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**An Analysis of *Short Ride in a Fast Machine* by John Adams**

John Adams, born 1947, is one of the most prominent minimalist composers alive today. After attending Harvard University where he studied with such famous composers as Roger Sessions and David Del Tredici, his earliest works were rooted in a modernist aesthetic, but a minimalist aesthetic began to emerge in his music after he moved to California and began teaching at the San Francisco Conservatory in 1972. In his 2008 autobiography, Adams wrote that he considered *Phrygian Gates*, a 30-minute minimalist piece for solo piano written in 1977, to be his first mature work.[[1]](#footnote-1) Other major compositions include his three-movement choral symphony, *Harmonium* (1981), his first opera, *Nixon in China* (1987), and the Pulitzer prize-winning composition *On the Transmigration of Souls* (2002), commissioned by the New York Philharmonic to memorialize the victims of the September 11, 2001 terrorist attacks. This paper will analyze *Short Ride in a Fast Machine* (1986), one of the composer’s most famous compositions, and one of the most widely performed minimalist compositions for orchestra of the past 50 years.[[2]](#footnote-2)

According to Adams in a 1999 interview, *Short Ride in a Fast Machine* was inspired by a ride he took in a sports car: “A relative of mine had bought a Ferrari, and he asked me late one night to take a ride in it, and we went out onto the highway, and I wished I hadn’t.”[[3]](#footnote-3) He described the ride as “absolutely terrifying,” though the anxiety experienced by Adams during the ride is arguably absent from the music itself. The music instead expresses the power and beauty of the Ferrari. Stanley Kleppinger writes that the piece is “truly about rhythmic and metrical conflicts,” but I disagree: I believe the piece is just as much about harmonic conflicts and will demonstrate why in what follows.[[4]](#footnote-4)

Example 1 provides a chordal reduction of the piece, one that normalizes register, placing the lowest sounding pc in the music on the bottom of each chord in the reduction, and placing all of the other pcs in each chord in the octave above that lowest note, except in the case of polychords, which the reduction voices in the most compact way that both keeps the lowest sounding note on the bottom and avoids any overlap between the component chords. The reduction ignores notes that are a half note or shorter in the score unless they are immediately repeated, and represents notes that are either sustained or repeated for a whole note or longer as whole notes, and notes that are an eighth note in the score and repeated in two consecutive measures as quarter notes if those notes are not already represented by whole notes in the same harmony.

Example 1: Chordal reduction of *Short Ride in a Fast Machine*.

Diagram, schematic

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Ex. 1 continued

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Diagram, schematic

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Ex. 1 continued

Table

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Harmonically, the piece is based on the interaction of two families of diatonic harmonies, one tonal and one post-tonal: the set classes (037) and (027). The former accounts for all major and minor triads and is thus associated strongly with tonality, but (027) is quartal in origin and thus post-tonal. Of the eighty-six chords represented in the reduction, all the trichords are some form of either (037) or (027), and all the larger harmonies have either (037) or (027) as a subset. Only 17% (15/86) are simple tertian harmonies (i.e. complete triads or seventh chords with no tones added), but other kinds of tertian harmonies abound: triads or seventh chords with one added tone, triads with an added sixth and ninth, seventh chords with an added ninth and thirteenth, and polychords that consist of two (or, in one case, three) triads with roots a step apart. When one adds up all the possible tertian harmonies (including tertian-based polychords), they account for 66% (57/86) of the harmonies in the piece. It is for this reason that I have provided traditional chord names rather than pc sets for most harmonies in the reduction. The fact that two-thirds of the chords in the piece can be considered tertian-based probably accounts for both its popularity and its accessibility. Audiences are simply more familiar with tertian harmony and therefore they more easily connect with music based on harmonies built in thirds.

While many of the chords I have labeled with pc sets in the reduction do have (037) as a subset, none of these clearly project the root of a triadic subset in a way that makes the harmony sound tertian-based: that is, they are voiced in ways that obscure the thirds that form the triadic subsets. In m. 10, for example, the chord [024679] is realized as a cluster harmony, sounding as C4, D4, E4, F#4, G4, A4, D5, and A5 in the brass. Though Adams could have easily voiced the same pitch classes as the polychord D|C (i.e. a D major triad over a C major triad), the label in the reduction is meant to reflect the fact that he chose not to do so, but instead chose a voicing that realized every pitch class within a single octave above the bass note C4, each pitch in that octave just a step away from the chord tone beneath it.

The set class (027) itself regularly occurs in tonal music, but in that context, one of the pitch classes functions as a suspension and resolves by step downward, as shown in Example 2. Ex. 2 provides the first harmony in *Short Ride*, followed by three different hypothetical tonal resolutions of it. In the first two resolutions, the D resolves down by step to the third of a triad, while in the third resolution the A resolves down to the third of a seventh chord. None of these resolutions (at pitch or transposed) can be found in *Short Ride*, which is why I elected to label these harmonies with pc set names in Ex. 1 rather than with traditional chord names like Asus (mm. 2-9 and 133-135) or Gsus (m. 173) . Adams does not treat the forms of (027) found in *Short Ride* as dissonant tonal entities, but instead as consonances.

Example 2: Three hypothetical tonal resolutions of the opening harmony.

Diagram, schematic

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The mix of tertian harmonies with non-tertian ones is not the only element that marks this work as post-tonal; the progression of harmonies is equally important. Of all the places where one tertian-based harmony progresses to another, there is not one instance of a dominant-tonic relationship, and in fact there are no progressions by fifth at all until mm. 144-145, more than three-quarters of the way to its ending. In that instance, an Amadd4 chord progresses to a Dadd9 chord, and even if one were to ignore the added notes, the A minor triad could not be mistaken for the dominant in D major because of its minor quality. The only place where there is a fifth relationship between two triads that would also match the chord qualities of a dominant-tonic relationship is in m. 182, the penultimate measure of the piece, but here this progression is sandwiched in between D major triads, and this context coupled with the fact that the chord progression is at least twice as fast as any heard in the movement thus far undercuts any chance that an Ab tonic would be heard.

While the chord progressions don’t at all sound tonal, they do sound natural, and this is because all of them can be understood as generated from one of three possible voice leading strategies: 1) the addition or subtraction of one or more pcs while holding the rest of the notes as common tones; 2) parsimonious voice leading in which the majority of voices move by half step or not at all; or 3) planing against pedal tones. Of these three strategies, the first is by far more common in this piece, and can be seen clearly in mm. 1-34 (see Ex. 1). The second strategy can be seen in the motion from the C6/9 chord to the E7add4/B chord in m. 39: the C moves down to B, the G moves up to G#, and the other three voices hold common tones. The third strategy can be seen in the motion from that E7add4/B chord to the Dadd9/A chord that follows it in m. 43: the D, E, and A are held as common tones while the B and G# move in parallel motion down by whole step.

The emphasis on pitch in this analysis so far is not to deny the importance of rhythmic and metrical conflicts that was the focus of Kleppinger’s article.[[5]](#footnote-5) After just three hits on a high wood block marking each beat of the opening 3/2 time signature while the rest of the orchestra sits silent, the pc set [249] is presented by the four clarinets starting on the downbeat of m. 2 in two different versions of the same three-note ostinato. Clarinets 1 and 3 present the set as the eighth notes D5-E5-A5 repeated continuously and without pause for the next eight measures, while Clarinets 2 and 4 present a rotation of that same ostinato beginning on E5 (E5-A5-D5), also repeated continuously and without pause for the next eight measures. Because of the contour created by the ostinato’s continuous repetition, it is likely that the music played by Clarinets 2 and 4 will quickly be reinterpreted by the listeners and players as simply the D5-E5-A5 ostinato starting on its second note and create the impression of the same figure in all the clarinets, just presented out of phrase in half of them.[[6]](#footnote-6) While Kleppinger doesn’t discuss it, these clarinet parts each create a 3-against-4 metrical dissonance with the wood block part that has quarter notes on each beat alternating with quarter rests off the beat just as in m. 1 (the clarinet ostinatos each divide the measure into four iterations of the ostinato, while the wood block divides the measure into three). This dissonance between the wood block part and the clarinets persists all the way to m. 59 (the location of the piece’s first asymmetrical meter, 5/4). It is safe to say that the opening of this piece is “truly about rhythm and metrical conflicts,” as Kleppinger claims, because Adams does not introduce any pitch classes other than D, E, and A until measure 10, when F# is finally introduced. That said, the opening section (mm. 1-78) can be characterized as much by a gradual increase of dissonant intervals and harmonies as it can by an increase in rhythmic and metrical dissonances, culminating in the Eb|F#|Em polychord sustained in mm. 71-78, a harmony that includes the tritones E-Bb, F-B, and G-C#, half of the six tritones available in a mod-12 universe that assumes enharmonic equivalence.

It is also the progression of harmony as much as anything else that defines the overall form of *Short Ride*. It is in a ternary form: A (mm. 1-78), B (79-132), A’ (133-180), Codetta (181-188). The beginning of the B section is marked by a dramatic reduction in texture and in the number of pitch classes being presented simultaneously: in mm. 71-78, Adams uses almost the whole orchestra to sustain a polychord with 8 different pitch classes, and then suddenly the texture drops down to just the double reeds, upper strings, Horns 1 and 2, and the woodblock repeating just Eb and Bb. The beginning of the A’ section is marked by the return of the opening clarinet ostinato from m. 2 (at pitch), and also by a dramatic change in texture: the “low end” of the orchestra (contrabassoon, tuba, contrabasses) that was first added to the texture in the B section, and then used more or less continuously, suddenly drops out for three full measures. The beginning of the Codetta is marked by texture in a similar way, as well as by the return of material of the D major triad that dominated the texture in mm. 10-31 of the A section.

*Short Ride in a Fast Machine* most likely owes much of its popularity to its accessible harmonic language, much of it tertian, though there are at least two other familiar elements from tonal music that might contribute to that popularity. For one, ternary form has been a staple of tonal music since its beginning (and in fact well before that). Another familiar element is the driving motor rhythms that fill most of its measures; while these are strongly associated with minimalist music, one should remember that motor rhythms are equally important to much Baroque-period music. Adams used many familiar elements from tonal music in his own brand of minimalism, and *Short Ride in a Fast Machine* is just one brilliant and popular example.

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1. Adams, John. *Hallelujah Junction: Composing an American Life*. London: Faber and Faber, 2008: 121. [↑](#footnote-ref-1)
2. Schwarz, K. Robert. *Minimalists*. London: Phaidon Press, 2008: 186. [↑](#footnote-ref-2)
3. Adams, John. Interview by Terry Gross, *Fresh Air*, 16 November, 1999. [↑](#footnote-ref-3)
4. Kleppinger, Stanley V. “Metrical Issues in John Adams’s *Short Ride in a Fast Machine*,” *Indiana Theory Review* 22/1 (Spring 2001), 65. [↑](#footnote-ref-4)
5. Kleppinger, 2001. [↑](#footnote-ref-5)
6. This analysis will not discuss the synthesizer parts as a matter of convenience, since Adams notes that they are optional on the first page of the score. [↑](#footnote-ref-6)