Report.

35. When Dr. Stewart writes, at Page 4 of his report, that “the bass line leaps downward by a sixth before ascending stepwise to the fifth degree of the scale,” (1) he is omitting the actual “bass line” throughout almost the entirety of TOL and (2) he is hiding the fact that while the bass guitar line in the LGO Recording leaps downward by a sixth, the bass guitar line in TOL *ascends* by a major third. The bass guitar lines move in *opposite* directions (the bass guitar in the LGO Recording leaps *down* but the bass guitar in TOL leaps *up*) as demonstrated in Musical Example 2 at Page 18 and Musical Example 3 at Page 20 in my Report.

36. Further, in regard to the actual bass-guitar parts present in each recording, Examples 2 and 3 of my Report include a comparative transcription of representative portions of each recording. These transcriptions and my analysis at Paragraph 58 at Pages 20-21 of my Report confirm that the melodic contour of the bass-guitar parts in each recording is distinct: (a) bar 1 of the bass line in the LGO Recording leaps downward; bar 1 of the TOL Bass Line leaps upward; (b) bar 1 of the LGO Recording includes the interval of a sixth; bar 1 of TOL does not include the interval of a sixth; (c) bar 1 of TOL includes the interval of a third; bar 1 of the LGO Recording does not include the interval of a third; (d) bar 2 of the LGO Recording moves upward; bar 2 of TOL contains a combination of upward and downward movements; (e) bar 2 of the LGO Recording consists of stepwise intervals; bar 2 of TOL includes a downward leap to scale degree 7; (f) bar 3 of the LGO Recording leaps downward; bar 3 of TOL leaps upward; (g) bar 3 of the LGO Recording includes the interval of a sixth; bar 3 of TOL does not include the interval of a sixth; (h) bar 3 of TOL includes the interval of a third; bar 3 of the LGO Recording

does not include the interval of a third; and (i) bar 4 of TOL includes a downward leap to scale degree 7; bar 4 of the LGO Recording does not include a downward leap to scale degree 7.

37. The transcriptions in Examples 2 and 3 and the analysis in Paragraph 58 of my Report also confirm that the melodic rhythms of the bass-guitar parts in each song are distinct: (a) the rhythmic durations of two of the three notes in bar 1 are different; (b) the rhythmic durations of three of the five notes in bar 2 are different; (c) bar 2 of the bass line in the LGO Recording includes two sixteenth notes; bar 2 of the TOL Bass Line does not contain sixteenth notes; (d) the rhythmic durations of two of the three notes in bar 3 are different; (e) the rhythmic durations of four of the seven notes in bar 4 are different; and (f) bar 4 of the LGO Recording includes four sixteenth notes; bar 4 of TOL does not contain sixteenth notes.

38. Thus, when the “bass line” in almost the entirety of TOL is compared with the “bass line” in the LGO Recording, the substantive differences undermine and contradict Dr. Stewart’s opinion that the “bass lines” in the LGO Recording and TOL are “nearly identical.”

39. I reviewed Dr. Stewart’s full transcription of TOL, which was not included in any analysis or transcription in his report, but which I understand he provided during expert discovery upon Defendants’ request. Dr. Stewart’s full transcription of TOL (which was not attached to his Report) indicates that, as of 24 seconds into TOL through 4:42 at TOL’s conclusion, the bass-line for TOL is the bass-guitar part, not the lowest notes played on the electric guitar. Thus, Dr. Stewart’s own full transcription (which he did not attach to or reference in his Report) confirms that the bass-line for approximately 91% of TOL (258 out of 282 seconds) is the TOL Bass Line, which is objectively different from the bass line in the LGO Recording.

40. In comparing the bass line of the LGO Recording with the TOL Opening Bass Line at Page 13 of his report, Dr. Stewart opines that there are five “characteristics” in common: (1) 1-3-4-5 sequence, (2) two-measures, (3) descending sixth, (4) anticipation of 3 and 5, and (5) syncopation.

41. *First*, the bass-line of the LGO Recording, as transcribed in Example 1 on Page 4 of the Stewart Report, consists of the pitches 1-3-3-4-5-5-5-6, not 1-3-4-5. In contrast, the lowest notes in the guitar at the opening of TOL, as transcribed by Dr. Stewart, are 1-3-4-5-5. Dr. Stewart thus omits many differences in the actual order of the pitches and does not provide an analysis of the full order of the pitches and the melodic rhythms to which those pitches are set.

42. *Second*, countless songs have bass-lines that consist of two measures.

43. *Third*, the descending sixth is never present in the TOL Bass Line, played on the bass guitar, which comprises the bass-line of TOL from 24 seconds until the song’s conclusion at 4:42 (*i.e.*, approximately 91% of TOL).

44. *Fourth*, the “anticipation of 3 and 5” causes, and functionally, is the “syncopation” in the bass-lines, which renders the fourth and fifth characteristics redundant as evidenced at Paragraphs 146-152 on Page 50-52 of my Report.

45. *Fifth*, the “characteristics” in common between the bass-guitar part of the LGO Recording and the TOL Opening Bass Line were commonplace prior to LGO, as detailed more fully at Paragraphs 153-160 at Pages 50-53 of my Report.

46. In sum: (a) Dr. Stewart’s analysis of the bass-lines is inherently flawed because his report altogether ignores the TOL Bass Line, despite admitting through his full transcription of TOL, not included in his report, that the TOL Bass Line is the bass-line of TOL; (b) the “characteristics” in common between the bass-guitar part in the LGO Recording and the lowest

notes played on the guitar at the opening of TOL are objectively insignificant and were commonplace prior to LGO; and (c) as Examples 2 and 3 from my Report establish, the actual bass-guitar lines in each song are very different. I can confidently state that these differences (not to mention Dr. Stewart's efforts to avoid these differences) confirm my initial conclusion that there are no objective similarities in the bass lines that are indicative of copying.

The Drums

47. Dr. Stewart claims that similarities exist between the drum parts in the LGO Recording and TOL because each drum part features: (1) the use of eighth-notes on hi-hat cymbals; (2) single snare drum hits on the backbeats (*i.e.*, beats 2 and 4); and (3) kick drum hits on beat 1 and on two "off-beats." But, the use of eighth-notes on hi-hat cymbals and snare drum on beats 2 and 4 were commonplace prior to LGO in numerous genres of music as Dr. Stewart admitted at his deposition, and the kick drum on two off-beats was also commonplace prior to LGO in numerous genres of music. The similarities in the drum patterns as transcribed by Dr. Stewart were in use in songs prior to the LGO Recording and are also found in student method books. Moreover, as transcribed by Dr. Stewart, the drum parts also contain several differences as evidenced at Paragraphs 67-69 at Pages 24-25 in my Report. Indeed, given the commonplace nature of the similarities in the drum patterns at issue as evidenced at Paragraphs 73-77 at Pages 27-28 of my Report, whether the elements are examined alone or together, there are no objective similarities that are indicative of copying.

The Two Works As A Whole

48. The component elements of the LGO Recording and TOL – individually and in the aggregate – represent very different musical expression. My comparative analysis of the two compositions demonstrates that the only relevant similarities between the LGO Recording and

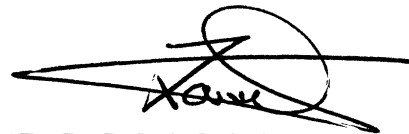
TOL are that (1) both feature variants of the commonplace I-iii-IV-V chord progression, a chord progression which, as demonstrated in my Report, was commonplace prior to the LGO Recording and not identical in the LGO Recording and TOL, (2) there is an unremarkable similarity between the bass guitar line in the LGO Recording and the lowest notes in the guitar during the first 24 seconds of TOL which, as demonstrated in my Report, was commonplace prior to the LGO Recording, not identical in the LGO Recording and TOL, and which is further undermined by the fact that the bass line in the remaining 91% of TOL has significant differences with the bass line in the LGO recording, and (3) there are similarities in the drum patterns which are not identical, contain several differences, and were in use in songs prior to the LGO Recording and also found in student method books.

49. Further, the key of each composition is different, no lyrical similarities exist, the vocal melodies are significantly different, the song structures contain many differences and any structural similarity is generic, and each composition embodies additional chord progressions that are significantly different to the chord progressions in the other composition. The fact that the two works are written in 4/4 meter is not remotely significant because 4/4 meter is “common time”, a musical building block, and probably the most common meter used in popular music.

50. On the basis of my analysis of the LGO Recording and TOL in their entirety within the context of the analysis of their component elements, individually and in combination, and the analysis of related music, it is my opinion that the LGO Recording and TOL are very different songs in their entirety. I did not find any significant similarities between the LGO Recording and TOL indicative of copying.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Dated: July 27, 2018

A handwritten signature in black ink, appearing to read "Lawrence Ferrara", is written over a horizontal line. The signature is stylized with a large loop and a long horizontal stroke.

By: LAWRENCE FERRARA, Ph.D.