

MÚSICA & Visualização de Informação



**Quantas vezes você ouviu uma
música e pensou...**

Que música
genial!

Descrever visualmente algo que não é visual.

(Jason Forrest)

5 SINFONIA DE BEETHOVEN www.superpartituras.com.br

(Em ritmo de Rock)

Arranjo: Antônio Célio - 21/01/2013

♩ = 116

L. Beethoven

Musical score for Melodia and Violão (Guitar) in C major, 4/4 time, 116 bpm. The score is arranged in two systems.

System 1:

- Melodia:** Starts with a rest, then a quarter note G4, followed by eighth notes A4-B4-C5. A repeat sign follows. The first measure of the repeat is marked *mf* and includes the instruction "Mod. Wheel (Ctrl 80)". The melody continues with eighth notes D5-E5-F5 and a quarter note G5.
- Violão:** Starts with a rest, then a quarter note G2, followed by eighth notes A2-B2-C3. A repeat sign follows. The first measure of the repeat is marked *mf*. The accompaniment continues with eighth notes D2-E2-F2 and a quarter note G2.

System 2:

- Melodia:** Continues with eighth notes A4-B4-C5 and a quarter note D5. The melody then moves to a higher register with eighth notes E5-F5-G5 and a quarter note A5.
- Violão:** Continues with eighth notes A2-B2-C3 and a quarter note D3. The accompaniment then moves to a higher register with eighth notes E2-F2-G2 and a quarter note A2.

Chords: The chords indicated above the staves are Am, E7, Am, E7, Am, E7.

Representando informações musicais



Elementos da Musicalidade:

Harmonia

Ritmo

Melodia

Timbre

- Reconhecimento de padrões
- Notas, acordes, intervallos
- Representação do tempo

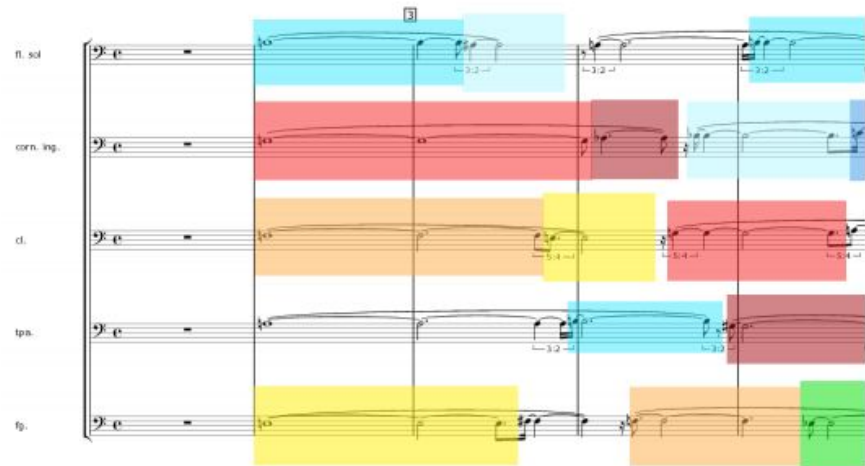


Fig. 2 – Aplicativo para visualização da peça de Ligeti com apenas algumas das camadas de cores ativadas.



Fig. 3 – Visão da peça inteira com todas as camadas de cores sobrepostas.

Critérios

- Foco nos Elementos da musicalidade
- Desenho Estático (Quadro musical)

Mind Mapping



Escolha uma música que você acha genial...

...e descreva suas informações
musicais

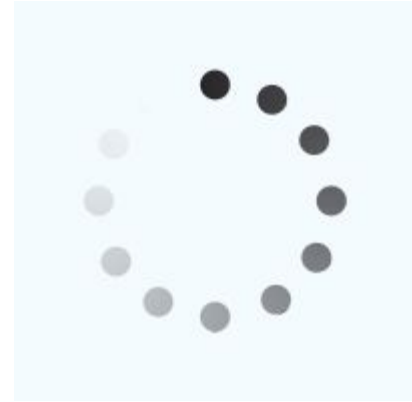
**Idealize e desenhe alguma forma de
representar a sua música Genial**



—

Imagine que eu sou uma pessoa que não conhece essa música. E com o material dado, tente explicar com desenhos **o que torna essa música genial.**

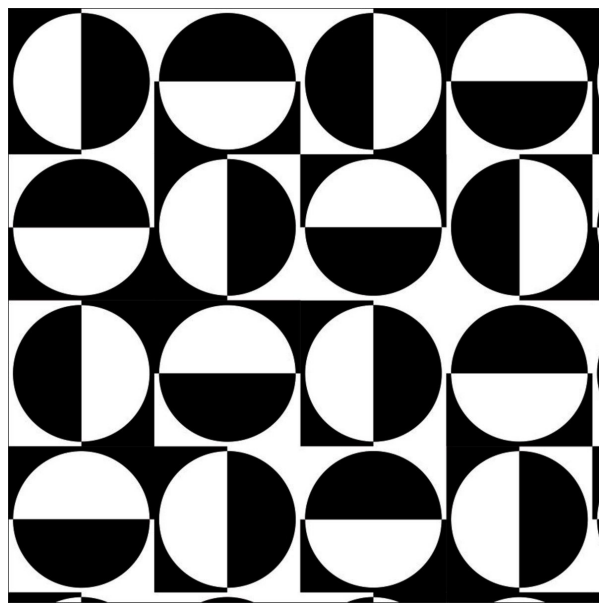
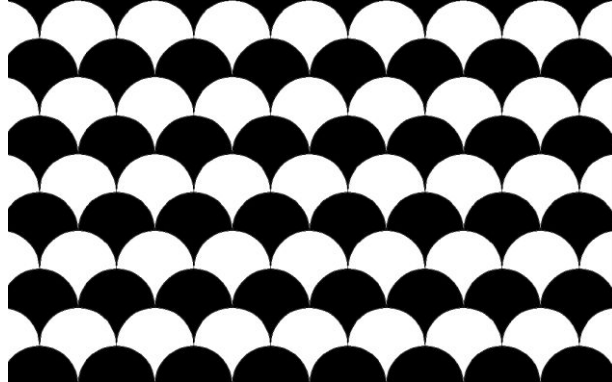
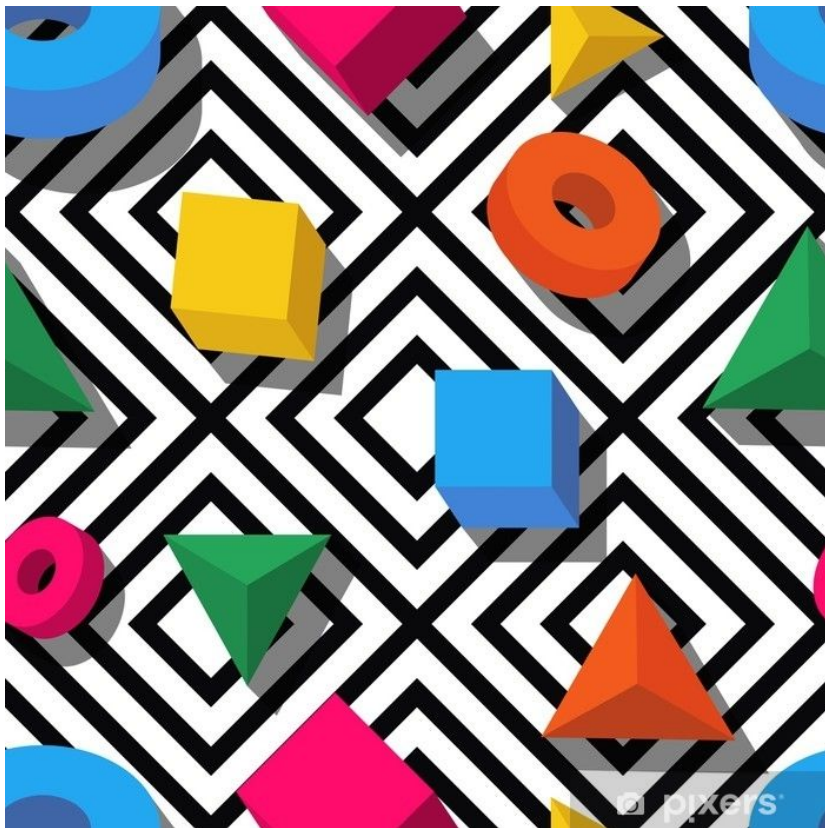
3-5 minutos para pensar

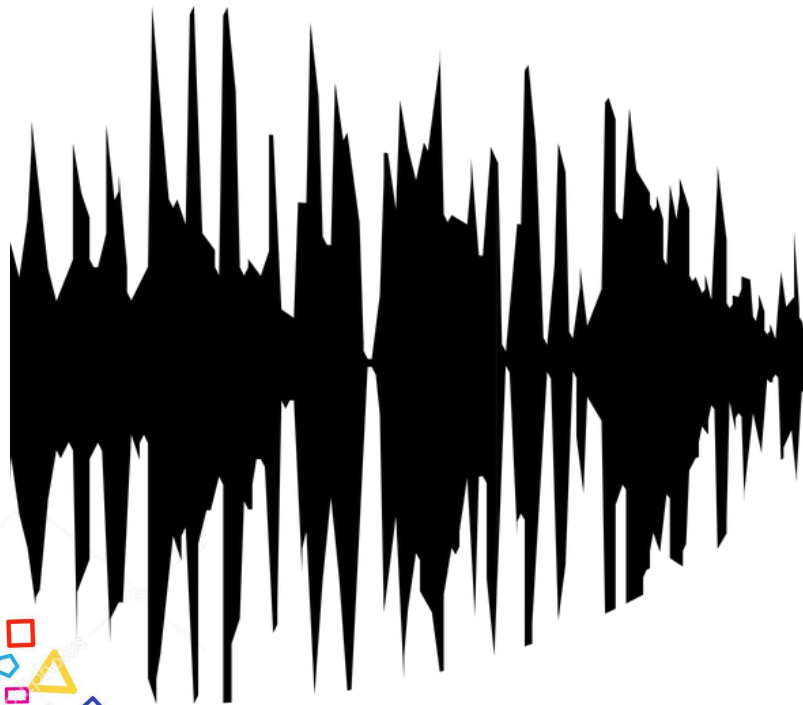
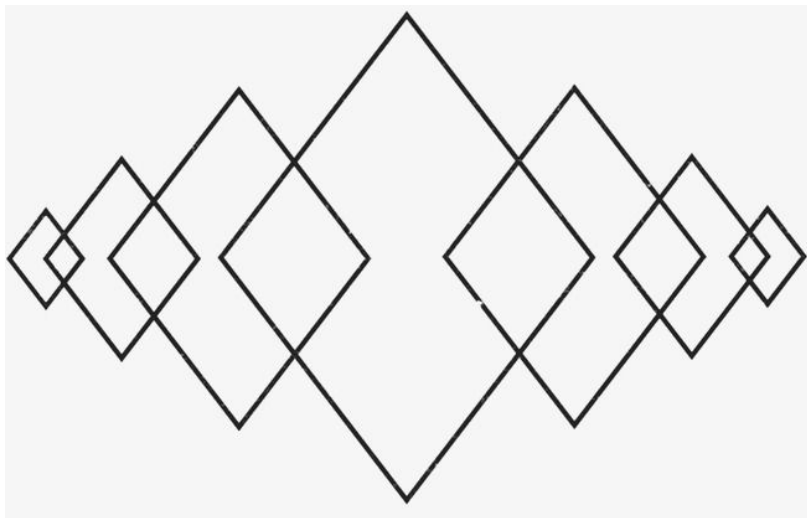


Visualizando a música

**Música, é uma combinação de sons e
silêncios de maneira organizada**

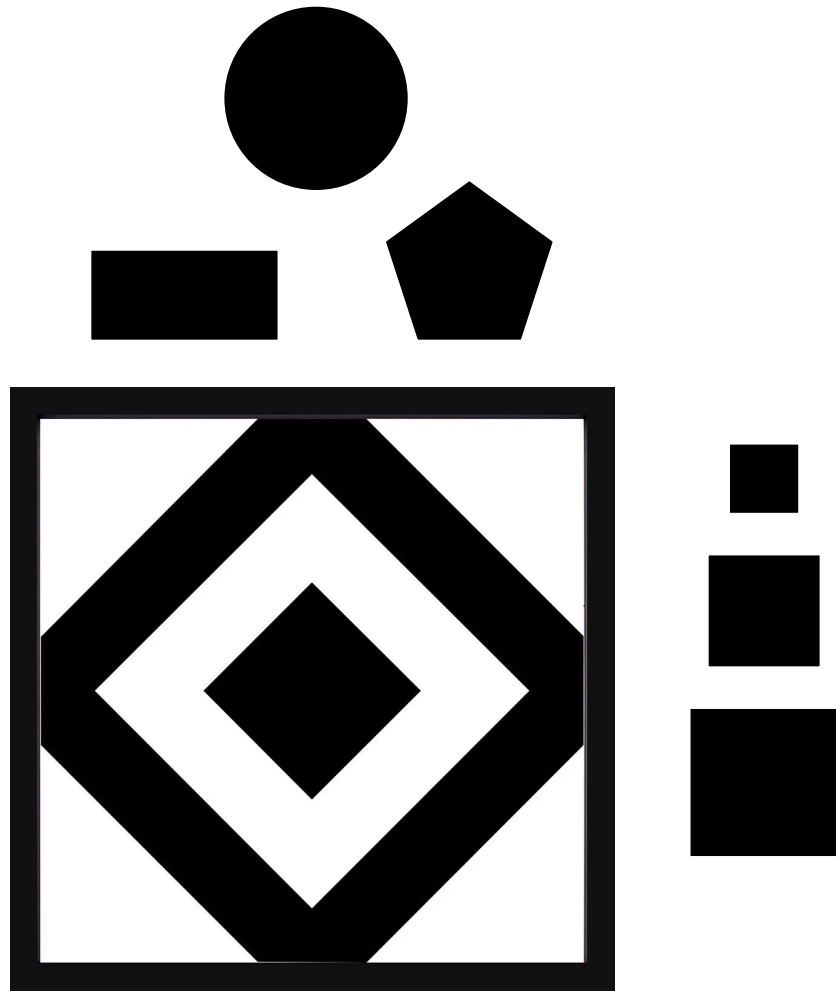
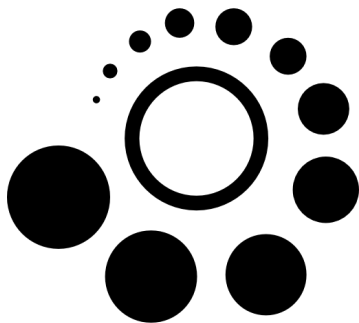
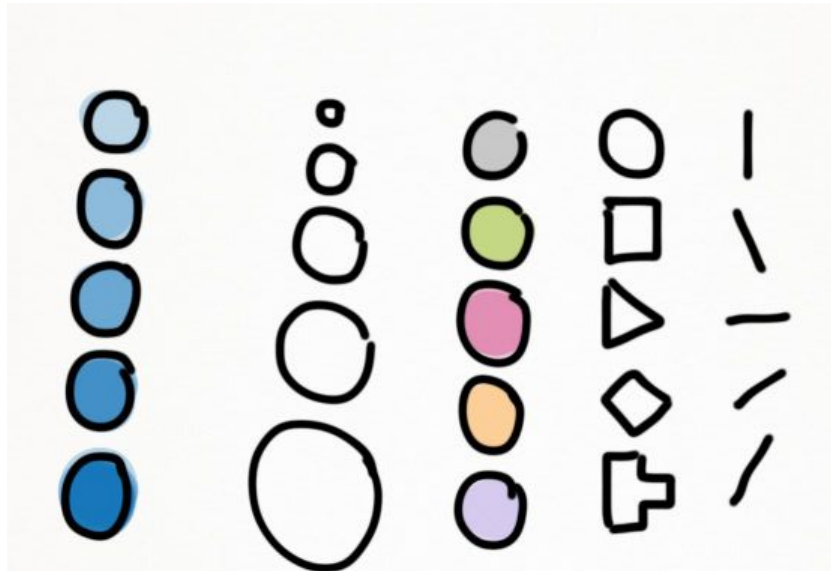
Dificuldades em desenhar a música?

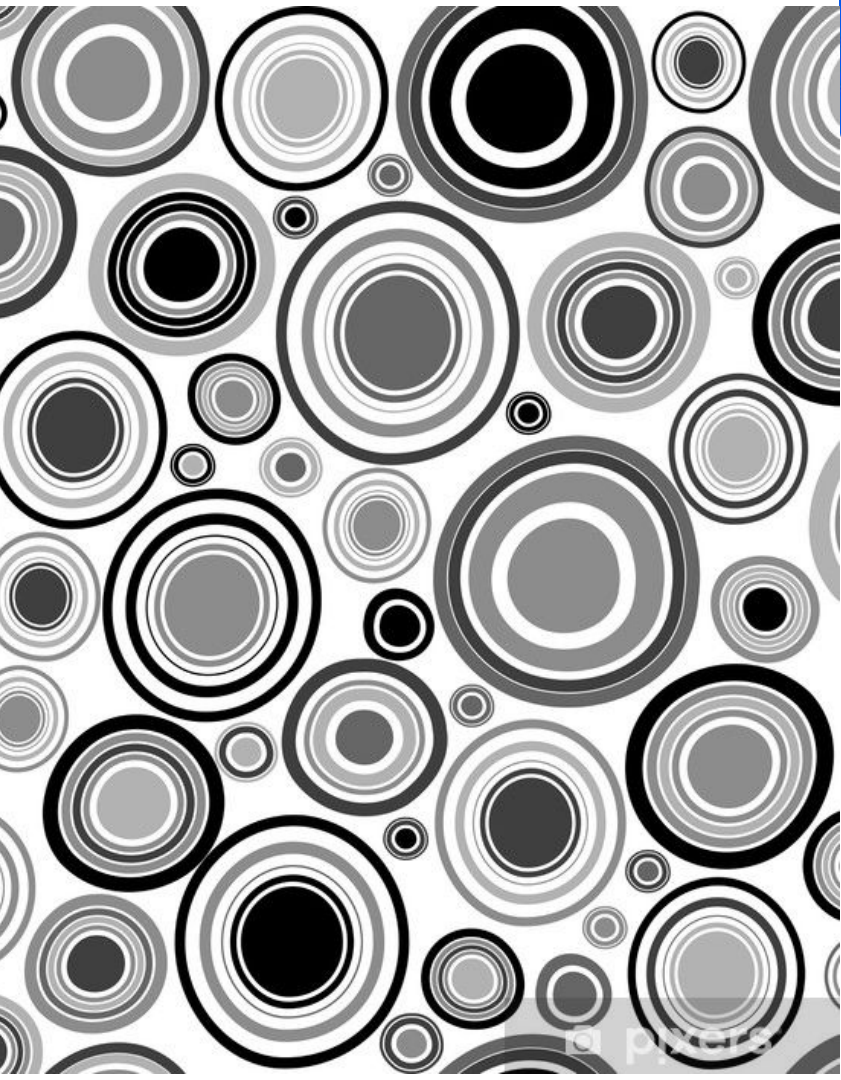




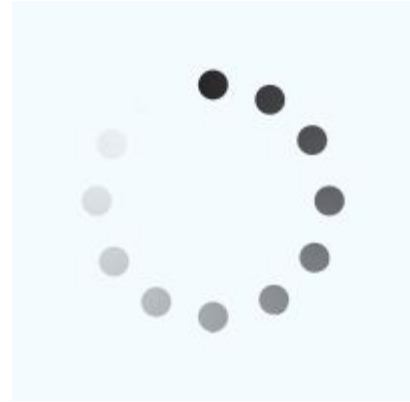
Waw form







2 minutos para pensar





Sua ideia!

Discussão

Explique o desenho que você fez e porque
essa música é genial

Problema de pesquisa

Quais problemas na área de música merecem novas formas de visualizações?

Objetivo: Visualizar e Sistematizar informações musicais, automatizando processos para gerar base de dados para computação criativa

... 2009.2.27 DEFENSE CHIEF LIFTS BAN ON PICTURES OF COFFINS: IN A REVERSAL OF POLICY, THE PENTAGON WILL ALLOW THE PRESS TO PHOTOGRAPH THE FLAG-DRAPE COFFINS OF AMERICA... 2009.2.27 U.S., PAKISTAN AND AFGHANISTAN TO HOLD REGULAR TALKS: THE PLAN WAS ANNOUNCED AFTER THREE DAYS OF MEETINGS, WHICH TOUCHED ON SENSITIVE ISSUES LIKE AMERICAN AIRSTRIKES AT A JEWISH COMMUNITY CENTER IN CARACAS, BUT NOBODY WAS HURT IN THE BLAST. 2009.2.27 WORLD BRIEFING THE AMERICAS: VENEZUELA: ATTACK ON JEWISH CENTER: ASSAILANTS SE TOWN OF MALAKAL KILLED AT LEAST 14 CIVILIANS AND SCORES OF F... 2009.2.27 IRAQ HANDS DEATH PENALTY TO 28 CULTISTS FOR ATTACKS: A MESSIANIC SHIITE FRINGE GROUP HAS TAKEN S EARLY AS 1.5 MILLION YEARS AGO AN ANCESTRAL SPECIES HAD ALREADY EVOLVED THE FEET AND WALKING GAIT OF MODERN HUMANS. 2009.2.27 MALBORK JOURNAL: FACING GERMAN SUFFERIN N A TURKISH AIRLINES JET CRASH-LANDED ON WEDNESDAY WERE FOUR AMERICANS AND FIVE TURKS. 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SUPPORT: PRESIDENT OBAMA IS TO AN ; MORE THAN \$11 MILLION OF INTERNATIONAL DONOR MONEY INTO HIS PERSONAL BANK ACCOU... 2009.2.27 WORLD BRIEFING EUROPE: THE NETHERLANDS: VICTIMS: THE NINE PEOPLE WHO DIED I SRI LANKA: EDITOR ACCUSED IN ATTACK: THE POLICE ARRESTED THE EDITOR OF A TAMIL-LANGUAGE NEWSPAPER DURING A FUNERAL IN COLOMBO, THE CAPITAL, ACCUSING HIM OF AIDING A REBEL ; NETHERLANDS: VICTIMS: THE NINE PEOPLE WHO DIED WHEN A TURKISH AIRLINES JET CRASH-LANDED ON WEDNESDAY WERE FOUR AMERICANS AND FIVE TURKS. DUTCH OFFICIALS SAID. 2009.2.2 ; AUSTRALIAN BUSHFIRES: FIREFIGHTERS CONTAINED EIGHT NEW BUSHFIRES IN AUSTRALIA. 2009.2.27 FIREFIGHTERS CONTAIN NEW AUSTRALIAN BUSHFIRES: FIREFIGHTERS CONTAINED EIGHT NEW BI FOUND IN BANGLADESH: POLICE COMBING THROUGH THE HEADQUARTERS OF MUTINIOUS BORDER GUARDS HERE FOUND A MASS GRAVE ON FRIDAY CONTAINING AROUND 30 BODIES. 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THE FORMER SERB PRESIDENT, MILAN MILUTINOVIC, WAS ACQUITTED. 2009.2.27 PRINTS SHOW A MODERN FOOT IN PREHUMANS: FOSSIL FOOTPRINTS SHOW THAT AS EARLY AS 1.5 MILLION YEARS F TO A CIVILIAN CRIMINAL COURT. 2009.2.27 MASS GRAVE FOUND IN BANGLADESH: POLICE COMBING THROUGH THE HEADQUARTERS OF MUTINIOUS BORDER GUARDS HERE FOUND A MASS GRAVE ON FRID ... 2009.2.27 DEBT TESTS CANADIAN MEDIA COMPANY: CANWEST GLOBAL COMMUNICATIONS MAY SOON BE NEARING DEFAULT ON ITS CRUSHING DEBT LOAD AND POSSIBLY FACING BANKRUPTCY. 200

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Elementos Musicais

Analyzing Harmonic Progressions with Harmln: the Music of Antônio Carlos Jobim

Giordano Cabral, Robert Willey
(2007)

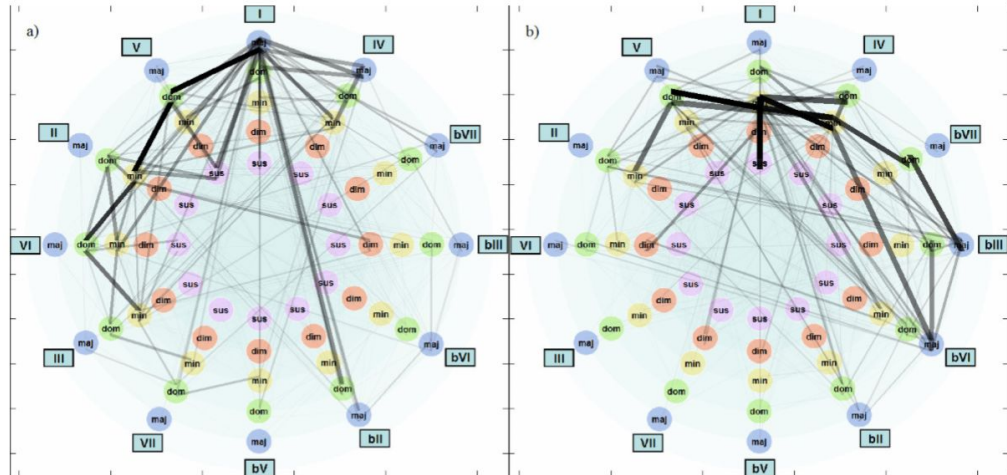


Figure 8. Chord transitions in all songs in major keys (a) and in minor keys (b).

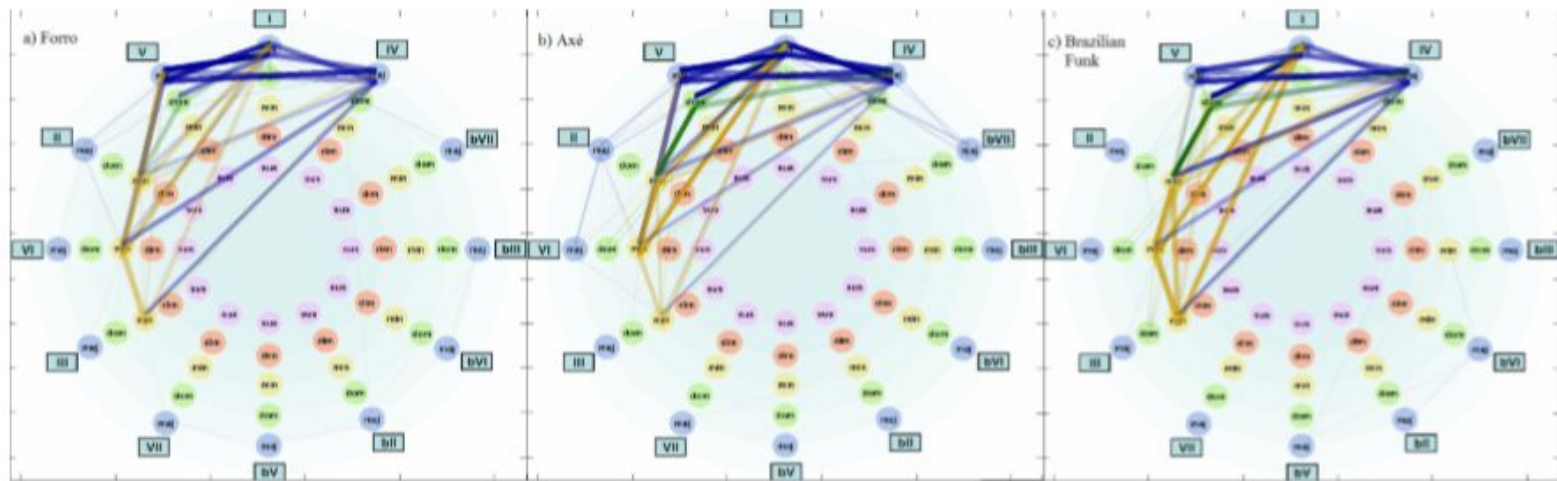


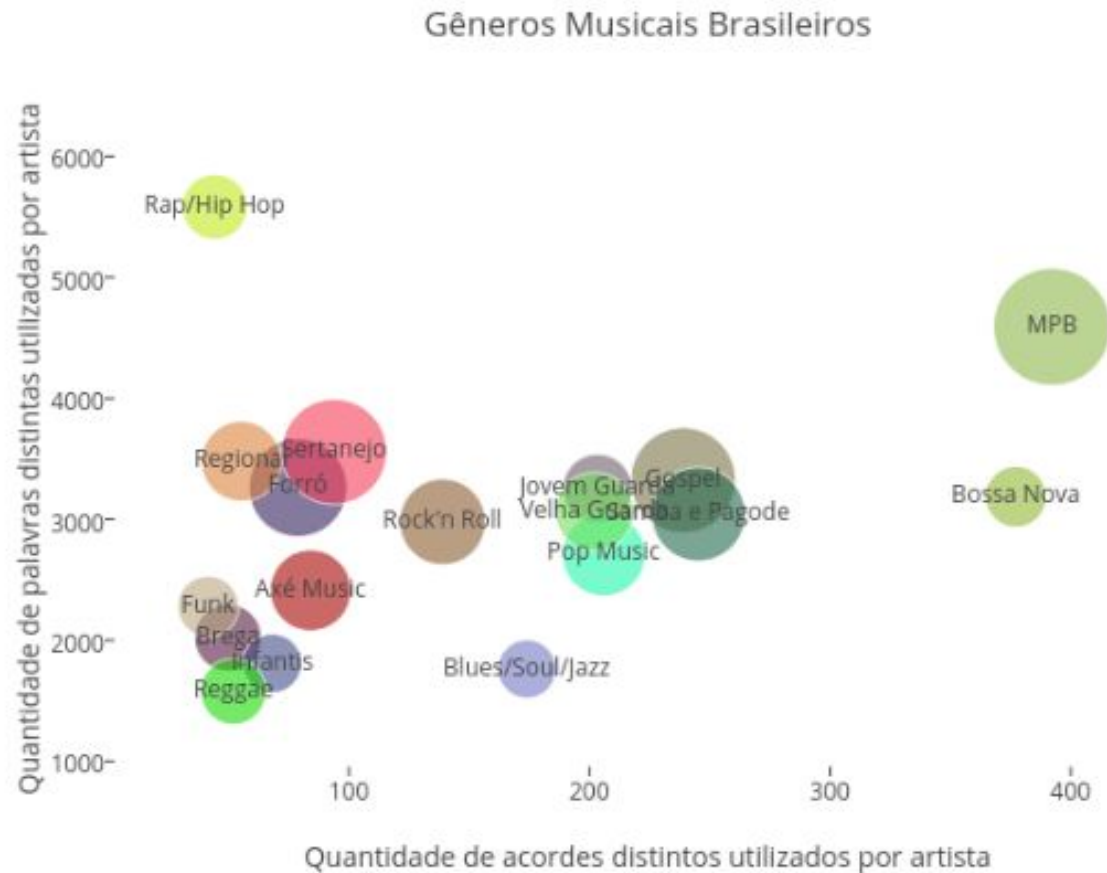
Figure 14. Chord transition graphs for Forró, Axé, Brazilian Funk genres.

Metadados

Análise de música brasileira

44.000 Cifras- Cifras.com.br

102.000 Letras- Letras.com.br



Motivação:

DADOS DA MÚSICA BRASILEIRA

RITMO

OBRIGADA

<https://www.youtube.com/watch?v=Mis8OXPEkJ4>

<https://www.youtube.com/watch?v=fscbi4-vas8>

<https://www.youtube.com/watch?v=kEvc6fh0oSE>

<http://turbulence.org/Works/song/gallery/gallery.html>