

## TECH1002-17 Social Media & Technology

### Lecture Week Seven: Music Has Always Been Social

	<b>Introduction:</b>
001	<p><b>Music Has Always Been Social:</b> People sitting in caves chanting and singing is a social experience...</p> <p>“Understanding that the origin of music before recorded history is unknown, we can logically deduce that the beginning of music came from naturally occurring sounds and rhythms. Body slaps, clapping, foot stomping, and other functions could be used to create patterns and repetition. Using voices to imitate animals and the sounds of nature led to the eventual creation of musical instruments to better reproduce those sounds” <a href="http://www.andrewlessermusic.com/wp-content/uploads/2011/11/Ancient-Music.pdf">http://www.andrewlessermusic.com/wp-content/uploads/2011/11/Ancient-Music.pdf</a></p>
002	<p><b>Noise – A Human History:</b> “During the Middle and Upper Palaeolithic, some 40,000 to 20,000 years ago, small groups of men, women and children – Neanderthals at first, then our most direct ancestors – would have gathered near the entrances of caves across Western and central Europe for shelter, and perhaps gone deep inside for rituals. These enclosed spaces have their own acoustic character: echoing voice, of course, but also intensifying them” (Hendy, 2013, p. 3). <a href="http://www.bbc.co.uk/programmes/p016bff9">http://www.bbc.co.uk/programmes/p016bff9</a> <a href="http://www.bbc.co.uk/programmes/p01671w6">http://www.bbc.co.uk/programmes/p01671w6</a> <a href="https://beta.prx.org/stories/100722">https://beta.prx.org/stories/100722</a></p>
003	<p><b>History Can Be Looked At In Different Ways:</b></p> <ul style="list-style-type: none"> <li>• Long List of Events, Technologies and Instances (Iterations)</li> <li>• Thematically or Epochs</li> <li>• Great Figures of Renown</li> <li>• The Clash of Ideology &amp; Ways of Life</li> </ul> <p><a href="https://youtu.be/LtHPhVhJ7Rs">https://youtu.be/LtHPhVhJ7Rs</a></p> <ul style="list-style-type: none"> <li>• Seldom is history examined from the mundane quality of everyday life...</li> </ul> <p><a href="http://www.youtube.com/watch?v=2DJgI2RgYUY">http://www.youtube.com/watch?v=2DJgI2RgYUY</a></p>
004	<p><b>Is Media History A Growing Pile of Debris?</b> “What is hyperbolised as a revolutionary train of events can be seen as a far more evolutionary and less transforming process” (Winston, 1998, p. 1).</p> <p>“The position taken here... is that Western civilisation over the past three centuries has displayed, despite enormous changes in detail, fundamental continuity – and it continues to do so” (Winston, 1998, p. 2).</p> <p>“The concept of the ‘Information Revolutions’ is implicitly historical, for how can one know that a situation has changed – has revolved – without knowing its previous state or position” (Winston, 1998, p. 2).</p>
005	<p>“An historical consciousness reveals the ‘Information Revolution’ to be largely an illusion, a rhetorical gambit and an expression of technological ignorance” (Winston, 1998, p. 2).</p> <p>“A German thought of the telegraph in the last years of the eighteenth century, three decades before the first working device. A Frenchman hypothesised the telephone in 1854, more than 20 years before Bell. The idea of television, which depended on the identification of the phenomenon of photoemission... was suggested in 1877. Bell Laboratory workers began worrying about transistors in the 1930s when solid state amplifiers had already been envisaged for a decade. Some of these thinkers went on to test their ideas ‘in the metal’; many did not. But more often than not their work was known to those who set about building devices” (Winston, 1998, p. 5).</p>
	<b>Recap:</b>
006	<p><b>We Have Also Sound Houses</b> “We have also sound houses, where we practice and demonstrate all sounds and their generation. We have harmonies which you have not, of quarter sounds and lesser slides of sounds.</p>

	<p>Divers instruments of music likewise to you unknown, some sweeter than any you have; together with bells and rings that are dainty and sweet. We represent small sounds as great and deep; likewise divers trembling and warblings of sounds, which in their original are entire.</p> <p>We represent and imitate all articulate sounds and letters, and the voices of beasts and birds. We have certain helps which set to the ear to do further the hearing greatly.</p> <p>We have also divers strange and artificial echoes, reflecting the voice many times, and as if it were tossing it; and some that give back the voice louder than it came, some shriller and some deeper; yea, some rendering the voice, differing in the letters or articulate sound from that they receive.</p> <p>We have also means to convey sounds in tubes and pipes, in strange lines and distances..." (Bacon, 1648).</p> <p><a href="http://imaginaryinstruments.org/sound-houses/">http://imaginaryinstruments.org/sound-houses/</a>  <a href="http://www.abc.net.au/radionational/programs/soundproof/we-have-sound-houses/5478918">http://www.abc.net.au/radionational/programs/soundproof/we-have-sound-houses/5478918</a></p>
007	<p><b>Folk Music:</b></p> <p>"A troubadour was originally a travelling musician. The early Medieval Troubadours travelled from one village to the next and many also travelled abroad. Some travelled to the major cities of Europe whilst other Medieval Troubadours travelled to the Holy Land accompanying the people who went on Crusade. The travelling of the early Medieval Troubadours allowed them to spread the latest news. The themes of the songs sung by the Medieval Troubadours mainly dealt with Chivalry and Courtly love - romantic ballads. The troubadour would play for royalty, lords and nobles. The themes of the songs sung by the Medieval Troubadours also dealt with chivalry and courtly love but they also told stories of far lands and historical events" <a href="http://www.medieval-life-and-times.info/medieval-music/troubadours.htm">http://www.medieval-life-and-times.info/medieval-music/troubadours.htm</a></p>
008	<p>"Let us now abandon these isolated incidents of 'spontaneous' transcriptions of melodies and descriptions of musical events, and devote ourselves to the publishes and followers of humanism who set out purposefully to collect folk songs for posterity and thus to make an impact on the culture of humanity" (Ling, 1997, p. 11).</p> <p>"Large numbers of fold songs were published with piano accompaniment in almost all European countries. These, along with all kinds of arrangements for keyboard, hard, guitar, and various ensembles, were central to the wide dissemination of folk music at the time" (Ling, 1997, p. 11).</p>
009	<p><b>Technology is Social:</b></p> <p>"We need to remember at this point once again that the technologist is a <b>social being</b> and that all this is taking place within the <b>social sphere</b>. The social has obviously informed the model thus far. The scientists conceptualising necessary fundamental understandings are as much social beings, exponents of and prisoners of the culture that produced them, as are the technologies who have ideas for devices and build prototypes" (Winston, 1998, p. 5).</p> <p>"The propensity of certain solids to conduct sounds seems to have been known in ancient times and was certainly a well-observed phenomenon by the late eighteenth century. It is such knowledge and understandings that form the ground of scientific competence which can then be transformed into technology" (Winston, 1998, p. 4).</p>
010	<p><b>Ideation:</b></p> <p>"Ideation occurs when the technologist envisages the device – gets the idea, formulates the problems involved and hypothesises a solution. Those mysterious mental forces – creativity, intuition, imagination, 'the will to think' – are all subsumed by ideation as are the general constraints of culture and the limits imposed by social forces of all kinds on the technologist's mind" (Winston, 1998, p. 5).</p>
	<p><b>Recap:</b></p>
011	<p><b>Printed sheet music:</b> came to prominence in the 19<sup>th</sup> Century with the development of music publishing industry and retailers. Music was distributed in sheet form rather than as folk music passed on from person to person. Cheap broadsides and penny ballads became popular in the 19<sup>th</sup> Century, and newspapers published songs. As printing improved it was possible to illustrate the sheets and to produce 'albums' and compendiums of songs.</p> <p>"Various methods of "printing" have been in use for many centuries. However it was the invention of the printing press using moveable type which allowed for printing on a large scale. This allowed books, news and information to become more readily available and helped to spread ideas more rapidly across the world. It wasn't long before the concepts of printing text were applied to the printing of music, and the first attempts at this were made in the 15<sup>th</sup></p>

	<p>and 16th centuries” <a href="http://www.mfiles.co.uk/music-notation-history.htm">http://www.mfiles.co.uk/music-notation-history.htm</a></p> <p>The process of lithography was invented by the playwright, Alois Senefelder in 1796. He could not afford to have his plays published so he began experimenting with printing techniques until he succeeded with lithography. The process involved drawing an image, text, or music on a smooth piece of limestone with an oil-based ink. Acid was then poured onto the stone to burn the image onto the surface. A water soluble solution such as gum arabic was then applied, sticking only to the non-oily surface and sealing it. For printing, the water adhered to the gum arabic. The oily ink, however, repelled the water, thereby allowing for the printing of the images. As technology advanced, lithography evolved into other processes such as chromolithography, photolithography, and microlithography. <a href="http://www.musicprintinghistory.org/lithography">http://www.musicprintinghistory.org/lithography</a></p>
012	<p><b>Music Hall</b>  Music hall is a type of British theatrical entertainment that was popular from the early Victorian era circa 1850 and lasting until 1960. It involved a mixture of popular songs, comedy, speciality acts, and variety entertainment. The term is derived from a type of theatre or venue in which such entertainment took place. British music hall was similar to American vaudeville, featuring rousing songs and comic acts, while in the United Kingdom the term "vaudeville" referred to more working-class types of entertainment that would have been termed "burlesque" in America. <a href="https://en.wikipedia.org/wiki/Music_hall">https://en.wikipedia.org/wiki/Music_hall</a></p> <p><b>The Parlour Song:</b>  “Though lithography had at last produced sharp images, it was the combination of the newly emerging technology of photography combined with lithography that allowed lithography to become the standard for producing high quality and multi colored prints in mass quantity. Rather than having to hand scribe a plate or stone a photo could be taken of a drawn image and converted to light sensitized stone”  <a href="http://parlorsongs.com/insearch/printing/printing.php">http://parlorsongs.com/insearch/printing/printing.php</a></p>
013	<p><b>Parlour Music:</b>  In the 19th century, long before radio, television, motion pictures, stereos, computers and iPods, we entertained ourselves, our families, and our guests with music and singing. In most families, usually, at least one person read music and played an instrument. By 1850, pianos sat in parlors of many, if not most, middle-class homes. Music and bookstores sold songs in sheet music form. The technical demands of this “parlor music” easily allowed amateur musicians and singers to share their talents.</p>
014	<p><b>Tin Pan Alley:</b>  Although Tin Pan Alley in New York City was the centre for song publishing at the time, music and bookstores in many smaller towns published hometown compositions. Piano-makers and music teachers, especially, produced their own-labelled music to help promote their businesses or products”  <a href="http://www.victorianpride.com/history.html">http://www.victorianpride.com/history.html</a></p>
015	<p><b>BBC Four – Sound of Song</b>  <a href="http://www.bbc.co.uk/programmes/b04yk00k">http://www.bbc.co.uk/programmes/b04yk00k</a></p> <p><b>Tin Pan Alley</b>  <a href="http://youtu.be/SADY_nqKeA0">http://youtu.be/SADY_nqKeA0</a></p> <p><b>The Shellac Disk:</b>  <a href="http://www.nwsoundarchive.co.uk/preservation/preservation-shellac-discs.aspx">http://www.nwsoundarchive.co.uk/preservation/preservation-shellac-discs.aspx</a>  <a href="https://youtu.be/qZ5PQSaDYgU">https://youtu.be/qZ5PQSaDYgU</a></p>
	<p><b>Recap:</b></p>
016	<p><b>Broadcast radio:</b>  “With the development of radio as a mass medium in 1920s, and it’s subsequent centralisation by governments and commercial companies, live music was given prominence. Programmes of live band and orchestra performances where popular, with the emergence of singers like Al Johnson, Bing Crosby, Noel Coward... Gramophone records</p>

	<p>were restricted on BBC by agreement with Musicians Union. Families gathered around radiograms in living rooms, or used 'crystal' sets in bedrooms to tune-in to 'wireless' broadcasts.</p> <p>"Morning BBC programmes during the later 1920's included The Daily Service at 10.15 AM, followed by [listen] Gramophone Records. Afternoon shows consisted of the BBC Dance Orchestra, 'A Light Classical Concert', Children's Hour at 5.15 PM (a show which was to remain for 40 years), and a short documentary about the Royal Horticultural Society. In a typical evening one could hear the BBC Dance Orchestra"</p> <p><a href="http://www.radiorewind.co.uk/radio2/2lo_page.htm">http://www.radiorewind.co.uk/radio2/2lo_page.htm</a></p> <p>"Radio's use of music for entertainment had an immense impact on the music industry. The demand for sheet music increased as radio popularised particular songs and dances. Radio came to be a major factor in the spread of particular styles of music beyond their regional sources... During the war years, 1939-45, broadcasters increasingly relied on gramophone records, because conscription limited the number of bands and musicians available, as music came to play a large part in wartime programming as a means of bolstering morale" (Gorman &amp; McLean, 2009).</p> <p><b>1920's British Radio Broadcasts (BBC Radio 1922 - 1929)</b>  The BBC in the roaring twenties.  <a href="https://youtu.be/DOThgMfP5rM">https://youtu.be/DOThgMfP5rM</a></p>
017	<p><b>The Jukebox:</b> Achieved prominence post World War II, with the development of the '45', allowing 'single' tracks to be played mechanically from a stored collection. Jukeboxes became popular with American teenagers in the 1950s, and were located outside the home and in bars and diners. Jukeboxes are associated with Rock &amp; Roll, the rise of the 'teenager' as a cultural phenomenon, and signified a break with parental and scholastic authority, meaning teenagers could make alternative cultural and identity choices. Most popular youth music programme on BBC TV in the early 1960s was 'Jukebox Jury'.</p> <p>"A jukebox is a partially automated music-playing device, usually a coin-operated machine, that will play a patron's selection from self-contained media. The classic jukebox has buttons with letters and numbers on them that, when entered in combination, are used to play a specific selection" <a href="http://en.wikipedia.org/wiki/Jukebox">http://en.wikipedia.org/wiki/Jukebox</a>  <a href="http://www.jukebox-uk.biz/jukebox-repairs">http://www.jukebox-uk.biz/jukebox-repairs</a></p> <p><b>The Mixtape:</b> A mixtape, which usually reflects the musical tastes of its compiler, can range from a casually selected list of favourite songs, to a conceptual mix of songs linked by a theme or mood, to a highly personal statement tailored to the tape's intended recipient. Essayist Geoffrey O'Brien has called the personal mix tape "the most widely practiced American art form", [2] and many mix tape enthusiasts believe that by carefully selecting and ordering the tracks in a mix, an artistic statement can be created that is greater than the sum of its individual songs.  <a href="http://en.wikipedia.org/wiki/Mixtape">http://en.wikipedia.org/wiki/Mixtape</a>  <a href="http://www.theguardian.com/music/2014/oct/21/disney-cassette-guardians-of-the-galaxy-mixtape">http://www.theguardian.com/music/2014/oct/21/disney-cassette-guardians-of-the-galaxy-mixtape</a>  <a href="http://www.theguardian.com/stage/2014/nov/20/your-mixtape-stories-share-your-memories-and-pictures">http://www.theguardian.com/stage/2014/nov/20/your-mixtape-stories-share-your-memories-and-pictures</a>  <a href="https://youtu.be/hhllMpSw9yo">https://youtu.be/hhllMpSw9yo</a></p>
018	<p><b>MP3:</b>  According to Wikipedia, On 7 July 1994, the Fraunhofer Society released the first software MP3 encoder called l3enc. The filename extension .mp3 was chosen by the Fraunhofer team on 14 July 1995 (previously, the files had been named .bit).</p> <p>With the first real-time software MP3 player WinPlay3 (released 9 September 1995) many people were able to encode and play back MP3 files on their PCs. Because of the relatively small hard drives back in that time (~ 500–1000 MB) lossy compression was essential to store non-instrument based music for playback on computer. In the second half of '90s, MP3 files began to spread on the Internet.</p> <p>The popularity of MP3s began to rise rapidly with the advent of Nullsoft's audio player Winamp, released in 1997. In 1998, the first portable solid state digital audio player MPMan, developed by SaeHan Information Systems which is headquartered in Seoul, South Korea, was released and the Rio PMP300 was sold afterwards in 1998. In November</p>

1997, the website mp3.com was offering thousands of MP3s created by independent artists for free.

**Peer-to-Peer networks:**

Napster was launched in 1999, based on the principle of file sharing via peer-to-peer networks (P2P), this meant that individuals could 'rip' their CD to a digital archive and store the files on their hard drive, allowing access to the other members of the network via the P2P client. Rather than downloading the whole file from the hard drive of one single user, the network tracks multiple copies and allows users to search those copies for better or different versions.

This period saw the use of the music databases that list CD releases by name and artist, and allow users to search for other version of those tracks. Users would burn CDs, store on their hard drive, share the files, and then download tracks from other users to listen later. Bandwidth was restricted at the time so music wasn't generally available on demand. When MP3 media files were introduced, file sharing became more widespread.

The small size of MP3 files enabled widespread peer-to-peer file sharing of music ripped from CDs, which would have previously been nearly impossible. The first large peer-to-peer file sharing network, Napster, was launched in 1999. The ease of creating and sharing MP3s resulted in widespread copyright infringement.

Major record companies argued that this free sharing of music reduced sales, and called it "music piracy". They reacted by pursuing lawsuits against Napster (which was eventually shut down and later sold) and against individual users who engaged in file sharing.

**Napster:**

<http://iml.jou.ufl.edu/projects/spring01/burkhalter/napster%20history.html>

<http://www.theguardian.com/music/2013/feb/24/napster-music-free-file-sharing>

<http://fortune.com/2013/09/05/ashes-to-ashes-peer-to-peer-an-oral-history-of-napster/>

**MP3:**

<http://en.wikipedia.org/wiki/MP3>

<http://inventors.about.com/od/mstartinventions/a/MPThree.htm>

[http://www.mp3-history.com/en/the\\_story\\_of\\_mp3.html](http://www.mp3-history.com/en/the_story_of_mp3.html)

**Song Database:**

"CDDB, short for Compact Disc Database, is a database for software applications to look up audio CD (compact disc) information over the Internet. This is performed by a client which calculates a (nearly) unique disc ID and then queries the database. As a result, the client is able to display the artist name, CD title, track list and some additional information. CDDB is a licensed trademark of Gracenote, Inc." <http://en.wikipedia.org/wiki/CDDB>

<http://www.gracenote.com/>

<http://www.freedb.org/>

<https://youtu.be/P8sC9L4JedU>

019

**Streaming:**

Eventually bandwidth services were capable of allowing for music to be shared in a continuous compressed format, which attracted broadcasters to 'simulcast' or 'webcast' their audio programmes. The advantage of the MP3 file format is that it can be 'interrupted' while streaming, but re-linked while the content is in a buffer. The expectation is that streaming is as near to live playback as the network allows, but should the stream be interrupted it can relink to the source stream without a noticeable delay. The BBC has been a major supporter of streaming media with the BBC iPlayer. More lately music services like Spotify, LastFM and iTunes Radio have promoted the use of music as a shared 'jukebox' that can be incorporated into other social media platforms and shared with peers who can note, share or add to the playlists. Services such as Soundcloud, Bandcamp, You Tube and Vimeo allow users to put playlists together and share them online.

<http://web.stanford.edu/class/ee398b/handouts/lectures/08-VideoOverNetworks.pdf>

<https://musicbusinessresearch.wordpress.com/2013/06/17/is-streaming-the-next-big-thing-the-business-models-of-music-streaming-services/>

<https://indigoboom.com/the-history-of-selling-music/>

<http://www.officialcharts.com/charts/audio-streaming-chart/>

	<a href="http://www.officialcharts.com/charts/audio-streaming-chart/">http://www.officialcharts.com/charts/audio-streaming-chart/</a> <a href="https://news.spotify.com/no/2016/09/06/spotify-reveals-the-most-streamed-songs-of-summer-2016/">https://news.spotify.com/no/2016/09/06/spotify-reveals-the-most-streamed-songs-of-summer-2016/</a> <a href="http://www.officialcharts.com/chart-news/the-official-top-40-biggest-songs-of-2016-so-far-revealed_14476/">http://www.officialcharts.com/chart-news/the-official-top-40-biggest-songs-of-2016-so-far-revealed_14476/</a>
020	<p><b>Online Music Services:</b>  Mixcloud, Bandcamp, YouTube, Vimeo, Soundcloud, Spotify, iTunes, LastFM, BBC iPlayer, Fabricfirst, Ministry of Sound, Cream, Rough Trade, ResonanceFM, The Wire, Pledge Music, Kickstarter, Track Database, Shazam</p> <p><b>Pirating:</b>  <a href="https://youtu.be/Sbfl9hVVhK0">https://youtu.be/Sbfl9hVVhK0</a></p> <p><b>Streaming:</b>  “What might you think would be Spotify’s most popular track ever? Stairway to Heaven by Led Zeppelin, often claimed to be the greatest rock song of all time, and one of the most played on the radio? Michael Jackson’s Thriller, the title track of the biggest-selling album ever? Or Bing Crosby’s White Christmas, the most popular single of all time? Answer: none of the above. In fact it’s a song released earlier this year, that didn’t top the charts in either the US or the UK, and which was released independently.”  <a href="http://www.theguardian.com/music/2015/nov/12/spotify-most-streamed-track-all-time-major-lazer-lean-on">http://www.theguardian.com/music/2015/nov/12/spotify-most-streamed-track-all-time-major-lazer-lean-on</a>  <a href="https://youtu.be/YqeW9_5kURI">https://youtu.be/YqeW9_5kURI</a></p>
	<b>Recap:</b>
	<p><b>Conclusion:</b>  <a href="http://youtu.be/U7IKihNI-K4">http://youtu.be/U7IKihNI-K4</a></p>
	<b>References:</b>