Chapter 15 – The Baroque Era

1600 -- 1750 C.E.

The Baroque era represents a shift in thinking and expression. Like the Renaissance, it began with a "reboot" as discoveries and new ways of thinking caused people to look at the world through new eyes. The music and art that they created needed to fill different needs and communicate different things.

There are a number of theories as to where the name *Baroque* came from. One of the most common ones comes from the belief that later generations gave it that name as an insult. They likened it to an irregular pearl--a potentially beautiful object but grotesquely misshapen.

The very first roots of the Baroque era began in Italy. A generation or so later found France as being the focal point of music and art. By the end of the era, Germany had become the key player in the musical culture of the Baroque.

The beginning of the Baroque era was influenced by many of the same general factors as
was the Renaissance. These included the culture of Classical Greece and Rome. The Church was still an important factor in the thought and the direction society took. However, the influence of religion had been fractured by the Reformation as well as the rise in power of the monarchies, as well as more power and influence in the hands of the middle class.

Baroque art and music often tend to be theatrical and overly complex to modern eyes. The Council of Trent (the defining event of the Counter-Reformation) directed that art should clearly speak to the masses. Historians cite this as an impetus for the elaborate and sometimes slightly over-the-top style found in Baroque art and music.

Like musicians of previous generations, the creators drew from the influences around them. They saw the world through their own eyes and created works based on the realities that they knew.

The realities that they knew, however, had changed. Johannes Kepler, Nicolaus Copernicus, Galileo Galilei had or were laying the foundation for modern scientific thought and more accurate understanding of the universe around us. They were just a few of the people who had torn down some of the old beliefs dating back to Classical Greece. Long held beliefs from revered philosophers such as Ptolemy and Aristotle were being shot down. Martin Luther's accidental Reformation challenged old theological ideas.

Newton, Pascal, Descartes, and Hobbes were some of the thinkers and philosophers that helped cause this era to be known as the "Age of Reason".

They were looking the world through a different set of glasses: their special viewpoint told them that logic and reason were the best tools to understand and even manipulate the world around them.

As it always does, the music reflects this different view.

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**BEGINNINGS**

Historians have chosen two nice round numbers to mark the beginning and the end of the Baroque Era. Again, the actual history of the Era isn't quite so cleanly divided, but we once again do see certain trends beginning and then fading around those dates. 1600 is a good round number easy to remember.
As noted in an earlier chapter, one of the factors that began the Renaissance was a rediscovery and interest of Classical Greek culture. This led to a new style of thinking, a new way of looking at things, and importantly here, a new style of music.

Almost exactly 150 years later, a new style of thinking began which led naturally to a new style of music--ironically--again--as a result of a rediscovery of Classical Greek culture. This also isn't the last time in Western history that something like this happened.

Like the Renaissance, the beginnings of the Baroque Era centered in Italy, which was already a leading center of music. The movement spread to France and eventually Germany, which dominated the final phase of the Baroque Era.

Around 1600 a group of intellectuals that called themselves La Camerata became interested in the dramas of Classical Greece. They came to the conclusion that the great dramas weren't spoken, but instead sung and wanted to try to recreate them. The Greek play Euridice was one of their earliest sources of inspiration and composer Jacopo Peri set it to music.

La Camerata felt that Renaissance music had become too florid--too many notes and that the meaning of the text had gotten lost. They felt that the complex polyphony of the late Renaissance music was missing the point. Their new style of music was a more "back to basics" style that placed more emphasis on expressing the text cleanly and clearly. They gave their new form of music a name: works. We now know it by the Latin word for works: opera. Unfortunately there are no surviving copies of Euridice.

La Camerata may or may not have been correct about the Greek plays being sung; the important thing is that in an attempt to create a better mousetrap, they began a new way of doing things that helped become the inspiration for a new era.

Opera became a very important medium in the lives of musicians, composers, and the members of the public for the next 400 years.

Like so many other musicians, writers, inventors, and artists, it is HIGHLY unlikely that these composers intended to create a revolution. They happened to be inventing a new product that they thought was better than the old one.

If someone had tried to do this a century earlier, would it have taken off the way it did? Probably not. A series of dominoes had to be lined up. Those dominoes had to include certain economic conditions; needs for entertainment and the ability to find time and money to enjoy it; certain performing venues large enough for the stage spectacle and the audiences; certain instruments to be developed (not to mention the invention of a particular kind of singing that allowed a singer to fill up a large hall without damaging
his or her voice), not to mention a society interested in exploring its cultural roots and appreciating the symbolism of mythology.

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**. . . AND ENDINGS**

1750--the acknowledged end of the era is the date of the death of Johann Sebastian Bach.

Hmmm. . . Bach must have been a world famous musician, highly celebrated, and an influential teacher for his death to be considered the end of the era. One might logically conclude that his style of composing dominated and when he died, other musicians had no choice but to set out into new territory. In theory. . .

In truth, while Bach was well known as an organist and revered as a teacher, he published less than a dozen compositions during his lifetime. He must have been quite a good teacher because a number of his children became leading composers of the next generation. However, they considered him the "old generation" and composed in the new style that was dominating at the time.

That new style (characterized by yet another "back to basics" mentality AND again inspired by a rediscovery of Classical Greece) had already become well established more than a decade before Bach's death.

To us, Bach's music is the foundation for modern harmony and for modern music theory. If you listen to any pop, jazz, rock, rap and beyond, some of the things the musicians and composers are doing are because Bach did them that way. To us looking back, his death does represent the end of an era.

Keep in mind that it just may not have looked that way to someone alive in 1750.
THE BEGINNING OF MODERN MUSICAL THOUGHT

MUSICAL NOTATION

Standardization and uniform rules in music calligraphy are clues that musicians and music had begun to take on functions similar to what they are now—or at least before the invention of recording made another major transformation.

The rules of music calligraphy are dizzyingly complex with many needs that appear to contradict each other. It wasn't until fairly deep into the age of the personal computer that the hardware and the software were able to became useful tools to notate music.

What is the purpose of all of those rules? Why are there two (and often three) different spellings for the same note? Why the obsession with bar lines, directions of stems, phrasings, etc?

There is a certain kind of Darwinian evolution at play. In music, things generally don't exist until they are needed. When they are no longer needed, or when something better suited comes along, they will die away. When the needs of music change, we will invent things to make music happen.

The needs of the musical world in the 1600s included the ability for it to be read by a lot
of people in different areas of the Western world (printing had helped with the element of standardization).

Music written in the early 1600s would be able to be read fairly well by a modern musician untrained in early music. The rules of music and performance had come together in a way we would be able to understand.

Articulation markings began to appear.

Why would one need articulation markings? Probably for practical reasons.

Recall the evolution of tempo, dynamics, and tone color in the Renaissance. They were not needed when the composer was always the performer. However, they become important when the composer isn't around to supervise the performance.

Articulation becomes very useful when there is more than one player on a part and when the composer throws a number of simultaneous lines at the listener.

Both of these happened in the Baroque Era.

THE ORIGINS OF THE ORCHESTRA AND THE CONCERTO

During the Renaissance there is an explosion of music composed specifically for instruments. These pieces were most often secular music--the voice was still the instrument of choice in church, but the economy was such that instruments could be produced and people learn to perform them to make an important contribution. When an early music specialist performs a Medieval piece, he usually has just the melody to deal with and creates the accompaniment using the most authentic improvisation he can manage. Renaissance instrumental music is often in a number of parts, ALL of them written out. The Baroque Era continued with this.

The dominant string family used in the Renaissance was the viol family. They tend to sound softer (and as many will describe them, sweeter and less dramatic than the violin family). They also have frets like a guitar (and are often tuned similar to a guitar). While the frets allow pitch to be more accurate, they limit certain types of expressive effects.
In the mid 1500s, a luthier in Cremona Italy by the name Andrea Amati built an instrument constructed a little differently from a viol. It didn't have frets (allowing the pitch flexibility of the human voice), was tuned differently, and because of the internal construction, had a more powerful tone.

This is believed to have been the first true violin. The French king Charles IX ordered 24 of them to be built, and the violin family began pushing the viol family out of the picture (however, the double bass still used in the orchestra is a descendant of the viol family, not the violin family). The shift didn't happen overnight--J.S. Bach was still composing for viols a number of times, but this was a case where a better mousetrap caused the world to beat a path to Cremona, Italy where the Amati, Guarneri, Stradivari families, among others, began making the finest instruments in history.

With the monarchy becoming powerful, many of the leading composers found work in the courts where a nobleman would naturally want to show off his musical finery with an ensemble of good musicians.

While other instruments were in somewhat of a primitive state (brass instruments didn't have valves, woodwinds didn't have the cross-linked key mechanisms that simplified fingering and improved sound), the strings were about as good as they were ever going to get.

Logically using the strongest instruments as the backbone for the ensemble, the first groupings of musicians resembled the modern orchestra. Modern orchestral repertoire will occasionally feature Baroque Music (but rarely anything earlier).

It is also important to mention that while the public concert as we know it didn't exist yet, and wouldn't for a century or so, amateur musicians had an outlet in their local Collegium Musicum (see "Renaissance Secular Music"). The Collegium Musicum also played an important role in the life in many of the British colonies on the east coast of North America.

A logical consequence of the musical ensemble of strings and the fact that natural human nature pushes us to try to be the best is a form of music known as the concerto.

The word concerto is derived from a word meaning "competition". A concerto is a piece of music that alternates between the sound of a group of musicians and the sound (and virtuosity) of a musician playing solo. The solo concerto became an important musical medium all the way into the 1900s, and we find the origins of the concerto beginning in the Baroque. The person most responsible for shaping it to a three movement fast-slow-fast format that was a vehicle for a virtuoso soloist was Antonio Vivaldi who composed hundreds of them over his creative life.
Equal tempered tuning is thought to have been calculated in the late 1500s almost simultaneously by Zhu Zaiyu in China and Flemish mathematician Simon Stevin.

A brief summary of equal tempered tuning: the Classical Greeks (one of them being Pythagoras) found sets of notes that worked well together in a natural tuning. When you play one of these notes at a time (or even two), things work fairly well. Frequencies in these (which are also found in the natural overtone series of the harmonics of a string or the partials of a brass instrument) work out to be very mathematically perfect ratios, such as 2:3 (an interval called a 5th) 3:4 (an interval called a major third). Three tones with frequency ratios of 4:5:6 produce a perfect Major triad.

When you start to put them together in combinations of three or four (as Western harmony and polyphony evolved), you run into trouble with these natural harmonies. Some chords were perfectly in tune, but others become badly out of tune with each other.

One logical place for equal temperament to take hold would be on fretted instruments, such as the lute. One early composer who created a series of lute works for this tuning was Vicenzo Galilei (father of Galileo Galilei).

One of the early major works that demonstrated how music could be played in all possible keys was The Well-Tempered Clavier, a set of 48 preludes and fugues by J.S. Bach in every major and minor key that existed on a standard keyboard.

Composers were very quick to take advantage of this new versatility.

Prior to this, a keyboard needed to be tuned to a specific key. For example, if it was tuned to C major, chords made out of the notes in the scale sounded great—actually, better than with our modern equal temperament. However, if you tried to create a chord far away from C, such as F# major, it would be extremely out of tune and unpleasant.

In comparison with the natural tuning, tempered tuning is actually just slightly out of tune. The difference is that it distributes this evenly over the entire scale. With this, a C major chord sounds just as good as an Eb chord, or an F# or anything else.
Above, a comparison of selected frequencies. To go up to the next half step from any note in tempered tuning, multiply that note's frequency by 1.05946309635 (that will get you precision to less than one ten-thousandth of a pitch). This means that every similar interval (Major 3\textsuperscript{rd}, Perfect 5\textsuperscript{th}, Minor 7\textsuperscript{th}, etc. will always sound as good as any other; every chord will also sound as good any other similar one). If you build a major chord on A using C# and E in tempered tuning, the C# is slightly sharp in pitch while the E is slightly flat in comparison with the natural tuning. The octave A notes are perfectly in tune with each other, the highest frequency always being exactly double the lowest.

This method of tuning is responsible for all of the complexities in modern harmony, including the elaborate key changes in Wagner, the serialism of Schoenberg. The ninth, eleventh, and thirteenth chords found in jazz owe their sonority and existence to this. The musical dramas of the Beethoven, Brahms, and Mahler symphonies would not have existed without Bach's innovation. Take away tempered tuning and you will never see anything like the sonata form or the symphony appear.

You would lose Debussy's music and its rich sonorities dependent on the interplay between the overtones of the piano keys.

You would lose jazz and all of its musical descendants all the way to rap.

What would our music sound like? We don’t need to speculate too much here, because
many cultures didn’t go the way of tempered tuning. They include Arabic, Asian, African, and Indian, so we probably have a good model.

Without tempered tuning our music may have gone the way of music like that of India—an ever increasingly complex improvisation based over a repeating harmony with drone notes. But, we would not have the modulations and the harmonic complexity of Western Music.

It should be noted that like Gutenberg's innovation, tempered tuning had been attempted centuries earlier. Only this time, the pages of Well Tempered Clavier by J.S. Bach became the musical soil where the seeds finally took root. We ended up creating music that clearly defines what is dissonant and what is consonant, something that is also a strong focus of our dualistic paradigm and tradition dating back to the Classical Greeks. Our symphonies start with a home key, get away from it, and create drama in how they get back to "home base". It would seem that once again, our music is perfectly linked with our thought.

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**OPERA**

As noted above, the invention of opera marks what historians cite as the beginning of the Baroque Era. Like the concerto, it was a very important medium for the next three centuries. As a creative vehicle in the early 21st century, opera still isn't off the radar screen.

Opera is a unique combination of many disciplines. One could even describe it as the 17th century version of a multimedia presentation. The spectacle includes instrumental music, voices, choruses, staging, acting, lighting (primitive at the onset), sets, costumes, etc.

The first operas were meant for the nobility and upper class. The medium quickly became popular among the middle class.

The earliest operas were based on mythological stories, historical and literary figures, gods and goddesses; characters larger than life. This particular track was commonplace for much of the history of opera. It wasn't until the late 1800s when verismo opera (stories of common people and their lives, sometimes even resembling modern soap operas) became common.
THE BAROQUE STYLE

A modern listener listening to Renaissance music will find a few things that don't always sound like the way we currently create music. While the importance of a tonal center and the proper resolution of dissonance were something composers kept as a priority, the rules they used weren't quite the same as what we are used to hearing. Therefore, there is often a slightly distinct sound to Renaissance music.

The Baroque era saw those rules evolve to what is very similar to our contemporary music. If your name is Wolfgang Amadeus Mozart or Ludwig van Beethoven, you grew up playing the music of J.S. Bach. If you are a modern music student studying a curriculum of music theory or composition, the way Bach did things is going to be your daily musical diet.

Like Baroque art, the music (which, of course, resulted from the same sociological influences) was also theatrical and ornate. Much of the music, especially in the later phase of the Baroque era, is highly polyphonic with numerous things going on at once. Interestingly enough, the early Baroque composers had rebelled against the music of the Renaissance because it had become too complex. By the end of the Baroque, a similar rebellion began as people began to believe that music and art (and, of course, the rest of their world) should reflect balance, proportion and simplicity. The wheel was again reinvented (as more or less happens nearly every generation) and we, as historians, look back and call it a new era and give it a new name.

There are no large scale forms instrumental forms yet--no Mahler symphonies lasting an hour and a half--but the groundwork was being laid for that to happen. Large scale forms that were a composite of smaller movements became commonplace. Some of these lasted a half hour or more, creating the trend toward larger and longer pieces of music (opera and oratorio already reached three hours on occasion). The simultaneous move toward full blown tonal harmony (based on equal and well temperament) became a critical factor in the trend toward larger and longer works.

Dominant instruments included the violin family, the harpsichord, and the organ. In the early 1700s Bartolomeo Cristofori improved on the mechanism of the harpsichord and created an instrument that could adjust dynamics of the sound based how hard the player struck each key. He named it *pianoforte* which we know as the piano. The piano wasn't that useful of an invention to the Baroque style, but it quickly became the instrument of choice for keyboard composers in the Classical era.
THE BAROQUE ERA AND ITS PROBABLE EFFECTS ON MODERN THINKING

At this point it should not be a surprise to find that if music has become "modern", that there are other things that also crossed that threshold at about the same time--such as the entire society that created it.

While there are many examples, this section will end with a fairly striking example.

Toss a coin a few times and record the pattern of heads and tails. Turn back the clock to the 1300 and do the same thing.

The explanation for what you see will be completely different. Today we accept random chance as a normal part of life (and a normal part of music if your name happens to be John Cage). We accept that if you toss a coin five times, there is a chance it will come up heads or tails five times, but that if you toss it 500 times, you are likely to have a total nearing 250 heads and 250 tails.

Understanding random chance gives us a tool for understanding complex weather
patterns, stock market fluctuations, gambling (especially if you are a programmer for a slot machine who wants to be sure to entice the player with enough winnings to keep him playing but ultimately make sure the house comes out on top). Take out a life insurance policy and random chance and probability are what determine how much you pay. Knowledge of this keeps insurance companies afloat by making sure that the premiums coming in are always less than the payments that go out.

If you tossed the coin five times in 1300, you would have looked at it--and life in general--through the eyes of theological determinism and predestination. The general philosophy (shared by Christianity, Islam, and Judaism) was that events were predetermined and shaped by Divine circumstances, that when the universe was created all events that eventually were to happen had already been determined.

While there are many precedents involving the understanding of random chance (including the perennial dilemma at how to maximize your wins at gambling), probability theory became fleshed out by Blaise Pascal (and to a lesser degree, Pierre Fermat). To accept probability theory, one must have at least a tacit belief in purely random chance, that there is not some great power controlling every single detail. Contrast this with the Medieval belief that God controlled everything--every rain cloud and storm, every little detail in one's life.

While it is still a long ways away from Nietzsche denying the value of religion, it is nonetheless an indication of the lesser role religion was playing in Western thought and a foreshadow of things to come.
Hmmm. . . what then does that say about our obsession with the preservation of music that has long ceased to be a useful function of our society? What real use is there for Gregorian Chant when our culture and society have moved far away in a completely different direction? Of course, the previous question is meant to be completely tongue in cheek, but it might inspire some thought about why we as a culture have taken great troubles to preserve so many things from our past that would seem non-essential.

As opposed to someone composing music for later generations. That is something that is a very modern concept and not a reason throughout history before the recording era.

While Bach’s “well tempered” tuning was not quite the same as “equal tempered” tuning, it was a giant step in that direction and demonstrated possibilities of using all of the available keys. There is a little disagreement among historians about the exact details, but it is thought that no key sounded bad. Some writers talked about the characteristics of certain keys and this is thought to be the effect of some keys being just slightly out of tune.

On the other hand, technically, every interval, except for the octave, in equal temperament is just slightly out of (natural) tune.

It’s probably not that surprising, knowing human nature, that during the transition, there were musicians vehemently opposed to equal temperament.

Without question, we in the West have done this in our own unique—but consistent—way. A thread running through our Western thought that dates back to the Greeks is a sense of opposites, also known as dualism. If there is consonance (a harmony that sounds stable or good), there must also be a harmony that doesn’t sound stable (dissonance). Our rules of harmony from the Common Practice Era (that modern music is based on) carefully and meticulously define what must be done with dissonance in order to reach that final stability at the ending cadence. Our tempered tuning contributes greatly to this paradigm.

But. . . what if there were a different set of rules where you didn’t consider a combination of notes to be a consonance in the first place? Without consonance, there would be no dissonance. There have been many experiments with this (using pentatonic scales is one easy way to do it), use of non-tempered scales (one example—birds sing pitches, but get a bunch of birds together and there is no dissonance), and other tricks.

Eastern philosophies—coming from the cultures that didn’t go tempered tuning—tend to look at things with a oneness model rather than the dualist good/bad, up/down, night/day approach that we take.

Could there be a connection? (Yes, that’s a loaded question).

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