

Calling All Musicians!

Studying Music: A Taste of the First Year

Ready to become a fully-fledged music geek? Grab your headphones and dive into this sampler of some of what you can discover on the first year of your music degree.

Below, you'll find some suggestions for listening, reading, and maybe even a few things that'll make you hear and make music a little differently.

Debates in Music – “Are Video Games Musical Instruments?”

In courses like 'Contemporary Debates in Music', we develop our understanding of music by discussing some provocative statements or ideas. This year, one of our questions was whether video games can be considered musical instruments.

We use the same word 'play' to describe the action of engaging with games as playing instruments. Is this a linguistic anomaly, or is there more going on? We know that both games and instruments are interactive. A game responds to the player's actions, and that usually means that the player is able to control the music in some way (even if that's just to a very limited degree).

Obviously, there are 'music games' like *Guitar Hero*, where the gameplay is based on the conceit of musical performance. In others like *Ocarina of Time*, playing an instrument in the world of the game is an important aspect of the game's story and action. But are these explicitly musical moments the only times games can be considered like instruments?

In other games, like many stealth games, music reacts to the player's actions as they play the game. When players take actions, musical changes occur. So even outside 'music games', we could argue that gamers are performers because they cause the arrangement of the musical material during the gameplay. Since the game plays out differently each time, perhaps players are even a little like composers.

Of course, we need to be careful not to overstate the case. Musical interaction in games is normally very restricted. The possibilities are highly confined by the game mechanics. Similarly, playing a game with the purpose of



Is there any reason we use the same word 'play' for both games and music?

making music is not normally the way players interact with the games – it's a secondary aspect of 'winning' the game. That's not to say, however, that even winning-focused players don't listen to the music: After all, music often gives players hints about the action.

The bigger question is 'What does thinking about music and games together tell us?' Does it emphasize the role of interactivity and participation in music, or the significance of fun, reward, and success? What about the idea of playing within particular rules and structures, and even ideas of virtuosity? In any case, even if they are not instruments, perhaps games still provide musical experiences to the billions of people who play them.

Watch: *Reformat the Planet* (2008 film about chiptune music, clips on YouTube).

Read: Michael Austin, 'Taking Note of Music Games' from Austin (ed.) *Music Video Games* (Bloomsbury, 2016). [Here](#).

Play: *Chime/Chime Sharp* (free demo); *Crypt of the Necrodancer* (free demo).

Listen: *Video Games Live* (2015).

Chiptune

Apart from the music written specifically for games, there is a genre of music called 'chiptune', which uses old video game technology as instruments to make new compositions. Either this music uses hacked original hardware and soundchips of old consoles, as in the picture to the right, or it emulates (copies) the sounds using modern synthesizers. We can also find chiptune elements in modern pop like Charli XCX and Drake.

Chiptune is more than just a style, it's a community of musicians and modders. Part of the appeal is the sharing of tips and techniques between musicians, as they find new ways to write music for old technology that can be very challenging to use. This community and online culture is an important part of why people continue to make music using old video game technology. Even if we don't agree that video games are normally musical instruments, we might say that they can be *adapted* into instruments in situations like this.



This Nintendo NES console has been modified into a MIDI instrument for writing new music.



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History of Music – Bach's Cantatas

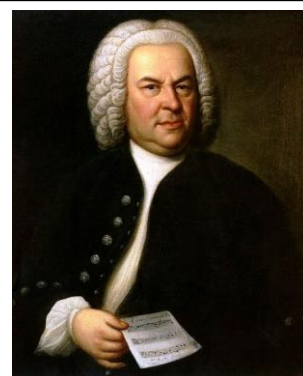
Apart from composing keyboard music, Passions and concerti, Johann Sebastian Bach wrote over 200 church cantatas.

These cantatas were written for weekly services at St Thomas Church (Thomaskirche) in Leipzig. Bach's music was integrated into the service, and the music and words normally had a thematic link to the Gospel for that week. They were written for choir, with an orchestra of strings, continuo (accompaniment), oboes, bassoons, sometimes with flutes, trumpets, timpani on special occasions. The Cantatas featured choruses, solo arias, recitative and instrumental passages. The cantatas included a chorale, a hymn that the congregation would join in with. Historians continue to debate the specifics of the performances, including how many singers would have sung each part, leading to very different recordings of the same pieces.

Cantata 140, Wachet Auf (1731)

This cantata was written for the 27th Sunday after Trinity in 1731. The opening, middle and last movements are based on an earlier hymn text and melody, 'Wachet auf, ruft uns die Stimme' by Philipp Nicolai. In the first movement, Bach splits up the original hymn tune (A/B) and combines it with his own themes.

Wa - chet auf, ruft uns die Stim - me, Der Wach - ter sehr hoch mit
Mit - ter - nacht heisst die - se Stun - de, Sie ru - fen uns mit
auf der Zin - ne, Wach auf, du Stadt Je - ru - sa - lem:
hel - lem Mun - de, Wo seid ihr, klu - gen Jung - frau - en?
Wohl - auf, der Braut - gam kommt, Steht auf, die Lam - pen nehmt, Hal - le - lu - jah, Macht
euch be - reit zur Hochs - zeits - freud, Ihr mus - set ihm ent - ge - gen - geh'n.



Johann Sebastian Bach
(1685–1750)

1–16	Bach's themes
17–53	Hymn A
53–69	Bach's themes
69–105	Hymn A
105–116	Bach's themes
117–189	Hymn B
189–205	Bach's themes

Form of the first movement of Wachet Auf: Bach interleaves the hymn tune with his own new music.

Read: Julian Johnson, *Classical Music: A Beginner's Guide* (Richmond, 2009). Chapter 3: Sounding the Human, 1600–1750.

Listen: Compare different versions of Bach, Cantata BWV 140 'Wachet auf' (try, for example, versions by Joshua Rifkin and Karl Richter). Listen for the differences of tempo, performance style and orchestration. [Score available here.](#)

Performance and Ensembles

Music can't exist outside time. When we hear music, even if it is a recording playing, it is always something happening at a particular time and place. Music always sounds in context. When we perform music, we are enacting a musical event.

While it's easy to think of notes on the page as 'the music', that's just a guide for how to make the music in performance.

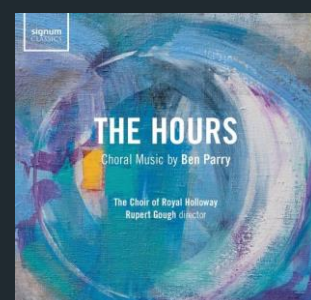
Some notations are very specific (like the music of Brian Ferneyhough, who writes highly detailed scores). Other notation is far less specific. Sometimes that can be deliberate, where

composers want to make performers to make decisions about the music (as in the music of our own Nina Whiteman, who has devised notation in the form of mazes).

In much older music, knowledge of how to interpret the notation might be lost to time.

Listen/Watch: Brian Ferneyhough's percussion piece 'Bone Alphabet', and [the composer teaching it](#). Is it easier to understand sonically than on the page?

An example of Brian Ferneyhough's highly specific scoring ('no time at all')



The Choir of Royal Holloway recently recorded an album of new music by Ben Parry called [The Hours](#).

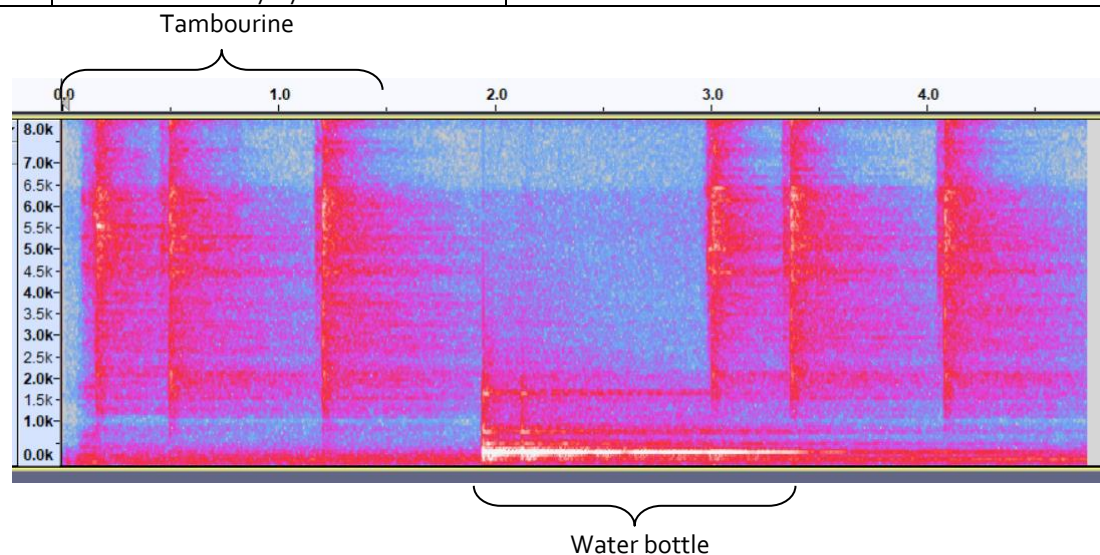
This music blends traditional aspects of choral music with more modern techniques. In 'Nunc Dimittis', listen out for the 7/8 metre and the use of a ground (repeating) bass which structures the piece.

Analysing Music

Fundamentally, analysing music is all about using techniques and tools to gain insight into a piece of music or a musical practice. There are huge variety of approaches to analysing music, and each method reveals/emphasizes certain aspects and doesn't show others. In analysis, it is more helpful to think about what analyses are useful/less useful, rather there being one 'correct' answer. Here are just some of the techniques and approaches to analysing music, some of which may be unfamiliar to you. We can apply them to the same music, to illustrate how each approach tell us something different. Let's consider them in the context of the Beach Boys record *Pet Sounds*, and particularly the song 'God Only Knows'.

Pet Sounds is a 1966 album by the Beach Boys. Group member Brian Wilson wrote the music, with lyrics by Tony Asher. The record is notable for its experimental production and unconventional musical processes.

Motivic/thematic analysis	This approach examines how musical fragments are repeated and changed across a piece or set of pieces, and the effect of such processes.	Though <i>Pet Sounds</i> doesn't use directly-repeated melodies between songs, the whole album has a sense of musical unity by emphasizing arch-shaped melodies in the treble, and stepwise descending bass parts. Listen out for them. The shapes are particularly noticeable in the doo-wop vocals in 'God Only Knows'.
Harmonic analysis	Examining the underlying harmony of music is particularly helpful for understanding how a sense of musical departure and arrival is created.	'God Only Knows' keeps the listener guessing because it seems to be in two keys at once (E major and A major): the verse seems to centre on E, the chorus on A. This ambiguity mirrors the uncertainty in the song's lyrics.
Transformational theory	An approach sometimes called neo-Riemannian theory emphasizes the movements between chords: how one is 'transformed' into another by changing the notes.	The vocal harmonies of the Beach Boys often have more to do with how the music moves smoothly by step, rather than going to or from a 'home' tonic chord. In 'God Only Knows', the unusual harmonic movement from verse to chorus doesn't sound awkward to our ears because notes are kept in common between them. See also 'Good Vibrations' for this effect.
Soundwave analysis	A variety of analytical techniques can be used to analyze the waveforms of the sound recordings. This can be particularly useful for analyzing timbres and differences that are difficult to identify by ears alone.	The picture below shows the opening of 'Caroline, No', which features a tambourine and a water bottle being hit. This spectrogram shows higher frequencies higher in the picture and louder frequencies in highlight. We can clearly see how the bright, sharp tambourine contrasts with the echoing lower water bottle.



The opening percussion of 'Caroline, No' from *Pet Sounds*

Read: Rachel Beckles Willson, 'Music Theory and Analysis', in J.P.E. Harper-Scott and Jim Samson (eds), *Introduction to Music Studies* (Cambridge: Cambridge University Press, 2009), 25–42.

For more on *Pet Sounds*, try Philip Lambert, 'Brian Wilson's *Pet Sounds*', *Twentieth-Century Music* 5/1 (2008), 109–133. Available on the author's site [here](#).

Listen: Listen to the same songs on the stereo and mono versions of *Pet Sounds*. How do they sound different to you? Why might fans care about the differences? Which do you prefer and why? How would you describe those differences? How else might you approach the music? For example, you might interpret the lyrics, analyse historical information about the recording, and so on.

Music in Cultures from Around the World

Studying music from around the world not only allows to find out about music and other cultures, but it also makes us rethink our own assumptions about music. We can explore new ways of understanding and engaging with music.

The word 'ethnomusicology' is often used to refer to the study of music in its cultural context. It is particularly associated with researching music in non-Western cultures, but ethnomusicologists can work on any kind of music.

By researching music of other cultures, we can appreciate the variety of ways that music is bound up with the human experience. For example, Henry Stobart has written about two general categories of music. 'Listening musics' are created and performed for listeners and often come with particular kinds of connoisseurs in mind. We might think of this like the Western concert hall, or North Indian classical music as falling into this category. On the other hand, we can (Stobart argues) think of 'doing musics' where the emphasis is on participation: 'the value of the music lies primarily in the sense of well-being and shared or individual expression it involves, rather than its acoustic result.' As an example, we can consider some of the music of the Bolivian Andes, which is bound up with seasons, rituals, battles and feasts. Much of this music is written for large groups of performers. Some instruments like the panpipe Jula Julas, don't have a full set of notes, so require multiple performers to play a complete melody. Of course, 'listening' and 'doing' musics are not strict divisions but they highlight the different ways we can engage with music in culture.

Watch: Henry Stobart [discuss his experiences of music in the Andes](#).



Henry Stobart in the Bolivian Andes.

See Henry Stobart, 'World Musics', in J.P.E. Harper-Scott and Jim Samson (eds), *Introduction to Music Studies* (Cambridge: CUP, 2009), 97–118.

Hip Hop Around the World

Hip hop originated in a specific time and place – late-1970s New York. Arising from the mixing of cultures and shaped by the socio-economic factors of the context, it had particularly distinctive qualities: rapping, DJ's turntablism skills and all of the attendant dancing and artistic culture. Yet hip hop quickly spread far beyond North America. As hip hop moved around the world, it was adapted to the new contexts, while maintaining a link with its origins. It is at once a 'global' music, and at the same time 'local'.

USA: *The Message* (Grandmaster Flash, 1982) – blends social realism with party lyrics. Shows hip hop can be a protest music.

Japan: Kaku-Sei (DJ Krush, 1999) – Blends traditional Japanese instrumentation with hip hop sampling techniques and backbeat; and uses heterophony (multiple instruments play variations of same material, often out of synchrony with each other).

Senegal: Bayi Yoon (Daara J, 2010) – Include multiple languages and traditions, aim to educate listeners.

France: *Pour un Nouveau Massacre* (Suprême NTM, 1993) – Protests treatment of poor in French suburbs, they also duet with Nas. In each example, consider what is similar, and what is different, from American hip hop. What does that tell us about the musical transmission?

Composition

When you start composing at university, as well as refining your technical craft and skills, we challenge you to find new ways to express yourself through music. One way to develop your voice is by experimenting with different aspects of your musical language. Here are some ideas for you to try:

Write a piece to respond to a painting or photograph. What aspects will you choose to respond to in your music, and how will you do that? (For example, consider colour, light/shade, emotive content, the perspective, what is depicted, how your eye moves over the image, impressions of motion or stasis, and so on.)

- For example, the first movement of Einojuhani Rautavaara's *Symphony 6* was inspired by Vincent van Gogh's 'Starry Night'.

Explore tonality by constructing your own scale, and use that as the basis of your piece.

- Debussy's *Nuages* uses the 'acoustic scale' (0,1,3,4,6,8,10) as its foundation.

Try composing a piece that uses a different form or structure to your normal process

- For instance, Nina Whiteman's maze pieces ask the player to explore the score as a maze or game.

You have been hired to write music for a sequel or video game adaptation of a film (of your choice). You have to make your music match the style of the original, but because of legal issues, you cannot quote the original themes. Listen to the original, and try to work out the composer's style for that film, including instrumentation, textures, melodic style, harmonies, and other stylistic elements.

- Listen to how Shirley Walker replicates Danny Elfman's style when she writes music for the *Animated Batman* series in the style of Elfman's 1989 film score for *Batman*.
- Listen to how Richard Jacques makes his *James Bond 007: Blood Stone* score sound like James Bond without directly quoting the theme.

If you are writing for a video game, write your piece as a loop with three layers of increasing intensity, which can be added or omitted as the action progresses. Consider:

- Instrumentation – which instruments will be in which layers? Will some layers duplicate instruments?
- Register – will layers add higher or lower instruments?
- Rhythm – will layers increase the rhythmic density?
- Texture – will layers use fragments or constant textures? Chords or counterpoint?
- Melody – will there be a melody? Which layer will it be in?
- Dynamics – how will the layers add to the dynamics?
- Harmony – how can you make sure the layers don't clash?
- Structure – how will the cue start and end?