DOWNLOAD PDF THE AESTHETIC LAWS OF MELODIES CONTAINING ONLY TWO DIFFERENT NOTES.

Chapter 1 : Music, Mind, and Meaning

Start studying hum 3. Learn vocabulary, terms, and more with flashcards, games, and other study tools. b. symbolism is a comparison of two things, only one of.

Take part in the Aesthetics survey near the end of this page. Download the music that inspired me to write this page! In other words, every picture or piece of music contains an inherent mathematical? All these aspects of music are very much interwoven which is why it gets so confusing, but I believe they can all be rated - with the very best music containing high scores for all of these attributes. Also, maybe the best music is so, so complex that an increasingly complex formula is required for increasingly better and better music. See later for how complex a possible formula might be. Or maybe there are a dimension of perfect melodies. The best chord combinations are at the top - all unique, brilliant and varied. Tunes generally have lots of these. Strawberry is something to really look forward to! Music is only pigeonholed into genres in the first place because of reasons such as: The cultural habit to imitate what already has been done. The limitations and advantages of certain instruments e. Simple luck that a particular set of instruments ended up with a bias towards certain chord or rhythmic progressions in the initial stage. But because music is effectively just a combination of motifs, patterns and harmonies put together, a more thorough break-down is desired. Naturally, a chord that sounds bad in one piece could fit very well into another tune, but there surely comes a point when a chord is so bad that it becomes practically impossible to fit into any tune. This is complex enough Could one somehow fit these chords into a decent tune appropriately? C, Eb, A, C Hmmm OK, now take this stunner: A bit better dontcha think? To ease the pain of those ear-aching earlier chords, here are just two of my fave chords using six notes: Any possible program to create good music would probably be made up of many sub formulas one dedicated to the melody, one for the harmony, rhythm etc. Good music defined Can beauty be defined or even measured? I think a thorough explanation of what makes good music would be almost as profound to know as how the universe started: There are just too many questions. I have tried my best to make these criteria as universal as possible, so that it applies to all music. The best music seems to have the following properties with most important at the top: If you look at the spectroscopic analysis of a sound in say Also, slowing a tune down with a significant amount of fast playing detail will often still provide a pleasurable listening experience. A good example is the beat, where a relatively faint hi-hat will sound every beat, but more prominent percussion such as a snare, or bass-drum will sound every 2 or 4 beats. This example is only a very limited view of the whole picture of course. Generally speaking, structures and some consistent patterns are vital. Also see I and L. Two, three, or more simultaneous melody lines polyphony will add tremendously if done well. These would tend to fit in with the underlying or implied chord at that point in the tune. I know, quite vague - your mileage may vary. Anything from a single bar to a whole movement could be quieter, slower, faster or louder than the rest. A more general description would be a quick-changing dynamic-volume sound effect. So basically, I think that even if a formula was found, not even the fastest super computers would compose a decent melody for ages and ages and ages The short answer is yes. The best analogy I can think of is comparing the simplicity of a sphere to the complexity of a beautifully intricate design made up of many shapes. The intricate design is better overall, but it still lacks something that the simple light sourced sphere has got. And then if this intricate design were to be distorted so that randomness and illogical shape crept in, this might well be enough to make the simple sphere better in both senses. One other point to bear in mind is that the more complex one tries to make a tune, the more likely errors either in the melody or orchestration are going to creep in. See if you like it! One could ask it all sorts of questions such as: Imagine how exciting that would be - finding the incredible results that this supreme formula would produce! Then one could have more fun by: Limiting the length of each note so that no one note lasts longer than a quarter of a second. No doubt a very intricate staccato styled tune would result. Art aesthetics What of graphics, pictures, artwork and moving pictures? In the same way music can be empirically rated on its

various aspects, pictures can also be given a definitive value or values. In my experience, the best pictures contain wide use of the full palette of colours in the spectrum including the brightest hues. Also, just like the best music, pictures which have repeating and evolving patterns rather than solitary or non-evolving should be held in higher regard. Other aspects I have found which make good pictures and the same could be applied to music are: This last one is interesting. It assumes that the best pictures contain simple foreground and complex background designs You might want to visit my Rating Art page. This was specially done for a web site forum I frequent, but its principles would apply universally. A mathematical formula for graphics? There is no strict art aesthetics definition, at least not for the foreseeable future, but who knows; one day, we might start unravelling the mathematical mysteries of good art I hope you have enjoyed reading this article as much as I have enjoyed writing it. Alternatively, message your comments and stir up some debate on the Skytopia Forum. Aesthetics Survey - submit your votes So what do you believe? Has this article made you think about music and aesthetics in general? Why not take the time to fill in this questionnaire There are just 10 questions in total and you will be able to submit comments at the end if you wish. Can music go much further in terms of quality and enjoyment than even the best tunes composed thus far? Yes - all or most musical enjoyment is derived once the music reaches the soul. Has this article made you think twice that music can be objectively rated Universal aesthetics theory? Assuming the above is true that there really is a universal aesthetic , could there be such thing as a perfect piece of music? Going one step further than the Universal Aesthetics music theory, could the best most satisfying music ever be explained via a mathematical formula of sorts? Can art and pictures also fit into the Universal Aesthetic theory? How interesting did you find this whole article?

Chapter 2 : Music and Emotion - Notes on Leonard Meyer

The book's chapters explore the aesthetic laws of melodies containing only two different notes, the complete musical scale, complex melodies, psychological laws effective in the historical development of melody, theory of melody, and aesthetic laws of harmony.".

The research presented in this paper is trying to give a solution to this problem. A first experiment consisted on the following: Out of this first experiments we derived a theory for feelings based music generation. Examples generated according to this theory will be also presented in this paper. Introduction The improvement of the aesthetic of the melody line of the music generated by the computer is a big challenge for the scientific world today. There are programs and mathematic theory [1] for computer music generation. Usually, this music is produced in conformance with the laws of harmony [3]. But when a computer scientist gives to a musician some music originated from the computer too often the musician is saying: I do not want only a music which is harmonic good, but also a music which will sound good. On another hand, for a mathematician, only employing the harmonic laws for the computer music generation still leaves a lot of freedom for the notes generation, and, consequently the number of possible solutions for a simple leading melody is usually very big. The research presented in this paper is trying to give a solution to the problems above mentioned. The team was formed by researchers from music and computer science. In main the experiment consisted on the following: This was a first experiment concerned with the computer music aesthetic. In our later experiences we took into account the set of rules derived from our first experiences. From this experiences we derived also a theory for feelings based music generation. The concepts of this theory are also applied and presented in this paper. The paper is organized as follow. Section 2 briefly presents the harmonic laws implemented by the tool. Section 3 describes the tool. Section 4 presents the first experiment related with the aesthetic music analyze. Section 5 deals with the theory of feelings based music generation. Section 6 gives examples of applications of this theory. These examples are analyzed also esthetically. Section 7 outlines the conclusions. The musical art has a theoretical system which is composed by a number of disciplines with different visions. In this way the musical theory, the harmony, the polyphony, the forms, the instrumentation and orchestration, the musical aesthetic and the composition, treat step by step the aspects studied by this art. In the natural resonance of the sounds the fundamental is repeated the most, the third is on the second place and the fifth is on the third place. The chords and the harmony are linked to the occurrence of the tonal system. From the necessity that the musical sounds must support each other, must have a weighting center, the idea of tonality was born. From the sounds of a tonality, a chord can be built on every musical degree. A chord is formed from third overlaps. Every sound takes the function given by its correspondent degree. From the point of view of their functions, two kinds of chords can be distinguished: The degrees of the principal chords are: The rest of the degrees are secondary: The harmony for four voices The present work treats the human voice harmony, especially the harmony of the principal voices -- Soprano, Alto, Tenor and Bas. According to their setting in the choir assembly the voices are divided in external voices Soprano, Bas and internal voices Alto, Tenor. Usually, the melody is given by Soprano. Sometimes the other voices contribute also to the melody. The most used chords are the ones with 3 sounds triads which are distributed to 3 voices. The fourth voice doubles the tonic or the fifth the third is doubled rarely. The tonic can not be omitted because it is the one which generates the chord. The same holds for the third because it gives the scale: Consequently, the only element which can be omitted is the fifth. The distance between voices For ensuring a homogeneous and balanced sonority a maximal distance should be respected among neighbour voices. The octave is allowed especially for the external voices. The leading tone plays an important role. It is attracted by the tonic. It has a special treatment: The leading tone goes immediately to the tonic. The harmonic movement of the voices In the melodic movement we observed the horizontal development of one voice, but in the harmonic one we will observe two voices which moves simultaneously. The following movements

between voices exists self-explanatory by name: The tool which is especially built for our experiments can be used in the following way: The main engine of the tool is the procedure Verify. This procedure has as parameters four arrays of notes for Bass, Tenor, Alto and Soprano. First it checks whether the distances between the notes of Bass and Tenor, Tenor and Alto, Alto and Soprano are in the allowed intervals see Section 1. After that it goes to the next position and generates again notes for Tenor, Alto and Soprano. This is done till a complete melodic solution is constructed. At each position the back-tracking algorithm verifies whether the melody generated is harmonic good this is done by using Verify. After a first solution, the algorithm generates other solutions. It stops only when all the possible combinations for every position are tried and, consequently, all the possible solutions for the melodies of Tenor, Alto and Soprano are produced. The tool have also the possibility to accept pattern functions for the Soprano voice. An example of such a pattern is: Another possibility is to ask the tool to generate all the voices when a pattern of the Soprano is given. This option was used for the feelings based music generation experiment. The first experiments The melody is the most expressive way of communication of the music. The melody is a general reference for the compositional, aesthetic, theoretical and historical characteristics of the sound art. The melody is the center to which all the characteristics of the musical image converge. The same Bas can generate, on the basis of the harmonic laws, melodies which are correct from an harmonic point of view but which do not sound well. More precise, these melodies do not have a beginning, a culmination and an end. The Bas given imposed is in a pedagogical style, arranged in such a way to make easy the analyze of the melodies generated. The harmonic laws of the classical style are used. From this reason the analyze of the melodies are made also from a classical point of view. The rhythm is the element which differentiates the melodies. Feelings based music generation theory In the previous chapters we presented a tool, aesthetical and classical musical form analyses and general rules of improvement derived from the analyses performed for the computer music. In the current chapter we propose a new theory for the music generated by the computer. We experimented with it on the tool presented in this paper. The feeling can be decided by the composer or can be derived from the text. For example, a piece of text expresses joy, another one violence or peace, etc. On another hand it is a known fact that using some general rules for composing music can produce in the audience some reactions. We propose to generate music according to a similar process used by the composers. Our method applies especially for texts which need to be sustained by melodies. When looking to the text, the human a composer or a non-specialist decides each portion of the text which feeling needs to awake. The computer receives as an input data the set of feelings and for each feeling the length of the melody which needs to be generated. Now, from its data base, for each feeling from the set, the tool will choose rules or a pattern which express that feeling and will generate music, till the whole melody is constructed. In the current paper we worked out a list which is not exhaustive containing feelings and their associated pattern. The list of sentiments and their correspondent patterns are given below. This list is not exhaustive and it was worked out by the authors of this article with the help of the existing literature see for example [5]. The music is a strange and subtle form of art. In function of the presence and the equilibrium of each of these ingredients the music can be peaceful or invigorating, profane or noble, philosophical or orgiastic. The music aims to influence the systems of our emotions. It is interesting to observe and to analyse from a medical point of view how the musical patterns listed above induce their correspondent feeling listed also above. But the way in which the musical sound from its entrance in the external hear induces the feeling production is not in the focus of the current article. Therefore we will explain this only for the variant a of point 1 above: This musical pattern has short breaks at the beginning of the three cumulated values which go always from the acute register to the grave register. Another characteristic is the syncope which is used repetitively. The syncope reverses the natural rhythm of the body which induces a sensation of anxiety which conduct to restlessness. According to the medical experts [4], this musical pattern modifies the respiration and the blood circulation.

Chapter 3 : Aesthetics | Internet Encyclopedia of Philosophy

Melodies/harmonies built from the notes of a major or minor scale. Chromatic Melodies/harmonies that include all the notes available within the octave; from the Greek word for "color".

An earlier published version appeared in Music, Mind, and Brain: The Neuropsychology of Music Manfred Clynes, ed. Why do we like music? Our culture immerses us in it for hours each day, and everyone knows how it touches our emotions, but few think of how music touches other kinds of thought. It is astonishing how little curiosity we have about so pervasive an "environmental" influence. What might we discover if we were to study musical thinking? Have we the tools for such work? Are such ideas too alien for anything so subjective and irrational, aesthetic, and emotional as music? I think the problems are the same and those distinctions wrongly drawn: Our culture has a universal myth in which we see emotion as more complex and obscure than intellect. Indeed, emotion might be "deeper" in some sense of prior evolution, but this need not make it harder to understand; in fact, I think today we actually know much more about emotion than about reason. But whence come those ideas that so conveniently fill these envelopes of order? A poverty of language shows how little this concerns us: I think this shows that ideas come from processes obscured from us and with which our surface thoughts are almost uninvolved. Instead, we are entranced with our emotions, which are so easily observed in others and ourselves. Perhaps the myth persists because emotions, by their nature, draw attention, while the processes of reason much more intricate and delicate must be private and work best alone. The old distinctions among emotion, reason, and aesthetics are like the earth, air, and fire of an ancient alchemy. We will need much better concepts than these for a working psychic chemistry. Why did such work have to wait for modern times? Before that, children seemed too childish and humor much too humorous for science to take them seriously. We all are reluctant, with regard to music and art, to examine our sources of pleasure or strength. No matter; when this happens we will go on, as always, to seek more robust illusions! I feel that music theory has gotten stuck by trying too long to find universals. Indeed, we find some almost universal practices in every musical era. But we must view these with suspicion, for they might show no more than what composers then felt should be universal. Imagine formulating "laws" for television screenplays, taking them for natural phenomenon uninfluenced by custom or constraint of commerce. The trouble with the search for universal laws of thought is that both memory and thinking interact and grow together. We do not just learn about things, we learn ways to think about things; then we can learn to think about thinking itself. Before long, our ways of thinking become so complicated that we cannot expect to understand their details in terms of their surface operation, but we might understand the principles that guide their growth. In much of this article I will speculate about how listening to music engages the previously acquired personal knowledge of the listener. It has become taboo for music theorists to ask why we like what we like: But this means only that we have to find the causes of this diversity of tastes, and this in turn means we must see that music theory is not only about music, but about how people process it. To understand any art, we must look below its surface into the psychological details of its creation and absorption. If explaining minds seems harder than explaining songs, we should remember that sometimes enlarging problems makes them simpler! The theory of the roots of equations seemed hard for centuries within its little world of real numbers, but it suddenly seemed simple once Gauss exposed the larger world of so-called complex numbers. Sonata as Teaching Machine Music makes things in our minds, but afterward most of them fade away. In one old story about Mozart, the wonder child hears a lengthy contrapuntal mass and then writes down the entire score. I do not believe such tales, for history documents so few of them that they seem to be mere legend, though by that argument Mozart also would seem to be legend. Yet, when the tunes are played again, they are recognized. Something must remain in the mind to cause this, and perhaps what we learn is not the music itself but a way of hearing it. Compare a sonata to a teacher. Next, the teacher presents the elements carefully, not introducing too many new ideas or developing them too far, for until the basics are learned the pupils cannot build on them. So, at first, the teacher repeats a

lot. Sonatas, too, explain first one idea, then another, and then recapitulate it all. Music has many forms and there are many ways to teach. I do not say that composers consciously intend to teach at all, yet they are masters at inventing forms for exposition, including those that swarm with more ideas and work our minds much harder. I prefer to turn that around: What is the difference between merely knowing or remembering, or memorizing and understanding? We all agree that to understand something, we must know what it means, and that is about as far as we ever get. I think I know why that happens. Then we can turn it around in our minds, so to speak: If there were only one way to represent this thing or idea, we would not call this representation thinking. So something has a "meaning" only when it has a few; if we understood something just one way, we would not understand it at all. That is why the seekers of the "real" meanings never find them. That is why sonatas start simply, as do the best of talks and texts. The basics are repeated several times before anything larger or more complex is presented l. No one remembers word for word all that is said in a lecture or all notes that are played in a piece. Yet if we have understood the lecture or piece once, we now "own" new networks of knowledge about each theme and how it changes and relates to others. Learning to recognize is not the same as memorizing. A mind might build an agent that can sense a certain stimulus, yet build no agent that can reproduce it. As a result, that mind "expects" to hear B after A; that is, it will discern B, given fewer or more subtle cues, and might "complain" if it cannot. Yet that mind cannot reproduce either theme in any generative sense. The point is that inter-agent messages need not be in surface music languages, but can be in codes that influence certain other agents to behave in different ways. Andor Kovach pointed out to me that composers do not dare use this simple, four-note motive any more. If sonatas are lessons, what are the subjects of those lessons? The answer is in the question! One thing the Fifth Symphony taught us is how to hear those first four notes. The surface form is just: At first, that pattern can be heard two different ways: Fifth and third in minor mode, or Third and tonic in major mode. Let us see how it is taught. The Fifth declares at once its subject, then its near-identical twin. First comes the theme. Presented in a stark orchestral unison, its minor mode location in tonality is not yet made explicit, nor is its metric frame yet clear: Next comes its twin. The score itself leaves room to view this transposed counterpart as a complement or as a new beginning. Until now, fermatas have hidden the basic metric frame, a pair of twinned four-measure halves. So far we have only learned to hear those halves as separate wholes. The next four-measure metric half-frame shows three versions of the subject, one on each ascending pitch of the tonic triad. Now we arc sure the key is minor. The second half-frame does the same, with copies of the complement ascending the dominant seventh chord. This fits the halves together in that single, most familiar, frame of harmony. The next eight-measure frame explains some more melodic points: I think that this evokes a sort of sinusoidal motion-frame idea that is later used to represent the second subject. It also illustrates compression of harmonic time; seen earlier, this would obscure the larger rhythmic unit, but now we know enough to place each metric frame precisely on the afterimage of the one before. The conductor must select a symmetry: Can the conductor do all at once and maintain the metric frame? We hear a long, long unison F Subdominant? The next frame reveals the theme again, descending now by thirds. We see that it was the dominant ninth, not subdominant at all. The music fooled us that time, but never will again. Then, tour de force: This new perspective shows us how to see the four-note theme as an appogiatura. Then, as it descends on each tonic chord-note, we are made to see it as a fragment of arpeggio. That last descent completes a set of all four possibilities, harmonic and directional. Is this deliberate didactic thoroughness, or merely the accidental outcome of the other symmetries? It has always seemed to me a mystery of art, the impact of those moments in quartets when texture turns to single line and fortepiano shames sforzando in perceived intensity. But such acts, which on the surface only cause the structure or intensity to disappear, must make the largest difference underneath. Shortly, I will propose a scheme in which a sudden, searching change awakes a lot of mental Difference-Finders.

Chapter 4 : Symphonic Literature: Mus

On another hand, for a mathematician, only employing the harmonic laws for the computer music generation still leaves a lot of freedom for the notes generation, and, consequently the number of possible solutions (for a simple leading melody) is usually very big.

BeepBox BeepBox is an online tool for sketching and sharing chiptune melodies. All song data is packaged into the URL at the top of your browser. When you make changes to the song, the URL is updated to reflect your changes. When you are satisfied with your song, just copy and paste the URL to save and share your song! Instructions You can add or remove notes by clicking on the gray rows at the top. BeepBox automatically plays the notes out loud for you. Notes go into patterns, and you can edit one pattern at a time. Those numbered boxes at the bottom of the editor are the different patterns you can edit. Click the other boxes to move to a different part of the song, or click the arrows on the currently selected box to swap which pattern is played during that part of the song. BeepBox can play several rows of patterns simultaneously, and each row has its own set of patterns. Most rows can play melodies or harmonies, but the bottom row is for drums. The purple loop underneath the numbered boxes controls which part of the song is currently repeating. Move the loop to listen to a different part of the song, or drag the ends to expand the loop to include the whole song. When BeepBox has focus click on its interface above , you can use these keyboard shortcuts: Pause or Resume Y or Shift Z: Copy the current pattern V: Paste the current pattern [ ]: Move the playhead backward and forward Arrow Keys: Change which bar is selected Shift the notes in the pattern up or down In the pattern editor, you can click and drag horizontally on a note to adjust its duration. Drag vertically from an existing note to bend its pitch, or drag vertically from above or below the note to adjust its volume. BeepBox has many more features. Try playing with the buttons and menus on the right side to find out what it can do! Check out some of these songs that other people have posted on Twitter! If you find something you like, you should let the creator know! And if you see any beginners asking for advice, maybe you can give them a hand! About BeepBox is developed by John Nesky , also known as shaktool. BeepBox does not claim ownership over songs created with it, so original songs belong to their authors. All song data is contained in the URL after the hash mark, and BeepBox running inside your browser converts that data into sound waves. The features are otherwise the same. You can download and use the source code under the MIT license. In particular, you can use the synth code as demonstrated here to play BeepBox songs in your own JavaScript projects!

Chapter 5 : Three Classics in the Aesthetic of Music (Review by Ken Blacklock)

h) Melodies or chords that smoothly flow from note to note via semi or whole tones, with relatively few 'big' jumps. These would tend to fit in with the underlying or implied chord at that point in the tune.

Experiment with Making Music: Instead of worrying about the possibility of mistakes, just relax, listen, and learn. No lessons are needed. Just begin pressing keys and making music. Here are some easy ways to play in 7 keys 5 pentatonics, plus major and minor with a keyboard: These 5 repeating notes form a pentatonic scale that is used in most cultures, all around the world. First, just play any way you want, listen, and see what happens. Then you can try something different by doing melodic experiments: After awhile, shift to another home-note. Each home-note is a different pentatonic scale with 5 notes, and you can play with all of the 5 pentatonic scales, each starting on a different note. As with the black keys, for awhile "just play any way you want, listen, and see what happens. How can you know where "C" and "A" are? Look for C on my colorized keyboard and then move two notes leftward, using alphabetical logic, to find B and then A. Both tips, playing black or white, can be useful for novice improvisors. Singing can be a fun way to make music because there is an efficient connection between thinking and doing, with your musical ideas intuitively-and-automatically translated into sound. If you can play an instrument with skill, this will help you improvise skillfully. If you can play several musical instruments, try using each of them and listen to the difference in results. And as one example of "other factors," with a valve trombone or trumpet the key of E-flat is very easy to play, much easier than the key of E. But with a guitar the key of E is easier. For example, here is musical imagery from the pen of O. He followed an air, but it swam mistily into a swirling current of improvisation. You could cull out the trill of mountain brooks, the staccato of green rushes shivering above the chilly lagoons, the pipe of sleepy birds. If there is too much sameness, so listeners can predict everything, they may become bored. But they may get frustrated if the music is too difficult to predict. Usually, the music we enjoy is an in-between mix, with some confirmation of expectations along with some surprises, in a blend that is interesting rather than boring or frustrating. For example, you enjoy hearing some songs over and over, even though or because? Improvising Music â€" by using Melody, Harmony, Rhythm Melodic Improvisation The melody of a song is only one of many possible similar melodies. You can use these possibilities, and others, in any blending you want. Try notes in creative new combinations. For intuitive inspirations about "how to do it", listen carefully to a group with good harmony, and then sing along while you listen! Rhythmic Improvisation Experiment with different rhythms: When you are well prepared, you will never have to face an unexpected situation "with little or no preparation," at least in the areas for which you have prepared. Definition 2, by contrast, accurately describes the kind of improvisation that is the focus of this page. Active Listening as a Preparation for Improvising This is similar to sing along or play along but with "active listening" you are passive-and-active: By listening carefully, you can learn a lot while enjoying the process of discovery. At a basic level, you can listen for the rhythm interacting with melody that produces the 1-count of each musical measure, and decide if the measures have 4 counts most common or 3 counts as in a waltz. You can listen to the same song over and over, hearing more and more of what makes the music what it is. You can shift your perspective back between levels, by using a whole-part-whole approach. For example, you might try to hear each individual instrument, and how it relates to other instruments and to the whole, and what functional role it plays in the musical mix. Listening during Interactive Improvising This is another level of experience, with an opportunity to make real-time musical decisions. As described earlier, it can be useful to "experiment in low-risk situations Try playing various functional roles, and experiment with different ways of deciding what to play and when. Be aware of the overall situation for you and your fellow musicians and the musical details of what they have been doing, are doing, and might be doing soon. Try to play with good taste and rhythmic precision, aim for creativity and quality, and enjoy whatever happens. He explains that "You have to fail at something first â€" which is not a failure, but an opportunity. Music is the act of recovery. Basically, an improvisation becomes a

composition when it is repeated in the same form, so its status changes from temporary to permanent. Because improvisation is on-the-spot composition, in real time while the music is happening, all skilled improvisers are skilled composers. And some composers, continuing the tradition of J. Bach, are also skilled real-time improvisers, with an ability to perform well and produce pleasing music when they and their listeners do care about the quality of the music. You can preserve a composition â€" so it can be duplicated later by yourself or others â€" by writing it on a sheet of paper or, in modern times, by saving it in the memory of a computer or electronic instrument. Or your improvisation can be recorded on tape or digitally, and then transcribed into a musical composition. Or you can just remember what you did, and then play it or something like it later. And if you "sing without words" this may loosen some limits on your melodic creativity. But if you play along with a musical instrument, you can use your personal skills in playing the instrument especially the skills preserved in your muscle memories and the special features of this instrument. This principle is useful in music and in other areas of life. Be aware of what other musicians have done, are doing, and might do soon. Experiment with different ways of deciding what to play and when. Or you can simply remember musical ideas, and practice them until they become part of your musical repertoire. Of course, you can learn much more than is possible by reading this page, when you read other pages! By following a link, I found the website of Rick , who wants to help you learn-and-use principles for improvising jazz. He explains how "as I continued to read and learn about great jazz musicians, I found that there is a skill common to all of them. That skill is the ability to play by ear. All great jazz musicians can play accurately and effortless by ear. You can effortlessly sing by ear. You simply think about a melody and you sing it. This natural ease we have using our voices should be taken advantage of when learning to improvise" â€" and of listening because "listening to jazz [or country, rock, And for Ear Training and much more. The titles of his Tips are: Some ideas from "Play along with records" and "Review after the fact" are: Try different approaches â€" perhaps play Most importantly, experiment far and wide, and go by what you think sounds good.

Chapter 6 : Two Elegiac Melodies | Revolvy

Look for C on my colorized keyboard and then move two notes is only one of many possible similar melodies. flats) contain the same scale-notes.

References and Further Reading 1. There is even now a four-volume encyclopedia devoted to the full range of possible topics. The core issues in Philosophical Aesthetics, however, are nowadays fairly settled see the book edited by Dickie, Sclafani, and Roblin, and the monograph by Sheppard, among many others. Before this time, thoughts by notable figures made some forays into this ground, for instance in the formulation of general theories of proportion and harmony, detailed most specifically in architecture and music. But the full development of extended, philosophical reflection on Aesthetics did not begin to emerge until the widening of leisure activities in the eighteenth century. Therefore it is important, first of all, to have some sense of how Kant approached the subject. Criticisms of his ideas, and alternatives to them, will be presented later in this entry, but through him we can meet some of the key concepts in the subject by way of introduction. Kant is sometimes thought of as a formalist in art theory; that is to say, someone who thinks the content of a work of art is not of aesthetic interest. But this is only part of the story. But our enjoyment of, for instance, the arbitrary abstract patterns in some foliage, or a color field as with wild poppies, or a sunset was, according to Kant, absent of such concepts; in such cases, the cognitive powers were in free play. By design, art may sometimes obtain the appearance of this freedom: But when no definite concept is involved, as with the scattered pebbles on a beach, the cognitive powers are held to be in free play; and it is when this play is harmonious that there is the experience of pure beauty. There is also objectivity and universality in the judgment then, according to Kant, since the cognitive powers are common to all who can judge that the individual objects are pebbles. These powers function alike whether they come to such a definite judgment or are left suspended in free play, as when appreciating the pattern along the shoreline. This was not the basis on which the apprehension of pure beauty was obligatory, however. Perceiving the object in such cases is an end in itself; it is not a means to a further end, and is enjoyed for its own sake alone. It is because Morality requires we rise above ourselves that such an exercise in selfless attention becomes obligatory. Judgments of pure beauty, being selfless, initiate one into the moral point of view. The shared enjoyment of a sunset or a beach shows there is harmony between us all, and the world. Indeed, Kant took it from eighteenth century theorists before him, such as the moral philosopher, Lord Shaftesbury, and it has attracted much attention since: Aesthetic Concepts The eighteenth century was a surprisingly peaceful time, but this turned out to be the lull before the storm, since out of its orderly classicism there developed a wild romanticism in art and literature, and even revolution in politics. He said that they were not rule- or condition-governed, but required a heightened form of perception, which one might call taste, sensitivity, or judgment. His full analysis, however, contained another aspect, since he was not only concerned with the sorts of concepts mentioned above, but also with a set of others which had a rather different character. For one can describe works of art, often enough, in terms which relate primarily to the emotional and mental life of human beings. These are evidently not purely aesthetic terms, because of their further uses, but they are still very relevant to many aesthetic experiences. To be a bachelor, for instance, it is necessary to be male and unmarried, though of marriageable age, and together these three conditions are sufficient. Other theorists, such as Rudolph Arnheim and Roger Scruton, have held similar views. Scruton, in fact, discriminated eight types of aesthetic concept, and we shall look at some of the others below. There is a famous curve, for instance, obtained by the nineteenth century psychologist Wilhelm Wundt, which shows how human arousal is quite generally related to complexity of stimulus. We are bored by the simple, become sated, even over-anxious, by the increasingly complex, while in between there is a region of greatest pleasure. The dimension of complexity is only one objective measure of worth which has been proposed in this way. Thus it is now known, for instance, that judgments of facial beauty in humans are a matter of averageness and symmetry. Traditionally, unity was

taken to be central, notably by Aristotle in connection with Drama, and when added to complexity it formed a general account of aesthetic value. To say a work of art had a positive quality like humor, for instance, was to praise it to some degree, but this could be offset by other qualities which made the work not good as a whole. Beardsley defended all of his canons in a much more detailed way than his eighteenth century predecessor however: The discrimination enabled Beardsley to focus on the artwork and its representational relations, if any, to objects in the public world. The main debate over aesthetic value, indeed, concerns social and political matters, and the seemingly inevitable partiality of different points of view. The central question concerns whether there is a privileged class, namely those with aesthetic interests, or whether their set of interests has no distinguished place, since, from a sociological perspective, that taste is just one amongst all other tastes in the democratic economy. The sociologist Arnold Hauser preferred a non-relativistic point of view, and was prepared to give a ranking of tastes. High art beat popular art, Hauser said, because of two things: He defended this with a thorough philosophical analysis, rejecting the idea that there is such a thing as truth corresponding to an external reality, with the people capable of accessing that truth having some special value. Instead, according to Taylor, there are just different conceptual schemes, in which truth is measured merely by coherence internal to the scheme itself. Janet Wolff looked at this debate more disinterestedly, in particular studying the details of the opposition between Kant and Bourdieu. Aesthetic Attitudes Jerome Stolnitz, in the middle of the last century, was a Kantian, and promoted the need for a disinterested, objective attitude to art objects. The country yokel who jumps upon the stage to save the heroine, and the jealous husband who sees himself as Othello smothering his wife, are missing the fact that the play is an illusion, a fiction, just make-believe. Art is not the only object to draw interest of this pleasurable kind: In particular, the broadening of the aesthetic tradition in recent years has led theorists to give more attention to sport. David Best, for instance, writing on sport and its likeness to art, highlighted how close sport is to the purely aesthetic. But he wanted to limit sport to this, and insisted it had no relevance to ethics. Best saw art forms as distinguished expressly by their having the capacity to comment on life situations, and hence bring in moral considerations. No sport had this further capacity, he thought, although the enjoyment of many sports may undoubtedly be aesthetic. Intentions The traditional form of art criticism was biographical and sociological, taking into account the conceptions of the artist and the history of the traditions within which the artist worked. But in the twentieth century a different, more scientific and ahistorical form of literary criticism grew up in the United States and Britain: Like the Russian Formalists and French Structuralists in the same period, the New Critics regarded what could be gleaned from the work of art alone as relevant to its assessment, but their specific position received a much-discussed philosophical defense by William Wimsatt and Monroe Beardsley in This debate over intention in the literary arts has raged with full force into more recent times. A contemporary of Wimsatt and Beardsley, E. One reason he rejected intention, at times, was because he believed the artist might be unconscious of the full significance of the artwork. The debate also has a more practical aspect in connection with the visual arts. For it arises in the question of what devalues fakes and forgeries, and by contrast puts a special value on originality. There have been several notable frauds perpetrated by forgers of artworks and their associates. Nelson Goodman was inclined to think that one can always locate a sufficient difference by looking closely at the visual appearance. But even if one cannot, there remain the different histories of the original and the copy, and also the different intentions behind them. The relevance of such intentions in visual art has entered very prominently into philosophical discussion. Of course, representational art is still to be found to this day, but it is no longer pre-eminent in the way it once was. Plato first formulated the idea by saying that art is mimesis, and, for instance, Bateaux in the eighteenth century followed him, when saying: It is the same thing with painting, dance and music; nothing is real in their works, everything is imagined, painted, copied, artificial. It is what makes their essential character as opposed to nature. And Burke, Hutcheson, and Hume also promoted the idea that what was crucial in art were audience responses: But the full flowering of the theory of Expression, in the twentieth century, has shown that this is only one side of the picture. Bouwsma who have preferred such theories. Collingwood in the s took art to be a matter of

self-expression: Social theories of art, however, need not be based on materialism. One of the major social theorists of the late nineteenth century was the novelist Leo Tolstoy, who had a more spiritual point of view. The aesthetic, and the arts and crafts movements, in the latter part of the nineteenth century drew people towards the appropriate qualities. Eduard Hanslick was a major late nineteenth century musical formalist; the Russian Formalists in the early years of the revolution, and the French Structuralists later, promoted the same interest in Literature. Clive Bell and Roger Fry, members of the influential Bloomsbury Group in the first decades of the twentieth century, were the most noted early promoters of this aspect of Visual art. Only one answer seems possibleâ€" significant form. In each, lines and colors combined in a particular way; certain forms and relations of forms, stir our aesthetic emotions. Abstraction was a major drive in early twentieth century art, but the later decades largely abandoned the idea of any tight definition of art. The Institutional definition of art, formulated by George Dickie, is in this class: But this suggests that these two contemporary definitions, like the others, merely reflect the historical way that art developed in the associated period. Certainly traditional objective aesthetic standards, in the earlier twentieth century, have largely given way to free choices in all manner of things by the mandarins of the public art world more recently. Expression Response theories of art were particularly popular during the Logical Positivist period in philosophy, that is, around the s and s. Science was then contrasted sharply with Poetry, for instance, the former being supposedly concerned with our rational mind, the latter with our irrational emotions. Thus the noted English critic I. Richards tested responses to poems scientifically in an attempt to judge their value, and unsurprisingly found no uniformity. We are now more used to thinking that the emotions are rational, partly because we now distinguish the cause of an emotion from its target. If one looks at what emotions are caused by an artwork, not all of these need target the artwork itself, but instead what is merely associated with it. So what the subjective approach centrally overlooks are questions to do with attention, relevance, and understanding. Hospers, following Bouwsma, claimed that the sadness of some music, for instance, concerns not what is evoked in us, nor any feeling experienced by the composer, but simply its physiognomic similarity to humans when sad: People who are sad move more slowly, and when they speak they speak softly and low. The discriminations do not stop there, however. Guy Sircello, against Hospers, pointed out first that there are two ways emotions may be embodied in artworks: Thus, a picture may be sad not because of its mood or color, but because its subject matter or topic is pathetic or miserable. That point was only a prelude, however, to an even more radical criticism of Embodiment theories by Sircello. Communication theorists all combine the three elements above, namely the audience, the artwork, and the artist, but they come in a variety of stamps. Bell and Fry saw no such social purpose in art, and related to this difference were their opposing views regarding the value of aesthetic properties and pleasure. Communication theorists generally compare art to a form of Language. Langer was less interested than the above theorists in legislating what may be communicated, and was instead concerned to discriminate different art languages, and the differences between art languages generally and verbal languages.

Chapter 7 : Harmony - Wikipedia

Musically speaking, the soundtrack contains an unusually large number of tracks for this era of film song, including two different versions of the best-known songs 'Ishq Bina Kya Jeena' [What is life without love?] and 'Taal Se Taal Mila' [Meeting of the rhythms].

Buy the book Review by Ken Blacklock This anthology contains the thoughts of three important composers at a pivotal time in the development of modern music. Connecting Threads All three composers are somewhat tedious writers. Debussy and Ives, however, can be occasionally forgiven thanks to their sense of humor. Perhaps this is suitable for two composers who were critical of the traditional, symmetrical approach to form in music. A few figures from the previous century haunt all three works, particularly Beethoven and Wagner. Wagner mostly serves as an example of where music has gone wrong; Beethoven, an example of true genius. Busoni and Ives both discuss a possible "music of the future. One may be able to listen to his music with new ears. The first two articles recall meetings with a strongly opinionated man referred to as "Monsieur Croche the Dilettante Hater. The other articles mostly concern specific composers and conductors, and other related topics. Emotions not Words Debussy, like every great artist, reserves his sharpest remarks for the critics and other writers on music. The article on The Symphony, begins, "A fog of verbiage and criticism surrounds the Choral Symphony," p. These works are created from pure emotion felt by the composer when faced with the miracle of nature. And far down below is all talk about art and beauty. Such lip service has not been denied to Wagner Great music is written from the depths of the soul. The great artist attempts to recreate beauty by transforming his feelings into music. Music is weakened by concerns about how others may feel about it. This enigmatic beauty is trampled by the unrecognizing masses who are in search of quick thrills and whistleable melodies. Adherence to tradition leads to dull, worn-out music. Debussy shows his respect for the great masters, but he is critical of audiences, conductors, composers, and even performers who rely on formulas for their art in place of seeking out their own truths. Music was Born Free Busoni suggests that art-works consist of spirit, emotion, humanity, form, manner, and "the flavor of the epoch. Spirit, emotion, and humanity are human constants. When a composer creates a successful artwork it endures beyond changing fashions because it has successfully imitated nature and interpreted human feelings. Busoni enters into an attack on "classics," "hallowed traditions," rules, principles, and laws in music. Then, with a statement reminiscent of Rousseau, he states that "Music was born free; and to win freedom is its destiny. Absolute Music Busoni is critical of so-called "absolute music" as well as "program-music. Busoni claims that absolute music also lacks freedom because it is confined to preconceived symmetrical forms. Modern composers, however, are held back by the restrictive forms, which have hardened over time. Compositions not defined by a program or a symmetrical form, but rather compositions created out of the natural development of a motive. The composer of this third kind of music does not know where the motive will lead when he begins his work. He simply follows its natural development. When a musician improvises he is attempting to capture musical inspiration as he envisions it. Thus, improvisation is closer to the original source of inspiration than a written composition, which is removed by both time and notation. But notation is to improvisation as the portrait to the living model. It is for the interpreter to resolve the rigidity of the signs into primitive emotion. Musical performance is a recreation of this improvisation and thus the performer must enter deeply into the original inspiration to recreate it for the listener. The composer, the improviser, and the performing artist all make their own laws as required to recreate the inspiration. Busoni praises "the Rest and the Hold Pause ," which "consummate players, improvisers," employ as "instruments of expression. Silence is a womb that gives birth to clear, unspoiled musical thoughts. Silence is the canvas that allows the listener to appreciate the approximations of an inspiration hinted at by color and shape. A Possible Music of the Future Busoni envisions a music of the future freed from the restraints of the scale system used traditionally by "classical" composers. The problem is not so much one of tonality, but one of limited scope, which in turn limits the possibilities of expression. Our

octave is arbitrarily divided into twelve equidistant degrees. And, even these two are in reality two aspects of a single scale system. They both present the same face, now more joyous, now more serious; and a mere touch of the brush suffices to turn the one into the other. But, why limit musical expression to this? Busoni points out that Liszt, Debussy, and even Richard Strauss have experimented with different arrangements. Busoni predicts a further division of the octave into smaller degrees, " The essays delve into the question of what might be the source of inspiration for musical compositions in general, then discusses the specific ideas that inspired each movement of the sonata. The prologue can be summarized as a single question: What is music by itself capable of expressing? The answer is hinted at in the verbal descriptions of Emerson, Hawthorne, the Alcotts, and Thoreau that follow. The implication is that we should listen for the musical expression of these ideas in the sonata itself. But, this also indicates that Ives felt the need to intellectually explain the music, perhaps out of fear that the musical ideas would be misunderstood by the listener. A related question is: Can music express something timeless that will mean something to all men at all places and all times, or is it restricted to the current moods of the current time and place? Ives attempts to answer this second section in the epilogue. Along the way, Ives eliminates a few of the standard answers regarding art. And, finally Ives tells us why he needs to tell us about his sonata. Emerson and Thoreau Emerson, as the leading transcendentalist, receives the first movement of the sonata and the longest stretch of writing about his vision in the essays. The essays on Emerson and Thoreau are particularly important to understanding Ives sense of his own music and his mission as a composer. It becomes gradually clear that Ives envisions a music that transcends time and place; a prophetic music that transcends words. Thoreau cultivated this pure source of inspiration, which for him, was expressed in poetry. Ives tries to capture the spirit of Walden pond at a specific point in time with the belief that his expression of that experience will transcend that time and place and have meaning for whoever takes the time to listen. Epilogue After discussing the individual sources of inspiration for each movement of his sonata, Ives admits "the futility of attempting to trace the source or primal impulse of an art-inspiration," pp. It is this alone that makes some music sound modern and other music dated. Something makes our hypotheses seem purely speculative if not useless. It is men like Bach and Beethoven. Substance and Manner A substantial part of the epilogue is devoted to a discussion of "substance" and "manner" in music. Manner has nothing to do with it. So-called nationalistic music is overly concerned with manner and is thus ridiculous unless it somehow captures "a true pigment of the universal color," p. It is because of the difference between manner and substance that "Beethoven is always modern and Strauss always medieval. Debussy calls for us to "shake off the ancient dust of tradition. Has music successfully freed itself from the dust of tradition? Has music won its freedom? Can we imagine a music common to all mankind? Has the "music of the future" arrived, or is it still on its way?

Chapter 8 : Grade Five - Content Standards (CA Dept of Education)

trill Musical ornament that consists of two notes a half step or a whole step apart played in rapid alternation. trio (1) A work for three performers; (2) the second section of a Baroque dance such as a minuet.

French Baroque music composer Michel Richard Delalande â€" , pen in hand. In many cultures, including Western classical music, the act of composing also includes the creation of music notation , such as a sheet music "score" , which is then performed by the composer or by other singers or musicians. In popular music and traditional music, the act of composing, which is typically called songwriting, may involve the creation of a basic outline of the song, called the lead sheet , which sets out the melody , lyrics and chord progression. In classical music, the composer typically orchestrates his or her own compositions, but in musical theatre and in pop music, songwriters may hire an arranger to do the orchestration. In some cases, a songwriter may not use notation at all, and instead compose the song in her mind and then play or record it from memory. In jazz and popular music, notable recordings by influential performers are given the weight that written scores play in classical music. Even when music is notated relatively precisely, as in classical music, there are many decisions that a performer has to make, because notation does not specify all of the elements of music precisely. The process of deciding how to perform music that has been previously composed and notated is termed "interpretation". Composers and songwriters who present their own music are interpreting their songs, just as much as those who perform the music of others. The standard body of choices and techniques present at a given time and a given place is referred to as performance practice , whereas interpretation is generally used to mean the individual choices of a performer. A work of music can have multiple composers, which often occurs in popular music when a band collaborates to write a song, or in musical theatre, when one person writes the melodies, a second person writes the lyrics, and a third person orchestrates the songs. A piece of music can also be composed with words, images, or computer programs that explain or notate how the singer or musician should create musical sounds. Examples range from avant-garde music that uses graphic notation , to text compositions such as Aus den sieben Tagen , to computer programs that select sounds for musical pieces. A more commonly known example of chance-based music is the sound of wind chimes jingling in a breeze. The study of composition has traditionally been dominated by examination of methods and practice of Western classical music, but the definition of composition is broad enough to include the creation of popular music and traditional music songs and instrumental pieces as well as spontaneously improvised works like those of free jazz performers and African percussionists such as Ewe drummers. Musical notation Sheet music is written representation of music. This is a homorhythmic i. When music is written down, the pitches and rhythm of the music, such as the notes of a melody , are notated. Music notation also often provides instructions on how to perform the music. For example, the sheet music for a song may state that the song is a "slow blues" or a "fast swing", which indicates the tempo and the genre. Written notation varies with style and period of music. In the s, notated music is produced as sheet music or, for individuals with computer scorewriter programs, as an image on a computer screen. In ancient times, music notation was put onto stone or clay tablets. To perform music from notation, a singer or instrumentalist requires an understanding of the rhythmic and pitch elements embodied in the symbols and the performance practice that is associated with a piece of music or a genre. In Western art music, the most common types of written notation are scores, which include all the music parts of an ensemble piece, and parts, which are the music notation for the individual performers or singers. In popular music, jazz, and blues, the standard musical notation is the lead sheet , which notates the melody, chords, lyrics if it is a vocal piece , and structure of the music. Fake books are also used in jazz; they may consist of lead sheets or simply chord charts, which permit rhythm section members to improvise an accompaniment part to jazz songs. Scores and parts are also used in popular music and jazz, particularly in large ensembles such as jazz " big bands. Tabulature was also used in the Baroque era to notate music for the lute , a stringed, fretted instrument. Musical improvisation Musical improvisation is the creation

of spontaneous music, often within or based on a pre-existing harmonic framework or chord progression. Improvisation is the act of instantaneous composition by performers, where compositional techniques are employed with or without preparation. Improvisation is a major part of some types of music, such as blues , jazz , and jazz fusion , in which instrumental performers improvise solos, melody lines and accompaniment parts. In the Western art music tradition, improvisation was an important skill during the Baroque era and during the Classical era. In the Baroque era, performers improvised ornaments and basso continuo keyboard players improvised chord voicings based on figured bass notation. In the Classical era, solo performers and singers improvised virtuoso cadenzas during concerts. However, in the 20th and early 21st century, as "common practice" Western art music performance became institutionalized in symphony orchestras, opera houses and ballets, improvisation has played a smaller role. At the same time, some modern composers have increasingly included improvisation in their creative work. In Indian classical music , improvisation is a core component and an essential criterion of performances. Music theory Music theory encompasses the nature and mechanics of music. In a grand sense, music theory distills and analyzes the parameters or elements of music â€" rhythm, harmony harmonic function , melody , structure, form , and texture. Broadly, music theory may include any statement, belief, or conception of or about music. Some have applied acoustics , human physiology , and psychology to the explanation of how and why music is perceived. Aspect of music Music has many different fundamentals or elements. Depending on the definition of "element" being used, these can include: All three curriculums identify pitch, dynamics, timbre and texture as elements, but the other identified elements of music are far from universally agreed. Below is a list of the three official versions of the "elements of music": The inter-related dimensions of music are listed as: The two most common contexts can be differentiated by describing them as the "rudimentary elements of music" and the "perceptual elements of music". Rudimentary elements In the s, the phrases "the elements of music" and "the rudiments of music" were used interchangeably. A definition which most accurately reflects this usage is: Perceptual elements Since the emergence of the study of psychoacoustics in the s, most lists of elements of music have related more to how we hear music than how we learn to play it or study it. Seashore, in his book Psychology of Music, [17] identified four "psychological attributes of sound". He did not call them the "elements of music" but referred to them as "elemental components" p. Nonetheless these elemental components link precisely with four of the most common musical elements: Although writers of lists of "rudimentary elements of music" can vary their lists depending on their personal or institutional priorities, the perceptual elements of music should consist of an established or proven list of discrete elements which can be independently manipulated to achieve an intended musical effect. It seems at this stage that there is still research to be done in this area. Analysis of styles Funk places most of its emphasis on rhythm and groove , with entire songs based around a vamp on a single chord. Pictured are the influential funk musicians George Clinton and Parliament Funkadelic in Some styles of music place an emphasis on certain of these fundamentals, while others place less emphasis on certain elements. To give one example, while Bebop -era jazz makes use of very complex chords, including altered dominants and challenging chord progressions , with chords changing two or more times per bar and keys changing several times in a tune, funk places most of its emphasis on rhythm and groove , with entire songs based around a vamp on a single chord. While Romantic era classical music from the mid- to lates makes great use of dramatic changes of dynamics, from whispering pianissimo sections to thunderous fortissimo sections, some entire Baroque dance suites for harpsichord from the early s may use a single dynamic. To give another example, while some art music pieces, such as symphonies are very long, some pop songs are just a few minutes long. Description of elements Pitch and melody Pitch is an aspect of a sound that we can hear, reflecting whether one musical sound, note or tone is "higher" or "lower" than another musical sound, note or tone. We can talk about the highness or lowness of pitch in the more general sense, such as the way a listener hears a piercingly high piccolo note or whistling tone as higher in pitch than a deep thump of a bass drum. We also talk about pitch in the precise sense associated with musical melodies , basslines and chords. Precise pitch can only be determined in sounds that have a frequency that is clear and stable enough to

distinguish from noise. For example, it is much easier for listeners to discern the pitch of a single note played on a piano than to try to discern the pitch of a crash cymbal that is struck.

Chapter 9 : Aesthetic Analyze of Computer Music

Stack Exchange network consists of Q&A communities including Stack Overflow, the largest, most trusted online community for developers to learn, share their knowledge, and build their careers.

Apart from this categorization, intervals can also be divided into consonant and dissonant. As explained in the following paragraphs, consonant intervals produce a sensation of relaxation and dissonant intervals a sensation of tension. In tonal music, the term consonant also means "brings resolution" to some degree at least, whereas dissonance "requires resolution". The consonant intervals are considered the perfect unison , octave , fifth , fourth and major and minor third and sixth, and their compound forms. An interval is referred to as "perfect" when the harmonic relationship is found in the natural overtone series namely, the unison 1: The other basic intervals second, third, sixth, and seventh are called "imperfect" because the harmonic relationships are not found mathematically exact in the overtone series. In classical music the perfect fourth above the bass may be considered dissonant when its function is contrapuntal. Other intervals, the second and the seventh and their compound forms are considered Dissonant and require resolution of the produced tension and usually preparation depending on the music style. Note that the effect of dissonance is perceived relatively within musical context: A tritone the interval of the fourth step to the seventh step of the major scale, i. Chords and tension[edit] Main articles: Chord music and Consonance and dissonance In the Western tradition, in music after the seventeenth century, harmony is manipulated using chords , which are combinations of pitch classes. In tertian harmony, so named after the interval of a third, the members of chords are found and named by stacking intervals of the third, starting with the "root", then the "third" above the root, and the "fifth" above the root which is a third above the third , etc. Note that chord members are named after their interval above the root. Dyads , the simplest chords, contain only two members see power chords. A chord with three members is called a triad because it has three members, not because it is necessarily built in thirds see Quartal and quintal harmony for chords built with other intervals. Depending on the size of the intervals being stacked, different qualities of chords are formed. In popular and jazz harmony, chords are named by their root plus various terms and characters indicating their qualities. To keep the nomenclature as simple as possible, some defaults are accepted not tabulated here. In many types of music, notably baroque, romantic, modern and jazz, chords are often augmented with "tensions". A tension is an additional chord member that creates a relatively dissonant interval in relation to the bass. Following the tertian practice of building chords by stacking thirds, the simplest first tension is added to a triad by stacking on top of the existing root, third, and fifth, another third above the fifth, giving a new, potentially dissonant member the interval of a seventh away from the root and therefore called the "seventh" of the chord, and producing a four-note chord, called a " seventh chord ". Depending on the widths of the individual thirds stacked to build the chord, the interval between the root and the seventh of the chord may be major, minor, or diminished. The interval of an augmented seventh reproduces the root, and is therefore left out of the chordal nomenclature. For a more complete exposition of nomenclature see Chord music. Continuing to stack thirds on top of a seventh chord produces extensions, and brings in the "extended tensions" or "upper tensions" those more than an octave above the root when stacked in thirds , the ninths, elevenths, and thirteenths. This creates the chords named after them. Note that except for dyads and triads, tertian chord types are named for the interval of the largest size and magnitude in use in the stack, not for the number of chord members: Extensions beyond the thirteenth reproduce existing chord members and are usually left out of the nomenclature. Complex harmonies based on extended chords are found in abundance in jazz, late-romantic music, modern orchestral works, film music, etc. Typically, in the classical Common practice period a dissonant chord chord with tension resolves to a consonant chord. Harmonization usually sounds pleasant to the ear when there is a balance between the consonant and dissonant sounds. In simple words, that occurs when there is a balance between "tense" and "relaxed" moments. In this way the composer ensures introducing tension smoothly, without disturbing the listener. Once the piece

reaches its sub-climax, the listener needs a moment of relaxation to clear up the tension, which is obtained by playing a consonant chord that resolves the tension of the previous chords. The clearing of this tension usually sounds pleasant to the listener, though this is not always the case in late-nineteenth century music, such as Tristan und Isolde by Richard Wagner. In a psychological approach, consonance is a continuous variable. Consonance can vary across a wide range. A chord may sound consonant for various reasons. One is lack of perceptual roughness. Critical bandwidth lies between 2 and 3 semitones at high frequencies and becomes larger at lower frequencies. The roughness of two simultaneous harmonic complex tones depends on the amplitudes of the harmonics and the interval between the tones. The roughest interval in the chromatic scale is the minor second and its inversion the major seventh. For typical spectral envelopes in the central range, the second roughest interval is the major second and minor seventh, followed by the tritone, the minor third major sixth , the major third minor sixth and the perfect fourth fifth. The harmonious major triad is composed of three tones. Their frequency ratio corresponds approximately 6: In real performances, however, the third is often larger than 5: Measurements of frequencies in good performances confirm that the size of the major third varies across this range and can even lie outside it without sounding out of tune. Thus, there is no simple connection between frequency ratios and harmonic function. The second reason is perceptual fusion. A chord fuses in perception if its overall spectrum is similar to a harmonic series. According to this definition a major triad fuses better than a minor triad and a major-minor seventh chord fuses better than a major-major seventh or minor-minor seventh. These differences may not be readily apparent in tempered contexts but can explain why major triads are generally more prevalent than minor triads and major-minor sevenths generally more prevalent than other sevenths in spite of the dissonance of the tritone interval in mainstream tonal music. Of course these comparisons depend on style. The third reason is familiarity. Chords that have often been heard in musical contexts tend to sound more consonant. This principle explains the gradual historical increase in harmonic complexity of Western music. For example, around unprepared seventh chords gradually became familiar and were therefore gradually perceived as more consonant. Western music is based on major and minor triads. The reason why these chords are so central is that they are consonant in terms of both fusion and lack of roughness. They lack roughness because they lack major and minor second intervals. No other combination of three tones in the chromatic scale satisfies these criteria. Consonance and dissonance in balance[edit] Post-nineteenth century music has evolved in the way that tension may be less often prepared and less formally structured than in Baroque or Classical periods, thus producing new styles such as post-Romantic harmony, impressionism , pantonality, jazz and blues , where dissonance may not be prepared in the way seen in "common practice era" harmony. In a jazz or blues song, the tonic chord that opens a tune may be a dominant seventh chord. A jazz song may end on what in Classical music is a quite dissonant chord, such as an altered dominant chord with a sharpened eleventh note.