

Rhetorical Figures in Music

Máire Slater

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Máire Slater
Department of English
University of Waterloo

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Introduction

When I was little, my parents would put me and my sisters on their knees and rattle off “The Grand Old Duke of York.” *The grand old Duke of York*, it goes,

He had ten thousand men,
He marched them up to the top of the hill
And he marched them down again.

And when they were up they were up,
And when they were down they were down,
And when they were only half-way up
They were neither up nor down.

“The Grand Old Duke of York,” Traditional

They probably bounced me along to that nursery rhyme hundreds of times, and I probably bounced my kids along to it hundreds more. It’s certainly memorable; it’s full of repetitions, rhythm, and rhyme that, for our family, has become a generational ear worm. The memorability of these types of figures—repetition, rhythm, and rhyme—has long been recognized. The existence of figuration in early texts “indicates clearly that one of the chief functions of figures was to resist message degradation both individually and culturally” (Harris, “Dementia, Rhetorical Schemes, and Cognitive Resilience” 4). In other words, these kinds of utterances—nursery rhymes, proverbs, sayings—are made to be remembered, and they are good at it. *An apple a day; Birds of a feather; One, two, buckle my shoe; Mary had a little lamb*—we all have a repertoire of them (though different for everyone) that we can pull out at a moment’s notice, no matter how long it’s been since we last heard them. It’s how, despite an intermission of decades, I came to be bouncing my kids up and down that hill. And it’s how I came to sing them a lullaby about the devil.

My mommy told me something that little girls should know
It’s all about the devil and I’ve learned to hate him so
I know he’ll be unhappy ‘cause I’ll never wear a frown
Maybe if we keep on smiling he’ll get tired of hangin’ round

“You are My Sunshine/Open Up Your Heart,” Anne Murray

I'm not, generally speaking, an Anne Murray fan, but my mother must have been. We listened to Murray's album, *There's a Hippo in My Tub* until we became too old to appreciate the humour of hippos in tubs any longer. We must have listened to it on LP, but I can't remember the spinning of the record, or the stereo it played on, or the room where it all happened; I can, however, still sing this song in its entirety, including the extra background bits (baaa ba da ba). Why should I remember that melody? Those *baaa ba da ba's*? Well, it turns out the melody to "You Are My Sunshine" is as full of figures—fuller, maybe—as the "Grand Old Duke" (see appendix 10 for a listing of them). Which brings me to a figure of my own because you read that correctly, though it may need repeating: the *melody* is full of figures. These two artifacts of my childhood even realize some of the same figures: plope, epanaphora, isocolon, and epizeuxis, for instance. Anne Murray may not have known she was tapping into the figures that would make her recording so memorable, but that's exactly what she did.

Making something memorable, however, is just one job of rhetorical figures. Some of their other jobs may also include carrying some of the most important information in any text (Alliheedi and Di Marco) and influencing assessments of truthfulness (Kara-Yakoubian et al.). Of course, for a long time, they were seen as merely ornamental, or perhaps organizational. But that is beginning to change: "The realization that rhetorical figures correspond to patterns and structures that are deeply inscribed in human thought and experience, and in the physical world, has still barely begun to reveal its implications for our understanding of every aspect of existence" (Paul 22). The figures in nursery rhymes don't just perform useful jobs that help us remember, or share, or believe information, they resonate with the way we think. And, as David Porter writes, the appearance and "surprising persistence" (119) of the same patterns in both literature and music is significant. I'm going to make the case that these same patterns and figures that are resonating with the way we think are performing the very same role in music.

This project takes as its starting place Mehlenbacher et al.'s "understanding of rhetorical figures as reflections of cognitive processes" (124) and looks for those reflections in rhetorical figures

present in music. Using chiasmus as a representative figural pattern, I aim to match textual examples with (instrumental) music examples from across the globe and over 2,000+ years of history. Showing the existence of chiasmus in music at the same times and places as chiasmus in text will suggest an overlapping relationship between language and music and deepen our understanding of our neurocognitive processes and their spheres of influence. Finally, I will suggest some potential therapeutic implications of learning more about the connections between music, language, and the brain¹.

¹ In what follows, I consider music from many places and periods, some of which fall outside (or before) the use of Western notation. While acknowledging the built-in biases that can make the transcription into Western notation problematic, it is the notation I have used, and trust that any approximations do not take away from my argument.

Figures Abound

Figures of speech abound. They abound in literature:

Better a **witty fool**
than a **foolish wit**.

Shakespeare, *Twelfth Night* in Grothe, 7

in politics:

Ask not what your **country** can do for **you**--
ask what **you** can do for your **country**.

John F. Kennedy

and in plain, everyday conversations, like the ones we had with my husband's Grandpa Fred, who frequently said grandfatherly things like:

You're a real **fart smeller**...
I mean, a real **smart feller**.

Grandpa Fred

I'm writing this paper in my closet, which I've repurposed as an office, so you can imagine the size and comfort of the space. My chair is butting up against the leg of my desk, the cords running to the various inputs are a tangle of tumbleweeds tripping me up if I try to leave, which I often do, because it's airless, and hot as a furnace in here. My white noise machine is furiously pumping out its static, trying to drown out the sound of my husband on the phone in the next room, his disembodied voice floating through the cracks in the door. But the show must go on, and research papers must be written, even about things as humdrum as rhetorical figures, which are everywhere, always. Including right here in this paragraph, where I've used figures like alliteration, assonance, metaphor, parison, personification, rhyme, simile; and, to the best of my ability, enargia.

Far from being some kind of elite linguistic cherry on top of a pedestrian sundae, figures are "the stuff of ordinary language," Anthony Paul writes in *Chiasmus + Culture*, "not a latter-day product of civilization but fundamental productive principles of human discourse" (20). Randy Harris goes even further: "Language cannot but be figured," (Harris, "Knowing, Rhetoric,

Science” 165) he explains, invoking Edward Sapir’s metaphor of “well-worn grooves of expression” (41) through which language runs. If figures are grooves, “deeply guiding, impressing, and in-forming” (Lissner 10) as they shape language, the shapes they make can tell us things about how we think and know, about how “our brains percolate and process” (Harris et al. 229). Figures abound because they reflect our everyday, all-the-time, ordinary thought patterns. Figures abound because they are cognitive.

But what does that mean, that *figures are cognitive*? It means there’s a reason for the ubiquity of figures beyond any impulse towards linguistic ornamentation. Jeanne Fahnestock sees rhetoric and cognition as two sides of the same coin. She argues that the attention paid to stylistic rhetoric (figures) is validated by the discoveries that language following those patterns has a stronger life in the brain—it is more memorable and more meaningful (Fahnestock, “Rhetoric in the Age of Cognitive Science”). Harris puts it this way: “Rhetorical figures are neurocognitively motivated linguistic assemblages which achieve degrees of salience, memorability, and aesthetic pleasure by the way they recruit our biases for particular patterns and relationships” (Harris, “Dementia, Rhetorical Schemes, and Cognitive Resilience” 3). So many rhetorical figures use repetition, for instance, because our brains *like* repetition. Figures such as anadiplosis, epiphora, parison, plope, and others—all forms of repetition—are “portals to the inner-workings of the human mind” (Mehlenbacher et al. 124). The same goes for figures using patterns like symmetry and antithesis; they tell us that these are the ways our brains are wired.

Rhetorical figures, the linguistic shapes our brains create, are cognitive. So far, so good. But this project is about music, and we’ll have to pivot towards it with some small epistemological steps. We can agree that our brains think in certain patterns, and love recreating those shapes in language. Thus, the same rhetorical figures have been showing up in language since at least the fathers of rhetoric—Aristotle, Quintilian, etc.—were discussing them. Hence, anything the brain makes should have evidence of these age-old and lasting patterns. The brain makes music;

hence and thus, these patterns should equally be in music as they are in language. My goal with this project is to find them.

Music, Language, and Abounding Figures

While so much of music is perceptible (e.g., the physical movements of playing instruments, the sounds that playing produces), there is a wealth of imperceptible processes that are required for us to experience music (Loui and Przysinda). Thanks to neuroimaging tools that allow us to capture different types of activity across the brain, we're able to see, and learn from, this otherwise invisible information. We now have evidence that processing various aspects of music and language activates the same areas of the brain (W. F. Thompson; Koelsch), that events in the brain that were previously thought to be language-specific are also elicited by music events (Patel et al.), and that there may be resources that are shared between language and musical structural integration processes (Patel, "Language, Music, Syntax and the Brain"). The increasing evidence of overlap in the cognitive realm begs a question about the similarities between language and music.

There is divided opinion about the relationship between language and music. The intuition that they are connected in important ways has lasted thousands of years without settling on either the quantity or quality of those connections. The parallels between these two domains include the similar behaviours in rhythm (Temperley) and prosody and syntax (Patel, *Music, Language, and the Brain*). The syntactic similarities include recursion (London), dependent relationships (Rohrmeier), and normative rules that seem to be recognizable by non-experts (Koelsch). In fact, there are so many similarities between music and language, some find it easier to identify what is dissimilar: mainly, the presence or absence of a lexicon (Katz and Pesetsky). "[W]hat language and music have in common," Katz and Pesetsky write, "is not their building blocks (which are different), but *what they do with them*" (3). The component parts of letters and words in language and notes and rhythms in music can't necessarily be made to correlate, but the hierarchies and systems they become can. With so much likeness between music and language, the idea of attempting a comparison of the building blocks can be very tempting, but we quickly realize the difficulty of such a project.

The impossibility of assigning a direct line between the component parts of linguistic and musical phrases lies in the differing amounts of information encoded in musical and linguistic utterances. Linguistic phrases are built from phonemes, morphemes, and lexemes, and move linearly along a horizontal plane. Musical phrases travel vertically and horizontally at the same time. Phrases are built from notes and rhythm (the horizontal plane) and harmony and beat (the vertical plane), and a singular sound may stand in for all four elements simultaneously. Also, in language, the markers for the identification of lexemes (or morphemes or phonemes) don't change. A lexeme will always be a word, for instance. But this isn't the case with music. Melodically, a lexeme *might* correspond to a note. Harmonically, a lexeme might correspond to one articulation of a chord, including all the notes making it up. Rhythmically, a lexeme might correspond to either, or both. And these three planes—the melodic, harmonic, and rhythmic—all happen synchronously, so that one musical utterance might correspond to a lexeme, a morpheme, and a phoneme all at once. Outside of semantic meaning, the wealth of information in each musical utterance is much denser than in a linguistic utterance, so no one-to-one translation can be possible. But if this is the case, and we can't turn a line of music into a line of prose, how can we make claims about the presence of rhetorical figures in music?

The history of rhetorical figures in music is long and varied. During the resurgence of rhetoric as an important—and popular—field of study in the 16th to 18th centuries, music theorists, composers, and practitioners used rhetorical terms as a vocabulary for talking about and creating music, making “claims for the importance of rhetoric in music” (Vickers 9). The connections between music and language began to be expressed at this time through text setting or word painting, an expressive compositional technique that purported to “reveal the meaning of the text in and through [the] music” (Bartel 19), or, at least, the composer's “reading of [the] text” (Godt 123). This idea, that the lyrics and the music of a piece work together to create meaning, is still widely accepted, to the exclusion of other ideas about music rhetoric. Deanna and Timothy Sellnow argue that “the rhetorical power of music can only be ascertained effectively by considering both lyrical content and musical score” (396), casting music as

something of a junior partner in meaning-making². Whether or not this is the case is outside the scope of this project, but there is at least another way of understanding rhetoric and music.

In language, figures are not merely ornamental but provide a model of our cognitive processes; *if* there are figures in music, they must do the same. Indeed, if music is shaped by the same cognitive processes as language, and we have seen evidence suggesting it is, then there *must be* figures in music. I can hear flocks of Baroque theorists calling across time that of course there are figures in music, they have said so all along. But Baroque theorists got the labelling of figures wrong as often as they might have got it right, “coin[ing] some abusive pseudo-figures that had nothing to do with the original literary rhetoric” (Lanza 198). I certainly hope to avoid abusing literary rhetoric, but I do want to be able to identify in music the same cognitive shapes and patterns that are so readily identifiable in language. Namely, I want to find chiasmus.

² What music might mean is an even bigger debate, and I’m not going to address it in this paper.

The Figure: Chiasmus

Chiasmus is a “grammatical structure that inverts a previous phrase” (“Chiasmus”). It can be represented as ABBA, or:



I chose this figure for its shape: the cross-wise repetition making an X is undeniably recognizable and delivers a “wow” factor not found in many other figures:

You have seen how **a man** was made **a slave**;
 you shall see how **a slave** was made **a man**.

Frederick Douglass

In fact, there are different kinds of chiasmi, what Harris and others call the *Chiastic Suite*. Antimetabole is the prototypical form, involving reverse lexical repetition in at least two elements. The above is an example of antimetabole. Other kinds of chiasmi involve reverse syntactic, phonological, morphological, or semantic repetition. All of them, however, in one way or another, make that recognizable X shape.

Chiasmi often do not work alone but in concert with other figures “to make that specific utterance salient, memorable, aesthetically pleasurable, and effective” (Harris, “Grammatical Constructions and Rhetorical Figures: The Case of Chiasmus” 11). For instance, as well as antimetabole, the Douglass quote also realizes epanaphora, mesodiplosis, and isocolon. All of these figures work together to create a gut-punch of a quote, one that has endured in public memory for well over a hundred years.

Western Tonal Music in a Very Small Nutshell

Many of the musical examples in this project are from, or adjacent to, the tradition of Western tonal music, and that is the tradition that I am trained in. For those two reasons, it seems best to briefly introduce some of its foundational ideas that I will be referencing throughout.

Perhaps the most important characteristic of Western tonal music, and the one it is named for, is that it has a tonal center “that provides a center of gravity” (Kostka et al. xiii) and arranges all other notes into a relational hierarchy (Nikolsky). This tonal center is called the *tonic*, and is the most important pitch (Jones 86) in any piece of music. When arranged into chords, these notes create the harmonic sequences, or chord progressions, that give to music a feeling of movement and meaning.

In the same way grammarians can parse sentences, finding the parts of speech and seeing how they work together, music theorists do the same thing with music. Rather than analyzing words, music theorists identify and analyze chords to see how they interact with other chords, and how they approach, or delay, tonic resolution, which is the goal of most Western tonal music.

When analyzing harmonic function, we often talk about three categories of chords: tonic (I), dominant (V), and sub-dominant (IV). Sub-dominant chords want to move towards dominant chords. Dominant chords want to move towards tonic chords; it is as though the dominant is a question, the tonic is the answer, and the question and answer are inextricably linked. Tonic chords begin and end phrases; they are stopping points. In a chord progression, we can map this movement to help understand how the music is working towards a music goal. Some of the examples in this project highlight the relationship between the tonic and dominant, and the way the dominant always looks ahead to resolving to the tonic.

I’ve kept the discussion of music theory to a minimum (and to the very broadest of strokes), but I hope I’ve given enough to understand something about the musical building blocks that go into creating musical figures.

Methodology

Most of the textual examples of chiasmus come from Dr. Mardy Grothe's book, *Never Let a Fool Kiss You or a Kiss Fool You*. In choosing which figures to use, I privileged quotes by women and people of colour. When there was a geographical or historical gap not filled by Grothe's book, I went to various other sources, including scholarly articles focusing on chiasmus, and the websites *Rhetfig.com* and *Goodreads* (where I scoured their quotes pages for chiasmus).

Finding music examples was a little harder, if only because no one has published a handy collection of musical chiasmi. As much as possible, I matched a text example with a music example from a contemporaneous composer. But just as not every piece of writing uses chiasmus, I didn't expect to find chiasmus in every piece of music. If I couldn't find it in the music of my first-choice composer, I tried another composer from the same time and place.

Looking for chiasmus in music meant reading the score when one was available and listening to pieces when a recording was available. Ideally, I would do both at the same time, but that wasn't always possible.

Choosing, and naming, musical examples

I wanted this work to be accessible to non-musicians, which meant the elements of any musical chiasmus would have to be readily identifiable. I decided to pursue the kind of exact repetition we find in antimetabole. Taking the definition of antimetabole as inverse lexical repetition, it's fairly easy to identify these in language. Either the words repeat in the right order, or they don't. Antimetabole can be recognizable even in an unfamiliar language—the repetition and ordering of the words is plain to see, even if understanding the words isn't possible. To find these figures in music, however, we would first have to decide what corresponds to a lexeme. Harkening back to our earlier discussion, this was not a task I was willing to take on. In music, there are granular elements of melody, of rhythm, of harmony, and of form all working at the same time in separate but connected relationships; something which looks like a lexeme in one looks more like a morpheme or phoneme in another, and vice versa. For that reason, I didn't use the label

“antimetabole.” Instead, when I found exact reverse repetition, either melodically, rhythmically, or harmonically, I called this a **fixed chiasmus**.

Sometimes, while there was clearly a chiastic figure in a piece of music, I couldn’t call it a fixed chiasmus because there was enough deviation in the elements that something other than *exact* repetition was going on. In most cases, the deviation was contained to the second A-section, which, changes notwithstanding, was still clearly referring to the first A-section in a significant way. In these situations, I called the figure a **variational chiasmus**.

What follows is a more detailed description of variational chiasmus and each of four types of fixed chiasmus using examples from four different pieces from the Mozart family.

Variational Chiasmus

I took my cue for this kind of chiasmus from another figure of the chiastic suite, antimetalepsis. This is a figure of “reverse repetition either of sense or of reference” (*RhetFig*). A good example comes from this traditional children’s song:

Old King Cole was a merry old soul
and a merry old soul was he

RhetFig

“He” is clearly referring to, and standing in place of, “Old King Cole,” but it’s not a repetition of “Old King Cole.” “Old King Cole” and “he” obviously go together, but, again, not because of lexical repetition.

I found the same thing happening in music. Either melodically or harmonically, two bits of music would obviously belong together, but not because of repetition. Here is an example:

“Minuet: From Nannerl’s Notebook,” Mozart

The B-sections are an exact repetition, but the A-sections are not. They do, however, fairly obviously belong together: they start on the same note, they have the same rhythm, and they have the same harmonic profile. The first bar in each A-section is articulating the dominant chord and the second bar in each is articulating the tonic. An important difference is that in the second bar of the first A-section, the note in the right hand is a G, the dominant. The answering tonic comes at the end of the second A-section, in the C in the right hand. So, again, these sections are related, not because of repetition, but because of the ways the second A-section is referring to the first.

Fixed Melodic Chiasmus

Here, I was looking for elements comprised of notes or phrases that made up part of the melody:

Allegretto M.M. ♩ = 126 - 138 (1756-1791)

“Menuetto and Trio in G,” Mozart

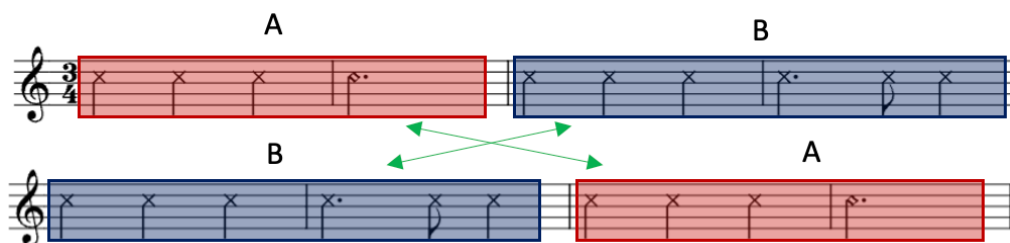
In this example, there is a repeated melodic motif that ends with four notes which make up the chiasmus. Each element consists of one note, and all four of the elements are in the same voice (here, the right hand of the piano piece) making up the main melody.

Fixed Rhythmic Chiasmus

This type of chiasmus occurs in the rhythm, irrespective of what the melody or harmony are doing. This example has a fixed rhythmic chiasmus in the right hand:

“Minuet: From Nannerl’s Notebook,” Mozart

If we take the rhythm out of its harmonic and melodic context, it looks like this:



Each element is 2 bars long, and the repetition, rhythmically, is exact.

Fixed Harmonic Chiasmus

This type of chiasmus involves harmonic structure. This example, “Ah, Vous Dirai-je, Maman,” (commonly known as “Twinkle Twinkle Little Star”) begins with two very simple lines that look like two melodies:

The image shows two staves of music in 3/4 time. The top staff is labeled 'Thema' and contains two elements: a red-shaded box labeled 'A' and a blue-shaded box labeled 'B'. The bottom staff is labeled '13' and contains two elements: a blue-shaded box labeled 'B' and a red-shaded box labeled 'A'. Green arrows point from the end of the red 'A' on the top staff to the start of the blue 'B' on the bottom staff, and from the end of the blue 'B' on the top staff to the start of the red 'A' on the bottom staff, illustrating a chiasmus. The top staff also includes chord markings (C, F, G, C) and dynamics (mf, sim.).

“Ah vous dirai-je, maman,”³ Mozart

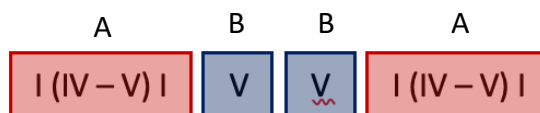
Taking each voice (upper and lower) separately and moving horizontally, we would certainly call these “melody.” Taking them vertically, however, they together form chords that make up the

³ This passage is actually a fixed full chiasmus (except for one ornamentation), but I’m using it as an example of fixed harmonic chiasmus (which it also is) because the chord progression is simple and easy to see.

harmonic structure, or chord progression, of the piece, which we can then analyze. I've done a very high-level analysis showing the basic chords.

This piece is in the key of C, which is the tonic (I). The A-sections extend the tonic harmony until the end where they briefly move through a very typical cadential pattern (IV – V – I) to finish and strengthen the tonic. The B-sections rest on a G chord, the dominant (V) chord.

Harmonically, we have:



It is a fixed harmonic chiasmus, where the elements are chords that give us the perfect inverse repetition of this figure.

Fixed Full Chiasmus

When the melodic, rhythmic, and harmonic dimensions all realize chiasmus together, I called this a fixed full chiasmus. The following is a great example:

A cont'd...

B B cont'd...

A cont'd...

“Allegro,”⁴ Mozart

The A-sections begin and end this piece, the B-sections take up the middle, and the sections are repeated exactly.

Without further ado, we turn now to the research, with examples separated by continent.

⁴ For the following music examples, I will continue the convention of using red boxes to indicate A-sections, and blue boxes to indicate B-sections, but I won't continue to put the letters above them.

Asia



Some of the oldest preserved melodies and songs that we've found come from Asia. As promised, I've matched examples of chiasmus from these ancient pieces of music to examples of chiasmus in ancient texts.

China

The melody, "You Lan," is thought to perhaps be the oldest complete, written melody in the world (J. Thompson). The surviving manuscript is dated from at least the 7th century CE, but some believe the melody itself was written by Confucius (551-479 BC), who gave us antimetabolic thoughts such as:

Don't worry that **other people** don't know **you**;
worry that **you** don't know **other people**.⁵

Grothe, 12

and

Advance the **honest** over the **crooked**, and the people will be loyal.
Advance the **crooked** over the **honest**, and the people will be disloyal.

Grothe, 66

and

The superior man is **easy** to serve, but **difficult** to please...
The inferior man is **difficult** to serve, but **easy** to please.

Grothe, 70

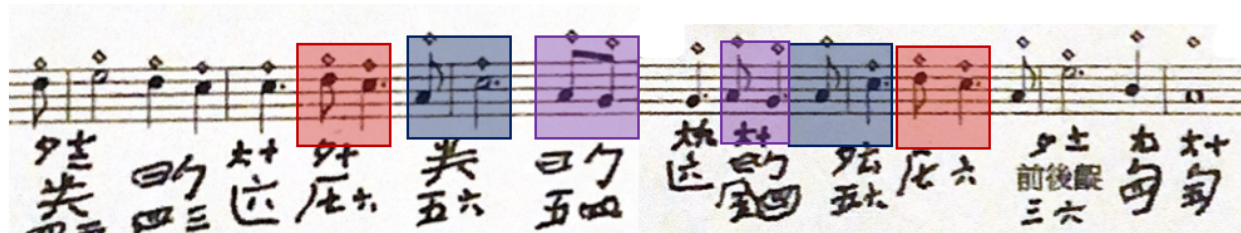
But Confucius was not alone in his use of chiasmus. East Asian Languages and Literatures scholar David McCraw writes that “traditional Chinese writers ubiquitously, exuberantly wielded... chiasmus” (68). It's no wonder, then, that there is chiasmus in this ancient Chinese song, where the ABBA structure is articulated by singles notes:

“Jieshi Diao You Lan,” reconstructed by John Thompson

The rhythm doesn't repeat exactly, and there is only implied harmony present (because it's written for a solo instrument), but because of the exact repetition of the pitches, in each case this figure is a fixed melodic chiasmus.

⁵ Chiasmus is very maintained in translation and rarely imposed by translator, but I have not had sufficient time and opportunity to map translations back against originals.

Another example occurs further along in the piece; here, the structure ABCCBA is articulated with elements which each have two notes:



“Jieshi Diao You Lan,” reconstructed by John Thompson

Again, the rhythms are not repeated exactly, and harmony is not at play, making this a fixed melodic chiasmus.

India

The semi-improvisational melodies of Indian ragas are thousands of years old. Ragas defy notation, especially Western: notation. For one thing, they account for twenty-two notes within the octave, while the Western scale can only accommodate twelve; any transcription will only be an approximation. That being said, indianclassicalmusic.com offers instructional videos with Western notation for various ragas, including Raag Bhairav, which, in this instance, has a couple of chiastic phrases:

Video: Raag Bhairav Part Two
0:45

1:15
1:28

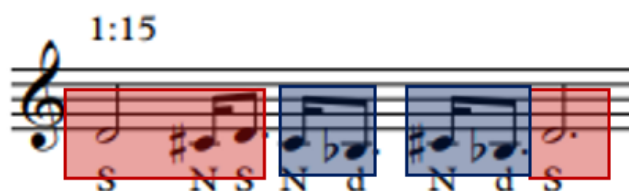
1:40
1:50

2:04
2:14

The image shows four staves of Western musical notation for Raag Bhairav. The notation is in treble clef with a key signature of one flat and a 4/4 time signature. Below each staff is a sequence of notes representing the Indian scale: r (re), N (ni), d (da), G (ga), r (re), S (sa). The first staff shows a phrase: r N d r G r G r S. The second staff shows a phrase: S N S N d N d S. The third staff shows a phrase: N d r G r S S G M N d N d P. The fourth staff shows a phrase: G M N d G r G r N d G M G M N d N d P. Two phrases are highlighted with green circles: the first phrase on the first staff (r N d r G r G r S) and the second phrase on the second staff (S N S N d N d S).

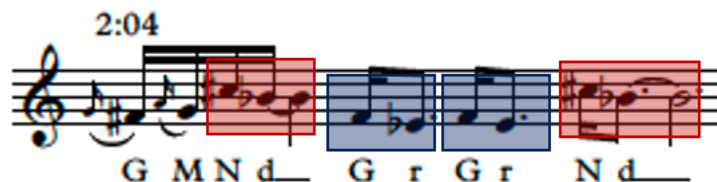
“Raag Bhairav,” Ramnath

The first phrase:



doesn't seem to be the balanced figure we're looking for. But upon listening, it becomes clear the first C-sharp 16th note is just a grace note, barely interrupting what would otherwise be the dotted half note that would match the one at the end. That leaves the two inner beats which are identical. To the ear, despite the brief interruption in the first A-section, it is ABBA.

The second phrase is even clearer:



Like the last phrase, the B-sections are identical, and apart from a slight rhythmic lengthening at the end of the phrase, so are the A-sections. Both of these phrases are fixed melodic chiasmi.

Audiences thousands of years ago might have heard something very similar to these melodies while reading *The Panchatantra*, an ancient book of animal fables that offers morals such as:

Better have as king a **vulture** advised by **swans**
than a **swan** advised by **vultures**.

Grothe, 67

Israel

The Talmud is a collection of Jewish writings that date from the 3rd to 6th centuries CE (Yehuda).

The writings include interpretations of Jewish law and rules for moral living, like this one:

Happy is the time where the **great** listen to the **small**,
For in such a generation the **small** will listen to the **great**.

Grothe, 72

The Torah—which the Talmud interprets—has markings throughout that have recently been understood to be a kind of musical notation called “cheironomy.” Musicologist Suzanne Haik-Vantoura has hypothesized a translation of these markings that may allow us to hear music exactly as it was performed 2000+ years ago (Levy). While not everyone agrees with her hypothesis, her work is acknowledged by the [National Library of Israel](#) and has been recorded by early music specialists, the San Antonio Vocal Arts Ensemble (SAVAE).

The song “Bircath Cohenim” uses Vantoura’s interpretation to “give people an idea of how music derived from encoded notations in the Bible may have sounded” (SAVAE). It begins:



and ends:



“Bircath Cohenim,” SAVA E

with a fixed melodic chiasmus. In the first instance, the A and B sections rotate around F-sharps in the middle. In both phrases, there are different numbers of syllables in the lyrics of each section. To the ear, however, the same weight is given to each section, regardless of the number of syllables.

Russia

While Konstantin Stanislavsky (1863-1938), the Russian actor, director, and creator of the Stanislavsky method was saying things like:

Love the **art** in **yourself**,
not **yourself** in the **art**.

Grothe, 43

the Russian composer, Tchaikovsky (1840-1893), was creating some of the most famous melodies in the world. The piece, “Old French Song,” from his *Children’s Album* begins with a longer example of chiasmus:

The image shows a musical score for the piece "Old French Song" by Tchaikovsky. The score is in 2/4 time, marked "Andante", "p", and "espressivo". The melody is written on a treble clef staff. The first section (A) is highlighted in red, the second section (B) in blue, and the third section (A) in red. The melody starts with a G, ascends stepwise to a D, and then descends back down to a D, which matches the pick-up note at the beginning of the passage. The repetition in the B-sections and the clear reference of the second A-section to the first A-section is an example of a variational chiasmus.

“Old French Song,” Tchaikovsky

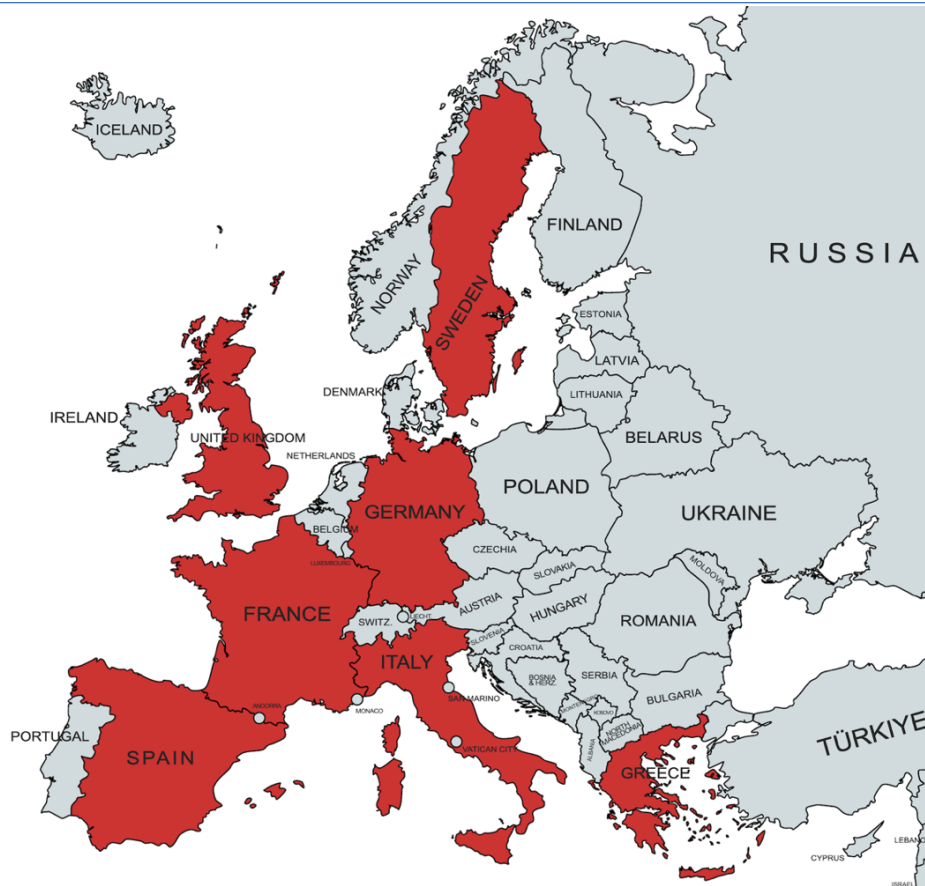
While the B-sections are repeated exactly, the A-sections are mirrored. Rather than exact repetitions, they perform an antithetical function, as the second A-section becomes almost an opposite of, or answer to, the first. In this case, the 8th notes of the first A-section ascend stepwise from the G to the D, and in the second A-section they descend back down, landing with a final leap on the D which matches the pick-up note at the beginning of the passage. With the repetition in the B-sections and the clear reference of the second A-section to the first A-section, this is an example of a variational chiasmus.

This melody is very catchy—you only need to hear it once to be humming it all day. Just as collocations make figures in language more memorable, the same is true in music; there are a number of figures working together in this melody, and most of them have to do with the repeated D (see appendix 4). Including the octaves, the D is repeated eight times (plope); the melody circles around it, highlighting it as an anchor it keeps returning to. Most of the phrases

begin on D and all of the phrases end on D (symploce), which means the most important notes (at the beginnings and ends of phrases) are usually the same (anadiplosis). Twice, the D is played twice in a row (epizeuxis). The repetition of the B-sections means the number of notes and their rhythm is the same (isocolon), and because the accompaniment in the bass line is the same, there is the same syntactic, or harmonic⁶, structure in those sections (parison). Whether intentional or not, Tchaikovsky's genius at composing had him making use of a handful of interrelated figures that make this song the lasting piece of music that it is.

⁶ I follow Annidrudh Patel's (and others) understanding of harmony as being syntactical, but, again, this is far too complicated and debated a topic to delve into in this paper.

Europe



Because the music and literature of Europe has been so well and often preserved, there are many examples of chiasmus in text and music from this region. I have focused on Western Europe because of my own familiarity with that music.

Greece

It's no surprise that this, or any, rhetorical figure should be found in ancient Greece; after all, chiasmus is named after the Greek word for *cross*, and the cross-wise motion the figure takes. No lesser figure than Socrates gave us chiasmus—actually, antimetabole—in the fifth century BC:

Bad men **live** that they may **eat and drink**,
Whereas good men **eat and drink** that they may **live**.

Grothe, x

A hundred years or so later, Epicurus was thinking along a similar vein:

It is impossible to live **pleasurably** without living **wisely, well, and justly**;
 And impossible to live **wisely, well, and justly** without living **pleasurably**.

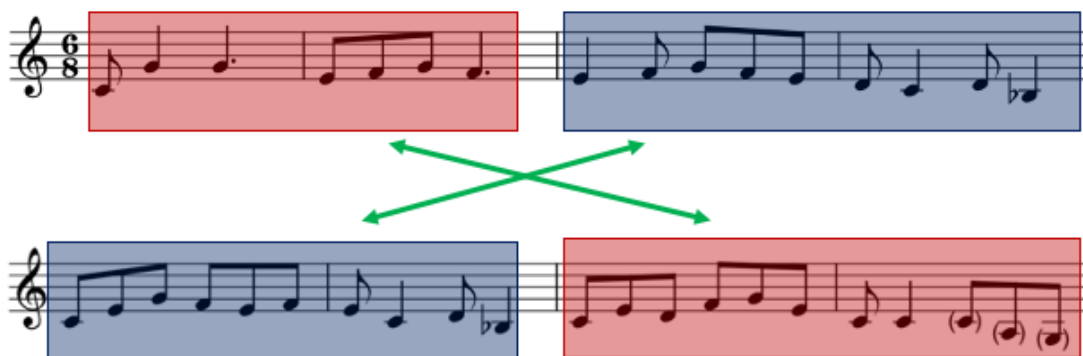
Grothe, 100

Because of Greece's widespread influence, the New Testament of the Christian bible was largely written in Greek. There has been a lot of attention paid to chiasmus in both the old and new testaments of the Bible, from short phrases to entire book-length chiastic structures. Genesis 9:6 is a good example:

Whoever **sheds** the blood of **man**,
 by **man** shall his blood be **shed**

as are the many New Testament passages where “the first is already last, where death is life, gain is loss, and the lost is found” (Welch 211).

In the first century CE, around the time Jesus was delivering his chiastic messages, a man named Seikilos engraved a song—lyrics and melody—on his wife's gravestone in Greece.



“Song of Seikilos”, SAVAE

The song is perfectly balanced in four quarters. To the ear, and anchored by the second bars, the B sections are a nearly exact repetition, giving allowances for the syllabic demands of the lyrics. The A-sections are mirrored; the first one starts on the tonic (the C) and moves up to the dominant (the G) before using the 8th notes in the second bar to develop the harmonic progression. The second A section reverses that, with the first bar beginning with 8th notes that

take us back to the dominant before descending to the tonic. Depending on the tempo, the notes in parenthesis either prepare for the next phrase or function as an embellishment of the tonic. The second A-section referring back to the first A-section and the slight deviations in the B-sections makes this an example of a variational chiasmus.

Spain

We must let a thousand years go by without comment, between the last example and this one, the epic Spanish poem, *Cantar de mio Cid*. Composed sometime in the twelfth century, it contains numerous examples of chiasmus, such as this one in lines 2402-3:

Los de mio Çid a los de Búcar **de las tiendas los sacan,**
Sácanlos de las tiendas, cáenlos en elcaz.

Smith, 8

Compiled 200 years later, the *Codex Las Huelgas* is a book of music that was discovered in a Spanish convent in 1904. The music, copied around 1300 AD but written sometime earlier, contains musical forms that were popular from as early as the eleventh century. The following double motet is from the collection:

Iam nubes / Iam novum

Código de las Huelgas

Anónimo (s. XIV)

Cantus I
Cantus II
Altus

Iam iam iam iam
Iam iam iam iam
So - lem so - lem so - lem so - lem

5

iam no-vum si-dus o - ri - tur. Iam iam Pa-ter ga-la - xi -
iam iam nu-bes dis-sol - vi - tur. Iam iam Pa-ter ga-la - xi - a. Iam
so - lem so - lem so - lem so - lem so - lem

33

a. Iam ex lu-de - a na - sei - tur. Iam iam o-ri-tur Ma - ri -
flos ex spi-na rum - pi - tur. Iam iam o-ri-tur Ma - ri - a. Iam
so - lem so - lem so - lem so - lem

34

a. Iam no-bis ce-lum pan-di - tur. Iam det no-bis gau-di - a
ve-rum lu-men cer - ni - tur. Iam iam de-mo-stra-tur vi - a. Iam pro no-bis pi-
so - lem so - lem so - lem so - lem

35

in ce-li cu - ri - a Christus, cu - ius fi - li - a es ma-ter et Ma-ri - a.
a ex - o-ret Ma - ri - a ut fru - a - mur glo - ri - a.
so - lem so - lem so - lem

“Iam nubes/lam novum,” Anonymous

The chiasmus is created by the two upper voices. Cantus II gives us both of the first A- and B-sections, which are then repeated in reverse (B and then A) in Cantus I. Apart from the second B-section starting one bar early, the repetition is perfect, down to the note order, pitch, and duration, making this a fixed melodic and rhythmic chiasmus.

France

Guillaume de Machaut was a fourteenth century poet and composer. He believed poets should also be composers, in part to ensure the close relation between the words and music of any of their work (Olson 72). There is, indeed, a close relation between the lyrics and music of his rondeau, “Ma Fin Est mon Commencement.” Machaut only wrote half the music necessary for this piece, and then provided directions for reading the music backwards in various ways to make up the rest (Key). While two of the voices swap parts and reverse, the tenor line is performed as a palindrome, the “most literal” (Lissner 58) and “compressed extreme of chiasmus” (Lanham in Lissner 58). The lyrics become this antimetabole:

Ma fin est mon commencement
Et mon commencement ma fin

The music, as transcribed by Dr. Jordan Key, looks like this:

MA FIN EST MON COMMENCEMENT

RONDEAU 14

GUILLAUME DE MACHAUT (c. 1300 - 1377)

TRANSCRIPTION BY: JORDAN ALEXANDER KEY

TRIPLUM

1. 4. 7. MA
.FIN
3. ET
5. MES
.FIN

CANTUS

TENOR

6

EST MON
NE U
CHANS TROIS

11

COM MEN MA
RE VERI
FOIS SEU

17

MENT - CE - MENT - COM - CE - MENT.
- - - - - MON ET 2. 8.
- - - - - E - MENT.
- - - - - LE - MENT.
- - - - - SE 6.

TAKE ON VERSE
2, 6, AND 8

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The road-mapping shows the upper two parts switching, while the tenor part, with nowhere else to go, just reverses direction. That all of these parts should be read backwards for the second half of the piece is indicated here with backwards clef markings.

Four hundred-or-so years later, Germaine de Staël (1766-1817), popular salonnière and literary figure, had this observation:

The desire of the man is for the woman,
but the desire of the woman is for the desire of the man.

Grothe, 25

Forty-or-so years before she was born, the chiasmic “Pat-a-pan” was published:

PAT-A-PAN
Traditional

Briskly

Am E7 Am E7 Am

1. Wil - lie, take your lit - tle drum Rob - in, take your flute and
2. When the men of old - en days Gave the King of Kings their
3. God and man this day be - come Joined as one with flute and

E/A E E/A E Am

(1) come When we hear the tune you play Tu - re - lu - re -
(2) praise, They had pipes on which to play Tu - re - lu - re -
(3) drum. Let the hap - py tune play on Tu - re - lu - re -

Rm E E/A B

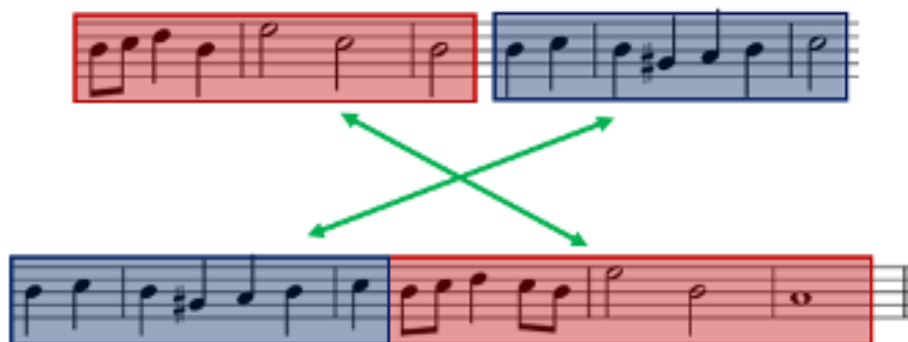
(1) lu, pat - a - pat - a - pan: When we hear the tune you
(2) lu, pat - a - pat - a - pan. They had drums on which to
(3) lu, pat - a - pat - a - pan. Flute and drum to - geth - er

Am G C E7 Am

(1) play, How can an - y - one be glad?
(2) play, Full of joy on - Christ - mas Day.
(3) play, As we sing on - Christ - mas Day.

“Pat-a-pan,” de la Monnoye

Here is the melody again, so we can more easily see the figure:



Apart from one ornamental note, the repetition is exact until the end of the second A-section, where the notes need to shift slightly to allow a dominant chord that leads to and lands on the tonic to finish the piece. Because of this small change, we can consider this an example of variational chiasmus. If we want a fixed chiasmus, we'll find one by looking closer at the B-sections:



We'll even find one in the second A-section, thanks to the addition of the ornamental note:



The other figures at play in this song are anadiplosis (going into both of the B-sections), epanaphora (as each of these phrases begin on the same note), and isocolon (four 8th notes and a half note) around which the A- and B-sections rotate (see appendix 5).

Italy

The sixteenth century saw Michelangelo (1475-1564) creating many of the masterpieces we're still familiar with today. Grothe offers this chiastic anecdote attributed to the artist:

A wealthy patron commissioned Michelangelo to do a sculpture and then complained that the sculptor was taking far too long to make only trifling changes in the piece. The artist replied:

“Trifles make perfection,
and perfection is no trifle.”

The sixteenth century also saw the rising fame of singer and composer Giulio Caccini (c. mid-1500s -1618). His repertoire “has come to be the very symbol of a new musical era, the Baroque” (Hitchcock 7). His piece, “Movetevi à pietà,” begins with a clear, 4-bar chiasmus:

“Movetevi à pietà,” Caccini

The melody G# A A G# is briefly interrupted by a 16th-note run that embellishes the second A (the second B-section) that, rather than lessening the weight of that note, emphasizes it by repeating it twice and reinforces the feel of repetition in the B-sections by maintaining the rhythmic motif of a dotted half note followed by a separate quarter beat. Depending on how you hear this, it is either a fixed melodic or variational chiasmus.

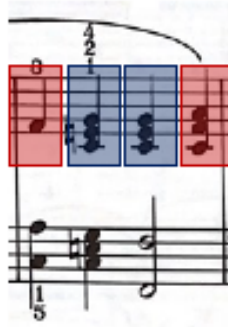
Germany

Germany, in the 18th century, was bustling with some of our most well-known composers of classical and romantic music, and with some well-known thinkers, as well. Immanuel Kant (1724-1804), the German philosopher, gave us this chiastic thought:

Suicide is not **abominable** because **God prohibits it**;
God prohibits it because it is **abominable**.

Grothe, 101

Turning to musical examples, bar 6 of Ludwig van Beethoven’s (1770-1827) Bagatelle in B flat, Opus 119, No. 11, looks like this:



“Bagatelle in B flat,” Beethoven

Harmonically, at least in the upper treble clef, this is F – C – C – F, despite the F chord being anticipated a beat early in the lower bass clef. Although the full chord is missing in the first beat in the treble clef, the missing notes are supplied in the bass clef so that the harmonic repetition is clear, making this a fixed harmonic chiasmus.

Jeanne Fahnestock writes,

Just as it is possible to compress an antimetabole into adjacent phrases, so it is possible to expand it and have not two terms but two whole predications exchanging their relative positions on either side of a point of equilibrium...It is not difficult to imagine that even larger text structures can be involved in such reversals (Fahnestock, *Rhetorical Figures in Science* 125).

These larger structures can include narrative chiasmus or ring composition, where entire works of literature (or music) realize this kind of inverse repetition. One example of a larger structure is Robert Schumann’s (1810-1856) Waltz in A Minor, Opus 124, No. 4:

WALTZ IN A MINOR / VALSE EN LA MINEUR

Op. 124, No. 4

Robert Schumann
(1810-1856)

Lebhaft* (M.M. ♩ = 52-63)

con pedale

9

17

26

35

*Lively / Vivace
Source: *Albumblätter*, Op. 124 (1854)

This entire piece makes one fixed full chiasmus. The A-sections are the identical 16 bars at the beginning and end. The B section is the 12 bars in the middle between the repeat signs, which instruct the performer to play that section twice. The chiasmus is born out structurally, as well. The A-sections are in A minor, and the B sections are in F major: A – F – F – A.

There are also many other figures working together with this chiasmus (see appendix 6). Each section (A and B) begins with the same note (epanaphora), and because the A-sections also end with that note—although in the lower octave—there is anadiplosis at the beginning of the first B-section. Other figures of repetition in this piece include the epizeuxis in the bass clef in the second and third beats of most of the bars, the plosive of the repeated E in the melody of the A-sections, and the repetition of the first three bars of the A-section in the second half of the A-section. There is isocolon in the rhythmic motif in the treble clef of the half note followed by the quarter note, and in the bass clef with the very familiar waltz rhythm of a low quarter note followed by two one-beat chords. The B-section is an extended example of anticlimax: three 2-bar phrases descend step-wise in both the melody and the accompaniment, which also creates the repeated syntactic (harmonic) structure of parallelism.

Scandinavia

Ellen Key (1849-1926) was a Swedish feminist and writer who gave us this thought about love and marriage:

Love is moral without legal marriage,
but marriage is immoral without love.

Goethe, 95

Next door, in Norway, Edvard Grieg (1843-1907) was putting a few chiasmic phrases into his piece, "Puck," Opus 71, No. 3:

PUCK
Op. 71, No. 3

Edward Grieg
(1843-1907)

Allegro molto (M.M. ♩ = 120-132)

pp

The passages in the treble clef use staccato intervals to create the exact repetition of the ABBA phrase we're looking for. This is just the beginning of the first page—this chiasmic motif continues throughout the rest of the piece.

England

This chiasmus comes from British novelist Ivy Compton-Burnett (1884-1969):

Parents have too little respect for their children,
just as the children have too much for the parents.

Grothe, 93

Ralph Vaughan Williams (1872-1958) was also writing chiasmi in his work, from short:

And an - swer, ech - oes,

“The Splendour Falls,” Williams

to longer examples:

1. The prim-rose in the shade do blow, the cow-slip in the sun; The
2. If you could see their comely gait an' pretty faces' smiles, A-

“Blackwore by the Stour,” Williams

The following example has three fixed melodic chiasmi back to back:

Andante sostenuto

Voice

Where sun-less riv-ers weep

Piano

Their waves in-to the deep, She sleeps a charm-ed sleep: A-

“Dream-Land,” Williams

These first two phrases are exactly the same, except that the second begins one step higher than the first (and the third one step higher than the second), realizing climax (see appendix 7). The note that ends each phrase and begins the subsequent phrase is an example of anadiplosis, and the exact rhythmic repetition creates isocolon.

This fixed melodic chiasmus is from the same song:

“Dream-Land,” Williams

Between the two colons, this passage also includes the figures of mesodiplosis and anadiplosis (see appendix 8).

We have lots of examples of chiasmus from Britain, including from Elizabeth I, Queen of England (1533-1603) who is said to have remarked to Sir Walter Raleigh, who introduced tobacco to England:

I have seen many a man turn his gold into smoke,
but you are the first who has turned smoke into gold.

Grothe, 32

From around the same time period—the 15th or 16th century—we have this song, “Thou Man, Envired,” found in the Ritson Manuscript:

8

7. Thou man, envired

ANON

R70^v-71

Thou man, en-vi-red with tempta - - - ti - on, Un-to Cal-va - ry cast - thy - - - mind,
 Thou man, en-vi-red with tempta - - - ti - on, Un-to Cal-va-ry cast thy - - - mind.
 Thou man, en-vi-red with tempta - - - ti - on, Un-to Cal-va-ry cast thy mind.

Re-mem-ber how faith-ful, how true, how - - - kind This li - on and lamb was, one - sing
 Re-mem-ber how faith-ful, how true, how kind This li - on and lamb was, one - sing
 Re-mem-ber how faith-ful, how true, how - - - kind This li - on and lamb was.

pi - ty; And say af - - ter me, and be not in - - - kind; Pa - ru - tus sum sem - per - - -
 pi - ty; And say af - ter me, and be not in - - - kind. Pa - ru - tus sum sem - per - - -
 one - sing pi - ty; And say af - ter me, and be not in - - - kind. Pa - ru - tus sum sem - per - - -

- - - mo - ri - - pro - - - lo.
 pro - - - lo.
 - - - ti - - - pro - - - ti.

“Thou Man, Envired,” Anonymous

The two examples are in the upper two voices and are each just four 8th notes long, but they realize both fixed melodic and rhythmic chiasmus.

Going back another few hundred years, we come to Chaucer (c.1340s–1400) who wrote:

For Y am sorwe,
and sorwe ys Y.

Rhetfig

Also from the 14th century, we find this example of fixed melodic and rhythmic chiasmus:

31. PATER NOSTER, MOST OF MYGHT

The image shows a musical score for a Tenor voice and Organ accompaniment. The title is "31. PATER NOSTER, MOST OF MYGHT". The Tenor part has a tempo marking of quarter note = 92. The lyrics are: "Pa - - ter no - - ster, most of myght, that al" and "thys word at erst hast wrount, help". The Organ part provides accompaniment. A red box highlights the first four notes of the Tenor line, and a blue box highlights the next four notes. A red box highlights the first four notes of the Organ line. A red box highlights the first four notes of the Tenor line in the second system. A red box highlights the first four notes of the Organ line in the second system. A red box highlights the first four notes of the Tenor line in the third system. A red box highlights the first four notes of the Organ line in the third system. A red box highlights the first four notes of the Tenor line in the fourth system. A red box highlights the first four notes of the Organ line in the fourth system. 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“Pater Noster, Most of Myght”, Anonymous

Africa



There are some excellent examples of chiasmus from Africa. I have chosen four examples that cross nearly 2000 years and the continent from Tunisia in the north to South Africa, and to the east coast and beyond with Kenya and the island country of Mauritius.

Tunisia

Terence was a Roman playwright in the second century BC, an educated slave who was eventually freed (Thayer). He was born in Carthage, in what is now Tunisia. He is quoted:

I know the nature of women:
when you **want to**, they **don't want to**;
and when you **don't want to**, they **want to**...exceedingly.

Grothe, 89

Imagining what music would have sounded like during Terence's lifetime is complicated due to Tunisia (and surrounding area) having a long history of conquest by various different peoples. It's a fair assumption that each period of occupation would have left a mark on the original population and their cultural products. It is believed that the Berber, or Amazight, people are the indigenous population of North Africa ("Berber"), but we can't know for sure what their music sounded like before Arab influence. However, because of their remote locations, many Amazight communities have music traditions that seem to have been preserved and that share links with Amazight communities across the Maghreb ("Berber"). It is possible that, since those ancient links persist across North Africa, the music has resisted outside influence across the centuries.

The first musical example is a chiastic song from Morocco. It is a traditional Amazight song and dance procession called an Ahwach. It has a repeating 5-bar melody with the first and last bars having two beats, and the middle bars having 4 beats. It is sung by two groups, who switch at the half-way point (indicated here with a breath mark):



["Yallah Yallah Yannirda Woulli,"](#) Remix-Culture

The A and B phrases are arranged around a C section, which is in two mirrored halves (shown here with a vertically mirrored triangle). There are very slight differences in the repeated sections (indicated by the notes in parenthesis) but they are inconsequential; mostly they are the tonic note on the down beat of the bar, and the drums make up for the missing note. It would be easy to mistake this song for having four bars of 4/4, but by catching the very first downbeat of the song it becomes obvious that the first bar has only two beats, making the fixed melodic chiasmus clear.

A second example of chiasmus in Amazight music comes from Tunisian-born Algerian singer Taos Amrouche. On Amrouche's 1968 album *Chants berbères de Kabylie*, "Chant de procession de l'oncle 2" begins with an excellent example of a fixed melodic and rhythmic chiasmus:



"Chant de procession de l'oncle 2," Amrouche

The repetition and structure of the chiasmus is perfect, but there are other figures being realized in this passage as well (see appendix 9). All of the phrases begin with G, creating epanaphora. There is anadiplosis at the end of each B-section going into the next phrase. The repeated G's within the phrases are examples of epizeuxis. There is isocolon in the first bar of each section. The density of figures in this short passage is perhaps one of the reasons this ancient chant survived long enough to be recorded.

South Africa

In a 1937 study of South African Bantu poetry, ethnologist G. P. Lestrade describes the importance of structural balance. He writes that this is created using various techniques including parallelism and anadiplosis, and also chiasmus (307). Lestrade identifies chiasmus in a Zulu proverb:

Inála / kayihámbi // kuhámb' / indlála
 (Prosperity / does not travel // what does travel (is) / poverty)

Lestrade, 307

In 1936, ethnomusicologist Percival Kirby published a survey of recorded Bushman music. He had come into possession of some manuscripts that had been transcribed in 1879, among which was this song:

!kattən !kattən || nauru Ino, !kha-u !kwə !kwə, !kha-u !kwə!kwə ta -!kū: .

!kattən !kattən || nauru Ino, -!bo !kwə!kwə, -!bo !kwə!kwə- ta -!kū: .

Kirby, 225

This chiastic melody is an example of a variational chiasmus. The example is two lines, or phrases, long, and each phrase realizes chiasmus. The B-sections are identical, down to the accented down beats in the first phrase. The A-sections are mirrored. In each phrase, the first A-section goes from the tonic to the dominant and the second A-section responds by going from the dominant to the tonic:

Like other examples we've seen where this harmonic inversion is at play, the second A-section refers back to, and answers, the first.

Kenya

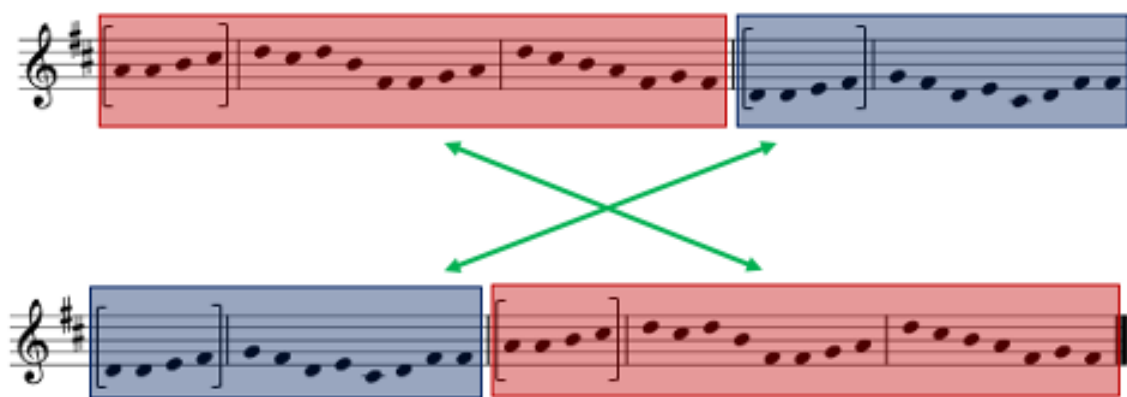
Muyaka bin Haji (c. 1776-1840) was a Kenyan Kiswahili poet. Repetition, including the inverted repetition of antimetabole, is a feature of a style of Kiswahili poetry called *mashairi ya takiriri* (Harries 253). Muyaka frequently used antimetabole, as in this poem:

Lakutenda situuze situuze lakutenda
 Metufunda wanamize wanamize metufunda
 Kuwa punda tuizize tuizize kuwa punda
 Kwandika tapo tutenda hilo halipatikani.

(What to do don't ask us, don't ask us what to do
 He has crushed us like shore crabs, like shore crabs he has crushed us
 To be pack donkeys we refuse, we refuse to be pack donkeys
 To be saddled in packs for work, that is what will not be achieved)

Harries, 254

The crosswise repetition is so clear and exact, it's evident even without the translation. The same is true of the following song, "Natamanl Uwa," recorded in Kenya in 1931:



"Natamanl Uwa," Abdi

I've transcribed this melody without rhythm to more easily see the phrases. Each section begins with a pickup to the down beat, and A is approximately twice as long as B. After an instrumental

introduction, there are two sung verses, finished by an instrumental verse. The first verse introduces A, then follows with a freer, melismatic (embellished with vocal runs) repetition of it. Then B is sung twice, and A twice again. The second and instrumental verses give us the clear and exact fixed full chiasmus we're looking for:

Verse 1: AA¹BBAA

Verse 2: ABBA; ABBA

Instrumental: ABBA

Mauritius

The Republic of Mauritius lies 2000km off the east coast of Africa. Malcolm de Chazal (1902-1981), who gave us the following chiasmus, was a Franco-Mauritian writer and a painter.

Women **eat** while they are **talking**;
men **talk** while they are **eating**.

Grothe, 25

Sega is the genre of music and dance most closely associated with Mauritius. Ti Frère is a "ségaier"—a sega performer. He rose to national attention in the mid-sixties (Déodat). His sega, "Roseda," is another great example of a variational chiasmus:



"Roseda," Ti Frère

Both the melody and the rhythm in this transcription are approximations – they change for each of the many verses in this song, mostly in the second B section to accommodate whatever additional lyrics are in any particular verse. However, the repetition is still clear: all of the important notes are kept (the held G, for example, and the F# and E). The additional notes and words replace the dotted quarter rest that leads into the first A section.

There is also repetition in the lyrics in each verse that supports the identification of these as repeated B sections:

Mo kryé li Roseda da Roseda

Zoli ti fam kuma twa

Zoli fam kuma twa

To zenes fini dan labutik

Central and South America



I am looking at chiasmus in medieval manuscripts from Guatemala, and in more recent examples from Brazil, in the writing of Paolo Coehlo and Bossa Nova music.

[Guatemala](#)

The *Popol Vuh* is an early document of the K'iche' Maya of Guatemala, probably compiled in the 1550's. It demonstrates the organizational features of K'iche' poetry, which Allen Christenson

explains are “not based on rhyme or metrical rhythms but rather on the arrangement of concepts into innovative and even ornate parallel structures” (322). In his study of early K’iche’ literature, Christenson finds many examples of chiasmus. This one concludes an account of a creation story:

Then they were multiplied,
 There at the place of dawn.
 Truly the names of the people came to be:
 Sovereign,
 Ballplayer,
 Masker,
 Sun Lord.
 [These were] the names of the people by which they were now called.
 There at the place of dawn
 They were multiplied.

Christenson, 323

Around the same time, Guatemalan composer Tomas Pascual (1595-1635) wrote this vocal piece, “Domine Ad [A]djuvandum”:

“Domine Ad [A]djuvandum,” Pascual

These are the second, third, and fourth phrases of the first verse, which make the fixed melodic chiasmus. Visually, it may not be clear, so let's take out everyone except the sopranos, and just look at the A-sections:



If we arrange them vertically like this, we can see most of the notes lining up. The only note we can't account for is the C on the bottom line, but we can let it go as an adornment. The other thing to notice is that the second line is two beats shorter than the first line. In fact, each of the bars are of different lengths, and we just have to accept that Pascual wanted it that way.

The B-sections are shared between the top two voices:



The sopranos give us the B-section first, and while they are finishing it (the long-held E), the tenors are stepping on their toes to begin their B-section.

Looking at the entire passage again, we can now see the chiastic structure:

Brazil

Paulo Coelho (b. 1947) is the often-translated Brazilian writer of *The Alchemist* and other books.

He has given us a number of antimetaboles:

His way isn't the same as mine,
nor mine as his.

The Alchemist

I'm not a body with a soul,
I'm a soul that has a visible part called the body.

Eleven Minutes

We love men because...they can see beauty in women
when women have long ceased to see any beauty in themselves.

Paulo Coelho

As much as Coelho may be said to have popularized Brazilian literature, Joao Gilberto (1931-2019) did the same for Brazilian music. Gilberto was a Brazilian guitarist, singer and composer who pioneered a new style of Samba, the Bossa Nova.

His song, “Ho-ba-la-la,” gives us two variational chiasmi, which together create a doubled chiasmus:

“Ho-ba-la-la,” Joao Gilberto

It’s easy to see the repetition in the B-sections: they are exact, even down to the lyrics. The A-sections, though, are less easy to identify; they are referring to each other rather than repeating. One way they’re doing that is in the movement of the notes. The first A-sections descend step-wise, and the second A-sections mirror that movement to ascend step-wise, although they are both together articulating the same scale. To see another way of analyzing these A sections, we need to extend our earlier discussion of harmonic function.

To reiterate, subdominant chords want to move to the dominant; dominant chords want to move to the tonic, and the tonic is the center of gravity, the most important chord in a piece of music. Our example, “Ho-ba-la-la,” is in the key of F; F is the tonic. C is the dominant. G minor in this key has a subdominant function—it wants to move to the dominant. So, the A-sections, side-by-side, look like this:

Sub-dominant > Dominant

Dominant > Tonic

It is as though the first section asks a question, or makes a proposition, and the second section gives the answer. They are not repetitions of each other, but they are clearly related.

Another chord that functions as a type of tonic harmony is called a deceptive cadence, because it slips into a chord progression in place of the tonic chord to delay resolution. In the above example, both phrases end on an F chord; however, the melody at the end of the first phrase goes to a D rather than an F, strongly suggesting a D minor chord (especially as there is a D in this particular F chord), which, in this key, is the deceptive cadence. We don't truly end up on the tonic until the end of the second phrase. These are doubled chiasmi because at the end of the first one, musically speaking, we are sent back to the beginning to try the whole phrase again so that we can end on the tonic.

If we go to the lyrics—not that we need to—we can find a confirmation of the relationship between these two phrases. The rhyming scheme is set up at the end of the first phrase and needs the second phrase to complete it. Also, in a clever wordsmithing move, the first phrase begins, and the second phrase ends, on homonyms – *hear/here*.

Another chiasmus from Gilberto's songbook (although written by Carlos Lyra) is in "Maria Ninguem." Again, the passage we're looking at is an example of a variational chiasmus, with the sections clearly referring to each other, but not repeating exactly:

MARIA L'AMOUR (MARIA NINGUEM)

Paroles françaises de
Christian JOLLET

Paroles Portugaises et Musique de
Carlos LYRA

Libre

Po-de ser que ha-ja a - ma me-lhor po - de ser Po-de ser que ha-ja a - ma pi - or, mui-to bem Mas i -
U a sou-rire é - cla-tant Comme un fruit trop ver-meil Un par-fum poursui-vant Un ray-on du so-leil Le re-
- guard al - teu-dri D'un bel ange é - pin-glant à la Vie: Un brin de Pa - ra - dis ..

T^odi Samba lente

- RI - A L'A - MOUR -
- RI - A L'A - MOUR -

F. Ma - ri - a et Ma - ri - a meu bem Se eu não sou loão de
Quel - le fleur a pu te don - ner le jour? Qui donc t'a vou - lu si
Quel - le fleur a pu te don - ner le jour? Qui donc t'a vou - lu si

Na - du Ma - ri - a que é mi-nha é Ma - ri - a Nin-guem Ma -
bel - le Pour que l'on t'ap - pel - le: MA - RI - A L'A - MOUR MA -
bel - le Pour que l'on t'ap - pel - le: MA - RI - A L'A - MOUR MA -

In this example, the A-sections both highlight the F, approaching it from below in the first A-section and from above in the second. The B-sections are largely identical, although they end differently.

North America



There are many examples of chiasmus in text and in music from the United States and Canada; I have focused on examples that might be familiar (or at least interesting) to my readers.

United States

Leroy “Satchel” Paige (1906-1982) was a professional baseball player who said this about pitching:

Throw high risers at the chin;
 throw peas at the knees;
 throw it **here** when they’re lookin’ **there**;
 throw it **there** when they’re lookin’ **here**.

Grothe, 58

One of Johnny Cash's (1932-2003) most famous songs was "I Walk the Line:



"I Walk the Line," Cash

This kind of fixed melodic chiasmus appears three times in each verse.

Turning to an earlier composer, Stephen Foster (1826-1864) is sometimes called the "father of American music" ("Stephen Foster"). In a short career, he wrote over 200 songs, and many of them include examples of chiasmus:

"That's What's the Matter," Foster

"The Song of All Songs," Foster

The first example is a simple fixed melodic and rhythmic chiasmus—one note/8th beat per section. In this second example, in two of the quarter beats there are two notes. In terms of

pitch and beat, however, this is the ABBA pattern we need for chiasmus. Rhythmically (bearing in mind that rhythm and beat are different) this phrase is in two parallel halves (made of one quarter note and two 8th notes).

Chief Si'ahl (or, Seattle) (1780-1866) who died two years after Foster, is attributed with these wise words:

This we know: The **earth** does not belong to **man**;
man belongs to the **earth**.

Chief Si'ahl

For our final American example of chiasmus, we turn to Gloria Steinem (b. 1934) who had this to say about relationships:

When **pain** has been intertwined with **love and closeness**,
 it's very difficult to believe that
love and closeness can be experienced without **pain**.

Grothe, 88

Six years after Steinem was born, "You Are my Sunshine," which is also about a relationship, was published, and is a wonderful example of a song-length articulation of a fixed full chiasmus:

The image shows a musical score for "You Are My Sunshine" with four phrases of music and lyrics. The first two phrases are on the top staff, and the last two are on the bottom staff. The first phrase is highlighted in red, and the second in blue. The third phrase is highlighted in blue, and the fourth in red. Green arrows cross between the phrases, illustrating the chiasmus structure: the first phrase of the first line corresponds to the second phrase of the second line, and the second phrase of the first line corresponds to the first phrase of the second line.

"You Are my Sunshine," Davis and Mitchell

With very few deviations, this piece falls neatly into ABBA form. What differences there are—a matter of four notes in the entire piece—are made to either accommodate more or fewer syllables in the lyrics and to add a dominant chord in the second A-section to strengthen the tonic resolution and give weight to the end of the song. Along with chiasmus (see appendix 10), this melody also realizes mesodiplosis in the quarter rests in the middle of most of the sections and anadiplosis between the A- and B-sections. In the first three sections there is the isocolon of three quarter notes and 2 half notes. There is plope in three of sections ending with the falling interval of E-C. The three instances of the lyric “sunshine” draws attention to the musical epizeuxis happening at the same time. There is symploce in most of the sections beginning and ending on middle C. And there is antithesis in each section, as each first half has ascending movement and each second half has descending movement. Again, the density of figures has helped this song to outlast so many others from the same era.

Canada

We know perfectly well what we’re looking for by now; without further comment, here is a list of chiasmic quotes by Canadian authors:

Authors like **cats** because they are such quiet, lovable, wise creatures,
and **cats** like **authors** for the same reasons.

Robertson Davies (1913-1995)

Men are afraid that **women** will laugh at them.
Women are afraid that **men** will kill them.

Margaret Atwood (b. 1939)

I understood then that when you **miss** a **thing** it leaves a hole
that only the **thing** you **miss** can fill.

Richard Wagamese (1955-2017)

Our corresponding musical example comes from Oscar Peter’s “Hymn to Freedom”:

The image displays two systems of piano accompaniment for the piece "Hymn to Freedom" by Peterson. The first system, starting at measure 9, features a red-shaded A-section (measures 9-12) with chords F, A⁷, Dm, and F⁷/A. The melodic line in the right hand has three notes circled in green: the first note of the A⁷ chord, the first note of the Dm chord, and the first note of the F⁷/A chord. A blue-shaded B-section (measures 13-16) follows, with chords B^b, B^o, F/C, and F. The second system, starting at measure 13, features a blue-shaded A-section (measures 13-16) with chords B^b, B^o, F/C, A/C[#], and Dm⁷. This is followed by a red-shaded B-section (measures 17-20) with chords Gm⁷, Am, B^b, C, F, and C. The melodic line in the right hand of the second system has three notes circled in green: the first note of the Gm⁷ chord, the first note of the Am chord, and the first note of the C chord. Both systems include bass lines and various musical notations such as triplets and slurs.

“Hymn to Freedom,” Peterson

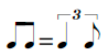
The B-sections, as we’ve seen in other examples, are essentially a perfection repetition. The A-sections diverge just enough to include a harmonic progression in the second A-section that strengthens the tonic that it ends on. The important melody notes (circled in green) are, however, preserved.

Let me go back for a moment, though, because this is actually the second half of another doubled chiasmus. Here is the full first page of this piece:

Hymn to freedom

Music by Oscar Peterson
Arrangement by Simon Westman

♩ = 68



A

Piano

First chiasmus

Pno.

Pno.

Second chiasmus

Pno.

The first two lines are the first chiasmus, and the third and fourth line are the second chiasmus, which we've already looked at. You'll notice that the first and second chiasmi are almost identical—certainly they're meant to sound like a repetition. The big difference is in both of the second A-sections. Like the Joao Gilberto example, where a deceptive cadence sent the passage back to the beginning, a harmonic turn here does the same thing. This time, though, it is dominant harmony doing the work.

At bar 7, rather than beginning a repetition of the first A-section, there is a bar-long articulation of a G7 chord; this chord is the dominant chord of C, and C is the dominant chord of F, which is the tonic of this piece. The result is a doubly reinforced dominant harmony that compels the passage to begin again from the beginning. It does, and in the second chiasmus, manages to finish on the tonic.

Therapeutic Figures

Although the potential of music therapy is not yet fully understood and its efficacy has not been fully studied, it is widely used for cognitive, emotional, and even physical pathologies. Its wide use is partly due to its “contain[ing] many different levels of structure, yet provide[ing]... variability and flexibility” (Wigram and Gold); it is highly adaptable in terms of both patient and clinician. A somewhat recent turn in music therapy has seen Neurologic Music Therapy (NMT) “shifting the models of music in therapy from social science and interpretative models to neuroscience and perceptual models” (Thaut and McIntosh 106). The *Handbook of Neurologic Music Therapy* asserts that:

music engages widely distributed neural networks that are shared with general ‘non-musical’ cognitive, motor, and language function. This is an important rationale for understanding music as a ‘mediating’ language in the therapy process. Music processing in the brain does not stop at music. Music processing can engage, train, and retrain non-musical brain and behavior function. (Thaut et al. 3)

Music therapy seems especially suited to help patients who struggle with language in various ways. It is very commonly used with autistic people to “improve language and communication deficits” (Wan et al.). Therapist and Director of Music Therapy at Charleston Southern University, Jennifer Whipple, writes that “all music intervention has been effective for children and adolescents with autism. Music appears to be so powerful a tool with this population that regardless of its purpose or how it is used for a particular client, it achieves positive effects” (102–03). We may not yet always know the best way to wield this tool, yet its impact seems overwhelmingly beneficial. The same seems to be true for people with dementia.

There is a lot of anecdotal support for the idea that music improves language use in people with dementia, such as Alzheimer’s Disease (AD). Potential reasons for this include music and language having shared neural resources and acoustic features (Baird and Thompson). Aimee Baird and Séverine Samson note that “the ability to respond, to recall, or to produce music...is

often remarkably well preserved even in the severe stage of AD” (209). Something else that is well preserved in people with Alzheimer’s is formulaic language.

Formulaic language is a little like auto-utterances: sayings, responses, and pause-fillers that are ingrained and habitual for any speaker. Everybody uses them, but compared with healthy adults, write Kelly Ann Bridges and Diana Van Lancker Sidtis, people with Alzheimer’s use them more often, and increasingly so as the disease progresses. “Clinical observations suggest that individuals with AD retain the ability to produce formulaic language long after other cognitive abilities have deteriorated” (799). What is it about formulaic language that makes it more resilient to cognitive decline? Harris offers an answer: “Dementia formulae...very frequently resonate neurocognitively, which is precisely what makes them more resilient against cognitive decline” (“Dementia, Rhetorical Schemes, and Cognitive Resilience” 14). Formulaic language includes idioms and proverbs—utterances that are likely to already be figured and have the additional virtue of having been repeated throughout a lifetime. Take Grampa Fred’s remark regarding his auditor’s attributes:

Fart smeller...smart feller

This phrase realizes alliteration, antimetathesis, isocolon, and rhyme. It is a witticism so dense that, years later, and having only met Fred twice, I have no trouble recalling it. Can this kind of neurocognitive resonance also explain music being “perhaps the most resilient signal structure we know against memory loss” (“Dementia, Rhetorical Schemes, and Cognitive Resilience” 14)? I think it can. I think music that endures does so because of its figural density, or neurocognitive resonance, and I’ll argue my case with a song so dense that it is a part my own musical lexicon despite never having learned the real lyrics to replace my own ridiculous substitution: “sunny llama Tina.”

Frère Jacques

Traditional
Arr. Julie A. Lind

Moderately
1

mf Frère Jacques, Frère Jacques, dormez-vous?

Dormez-vous? Sonnez les matines!

Sonnez les matines! Din, dan, don. Din, dan, don.

There are all kinds of figures in this tune (see appendix 11). At the phrase level, each bar is repeated exactly and immediately creating four parallel phrases. The first two phrases (bars 1-4) have a generally ascending motion while the last two phrases (bars 5-8) have a generally descending motion, creating antithesis. At the level of the notes there is the plosive of the repetition of the middle C's, and the epizeuxis of the C's between bars 1 and 2, 6 and 7, and 7 and 8, and the G's between bars 4 and 5 which also realize anadiplosis. There is either epanaphora or epiphora (or both) in every bar. There is the isocolon of each bar's repeat, as well as between bars 3 and 4 and bars 7 and 8. And there is the metaphor in the last two bars of the notes being a church bell. If it were possible that someone wasn't familiar with this song, it wouldn't take them long to become so, which is why so many children have the experience of

singing this song in school, or in a choir, usually as a round (creating even more figures to add to the list).

Can we take advantage of music's figural density when designing music therapies? NMT seems to be looking in that direction, seeing in music "structures and patterns" that are "capable of engaging the brain in retraining neural and behavioral functions that then be applied to nonmusical functional contexts" (Thaut and McIntosh 106). Could we design music therapies that, as well as practicing the prosody of speech, also practice other kinds of cognitive shapes in language? Perhaps, with further research, we could capitalize on the figural structures and patterns in music to build a more robust bridge between music and language.

Conclusion

I began this project with a hypothesis: if rhetorical figures are cognitive, if they take the shapes impressed upon them somehow in the brain, if they therefore show us the shapes the brain likes to impress, and if music has much of anything in common with language in terms of provenance, these brain-shapes should appear in music with similar frequency as they do in language. They should show up whenever and wherever humans have made music. I focused on the figure chiasmus for its cross-wise shape that would be recognizable across domains, and then I went looking for it in recordings and scores. I found examples of linguistic and musical chiasmus from the same times and places across 2000+ years of history and from every continent. Finally, I looked ahead to therapeutic applications these cognitive shapes in music may allow.

There continues to be debate about the relationship between music and language – is music a language? is it *like* a language? does its production or processing use the same neural resources as language? in what ways can it be a bridge between non-verbal pathology and communication? This paper has aimed to engage with these questions from a novel perspective on cognition, rhetoric, and music. The debate continues, but I hope to have added something useful to it.

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Appendix 1: List of Music Examples

Methodology: Choosing, and naming, musical examples

Country	Year	Composer/Performer	Piece	Type of Figure
Austria	1762	Leopold Mozart	Minuet	Variational chiasmus
Austria	1761	Wolfgang Amadeus Mozart	Menuetto and Trio in G	Fixed melodic chiasmus
Austria	1762	Leopold Mozart	Minuet	Fixed rhythmic chiasmus
Austria	c. 1780	Wolfgang Amadeus Mozart	Twinkle Twinkle Little Star	Fixed harmonic chiasmus
Austria	1756-1791	Wolfgang Amadeus Mozart	Allegro	Fixed full chiasmus

Asia

Country	Year	Composer/Performer	Piece	Type of Figure
China	c.600 AD or earlier	Anonymous	You Lan	Fixed melodic chiasmus
India	Contemporary	Kala Ramnath	Raag Bhairav	Fixed melodic chiasmus
Israel	c. 400 BCE	Anonymous	Bircath Cohenim	Fixed melodic chiasmus
Russia	1878	Tchaikovsky	Old French Song	Variational chiasmus, also: <ul style="list-style-type: none"> • Ploke • Symploce • Anadiplosis • Epizeuxis • Isocolon • Parison

Europe

Country	Year	Composer/Performer	Piece	Type of Figure
Greece	1 st c. AD	Seikilos	Song of Seikilos	Variational chiasmus
Spain	c.14 th century	Anonymous	I am numbes	Fixed melodic and rhythmic chiasmus
France	c. 14 th century	Guillaume de Machaut	Ma Fin est mon Commencement	Fixed melodic chiasmus

Country	Year	Composer/Performer	Piece	Type of Figure
France	1720	Bernard de la Monnoye	Pat-a-pan	Variational chiasmus, also: <ul style="list-style-type: none"> • Anadiplosis • Epanaphora • Isocolon
Italy	c. 16 th century	Giulio Caccini	Movetevi à pietà	Fixed melodic chiasmus
Germany	1820	Ludwig van Beethoven	Bagatelle in B flat, Opus 119, No. 11	Fixed harmonic chiasmus
Germany	1835	Robert Schumann	Waltz in A Minor, Opus 124, No. 4	Fixed full chiasmus, also: <ul style="list-style-type: none"> • Epanaphora • Anadiplosis • Epizeuxis • Ploke • Isocolon • Anticlimax • Parison
Norway	1901	Edvard Grieg	Puck, Opus 71, No. 3	Fixed melodic chiasmus
England	1902	Ralph Vaughan Williams	The Splendour Falls	Fixed melodic chiasmus
England	c. 1904	Ralph Vaughan Williams	Blackwore by the Stour	Fixed melodic chiasmus
England	1905	Ralph Vaughan Williams	Dream-Land #1	Fixed melodic and rhythmic chiasmus, also: <ul style="list-style-type: none"> • Climax • Anadiplosis • Isocolon
England	1905	Ralph Vaughan Williams	Dream-Land #2	Fixed melodic and rhythmic chiasmus, also: <ul style="list-style-type: none"> • Mesodiplosis • Anadiplosis
England	c. 15-16 th century	Anonymous (the Ritson Manuscript)	Thou Man, Envired	Fixed melodic and rhythmic chiasmus
England	c. 14 th century	Anonymous	Pater Noster, Most of Myght	Fixed melodic and rhythmic chiasmus

Africa

Country	Year	Composer/Performer	Piece	Type of Figure
Morocco	2014	Group from Agdz	Yallah Yallah Yannirda Woulli	Fixed melodic chiasmus
Algeria	1968	Taos Amrouche	Chant de procession de l'oncle 2	Fixed melodic and rhythmic chiasmus, also: <ul style="list-style-type: none"> • Epanaphora • Anadiplosis • Epizeuxis • Isocolon
South Africa	1879	Recorded Bushman music	Unnamed	Variational chiasmus
Kenya	1931	Maalim Abdi	Natamanl Uwa	Fixed full chiasmus
Mauritius	1965?	Ti Frèr(e)	Roseda	Variational chiasmus

Central and South America

Country	Year	Composer/Performer	Piece	Type of Figure
Guatemala	c.16 th century	Tomas Pascual	Domine Ad adjuvandum	Fixed melodic chiasmus
Brazil	1961	Joao Gilberto	Ho-ba-la-la	Variational chiasmus, doubled chiasmus
Brazil	1959	Joao Gilberto	Maria Ninguem	Variational chiasmus

North America

Country	Year	Composer/Performer	Piece	Type of Figure
USA	1973	Johnny Cash	I Walk the Line	Fixed melodic chiasmus
USA	1862	Stephen Foster	That's What's the Matter	Fixed melodic and rhythmic chiasmus
USA	1865	Stephen Foster	The Song of All Songs	Fixed melodic chiasmus
USA	1940	Jimmie Davis and Charles Mitchell	You Are my Sunshine	Fixed full chiasmus, also: <ul style="list-style-type: none"> • Mesodiplosis • Anadiplosis • Isocolon • Ploke • Epizeuxis • Symploce • Antithesis
Canada	1962	Oscar Peterson	Hymn to Freedom	Variational chiasmus, doubled chiasmus

Therapeutic Figures

Country	Year	Composer/Performer	Piece	Type of Figure
France	c. 1700s	Traditional	Frere Jacques	<ul style="list-style-type: none">• Antithesis• Ploke• Epizeuxis• Anadiplosis• Epanaphora• Epiphora• Isocolon• Metaphor

Appendix 2: Glossary of Musical Terms⁷

4/4: a basic metrical pattern having four beats per bar

8th note: a note with the duration of half of one beat

bar: or, measure: a rhythmic grouping, set off in written music by a vertical barline

beat: a musical pulse

chord progression: a series of chords that functions similarly to a clause or phrase in spoken language

dominant: the fifth scale degree, on which a dominant chord may be built; also refers to a type of chord that moves to tonic harmony

downbeat: the first beat of a musical measure

half note: a note with the duration of 2 beats

harmonic function: the tendency of certain chords to progress to other chords, or to remain at rest

harmony: the elemental category describing vertical combinations of pitches

melismatic: singing that incorporates a succession of many pitches while sustaining one syllable of text

octave: a musical interval between two pitches with the same name

pick-up note: a partial measure of notes that precedes the downbeat of the first, full measure

quarter note: a note with the duration of one beat

rhythm: the element of music as it unfolds in time

scale: a family of pitches arranged in an ascending/descending order

staccato: short, detached notes

subdominant: the fourth scale degree, on which a subdominant chord may be built; also refers to a type of chord that moves to dominant harmony

tonic: the first note of a scale or key

variation: the compositional process of changing an aspect(s) of a musical work while retaining others

⁷ Definitions are either mine, or come from Western Michigan University's [Glossary of Musical Terms](#), or Robert Hutchinson's [Music Theory for the 21st-Century Classroom](#).

Appendix 3: Glossary of Rhetorical Terms⁸

alliteration: the occurrence of one or more of the same consonants or semi-vowels at the beginnings of words

anadiplosis: the occurrence of one or more of the same lexemes at the end of a phrase or clause and at the beginning of the immediately subsequent phrase or clause;

musically, I consider this a note at the end of one phrase that repeats at the beginning of the next phrase

antimetabole: the occurrence of at least two of the same lexemes in one sequence (A<B) and in the reverse sequence (B<A)

antimetalepsis: reverse repetition either of sense or of reference

antithesis: opposed predications, through antonyms or affirmatives and negations;

musically, I consider this phrases that are related but exhibit opposites in some way (e.g., ascending vs. descending motion)

assonance: multiple occurrences of the same vowel sound

chiasmus: a class of figures involving inverse repetition of linguistic constituents

climax: a series of anadiploses combined with the idea of increase or decrease, such that an ascending or descending semantic sequence of words or phrases is linked through final/initial repetitions;

musically, when there is final/initial repetition of notes and the phrases have ascending or descending motion

epanaphora: the occurrence of at least one of the same lexemes at the beginning of different phrases or clauses;

musically, here, when the same note occurs at the beginning of different phrases

epiphora: the occurrence of at least one of the same lexemes at the end of different phrases or clauses;

musically, here, when the same note occurs at the end of different phrases

epizeuxis: the occurrence of at least one of the same lexemes immediately adjacent to one another;

⁸ Definitions either come from [RhetFig](#) or the online [Cambridge Dictionary](#).

musically, the immediately adjacent repetition of a note

isocolon: the occurrence of the same syllabic and prosodic structure in at least two phrases or clauses;

musically, the occurrence of the same rhythm in at least two phrases

lexeme: a word or colligation of words, which may differ inflectionally

mesodiplosis: the occurrence of at least one of the same lexemes in the middle of different phrases or clauses;

musically, the occurrence of a note or chord (or rest) in the middle of different phrases

metaphor: an implicit cross-domain similitude

morpheme: the smallest phonologically realized unit of language that has its own meaning, either a word or a part of a word

parison: two or more phrases or clauses with the same close syntactic structure;

musically, two or more phrases with the same harmonic structure

personification: figuring an abstraction as a person

phoneme: one of the smallest units of speech that make one word different from another word, i.e., speech sounds

ploke: the occurrence of the same lexeme at least twice;

musically, the occurrence of the same note at least twice

rhyme: the occurrence of the same syllable or series of syllables at the end of lexical items

semantic: having to do with the meanings of words

simile: an explicit cross-domain comparison, with a lexical marker such as “like” or “as”

symploce: compound figure of epanaphora and epiphora

syntactic: relating to the grammatical arrangement of words in a sentence

Appendix 4: Figures in Tchaikovsky, “Old French Song”

Variational chiasmus:

Andante A B B A

p *espressivo*

Ploke:

Andante

p *espressivo*

Symploce:

Andante

p *espressivo*

Anadiplosis:

Andante

p *espressivo*

Epizeuxis:

Andante

p *espressivo*

The musical score for Epizeuxis is in 2/4 time with a key signature of two flats. The tempo is marked 'Andante'. The piece begins with a piano (*p*) and expressive (*espressivo*) dynamic. The melody in the right hand features a sequence of eighth notes, with the first four notes (G4, A4, Bb4, C5) circled in yellow to highlight the epizeuxis. The bass line consists of a steady eighth-note accompaniment.

Isocolon:

Andante

p *espressivo*

The musical score for Isocolon is in 2/4 time with a key signature of two flats. The tempo is marked 'Andante'. The piece begins with a piano (*p*) and expressive (*espressivo*) dynamic. The melody in the right hand features a sequence of eighth notes, with the last two notes of the first phrase (Bb4, C5) and the first two notes of the second phrase (G4, A4) highlighted with yellow boxes to illustrate the isocolon. The bass line consists of a steady eighth-note accompaniment.

Parison:

Andante

p *espressivo*

The musical score for Parison is in 2/4 time with a key signature of two flats. The tempo is marked 'Andante'. The piece begins with a piano (*p*) and expressive (*espressivo*) dynamic. The melody in the right hand features a sequence of eighth notes, with the last two notes of the first phrase (Bb4, C5) and the first two notes of the second phrase (G4, A4) highlighted with yellow boxes to illustrate the parison. The bass line consists of a steady eighth-note accompaniment.

Appendix 5: Figures in de la Monnoye, "Pat-a-pan"

Variational chiasmus:

PAT-A-PAN
Traditional

Briskly

Am E7 Am E7 Am

1. Wil - lie, take your lit - tie drum Rob - in, take your flute and
2. When the men of old - en days Gave the King of Kings their
3. God and man this day be - come Joined as one with flute and

mp - mf

E/A E E/A E Am

(1) come When we hear the tune you play Tu - re - lu - re -
(2) pipes They had pipes an which to play Tu - re - lu - re -
(3) drum. Let the hsp - py tune play on Tu - re - lu - re -

Em E E/A E

(1) lu, pat - a - pat - a - pan: When we hear the tune you
(2) lu, pat - a - pat - a - pan. They had drums on which to
(3) lu, pat - a - pat - a - pan. Flute and drum to - goth - er

Am G C E7 Am

(1) play How can an - y - one be plume?
(2) play, Full of joy on - Christ - mas Day.
(3) play As we sing on - Christ - mas Day.

The image shows a musical score for the song "Pat-a-pan". It features a treble and bass clef with various chords and lyrics. There are four systems of music. The first system has a red highlight on the treble staff. The second system has a blue highlight on the treble staff. The third system has a blue highlight on the treble staff. The fourth system has a red highlight on the treble staff. The lyrics are: "1. Wil - lie, take your lit - tie drum Rob - in, take your flute and 2. When the men of old - en days Gave the King of Kings their 3. God and man this day be - come Joined as one with flute and". The second system has lyrics: "(1) come When we hear the tune you play Tu - re - lu - re - (2) pipes They had pipes an which to play Tu - re - lu - re - (3) drum. Let the hsp - py tune play on Tu - re - lu - re -". The third system has lyrics: "(1) lu, pat - a - pat - a - pan: When we hear the tune you (2) lu, pat - a - pat - a - pan. They had drums on which to (3) lu, pat - a - pat - a - pan. Flute and drum to - goth - er". The fourth system has lyrics: "(1) play How can an - y - one be plume? (2) play, Full of joy on - Christ - mas Day. (3) play As we sing on - Christ - mas Day.".

Anadiplosis:

PATA-PAN
Traditional

Briskly

Am E7 Am E7 Am

1. Wil - lie, take your lit - tle drum; Rob - in, take your flute and
 2. When the men of old - en days Gave the King of Kings their
 3. God and man this day be - come Joined as one with flute and

mp - mf

E/A E E/A E Am

(1) come. When we hear the tune you play Tu - re - lu - re -
 (2) praise. They had pipes on which to play Tu - re - lu - re -
 (3) drum. Let the hap - py tune play on Tu - re - lu - re -

Em E E/A E

(1) lu, pat - a - pat - a - pan; When we hear the tune you
 (2) lu, pat - a - pat - a - pan. They had drums on which to
 (3) lu, pat - a - pat - a - pan. Flute and drum to - geth - er

Am G C E7 Am

(1) play, How can an - y - one be glum?
 (2) play, Full of joy on Christ - mas Day.
 (3) play As we sing on Christ - mas Day.

Epanaphora:

PAPA-PAN

Traditional



Briskly

Am E7 Am E7 Am

1. Wil - lie, take your lit - tle drum; Rob - in, take your flute and
 2. When the men of old - en days Gave the King of Kings their
 3. God and man this day be - come Joined as one with flute and

mp - mf

E/A E E/A E Am

(1) come. When we hear the tune you play Tu - re - lu - re -
 (2) praise, They had pipes on which to play Tu - re - lu - re -
 (3) drum. Let the hap - py tune play on Tu - re - lu - re -

Em E E/A E

(1) lu, pat - a - pat - a - pan; When we hear the tune you
 (2) lu, pat - a - pat - a - pan. They had drums on which to
 (3) lu, pat - a - pat - a - pan. Flute and drum to - geth - er

Am G C E7 Am

(1) play, How can an - y - one be glum?
 (2) play, Full of joy on Christ - mas Day.
 (3) play As we sing on Christ - mas Day.

Isocolon:

PATA-PAN
Traditional

Briskly

1. Wil - lie, take your lit - tle drum; Rob - in, take your flute and
 2. When the men of old - en days Gave the King of Kings their
 3. God and man this day be - come Joined as one with flute and

mp - mf

(1) come. When we hear the tune you play Tu - re - lu - re -
 (2) praise, They had pipes on which to play Tu - re - lu - re -
 (3) drum. Let the hap - py tune play on Tu - re - lu - re -

(1) lu, pat - a - pat - a - pan: When we hear the tune you
 (2) lu, pat - a - pat - a - pan. They had drums on which to
 (3) lu, pat - a - pat - a - pan. Flute and drum to - geth - er

(1) play, How can an - y - one be glum?
 (2) play, Full of joy on - Christ - mas Day.
 (3) play As we sing on - Christ - mas Day.

Appendix 6: Figures in Schumann, “Waltz in A Minor”

Fixed full chiasmus:

WALTZ IN A MINOR / VALSE EN LA MINEUR
Op. 124, No. 4

Robert Schumann
(1810-1856)

Lebhaft*(M.M. \downarrow 52-63)

con pedale

*Lively / Vivant
Source: *Albumblätter*, Op. 124 (1854)

Epanaphora:

WALTZ IN A MINOR / VALSE EN LA MINEUR

LIST C Op. 124, No. 4 Robert Schumann
(1810-1856)

Lebhaft*(M.M. ♩=52-63)

*Lively / Vivant
Source: *Albumblätter*, Op. 124 (1854)

Anadiplosis:

WALTZ IN A MINOR / VALSE EN LA MINEUR

LIST C

Op. 124, No. 4

Robert Schumann
(1810-1856)Lebhaft*(M.M. $\text{♩} = 52-63$)

5
3 1 3 2 4 2
f *sf*
5 2 4 1 3 5
con pedale

9 5 2 3 4 5
sf

17 5 3 2
p

26 5 3 2 4 2
f *sf*

35 5 3 2 4 2
sf

*Lively / Vivant
Source: *Albumblätter*, Op. 124 (1854)

Epizeuxis:

WALTZ IN A MINOR / VALSE EN LA MINEUR

LIST C Op. 124, No. 4 Robert Schumann
(1810-1856)

Lebhaft*(M.M. ♩=52-63)

con pedale

*Lively / Vivant
Source: *Albumblätter*, Op. 124 (1854)

Ploke:

WALTZ IN A MINOR / VALSE EN LA MINEUR

LIST C Op. 124, No. 4 Robert Schumann
(1810-1856)

Lebhaft* (M.M. $\text{♩} = 52-63$)

con pedale

*Lively / Vivant
Source: *Albumblätter*, Op. 124 (1854)

Isocolon:

WALTZ IN A MINOR / VALSE EN LA MINEUR

LIST C Op. 124, No. 4 Robert Schumann
(1810-1856)

Lebhaft*(M.M. ♩=52-63)

con pedale

*Lively / Vivant
Source: *Albumblätter*, Op. 124 (1854)

Anticlimax:

WALTZ IN A MINOR / VALSE EN LA MINEUR

LIST C Op. 124, No. 4

Robert Schumann
(1810-1856)

Lebhaft*(M.M. ♩=52-63)

con pedale

cont'd

*Lively / Vivant
Source: *Albumblätter*, Op. 124 (1854)

Parison:

WALTZ IN A MINOR / VALSE EN LA MINEUR

LIST C Op. 124, No. 4

Robert Schumann
(1810-1856)

Lebhaft*(M.M. $\text{♩} = 52-63$)

f *sf* *sf* *sf*

con pedale

9 17 26 35

p *f* *sf* *sf*

*Lively / Vivant
Source: *Albumblätter*, Op. 124 (1854)

Appendix 7: Figures in Williams, "Dream-Land #1"

Fixed melodic and rhythmic chiasmus:

Andante sostenuto

Voice

Piano

p

Where sun-less riv-ers weep

— Their waves in - to the deep, — She sleeps a charm - ed sleep: A -

Detailed description: This musical score illustrates a fixed melodic and rhythmic chiasmus. The top system shows the voice part with the lyrics "Where sun-less riv-ers weep". The notes for "sun-less" and "riv-ers" are highlighted in blue, while the notes for "Where" and "weep" are highlighted in red. The piano accompaniment is in the bass clef with a piano (*p*) dynamic. The bottom system shows the voice part with the lyrics "— Their waves in - to the deep, — She sleeps a charm - ed sleep: A -". The notes for "in - to" and "charm - ed" are highlighted in blue, while the notes for "waves" and "sleep:" are highlighted in red. The piano accompaniment continues in the bass clef.

Climax:

Andante sostenuto

Voice

Piano

p

Where sun-less riv-ers weep

— Their waves in - to the deep, — She sleeps a charm - ed sleep: A -

Detailed description: This musical score illustrates a climax. The top system shows the voice part with the lyrics "Where sun-less riv-ers weep". The note for "Where" is highlighted in yellow. The piano accompaniment is in the bass clef with a piano (*p*) dynamic. The bottom system shows the voice part with the lyrics "— Their waves in - to the deep, — She sleeps a charm - ed sleep: A -". The notes for "waves" and "sleep:" are highlighted in yellow. The piano accompaniment continues in the bass clef.

Anadiplosis:

Andante sostenuto *p*

Voice

Piano

Where sun - less riv - ers weep -

— Their waves in - to the deep, — She sleeps a charm - èd sleep: A -

Isocolon:

Andante sostenuto *p*

Voice

Piano

Where sun - less riv - ers weep -

— Their waves in - to the deep, — She sleeps a charm - èd sleep: A -

Appendix 8: Figures in Williams, "Dream-Land #2"

Fixed melodic and rhythmic chiasmus:

The image shows a musical score for the piece "Dream-Land #2" by John Williams. The score is in 3/4 time and features a vocal line and a piano accompaniment. The tempo is marked "affrett.". The lyrics are: "can - not see the grain Rip - 'ning on hill and plain, She can - not". The vocal line is marked with four colored boxes: a red box around the note "hill", a blue box around the note "and", a blue box around the note "plain", and a red box around the note "not". This illustrates a fixed melodic and rhythmic chiasmus.

Mesodiplois:

The image shows the same musical score as above, but with two yellow circles highlighting the notes "hill" and "plain" in the vocal line. This illustrates mesodiplois, where the notes are separated by a phrase.

Anadiplois:

The image shows the same musical score as above, but with two yellow circles highlighting the notes "hill" and "hill" in the vocal line. This illustrates anadiplois, where the same note is repeated immediately.

Appendix 9: Figures in Amrouche, “Chant de procession de l’oncle 2”

Fixed full chiasmus:

Diagram illustrating Fixed full chiasmus. The first staff shows two segments: A (red box) and B (blue box). The second staff shows the segments swapped: B (blue box) and A (red box). Green arrows indicate the interchange of segments A and B between the two staves.

Epinaphora:

Diagram illustrating Epinaphora. The first staff shows a yellow circle highlighting the first note. The second staff shows a yellow circle highlighting the last note.

Anadiplosis:

Diagram illustrating Anadiplosis. The first staff shows a yellow circle highlighting the last note. The second staff shows a yellow circle highlighting the first note.

Epizeuxis:

Diagram illustrating Epizeuxis. The first staff shows yellow circles highlighting the first and second notes of the first measure and the first and second notes of the second measure. The second staff shows yellow circles highlighting the first and second notes of the first measure and the first and second notes of the second measure.

Isocolon:



Appendix 10: Figures in Davis and Mitchell, "You Are My Sunshine"

Fixed full chiasmus:

A

You are my sun-shine my on-ly sun-shine

B

You make me hap-py when skies are grey

B

You'll ne-ver know dear how much I love you

A

Please don't take my sun-shine a - way

Mesodiplosis:

You are my sun-shine my on-ly sun-shine

You make me hap-py when skies are grey

You'll ne-ver know dear how much I love you

Please don't take my sun-shine a - way

Anadiplosis:

You are my sun-shine my on-ly sun-shine

You make me hap-py when skies are grey

You'll ne-ver know dear how much I love you

Please don't take my sun-shine a - way

Isocolon:

You are my sun-shine my on-ly sun-shine You make me hap-py when skies are grey
 You'll ne-ver know dear how much I love you Please don't take my sun-shine a - way

Ploke:

You are my sun-shine my on-ly sun-shine You make me hap-py when skies are grey
 You'll ne-ver know dear how much I love you Please don't take my sun-shine a - way

Epizeuxis:

You are my sun-shine my on-ly sun-shine You make me hap-py when skies are grey
 You'll ne-ver know dear how much I love you Please don't take my sun-shine a - way

Symploce:

You are my sun-shine my on-ly sun-shine You make me hap-py when skies are grey

You'll ne-ver know dear how much I love you Please don't take my sun-shine a - way

Antithesis:

You are my sun-shine my on-ly sun-shine You make me hap-py when skies are grey

You'll ne-ver know dear how much I love you Please don't take my sun-shine a - way

Appendix 11: Figures in “Frere Jacques”

Antithesis:

Frère Jacques, Frère Jacques, dormez-vous?

Dormez-vous?

Sonnez les matines! Din, dan, don. Din, dan, don.

The image displays three systems of musical notation for the piano accompaniment of "Frere Jacques". Each system is highlighted with a yellow background. Green arrows are drawn above the treble clef staves, indicating melodic lines. The first system shows the first three measures with an arrow pointing from the first measure to the third. The second system shows measures 4 and 5, with an arrow pointing from measure 4 to measure 5. The third system shows measures 6, 7, and 8, with an arrow pointing from measure 6 to measure 8.

Ploke:

Frère Jacques, Frère Jacques, dormez-vous?

Dormez-vous?

Sonnez les matines! Din, dan, don. Din, dan, don.

The image displays three systems of musical notation for the piano accompaniment of "Frere Jacques". Yellow circles are drawn around specific notes in the bass clef staves, indicating ploke. The first system shows circles around the notes in measures 1, 2, 3, and 4. The second system shows a circle around the note in measure 5. The third system shows circles around the notes in measures 6, 7, and 8.

Epizeuxis:

mf Frè - re Jac - ques, Frè - re Jac - ques, dor - mez vous?
 1

Dor - mez vous? Son - nez les ma - ti - nes!
 4

Son - nez les ma - ti - nes! Din, dan, don. Din, dan, don.

Detailed description: This musical score is in 4/4 time and consists of three systems. The first system shows the piano accompaniment for the first two measures of the vocal line. The notes G4 and A4 in the right hand of the first two measures are circled in yellow. The second system shows the piano accompaniment for the next two measures. The notes G4 and A4 in the right hand of the first measure and the notes G4, A4, B4, and C5 in the right hand of the second measure are circled in yellow. The third system shows the piano accompaniment for the final two measures. The notes G4, A4, and B4 in the right hand of the first measure and the notes G4, A4, and B4 in the right hand of the second measure are circled in yellow.

Anadiplosis:

mf Frè - re Jac - ques, Frè - re Jac - ques, dor - mez vous?
 1

Dor - mez vous? Son - nez les ma - ti - nes!
 4

Son - nez les ma - ti - nes! Din, dan, don. Din, dan, don.

Detailed description: This musical score is in 4/4 time and consists of three systems. The first system shows the piano accompaniment for the first two measures of the vocal line. The notes G4 and A4 in the right hand of the first two measures are circled in yellow. The second system shows the piano accompaniment for the next two measures. The notes G4 and A4 in the right hand of the first measure and the notes G4, A4, B4, and C5 in the right hand of the second measure are circled in yellow. The third system shows the piano accompaniment for the final two measures. The notes G4, A4, and B4 in the right hand of the first measure and the notes G4, A4, and B4 in the right hand of the second measure are circled in yellow.

Epanaphora:

mf Frère Jacques, Frère Jacques, dormez-vous?

Dormez-vous? Sonnez les matines!

Sonnez les matines! Din, dan, don. Din, dan, don.

Epiphora:

mf Frère Jacques, Frère Jacques, dormez-vous?

Dormez-vous? Sonnez les matines!

Sonnez les matines! Din, dan, don. Din, dan, don.

Isocolon:

mf Frère Jacques, Frère Jacques, dormez-vous?

Dormez-vous? Sonnez les matines!

Sonnez les matines! Din, dan, don. Din, dan, don.

Metaphor:

mf Frère Jacques, Frère Jacques, dormez-vous?

Dormez-vous? Sonnez les matines!

Sonnez les matines! Din, dan, don. Din, dan, don.