

**MUSIC 100: Understanding Music
Lecture Notes**

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1A/B: Introduction and Course Structure

- All material is posted on LEARN
 - The course is about “classical music” -> European art music
 - Learn about history of music, establishing vocabularies of music, characteristics of music from different eras (middle ages to present days!), characteristics of important individual composers
- Textbook contains links to all music. Furthermore, all and additional music is found on music library (link available on LEARN) → Make sure you listen! Listening is important
- Grade Breakdown – Tests are posted at least a week before
 - Quiz -> end of the month, more details coming soon
 - Midterm Test -> more details coming soon
 - Final Exam -> more details coming soon
 - Concert Reviews -> listen to concert on YouTube (but need recordings with actual audience) -> rubric posted on LEARN
- Try to locate Mozart’s Symphony 40 on Naxos Music Library

- Some Important Things:
 - Scope of the course:
 - “classical music” / western art music (WAM) → yet this is a very ambiguous term: what is exactly the difference between this and “popular music”?
 - Ex: Opera used to be popular, but not today anymore
 - Ex: we think that we cannot talk through concert, but back then we can
 - Music (both the musical aspect and the social aspect) has changed
 - No popular music, jazz, non-western music, etc → just because we don't have time! They are still amazing!
 - Aim of the course:
 - Don't waste time to memorize dates -> the exact date does not matter, just the era and the rough/general time period

1C/D/E: Musical Sounds: Tone, Pitch, Interval, and Melody

- What is music?
 - o Music is not really a universal language -> not everyone understands music from everywhere
 - o Yet, there are rules in music -> just like in languages
- 3 big aspects of musical sounds
 - o Melody
 - o Harmony
 - o Rhythm
- **Tones**
 - o Sound that is dominated by a particular frequency -> we perceive that as a tone
 - o There are some other frequencies associated with it -> called overtone
 - Overtone gives it the texture -> why things sound different
 - o We distinguish one tone from another by calling it **pitch**
 - Ex: a tone dominated by 440 Hz is called "A"
- **Melody**
 - o It is the same, doesn't matter if someone sings it or it is played on an instrument
 - o Melody is just sequence of sounds/pitches
 - But, most of the time, the melody also has some coherences -> it makes sense somehow
 - Usually it only contains a small set of pitches -> derived from scales -> usually from diatonic pitch set
 - o Yet, not any sounds -> we need particular sounds called tones
 - o Hence, more precisely:
 - Melody is a sequence of pitches, each with a particular tone, and those pitches make sense when they are put together
- **Interval**
 - o The distance between 2 pitches
 - o When 2 pitches are close together -> small interval
 - o When 2 pitches are far from each other -> wide/big interval
 - o Names are based on the diatonic major scale
 - o There is an interval associated with every 2 notes in melody -> the interval combination is what made melody interesting!
 - o Usually we want steps (small intervals) with occasional leaps -> this will make the melody memorable
- **Shape of the Melody**
 - o What the melody is doing -> a graphical representation of the melody
 - o Where the melody rises and falls
 - o Usually wave shape (up down up down ..) -> we usually want this, to allow the melody to stay within the **range** that are able to be performed
 - Usually, the range is not too big either -> otherwise it is hard to sing
 - Yet there are some songs with wide range -> ex: American anthem
 - o Or just an arch shape (up and down) -> usually short
 - o Occasionally, linear only -> up or down only (but these are usually short)

1F: Harmony

- The study in music of non-sequential sound, but rather simultaneous sound → multiple pitch at the same time
- The study of how sound goes together
- **Chord**
 - 3 (**triad**) or more pitches sounding at the same time
 - Usually we talk about specific combinations when we talk about chord -> based on the diatonic major scale
- Yet we don't understand very well yet (on our brain)
 - Some are resting, some have momentum and need to go somewhere
- **Consonant**: good sounding together -> ex: major third, perfect fifth
- **Dissonant**: not good sounding -> ex: seconds
- Dissonant usually resolves into consonant -> **resolution**
 - This is how music gets interesting -> through dissonant and resolution
- Harmony is just working with consonance and dissonance so that we want to keep listening
- In western music, harmony can also convey emotions via minor and major triads
 - Yet this is just a cultural thing! In other cultures, same chord might convey different emotions

1G: Rhythm

- Melody is sequential (horizontal), harmony is simultaneous (vertical), and rhythm is the **time** aspect
- Music exists in time! -> a beginning, you listen to it, then over
- Rhythm is the flow of musical sounds as time passes
- In western music, it is fairly straightforward
 - **Notion of Pause**
 - Organized in a regular series of pause -> steady, unchanging rhythm -> the beat
 - **Tempo**: how quickly the pause is moving
 - Yet, we need more than pause for it to be interesting -> a metronome ticking is not very interesting
 - It is interesting when some pauses are different from other pauses
 - **Meter**
 - some pauses are stronger / louder than some other ones -> accents in music
 - A pattern of pause
 - Can be divided into any groups (1S1W, 1S2W, etc.)
 - In western music, usually **duple meter** (group of 2 -> most of them) or **triple meter** (group of 3)
 - To figure out the meter, just listen to music, find the beat, then count!

1H: Expression: Dynamics and Tempo

- There are a few more aspect of music... For example: **volume** of sound
- The system of writing down music (music notation) is in Italian -> due to the Renaissance Period (ex: for dynamic - forte, piano, etc; for tempo: presto, adagio, etc)
- It is nice to familiarize those terms -> we will use them a lot -> see them in textbook

1I: Texture

- The fabric of music -> how everything come together -> how different things interweave
- 3 categories of textures:
 - o **Monophony**
 - o **Homophony / Song Texture**
 - o **Polyphony**
- **Monophony**
 - o Music where there is only one voice -> only one part to the music
 - o Ex: you sing alone, or a bunch of people only sing the melody (sing the same thing)
 - o In the other word, everyone is playing in unison
- **Song Texture**
 - o Melody + accompaniment
 - o Ex: you sing along with a guitar
 - o Usually, you can take away accompaniment without getting rid of the identity of the song (since many songs have the same harmonic structure)
- **Polyphony**
 - o Has been out of style for a very long time
 - o Many voices -> lots of melodies all happening at the same time! (or, just melody starts at different times)
 - o All parts are important!
- Composers can make the music interesting by varying the texture!
 - o See textbook for Handel's music listening guide

2A/2B: Musical Forms – ABA, AABA, AABCBC, Rondo

- Shape of the piece of music → but it is hard to talk about, since it is a spatial thing...
 - o Essentially, how the music is organized
- Usually organized in a very simple way → via repetition or alternation
 - o We label these sections based on whether they are the same or different
- Can describe short songs or long songs using musical forms
- We can use letters to describe the form
- **ABA Form** -> ex: Twinkle Twinkle Little Star (first phrase, different phrase, same first phrase)
- **AABA Form** -> a very popular form -> ex: Blue Skies
 - o B is often called the bridge
- **AABCBC Form**
- **Sonata**
- **Theme and Variation** -> variation on the melody/instrument, but not the harmony
- **Rondo (ABACADAE...)**
 - o Found in many long pieces
 - o Keep coming back to the original theme
 - o Example: Haydn
- The idea of repetition is fundamental in understanding the form of music!

2D/2E/2F/2G: Musical Instruments

- Different instruments have different tone colours -> the **timbre** of the instrument
- **Organology**: the study of musical instrument (history and how they work)
- Classification of instruments
 - o Based on how instruments make a sound
 - o **Chordophone** -> through the vibration of strings
 - o **Aerophone** -> through the disturbance of air
 - o **Ideophone** -> through the vibration of the body of the instrument (ex: symbol, wood blocks, triangles, bells, etc.)
 - o **Membranophone** -> through the vibration of the stretched membrane (ex: drum)
 - o **Electrophone** -> digital instruments, through electrical signals
 - o can also be **hybrids** -> ex: electric guitar (electrophone + chordophone)
- **Aerophones**
 - o Brass (via cup-shape mouth piece) instrument (trumpet, trombone, tuba, French horn, etc)
 - o Wood wind instruments -> via reed -> reed vibrates on the mouth piece
 - Single reed instrument or double reed instrument (oboe, etc)
 - Flutes don't use reed however
 - o Pipe organs -> compressed air blown through large pipes
- **Chordophones**
 - o String family (violin, viola, cello, double bass) -> played with a bow
 - o Harp, guitar, banjo, ukulele, etc. -> lots of chordophones!
- **Ideophone**

- Symbol, tringles, wood blocks, marimba, etc -> percussion instrument
- **Membranophones**
 - All drums -> also percussion instruments

2H: Ensembles

- Group of musicians
- **Symphony Orchestra**
 - A LARGE group of players (largest ensembles)
 - Most possible combinations of sound -> all kinds of timbres
- **Chamber Music**
 - "Room" music → music that is meant to be played in a small room
 - Usually small!
 - String quartet, brass quintet, piano trio (violin, cello, piano)
- **Choir**
 - SATB choirs
- **Choir + Orchestra**
 - ex: Opera
- Example: NAXOS -> modern -> Britten: Young Person's Guide to the Orchestra
 - Very organized form -> theme and variation

3A/3B: The Middle Age / The Medieval Period and Church

- The history of western music begins
- The declining of culture in Europe -> also known as the "Dark Ages"
- Middle of 5th century to End of 15th century → 1000 years!
 - o During this 1000 years, not many cultures have changed
- The Roman Empire was gigantic during this period
 - o So it is split into eastern and western empire, each with its individual king
 - o So there are a lot rivals... So the western empire eventually fall at the beginning of middle ages
 - Meanwhile, the eastern lasts till the end of middle ages
- The official religion of the Roman state is **Christianity**
 - o This spreads Christianity across Europe
 - o Once the Western Roman was gone -> Roman Catholic Christian church remains
 - The church provides continuity after the empire is gone -> since in the time of low literacy, church people can write and read -> in **Latin**
 - They keep record and learning
- **Latin** becomes the universal church language all over Europe
- So, what does it mean for music?
 - o Documents are kept in church -> since it is the only thing that is left
 - o There are two category of music
 - o **Secular** -> non-church / religious music (music for entertainment, dancing, poets, etc.)
 - o **Sacred** -> meant to be used in connection to the church/region
 - The oldest music that we know anything about! -> since officials in the church invented **music notation**
 - Due to the necessity to maintain the musical aspect of the catholic church -> musical practices start to deviate due to physical distances (ie: music in Britain vs. music in Rome)
 - Church official started to notice that music becomes different in different places, yet they believe that they need to be the same! → They write it down
 - The problem: easy to write down words, but not the music → hence, they invent music notations
 - The **Gregorian Chant** / plainchant / plainsong

3C: Chant and Organum

- Chant seems very relaxing → and there is a good reason for that!
 - o **Flowing rhythm**
 - Chant is non-metric → there is no meter!
 - The rhythm does not come from the underlying beat, but rather it comes from the rhythm of the words -> poetic meter
 - o **Monophonic music**
 - There is only one voice singing at a time → single melodic line without harmony

- **Responsorial**
 - Organized in calls and responses -> one sings a line, everyone then joins and sings
- Use **Modes** instead of Normal Scales (minor major, etc.)
 - It does not follow the pattern that we expect
- Sections of Chant
 - Ordinary sections → Always performed at the mass / service
 - Proper Text → changes week to week
- Text Setting → how do you set text to music?
 - **Syllabic** -> for every syllable, there is a pitch to each word (not common in chant)
 - **Melismatic** -> many melodies to one word (common in chant, takes a long time to sing each word)
- **Organum**
 - Earliest form of polyphonies (multi-part music)
 - Start with parallel melody, then evolve gradually
 - Sound very odd at first -> not minor/major, no rule of modern harmony

3D: Secular Music

- Not sacred → everything that is not for church
- It has been forever, but for the first time in middle ages, they are written down! -> we get to understand how do they sound like
- People travel from place to place, sing the music for entertainment and make a living out of it
- A lot of **love poetry** -> jugglers (entertainers) will express the love for you by singing
- Listening Example – remarkable in several way:
 - We know the composer! (For the first time)
 - It's a woman composer! (society discourages women to compose and perform)
 - Sing in a local language (antique French)
 - Sacred is always in Latin, yet secular music is usually in local languages
 - It sounds ... familiar (aka normal to the music today!)
 - A **strophic song** → Verse words are different, but the melody is the same
 - Very modern form of popular music today!

3E/4A: Renaissance

- In Renaissance, the change finally comes! → “Rebirth”
- A lot shorter → about 200 years (around 1400 to 1600)
 - Changes happen slowly and has overlaps, but generally those 200 years
- Explosion of European economy (yet still relatively religious)
- A spirit of **humanism** is reborn
 - Recall: middle age is an age of faith → church dominates everything
 - In Renaissance, a gradual interest in humanism → relationship between the human and the world → questioning received wisdom
 - People start to question: how does the world work? → start of science!
 - Inquiry, rational reasoning, and logic are reborn from the Greek philosophers
 - Human centred approach to all the art → some of the most celebrated artists
- The art work looks less the same as the middle ages, but rather similar to the Greek
 - **Realism** is important → Laws of perspective
- Understand the world via logical thinking, rather than faith
- It was a time that technology started to change rapidly
 - European starts to move outside → ex: To North America (“New World”)
 - Beginning of Colonial Empire of Europe → Make Europe very rich → so you can spend money on music and arts
- Reformation (around 1500)
 - When Christian church is split in 2 → originally there was only the Catholic church
 - Martin Luther and his followers broke off and formed a new Protestant church → these people have a very different view about music in church → so 2 different types of sacred music!
 - Later... Counter-reformation by Catholic church
- Same types of music: liturgical music (for masses), non-liturgical sacred music (**motets**), secular music
 - Sacred music continued to be **acapella** → no instrument
 - Where polyphony reaches its highest peak
 - **Imitation** → first voice comes in, the next voice reflects what the first voice is doing
 - **Word painting**
 - How melody reflects the text

4B: Motets

- Music that is heard in church, but not for the mass
- Music is less complex (yet still fairly complex polyphony music with rules)
- Important composer: Palestrina → the rules he wrote last for hundreds of years (counterpoint)
- Characteristics:
 - Acapella, Usually 4 different parts
 - Sacred text (from Bible, etc.)
 - Expressive word painting (mot: “word” in French) & Imitation

4C/4D/4E/4F/4G: Secular Music in Renaissance

- Invention of the printing press -> music can be greatly available -> market for music
- Different forms of dance instrumental music. Examples:
 - o Marazula: simple, repeated rhythm
 - o Courante: triple metre
 - o Saltarello: more upscale dancing
- Yet, up to this point, instrumental music is functional → it is for accompany something, not just for pure listening joy (ie: instrumental music)
 - o It becomes a new thing in the Renaissance → in the concept of church (special type of church music → not sacred)
 - o Ex: Gabrieli wrote music for brass instruments in huge cathedral with huge echoes → usually polyphonic style
- **Madrigals**
 - o A particular type of secular music
 - o Acapella → sound similar to motet -> vocal singing with high polyphonic complexity (both rhythmically and harmonically)
 - o Yet, always about secular topics -> Ex: love, romance, tobacco from new world (how wonderful smoking is!!! ?????), etc.
 - o Primarily in England or Italy
 - o “Lalalalala” fills the spots where the composer does not want to use actual words (ex: sex stuff) (最早的歌词和谐?)
 - o Written for high-class audience
 - o A lot of word painting
 - o People who are professional madrigals singer: King Singers (all man)
 - 1 extremely high voice → counter tenor
 - Can be trained, or through male castration to prevent puberty from happening (?????)

5A: Introduction to the Baroque Period

- Baroque: a term used in music/art/literature to describe a style and a time period → yet not really a historical period!
- **Around 1600 (end of 16th century) to 1750 (death of J.S. Bach)**
 - o Yet Bach is out of style when Bach died... → His sons are more popular than he is → his sons compose in “Classical Style”
 - o Yet, Bach is still the most important composer in Baroque era
- A relatively short era → only 150 years
- Things continued from the Renaissance
 - o European empire
 - o People got rich → rich and powerful middle/business class (from owning things: ships, etc) → paid painters to have serious painting of business people
 - Idea of “money”
 - These people want to celebrate their wealth → they build large concert halls and theatres → the “buying a ticket” idea starts here
 - Musicians are also getting paid other than the church → music industry
 - o Intellectual/scientific work → Rena Descartes, Isaac Newton, etc.
 - Also reflected in the art → order, organization, symmetry, etc.

5B: Characteristics of Baroque Music

- Very similar to the modern music (unlike the pieces in the middle ages/many in the Renaissance)
 - o Because musicians decide on the “Major” and “Minor” music! → Most music are composed in those modes
- Equal temperament tuning → all pitches have the exact difference in frequency
 - o Keys can be changed easily without re-tuning the instruments
 - o Instruments are also becoming how they are today
- Accompany becomes popular → instrument playing the bass, another doing the harmony, another doing the melody
 - o Bass players also used “chord charts” (called figured bass symbols) → they get to fill in the notes themselves → much more creative than they are today
 - o Musicians also get to “freestyle” the melody
- Doctrine of affections
 - o Music makes you to **feel** emotions, rather than reminding you about emotions
 - o Ex: minor makes you feel sad

5C/5D: Vocal Opera Music

- Invented in the Baroque Period → so powerful that it influenced a lot of other music
- An opera is a **play/drama that is sung** rather than played/read
 - o Since singing can be projected a lot further than speaking
- Full theatrical production → Everything: acting, plots/characters, costumes, visual sets, music, dance in early production, effects/prompts
 - o Very popular form of entertainment everywhere for everyone → big business

- Commedia del Arte → travelling artists from Italy → different plays but with similar roles (ie: the stereotypes of what characters are and what they are or sound like in the opera)
- How are operas constructed (ie: the conventions):
 - o **Overture:** a piece of music that the orchestra plays before the play
 - o **Arias:** songs (solo)
 - o **Ensembles:** songs (by multiple people)
 - o **Choruses:** at the end of the act → big finish/climax
 - o **Recitative:** “dialog singing” → just to keep the plot moving
- Story of the opera is not very original → borrowed old ones from mythology (Greek and Rome)
- First opera is by Italian composer Monteverdi called Orfeo in early Baroque era
 - o Orfeo refers to the main character, Orferous (Myth of Orferous)
 - Orferous is the greatest musician in the world
- Another example: Dido and Aeneas by Purcell
 - o Based on Roman mythology

5E: Vocal Cantata Music

- Opera influenced almost all vocal music since it is so popular! → both secular and sacred
 - o The model of opera is used in the church very frequently
- The church back then was huge → employed a lot of people
 - o Bach (the most well-known one) was composing for the church → he composed for God, so he never wrote an opera
 - o Yet, he knows that how popular opera is → he starts to write mini operas for church services (~20mins)
 - Also, no costumes. Yet, all other elements are similar
 - o These mini operas are called **cantata** → mostly sacred (words from bible), but occasionally you will get a secular cantata
 - o Example: A Mighty Fortress by Bach
 - Note the **chorale:** an easy tune that everyone knows

5F: Vocal Passion Music

- Another influence by operas: Passion
- Passion is the final days of Christ
- Oldest form of the theatre (usually during Easter → re-enactment performed in church)
- It is long, so more like a concert that takes place in church for a specific story
- Examples: the 3 passions wrote by Bach

5G: Vocal Oratorio Music

- Another opera influenced music
- “Opera on the cheap”
- Oratorio is an opera without acting, lighting, costumes → yet they pretty much have all the musical things of the opera

- Yet in oratorio, the text is not always a play, some just have a theme
- Another great composer: Handel (who is the exact same age as Bach and is also German)
 - Yet rather than working for the church like Bach, Handel worked for commission or wrote a music and put on a concert (self-made man)
 - He was most well-known for Messiah (coming of Christ)
 - Written for a fund-raising
 - Hugely popular that is performed usually during Christmas
 - A lot of textures
 - Monophony if he wants to make a point
 - Polyphony if he wants to use imitation
 - Homophony for other times
 - Also a lot of word painting

6A: Baroque Instrumental Music: Dance Suite

- Music performed without singers → just music for instruments
- Big idea: you take something you are familiar with, and turn them into a music
- Yet, IT IS NOT MEANT FOR DANCING!!!
 - A collection of instrumental music, divided into sections
 - Sections are **contrasted** with each other: mix up speed, metres, etc. → just to keep people interested
- Examples: Handel's Music for Royal Fireworks, and Water Music

6B: Baroque Instrumental Music: Sonata

- A refinement of the dance suite
- The meaning of the sonata changes overtime...
 - At the beginning of baroque music, it is pretty much the same as dance suite
 - Several instrumental movements that are contrasting
 - # of movements change overtime → later on, it has to have 4 sections
 - Yet in Baroque time, the number of movements not limited
- Example: Corelli's Trio Sonata (but you hear more than 3 players. In this case it means it has 3 string instruments + accompany for rhythm → Basso continuo)
 - 6 movements, yet very short

6C: Baroque Instrumental Music: Concerto

- Nowadays: a piece music for a **solo** artists accompanied by an orchestra → show-off playing for the solo artists → display pieces
- Yet, in the Baroque era → not always for solo!
 - The idea of concerto is "playing together"
 - Hence, can be a single person working with an orchestra, or a small number of people working with a larger number of people → this type is called concerto grosso
- Example: Italian composer Vivaldi's Four Seasons Concerto → each of them is a separate piece

- A small group of violinist by a large orchestra
- Most well-known example: Spring
- A type of **program music**
 - Music that is about something → it has a subject that is about something (in this case, about the spring)
 - A lot of reference to real world → a story behind it
 - They print “programs” about the story and hand out to people
 - Later become a dominant form of “classical music” → film music without film
- A form called ritornello → keep returning to a theme (like rondo)

6D: Baroque Instrumental Music: Bach’s Prelude and Fugue

- J.S. Bach
 - A lot of children → big family
 - 4 sons who become big composers, with confusing names...
- A piece of music in 2 parts → don't have to be played together, but often does
 - **Prelude:** introduction → something to play before the actual the piece, free form
 - **Fugue:** the most ruled based composition → very elaborate polyphonic composition, composed according to a very strict rule → follows strictly via counterpoint → can have a lot of voices → becomes very complicated!!! → a very dense composition

6E: Baroque Instrumental Music: Bach’s Musical Offering

- One of the last pieces he wrote before he died
- Most complicated themes/Fugues for this piece → The greatest masterpiece of polyphonic arts

6F: Baroque Instrumental Music: Bach’s Cell Suite #1 Prelude

- Very well-known piece for solo cello
- An example of brilliance of J.S. Bach, yet unusual
 - Bach is good at writing polyphony, so it might be hard to write for solo instruments
 - Yet, Bach managed to include polyphony for solo instrument that can only play one note at a time → the cello plays distant notes that sounds like a chord → seems that there are a lot of voices

6G: Introduction to the Classical Era

- **From 1750 to 1800/1825 → fairly short**
- A term the music historian uses
- **“The Enlightenment”**
 - o Science continues to grow rapidly → a lot of technology is invented during this age, carrying on from Newton → Industrial revolution
 - o Explosion of the economy → people continue to get rich
 - o Colonial empires → French, British, Belgium, etc.
 - o Social Scientists → philosophers for economy, society, politics, rights of human beings
 - A lot of revolutions regarding the government → overthrowing the king and replace that with a democratic government
 - American Revolution, French Revolution
 - o Projects such as Oxford dictionaries
- The age of reasoning of the mind (no longer emotional) affects music as well
 - o About **forms** → how music is constructed → systematic organization principles
 - o Beginning of **music theories** → how does music work
- Song texture takes over completely → polyphony is old fashion!
 - o Melody is balanced
 - o Accompany/harmony is simple and straightforward → light, refined, polite, balanced
 - o There are emotions in it, but it also has formality in it → very contained
- In instrumental music, beginning of **“Absolute Music”**
 - o The music is not about anything, it is simply about music → about music architecture → opposite to program music
 - o You can probably tell from the title of music to determine whether it is absolute or program

7A/7B/7C: Sonata

- The most important way to organize instrumental music in classical era (for piano, for orchestra, for string quartet, etc.)
- The definition of sonata becomes more strict in classical era
 - o Still a piece of instrumental music with contrasting sections
 - o **THERE ARE 4 MOVEMENTS → IT HAS TO HAVE FOUR**
 - o Each section is distinguished
 - First is fast
 - Second is slow -> could use theme and variation
 - Third is in a contrasting metre (usually triple metre)
 - Fourth is fast
- **Symphony** is just a sonata for orchestra
- Sonata tends to be long too → can be up to about 25min → each individual sections get longer as well (5-10 min on its own)
 - o Hence, each movement has to have a form as well! (套娃操作?)
- Organization of each individual movement – **Sonata Allegro Form**

- 3 sections in total
 - Exposition → When the composer lays the raw material (melody)
 - Exposition is repeated a lot of times
 - Development → play around with the melody
 - Recapitulation → refer back to the melody, and has a short section (the coda) that ends the song
- Example: Mozart
- Organization of each individual movement – **Minuet and Trio**
 - Usually find in the 3rd movement
 - Also 3 sections
 - Minuet Proper
 - Trio
 - First section → Exactly the same minuet proper

7D: Joseph Haydn

- Austrian Classical composer
- A lot of short symphonies, sacred/mass music, oratorio, chamber music (music to be played in a small room → small number of musician → ex: string quartet, piano + cello + violin)
- Well adjusted, steady job, good at what he did
- Examples:
 - **Rondo** (last movement) for String Quartet #30 → ABACAD...
 - **Theme and Variation** → The Surprise Symphony Mvt 2 → big chords for surprise

7E/7F/7G/7H/7I: Mozart

- His father is a good composer as well
- Naturally gifted at a very young age
- He started to compose music starting 6,7 years of age. Yet he did not know much other than music, since he did not go to proper school. → a very strange life, and he did not work with other people
- Operas, concerto (including piano concerto → where piano is just invents), symphonies, choir music, chamber music ...
- The “Kochel” in Mozart’s song title is referring to the people who organized Mozart’s pieces
- Examples:
 - Symphony 18 (composed at 16 yrs of age!)
 - Marriage of Figaro Overture → very fast!! Very excited piece for an opening
 - Don Giovanni and Zerlina → an opera about a great lover
 - Piano Concerto #21 Mvt. 2
 - Concerto is not sonata -> can be any number of movements (usually 3)
 - Theme and variation
 - (French) Horn Concerto → Rondo Form
 - Usually not a lot is written for the horn! It is usually an orchestra instrument

8A: Beethoven – Introduction

- One of the most important composer in western music!!! → he has a own chapter in the textbook :)
- Compose everything, and almost everything is fantastic: symphonies, opera, chamber music, concerto, ballet (a new art form in Beethoven's time), choral, secular, sacred ...
- A great pianist himself → he was famous in his own day
- He was so good that Vienna gave him a pension for just living in Vienna
- Like Mozart, he was a **freelancer** → he even wrote a lot of medium level pieces for middle class people (not the best player, but pretty decent players → a lot of women, who were discouraged to play professionally)
- He went **deaf** in his later years due to a progressive (slowly) disease that is unknown → this makes his music in the later years more amazing
 - o he continued to compose while he was completely deaf → and those are some of the most moving/profound music he ever wrote (9th symphony, string quartet)
- **A transitional figure** → the last in classical (emphasis on the template/rules → everyone sounds about the same, not really expressing themselves, but rather only on the subjects) or the first in romantic (emphasis on **individualism** → clear individual style, ie: Beethoven's pieces sound like Beethoven → Struggle, dramatic contrast, emotional, etc.)
- Interesting personality → he had a very positive self-image → sometime is stiff (like Mozart)

8B: Symphonies of Beethoven – Symphony #5

- Most well-known works of Beethoven are his symphonies → ex: 5th and 9th symphonies
- A lot of listening (**Symphony #5**) → try to listen through it without breaking it up
 - o Beethoven wants you to do that, since **he links all the sections of his symphonies** by linking all movements together → not something that is done before!!!
 - Before him (such as for Haydn and Mozart), each movement is individualized → hence, unlike Haydn and Mozart, **no clapping** between movements for Beethoven!
 - He turned musical concert into a "serious" affair
 - o Yet the symphony is still in form of symphony → 4 movements total
 - Sonata Allegro Form for 1st → one of the most well-known movement
 - Theme and Variation for 2nd
 - Contrasting Metre (triple metre) for 3rd → minuet trio, yet at a much faster tempo → **Scherzo**
 - Sonata Allegro Form for 4th → The big finish with false ending, increasing tempo
 - o Very dramatic and powerful!!! (unlike the restrained music like Mozart and Haydn)

8C: Introduction to the Romantic Period

- Most of the 19th century (~1825 to ~1900)
- Romanticism carried well into 20th century → it is mostly still with us! (in a lot of film score writing)
- The most popular kind of “classical” music
 - o Most **accessible** – a lot of program music (music about something)
- 19th century: post French revolution. Economy is booming thanks to the industrial revolution (rail road, energy, steel, photographs, etc.)
- Colonial empire
 - o France, Britain, Belgium
- Slavery and slave trade
- Overall: Europeans are RICH
- **Romanticism** is first being expressed in the visual art / literature
 - o See the world, react to it, has **feelings** attached to it → main difference between romanticism and enlightenment (classical era)
 - **Apollonian** for classical era
 - Greek god of Learning – reason is #1 – enlightenment is about objective reasoning – subjectivity and logic
 - Formal procedure – forms and structures
 - **Dionysian** for romantic era
 - Greek god of wine/enjoying oneself – body, emotion, and feeling are #1
 - All about intuition – subjectivity – how I feel about something, individual expression
 - Less concerned with form
 - o **Idealization** of the natural world – a lot of designs: what people think the “perfect” thing looks like – fantasy
 - o **All about emotions**

8D/8E/8F/8G: Characteristics of Romantic Music

- **Size/range** of musical performance is BIG – big orchestras and small solos, small emotional music
- **Tempos** are fluid – Romantic music is bad to dance to (a lot of slowing down/speeding up)
- **Tends to be more adventurous with harmony** – new instruments are invented, since composers cannot find the instrument that fits the sound
- **Show business / touring musicians** thanks to rail connection – something impossible prior to romantic period – a lot of players are celebrated around Europe (ex: Liszt – The greatest pianist; Chopin – the greatest piano composer, as he mainly composes piano music)
 - o Ex: Minute Waltz by Chopin (the small waltz)
- **Golden age of program music**
 - o Music that is about something, music that tells a story – goal is to affect emotion, rather than “interesting way to treat theme number 2”

- Ex: Picture at the exhibition by Mussorgsky
 - About a painting at the exhibition – a very long piece -- 12 to 13 sections
 - A music that is organized in a narrative way
 - Entering into the art gallery, an impressive building. Then you start to look at paintings, and you enjoy the painting. Then you walking down the hall. You look at another painting
 - Each individual movement tells a story – a perfect example of program music – a film music without a film – narration
- **National Music**
 - In classical – music is universal – ex: law of physics is the same in all nations
 - Yet in romantic – music is a reflection of the composer – Russian composers write story about Russian folks, French writes about French culture, etc.
 - Composers become more attached to their national values/cultures
 - Ex: 1812 Overture by Tchaikovsky
 - A narrative / program music
 - A national story about Russia – Napoleon army is defeated by the Russian army in 1812
 - A music about the battle on Russian land
 - It uses a melody that all Russians are familiar (played by the cellos). He also puts the French anthem in the music
- **Exoticism**
 - Flip side of nationalism, as a result of large European colonial empire
 - Put Europeans in direct contact with the rest of the world
 - Can be influenced by music from all parts of the world
 - To Europeans, those cultures are new and unfamiliar – they take those materials from far away to create music
 - Ex: The Thousand and One Night by Rimsky Korsakov
 - Translated from the Islamic tales
 - Scheherazade – NOT a symphony, but a story with characters
 - Each character has a little theme
 - Sounds like a film music!!

9A/9B/9C: Opera in the Romantic Period – the Italian Opera

- The essential romantic art form – uses all features of romanticism
 - Program music – they are plays, they are stories
- Precursor of the 21st century music show business – it is THE most popular art form all over Europe
 - Every little town will have their opera company and opera house
- **Italian Opera**
 - Opera stops being written about Gods, myths, etc. – operas to be about regular and ordinary people
 - All of the musical trends (music stars system, show business, etc.) can be found in opera

- A lot of terminologies that we use today can be traced back from the Romantic period (ex: super popular stars who are a bit demanding today are called “divas” → this means leading singer in the opera company, means “goddess”. Also, “prima donnas” → means princess)
- Singers become celebrities
- The role of opera is still in play as how they are in the Baroque period
- Giantism – the bigger the better – bigger venues
 - “Bel Canto” opera voice – a technique so that the voice can be projected throughout the big opera house – big opera voice
- Ex: La Boheme by Puccini
 - One of the most popular opera – a very beautiful and emotional melody, and an opera that is about struggling/poor people/artists – not about kings and queens – emotional
 - There is always a section where the aria shows off how good a singer she is – the show business aspect of things
- Ex: Another aria - Nessun Dorma from Turandot
 - Has that fantastic melody and that show off tune
- **Nationalism**
 - Opera on national themes
- **Exoticism**
 - Ex: Italian Puccini – he wrote all his music in Italian, yet the setting can be anywhere in the world (China, Japan, etc.) !! – and he did not travel at all
 - “Girl of the Golden West” – Italian songs about the American west (cowboy, gunfighter)
 - “Madame Butterfly” – one of the most popular opera
 - American navy ship that sails into the Tokyo Bay. 日本女人被美国渣男骗的故事
 - Ex: French Bizet’s “Carman” – lyrics in French, setting in Spain
 - Carman is the main character, but mezzo soprano (not soprano)
 - Selfish woman
 - One of the most memorable melody – very upbeat and danceable
- Example: *Intermezzo from Cavalleria Rusticana* by Mascagni
 - Beautiful melody, yet it does not have a human voice! → the representation of romanticism → heart > brain
 - Music played between scene changing so that people can change their customs and getting ready for the next scene
 - The melody does not exist in other parts of the opera → it comes and goes

9D/9E/9F/9G/9H/9I/9J: German Opera – Wagner (1813 – 1883)

- Very important (and interesting) figure for romanticism and opera
- One of the most complicated and controversial and polarizing figure → the way he approaches harmony is very influential and affect many composers later

- He ONLY wrote operas (not many symphonies, not many chamber music, etc.)
- Yet, most of his works are very popular! → still played all around the world!
- Ex: The Ring – a huge and long opera consists of many parts
- Born in Leipzig (Bach's hometown)
- “self-taught” (he went to conservatory, but he argued with teacher all the time) → very strong self-image
- Bridge from Romantic era to the era that follows (a lot of other -isms)
- He is vicious anti-Semite (anti-Jewish) → so his work does not have many Jewish characters in his opera → Hitler's favourite composer → yet that is before the rise of the National Socialist Party
- Characters are mostly Germans
- Big Q: can we hate the composer but love his or her music?
- Wagner's opera (or as he called it, “music drama”) is very different than Italian opera
 - He does not like the fact that singer in Italian opera is more important than the performance/production itself → he thinks that he is the most important
 - He does not give the audience to have a chance to give applause to the aria singer
 - He composed the entire opera all by himself → the words and the music → a big control freak
 - Had King Ludwig II of Bavaria to back him up → so he built a bigger opera house to have his show stages
 - darkening the hall for performances so that audiences can focus → Wagner starts this idea
 - Conducting the opera as well!
 - Wagner Music Festival
 - **Subject matter**
 - Italian operas are about current theme → about people living in that time → *Brisimo*: truthfulness, relatable
 - Yet in German opera → Always **mythological story** about Europe/Germany
 - Because Germany as a federated state is very new
 - He wants to provide Germany with a mythological background → Example: The Rings → use mythology to create stories
- Creation of **Leitmotiv** → little tunes that represent everyone → little motif about EVERYTHING
 - Characters, emotions, objects, etc.
 - Very sophisticated
 - Now becomes the standard for film scores → you hear a music, you who what/who it is associated with
- Technical innovation pushed by Wagner
 - For a very long time → music is **tonal** → one particular note is the most important note → we resolve into that note
 - Wagner's music is still tonal, yet he also likes to move things forward → therefore, he constantly changes the key of his piece → called **chromaticism**

- Effect: unpredictable for the audience
 - Stress, sense of ill, striving, unsettling, etc.
- Example: Prelude: Tristan (the opening of opera Tristan) → hard to guess where the piece will go next
- Influence: why can't we have music that has no keys at all? → in 20th, **atonal music** → music with no tonal centre
- Example - "*Bridal Chorus*" from *Lohengrin*
 - One of the most well-known piece in the entire history of western world, yet no one knows that he is the composer
- Example - "*Ride of the Valkyries*" from *Die Walkure*
 - Another very famous piece that no one knows that Wagner is the composer
 - No singing – music for a great/huge battle scene
 - 2nd opera in The Ring sequel
 - Valkyries are female battle goddess
 - After someone dies, the Valkyries take the hero Valhalla
 - Very programmatic, very visual
 - One of the best battle music

10A: Songs

- Romantic period: wide ranging contrast (big big big orchestra pieces with thousands of players, and very small chamber music)
- **Songs** – similar to the songs we listen to today
 - Singings with accompany
 - Relatively short (several minutes)
 - Two kinds of songs:
 - **Strophic song** – use the same melody over and over for many verses
 - **Trough composed song** – no repetition
 - Yet, both are words set to melody
- **Song Cycle**
 - Number of poems by the same author, and set them to different songs
 - Group of songs related to the same theme
 - Great song composer: **Franz Schubert**
 - Died young, but he composed a lot! (song cycles, symphonies, chamber)
 - Master of word painting
 - Example: "The Trout" → poem about finishing (little drama about the fish)
 - Everything in the piece is symbolized → music supports what the word is saying → great word painting

10B: Chopin

- Emotion is the most important thing in romanticism, along with national music
- Chopin is one of the greatest pianist
- He didn't compose much music for things other than the piano → yet those are good
- A lot of piano etude → even modern day testing standards

- He composed music based on a lot of Polish folk traditions → Chopin is major culture figure in Poland
- Example: Prelude in E Minor
 - o How piano players express their emotions → control the attack and tempo → in romanticism, the tempo is free: **rubato** → no steady beat
 - o The notes are all the same (8th notes only) → but it is not how it is played!

10C/10D: Robert Schumann and Clara Schumann

- **Innigkeit**: “poignant intimacy of feeling” – heart felt, personal emotions
 - o yet, if the emotion goes too far – it becomes fake
 - o but if you got it right: you get Schumann
- Robert Schumann has a very difficult life → struggling artist
 - o Other struggling artist: Berlioz, Tchaikovsky
 - o yet Schumann probably has the hardest → yet he still composed fantastic music
 - o Mental illness that brought him to an early end
- Example: Dreaming (Traumerei) → elastic approach to tempo
- There are not a lot of female artist in Europe → due to social conditions, since women are discouraged to be a composer/performer
- Clara Schumann is the wife → she is discouraged to become a musician, but she became anyway
- Example: Clara Schumann Piano Trio (piano violin and cello)

10E: Brahms

- Important German composer → The important “B”: Bach, Beethoven, Brahms
- Symphonies, concerto, piano chamber, etc.
- Example: one of the most well-known piece: “Wiegenlied” (Lullaby) → Brahms’ Lullaby
- He is a classical and romantic composer → he still thinks it’s important to have rules, yet it is still very powerful
- He does not write a lot of program music → most are abstract **absolute music**
- Example: 4th Mvmt, Symphony #4
 - o His last symphonic work → very powerful, yet very structural (theme and variation)

10F: Late Romanticism

- Similar to romanticism in style, it is just there are other stuff happening → romanticism is even carried out to some of the work today
- **Gustav Mahler (1860 – 1911)**
 - o Live across the turn of the century
 - o Follower of Wagner's musical idea → not Wagner's ideology, since Mahler is Jewish
 - Chromaticism, powerful emotion effect, expressive techniques
 - o Composer and conductor in Vienna opera
 - Yet given the anti-Semitism, he converted to Christian so that he can get a job
 - o Almost all program music → about trying to find an answer to something, but never quite getting it → trying and failing (oof) → very Romantic
 - o Example: Urlicht (light of heaven) from Symphony #2
 - Everything is symbolic → all melody represents something
 - There is also a female voice in this symphony
 - Very emotional !! → about deep feelings

10G: Introduction to the 20th Century

- A violent century → 2 massively world wars → mainly in Europe
- 1917: Russian revolution
- Cold war
- A lot of astonishing technologies → flights, moon landings, computer, telegraphs, radios, televisions, **recordings** and broadcastings, movies, photography
 - o People can listen to music in the bedroom → whatever people want to and whenever people want to → something that is impossible in 19th century
- Idea of music for mass consumption

10H: Impressionism

- Mostly in France → 2 composer: **Debussy** and **Ravel**
- Comes from the world of visual art → use to describe a school of French painter (ex: Monet)
 - o The attempt to give an impression of a thing, rather than (photographic) realism → does not have to follow the rules of perspective (ie: does not have to be 100% perfect representation)
- Starting to be non-representative and like a dream
 - o When you listen to it, it make senses. When it is over, you do not know what happened!
- In music → harmony starts to blur → chord progression is ambiguous → extended chord
 - o Ex: Add more notes to triad (1357911) → the more there are, the less defined
 - Those chords are full of dissonances, yet Debussy just let it sink
 - o Becomes the basis of future music (especially jazz)
- Use of scale other than major and minor → ex: whole tone scale

- Chords in whole tone scale all sound similar → since same distance → does not give hints of where the music is going → free floating
- The meter is mixed up (duple and triple) → listener loses track of where the down beat is → exactly the effect Debussy wants
- Music should be a pleasure → does not need to think about it while you listen to it
 - No formal structure, etc.
- Ex: Prelude to the Afternoon of a Faun by Debussy
- Ex: Mother Goose + Pavanne by **Ravel** → pay attention to the harmony → a lot of extended chords

10I/10J/10K/10L: Primitivism

- Big name in visual art: Picasso
- Big name in music: **Igor Stravinsky** (1882-1971) (Russian but living in Paris)
- Called primitivism because Europeans view the music of their colony “simple” → since they did not bother to understand it
 - Yet, they are extremely complex → in rhythm
- Stravinsky’s music is very innovative rhythmically and revolutionary
 - His music does not sound like anything before → “birth of modern music”
 - He primarily wrote **ballet** music → yet most ballet music is not memorable, since it is meant to support the dance
 - Yet for Stravinsky, his music is very memorable
- Ex: Firebird → not very revolutionary, but still very good and refreshing
 - Finale is 7-beat meter → very weird for European music
- Ex: Petrushka - The Shrovetide Fair → a bit more revolutionary, but still pretty standard
 - Russian folktale about a fair
 - He thinks about what actions will be happening at the fair
 - He has many layers of things going on at the same time (sometime even in completely different keys!)
 - Bitonality (2 keys for same melody), polytonality, mixed meter (polyrhythm), changing of meters (**additive rhythm** → very hard to predict what the beat is) → those are not common in western music!
- Ex: Rite of Spring → HUGELY REVOLUTIONARY
 - The first performance is so controversial that there is a riot
 - About **pagan** religion → nature is worshiped
 - sexual, sacrifice, violence, non-Christian
 - Non-ballet - birth of modern dance
 - **Ostinatos** → rhythm repeats but never develops
 - Beginning of modern music

11A/11B/11C: Expressionism and Serialism

- Ground breaking event → WWI → people cannot look at the Europe the same way → European system is changed → new society → many artists think that the old way does not work, a new way of doing art is needed
- Post WWI, division between “elite art” and “popular art”

- Thanks to recordings, the general public can afford to whatever they want to → start of the music recording business
- People start to lose interest in the “classical art”
- **Tonality Rejected**
 - music with no tonal centre is invented → **atonal music** (music without a tonal centre)
 - Result: sounds very odd → yet it makes sense, it is just not something that we are not used to
- Artists (then composers) start to express **anxiety**
 - The style is less about reality (or at all), but about expression / feeling
 - In art: thick and aggressive paint strokes
- Start of **silent film** business → film is international (since no remake of sound track is needed)
 - A lot of anxiety film → influenced by expressionism
- **Arnold Schoenberg** (1874-1951)
 - Trained in the tonal tradition way → and his early pieces are conventional!
 - Ex: Verklärte Nacht (Transfigured Night)
 - Served in WWI as a ambulance driver → this broke him, and he stopped composing for 8 years
 - "**Second Viennese School**" with Berg and Webern → ways of composing the “new” music
 - Atonal consists of **12-tone music** and **serial music**
 - He composes without any plans → ex: Schoenberg: Pierrot Lunaire
 - He rejected the old tradition of tonality, vocalization (the new singing-speaking), harmony
 - Yet, everything is not random → every time it is played, it will sound the same
 - Yet he want to organize atonal music → there should be a system to compose atonal music (just like for tonal music)
 - All 12 notes are equally important → accomplished by **tone row** → an ordered sequence of 12 pitches → you cannot use a pitch twice until you have played all the other 11 pitches
 - Avoid sequence of pitches that gives tonality
 - Yet, all the other procedures in counterpoints are still available → just without a “typical” scale → so, the 12-tone method is actually pretty conventional → being familiar and unfamiliar at the same time
- Ex: Excerpt from Five Movements for String Quartet by Weber
 - Every single note is intentional → atonal music is controlled (everything but random!)
- Now, can we use tone row to determine rhythmic/dynamic values? → yes! **Serialism**
 - Ex: the initial choice of materials (the row) controls all aspects of the composition → the piece writes itself once you have the row
- Yet, not a lot of audiences for this type of music → since so unconventional

11D/11E/11F: Tonality Extended

- Even though serial musicians look at tonal musicians as “outdated”, tonality continued → many composers still compose tonal music
- Reason 1: **Conservatism** → they don’t think tonal music is wrong, and there are still a lot of reasons for composing tonal music
 - **Jean Sibelius** (1865-1957) – from Finland
 - **Richard Strauss** (1864-1949) – not Joseph Strauss
 - He wrote good **tone poems** → program music
 - Also: he joined the Nazi party → good at writing music in heroic setting
 - Ex: Also Sprach Zarathustra opening → very tonal opening → film music
 - **Host** – English composer
 - Ex: Mars from The Planets – about the gods of the planets (astrology)
 - **Orff**: O Fortuna from Carmina Burana → sounds old in the atonal setting!
- Reason 2: **Popularity** → they want to connect with a broader audience → more accessible
 - **Aaron Copland** – US composer
 - He was very adventurous when he was young – as he gets older, he composes more American folk songs
 - His music reflects a lot of the great characteristics of the US
 - He wanted to create music with tradition from America → cowboys and the old west → 2 ballets on those topics
 - Very accessible music
 - Ex: "Hoedown" from Rodeo → lively and tonal music; also sounds very western Hollywood
 - Ex: "Fanfare for the Common Man" → fanfare is usually for king/queen, but this piece is for “common American man”; also very tonal
- Reason 3: **Compulsion** → the government might make you to compose tonal music
 - In Nazi Germany, in Soviet Union, some Chinese music
 - In Nazi Germany
 - Artistic expressions that are not approved by the government is suppressed – decadent, Jewish, Negroid (American) music (such as jazz)
 - In Soviet Union
 - Excess all controls on arts
 - Ironically, after Soviet revolution, everything is new. Then it is suppressed (starting 1920s) → many composers left
 - Compose in “political correct” way
 - **Shostakovich**
 - many symphonies chock full of irony, satire and double meanings that went right over the censors' heads.
 - Ex: Sym. #5, movement 4 → too grand to be satirical
 - **Prokofiev**
 - Compose for silent films and ballet (all different music)
 - Children music: Peter and the Wolf

12A: Aleatoric Music and Prepared Piano

- After 20th century → there is not really a central theme → there are a lot of different ideas/streams going on
- Several main streams:
 - **Atonal/12-tone/serial** → non-conventional, yet there are still a lot of **planning**, the plan is just not very obvious → every time the piece sounds the same
 - **Aleatoric music** → completely “random” music → chance music
 - Important composer: **John Cage**
 - Composer should determine how the pieces sound
 - A lot of the music is not in music notation → just a set of instructions, most time even ask the performers to do random things (such as rolling a dice) ??? LIKE WTF
 - Result: Cage’s music does not sound the same every time, even though Cage still composes the music
 - In Cage’s idea → if the composer can draw your attention through a sound (good or bad), then it is a good piece
 - ex: 4 minutes and 30 seconds → silent (resting) for 4 minutes and 30 seconds
 - ex: Sonatas and Interludes → before he embraces randomness, but after his study with Schoenberg
 - Invented **prepared piano**
 - What to do to the piano, other than playing the key → it makes the piano to have an interesting sound

12B: Klangfarbenmelodie

- “tone colour melody”
- **Edgard Varese**
 - Challenge the notion of what the **melody** is → can we make interesting music other than the succession of pitches?
 - For Varese: the answer is the **timbre** → the colour/quality of the tone (that is related to the overtone series, ex: piano’s C4 vs. violin’s C4)
 - Write a piece for instruments that do not have pitches → the percussions (most of them)
 - Ex: Ionisation → a piece for “percussion orchestra” and some piano at the end
 - He still contrasts tone colours and rhythms

12C: George Crumb

- Extremely unique → nobody else sounds like him
- He does not mind use tonality, but he also does not mind using untraditional sound → extended techniques
- He wants to create feelings such that it is familiar, but yet unfamiliar
 - Non-conventional, yet very tonal
- Ex: Music for a Summer Evening

12D: Minimalism

- 1960s is a turbulent time in society → many protests, Vietnam War
- Rise of “popular music” → record company, recordings, etc.
- There are composers who actually care about whether people listen to their music
 - o Some people become interested in **tonality** and **rhythms** again → since popular music is “dance music”, so rhythms (and ostinatos) are important → 3 or 4 pitches that keeps repeating itself → **minimalism**
- Those music is popular → music is appealing to broader audiences, since it is easy to understand → work with rhythms and small amount of pitches (but usually does not really develop)
- Basic rhythms begin, and other parts are added, and then taking things away → has a very powerful rhythmic drive, that has been missing for decades!
- Ex: Reich “Eight Lines”

12E: The Technologies

- In the 1960s, the intersection between technology and music → digital technology impacts the way music is made/produced (synthesizers, etc) → electronic production of music
- Mainly driven by the popular music
- **Paul Lansky**
 - o A computer scientists that work on production of speech by the machine
 - o He took the speech elements and create a piece of music that connect everything together → ex: “Not just more idle chatter” → entirely produced synthetically → entirely digital!
 - o It is music that is impossible to exist before 1960s