

Steve Reich's *Different Trains* – A Formal Analysis

by Sam Moffett

During World War II, a young Steve Reich made train journeys between New York and Los Angeles to visit his parents, who had separated. Years later, he pondered that, as a Jew, had he lived in Europe at the time, he might have been traveling on Holocaust trains.¹

In 1988, Steve Reich was commissioned by the Kronos Quartet to write a piece. In the composition of this piece, he incorporated pre-recorded speech into the composition. This allowed him to use the speech in order to construct a narrative, and he decided to use his ponderings about these different trains as such. Thus, in 1988, he composed the piece *Different Trains* for the Kronos Quartet.

Because of this piece's use of constant, irrational tempo changes, non-functional triadic harmony, and constantly changing text content, it is difficult to detect the piece's form. In this paper, I will be analyzing the first movement of Steve Reich's *Different Trains* (1988). By detecting significant connections between the elements of text, harmony and tempo, I will attempt to uncover the piece's form.

Elements of the piece

This piece is written for three string quartets (two of which are pre-recorded, the third played live), and electronic tape (which contains the pre-recorded quartets). The melodic content of the piece is entirely dependent on pre-recorded speech, which is part of the electronics. In this instance, Reich is using a technique of composition called "speech melody" wherein a composer can approximate a syllable of speech to a note within the 12-tone aggregate. These speech melodies are then translated to one of the instruments in the quartet and are often played in

¹ Steve Reich, *Writings on Music 1995 – 2000* (New York: Oxford University Press, 2002), 151.

tandem with the voice represented in the recording. Two voices are used in the electronics – a man’s and a woman’s. The woman is represented by the viola, and the man is represented by the cello.

The analytical problem

The issue with analyzing this piece of music in particular is that most of the musical elements are determined by the speech. As was discussed above, the melodies that are played in the viola and cello are approximate transcriptions of the speech. With this in mind, the harmony is also largely determined by the speech, as Reich is using consonant, triadic harmony throughout the movement, and the melodies have to fit. The tempo of each “section” (meaning each time a new fragment of speech is introduced) is also determined by the rhythm of each fragment of speech, which results in sudden, irrational tempo changes throughout the movement. Reich facilitates these changes through the electronics; the pre-recorded quartets start each new section while the live quartet rests, making it easier for the live performers to perform the tempo change.

The solution

Since each section brings about new text, new melody, new harmony, new tempo, and oftentimes new texture, it is difficult to detect a larger form within the movement. In order to find some kind of form, I am going to analyze the text, harmony and tempo from each section, observe how the sections relate to one another within these elements, and point out visible connections that may be indicative of a formal structure.

Text

The text of the movement is taken from pre-recorded speech and determines the pitch of the melodic fragments throughout the movement. The first of these speech fragments says “From

Chicago to New York,” at rehearsal 6. As this is Steve Reich’s brand of minimalism, the music uses repetitive, developing patterns. As a result, Reich repeats these speech fragments multiple times before moving to a new one. In this case, the next unique speech fragment appears at rehearsal 14 (“One of the fastest trains”). It is important to note, therefore, that “new sections” will be marked by new speech fragments. The formal map of each speech fragment is thus:

Rehearsal Mark	Text
6	“From Chicago to New York”
14	“One of the fastest trains”
22	The crack train from New York”
29	“From New York to Los Angeles”
35	“Different trains every time”
41	“From Chicago to New York”
47	“In 1939”
53	“1939”
56	“1940”
59	“1941”
63	“1941, I guess it must have been”

There are a few formal connections that can be made here. Rehearsal 6 and rehearsal 41 have the same text, (“From Chicago to New York”) which could be indicative of a reprise. There is another noteworthy connection between rehearsals 6 and 29. One of these says “From Chicago to New York,” while the other says “From New York to Los Angeles.” In other words, reading into the narrative, the trains are taking the music to different places, and, therefore, “From New York to Los Angeles” could be the start of a new section. With this in mind, the first three sections on the table above (rehearsals 6, 14 and 22) could together create an “A” section, while

the next two sections (rehearsals 29 and 35) could together constitute a “B” section. With the reprisal of “From Chicago to New York” at rehearsal 41 comes a part of the “A” section, which constitutes its reprisal.

The connection between the last five sections is that they are all referring to a year in time. That relation allows those five sections to be grouped together into one formal part, and in this case, it would be the “C” section. Going purely from this analysis of the text, the movement’s form therefore becomes “ABAC.”

Rehearsal Mark	Text
6	“From Chicago to New York”
14	“One of the fastest trains”
22	The crack train from New York”
29	“From New York to Los Angeles”
35	“Different trains every time”
41	“From Chicago to New York”
47	“In 1939”
53	“1939”
56	“1940”
59	“1941”
63	“1941, I guess it must have been”

Harmony

The harmony in each section is dependent on the speech melodies. Reich mostly uses either minor seventh chords with an added tension 11, or major seventh chords with an added tension 13. Reich used these tensions so that he could voice the strings in intervals of fourths and fifths, which helped him better create the texture of trains throughout the movement.

Therefore, I chose to analyze the chords as triads. Furthermore, I analyzed the chords’

relationships with one another using Neo-Riemannian transformations, in order to find any significant connections within the harmony. I chose Neo-Riemannian transformations because, although Reich is using consonant, triadic harmony, he is not using functional harmony, and Neo-Riemannian operations are therefore a likely-viable way to explain the chords' relationships to one another. My harmonic analysis of each section was thus:

Rehearsal Mark	Harmony	NR Operation from Previous Chord
Beginning	Gm7(11) (Triad = G minor)	
6	Dbmaj7(13) (Triad = Db major)	Slide + L + R
14	Abmaj7(13) (Triad = Ab major)	L + R
22	Dm7(11) (Triad = D minor)	Slide + L + R
29	Dbmaj7(13) (Triad = Db major)	Slide
35	Gbmaj7(13) (Triad = Gb major)	R + L
41	Dbmaj7(13) (Triad = Db major)	L + R
47	Abmaj7(13) (Triad = Ab major)	L + R
53	A(add2) (Triad = A major)	Slide + P
56	C#m7(11) (Triad = C# minor)	L
59	Abmaj7(13) (Triad = Ab major)	P + L + R
63	Fm7(11) (Triad) = F minor	R

There are certain connections that can be made when purely looking at this harmonic analysis table. The particular use of “Slide,” and “L+ R” are frequent and noteworthy.

Significant operational changes, such as the introduction of operation “P” at rehearsal 53, are also worth acknowledging.

Since the text of the piece determines most of the other elements in the piece, I want to point out what it looks like when I map my analysis of the text form onto this harmonic analysis:

Rehearsal Mark	Text	Harmony	NR Operation from Previous Chord
Beginning		Gm7(11) (Triad = G minor)	
6	“From Chicago to New York”	Dbmaj7(13) (Triad = Db major)	Slide + L + R
14	“One of the fastest trains”	Abmaj7(13) (Triad = Ab major)	L + R
22	The crack train from New York”	Dm7(11) (Triad = D minor)	Slide + L + R
29	“From New York to Los Angeles”	Dbmaj7(13) (Triad = Db major)	Slide
35	“Different trains every time”	Gbmaj7(13) (Triad = Gb major)	R + L
41	“From Chicago to New York”	Dbmaj7(13) (Triad = Db major)	L + R
47	“In 1939”	Abmaj7(13) (Triad = Ab major)	L + R
53	“1939”	A(add2) (Triad = A major)	Slide + P
56	“1940”	C#m7(11) (Triad = C# minor)	L
59	“1941”	Abmaj7(13) (Triad = Ab major)	P + L + R
63	“1941, I guess it must have been”	Fm7(11) (Triad = F minor)	R

It is important that the imposed B section is brought about by the only instance of the slide operation by itself, and that it also contains “R+L,” the reverse of the now significantly

used “L+R.” The second A section is brought about by the familiar “L+R,” another indication of reprisal. Also noteworthy is that the introduction of the “P” operation occurs as the first operation *within* the imposed C section. In short, the text analysis and the harmonic analysis can support one another to create an ABAC form with sufficient evidence. The “beginning” section could therefore fit into the form as an introduction.

Tempo

With each new section comes a different tempo, and the change in tempo is always sudden. Therefore, I thought it would be fruitful to try and indicate whether or not these tempo changes play a significant role in a possible formal analysis. Below is a table indicating each marked tempo, section to section:

Rehearsal Mark	Tempo	Change
Beginning	q = 94.2	
6	q = 108	+13.8
14	q = 97	-11
22	q = 84	-13
29	q = 69	-15
35	q = 76	+7
41	q = 108	+32
47	q = 130	+22
53	q = 126	-4
56	no change	
59	no change	
63	q = 99	-27

Some of these tempo changes seem more significant than others. There are certain sections where the piece either speeds up or slows down in a more relatively drastic fashion.

Some of these changes include from rehearsal 22 to 29 (-15), rehearsal 35 to 41 (+32), rehearsal 41 to 47 (+22) and rehearsal 59 to 63 (-27).

If I further impose this tempi analysis onto my ongoing analysis table above, this is what results:

Rehearsal Mark	Text	Harmony	NR Operation	Tempo	Change
Beginning		Gm		q = 94.2	
6	"From Chicago..."	Dbmaj	Slide + L + R	q = 108	+13.8
14	"One of the..."	Abmaj	L + R	q = 97	-11
22	"The crack train..."	Dm	Slide + L + R	q = 84	-13
29	"From New York..."	Dbmaj	Slide	q = 69	-15
35	"Different..."	Gbmaj	R + L	q = 76	+7
41	"From Chicago..."	Dbmaj	L + R	q = 108	+32
47	"In 1939"	Abmaj	L + R	q = 130	+22
53	"1939"	A:maj	Slide + P	q = 126	-4
56	"1940"	C#m	L	no change	
59	"1941"	Abmaj	P + L + R	no change	
63	"1941, I guess..."	Em	R	q = 99	-27

In examining the imposed form, now with the tempo changes in place, it is evident that the more drastic tempo changes mentioned earlier (22 to 29 [-15], rehearsal 35 to 41 [+32],

rehearsal 41 to 47 [+22] and rehearsal 59 to 63 [-27]) are linked to the formal shifts shown on the chart. Rehearsal 22 to 29 takes the music to the B section. 35 to 41 takes the music to the second A section, and 41 to 47 takes it to the C section.

The final dramatic tempo change (from rehearsal 59 to 63) does not facilitate a sectional change in the movement, but serves to foreshadow the slower, heavier second movement of the piece, which is played *attacca*.

The function of the introduction

It is important for me to note that, although the beginning of the piece to rehearsal 6 contains a shift in tempo and harmony, I decided not to link it to any part of the form of the movement. This is partly because it is the only section of the movement that doesn't have text. Steve Reich likely used this introduction in order to establish the texture of trains with the quartets and electronics, foreshadowing the meaning behind the piece before the text came in. There does not seem to be a clear reason why Reich chose the introduction's tempo to be as minute and specific as quarter note equals 94.2. However, the fact that the introduction is not part of the piece's form absolves that tempo (and subsequently that tempo's change) from being formally significant. It is also perhaps likely that Reich wanted to have a section without text at the beginning, in order to make the entrance of the text (and the not-yet-popular use of speech melodies) more meaningful.

Conclusion

The goal of this analysis was to uncover an overall form within the first movement of Steve Reich's *Different Trains*. By analyzing the changes in text, harmony and tempo between the different sections of the piece, I was able to draw connections between significant changes in these elements that may be indicative of a form. This analysis supports an overall form of

ABAC, with the first A running from rehearsal 6 up to rehearsal 29, the B section being from rehearsal 29 to rehearsal 41, the second A section (reprisal) being from rehearsal 41 to rehearsal 47, and the C section being from rehearsal 47 to the end of the movement.

A potentially problematic element of this analysis is that the second labeled A section does not contain all of the first A section, but merely a fragment of it. It may therefore be difficult to analyze that reprise of the first A fragment as a “second A section.” However, the development of form in music has shown that an entire formal section of a piece does not necessarily have to be restated in full, or as exact, in order to be considered a proper reprisal of that section, (some examples of this are shown in the development of sonata form, where, such as in Haydn’s String Quartet in D minor, op. 76 no. 2, fragments of the expositional theme groups are presented unusually in the recapitulation). A case for why a fragment of the first A being brought back is a proper reprisal of A can therefore be made, making the form of this movement **ABAC**.

Steve Reich – *Different Trains* Movement 1

Formal Map

Rehearsal Mark	Text	Harmony	NR Operation	Tempo	Change
Beginning		Gm		q = 94.2	
6	“From Chicago...”	D bmaj	Slide + L + R	q = 108	+13.8
14	“One of the...”	A bmaj	L + R	q = 97	-11
22	“The crack train...”	D m	Slide + L + R	q = 84	-13
29	“From New York...”	D bmaj	Slide	q = 69	-15
35	“Different...”	G bmaj	R + L	q = 76	+7
41	“From Chicago...”	D bmaj	L + R	q = 108	+32
47	“In 1939”	A bmaj	L + R	q = 130	+22
53	“1939”	A maj	Slide + P	q = 126	-4
56	“1940”	C #m	L	no change	
59	“1941”	A bmaj	P + L + R	no change	
63	“1941, I guess...”	E m	R	q = 99	-27

Yellow = A. Teal = B. Green = C.

Bibliography

- Reich, Steve. *Different Trains*. London. Boosey and Hawkes, 1988.
 - The score of *Different Trains* used for analysis.
- Reich, Steve. *Writings on Music 1965 – 2000*. New York: Oxford University Press, 2002.
 - This was used in order to gather information on the background of the piece analyzed.