

My friend and I have started to organize our iTunes libraries by bpm. My friend does it because he's a dj and it's actually useful information when he's arranging, mixing and transitioning in between songs. If the songs don't match perfectly, with the simplest music or dj software it's incredibly easy to adjust the bpm if desired. In programs like virtual dj one can automatically sync songs by warping one BPM to match the other, with additional options to manually adjust the BPM. In this context, the BPM of a song functions more as a suggestion for playback, similar to the tempo for a piece of notated music.

In classical music, if the performer plays the song at a different tempo than the one intended it's considered within a right and wrong spectrum, where the written tempo is 0, the neutral standard, and depending on the audience a different tempo is either 'incorrect' or at best a 'creative interpretation.' In the tradition of jazz, the 'creative interpretation' of standards was* (*the way that I studied, encountered and performed jazz music in middle school and high school was much more within the tradition of classical music, where there were definite 'rights' and 'wrongs'.) encouraged, teasing out variations in key, arrangement, tempo, instrumentation, and mood, yielding a flourishing ecosystem of evolving song forms, from a basic DNA of the standard.

The performance of notated music, such as in jazz or classical music, can be understood as an audio playback technology, in the same category as records, tapes, cds and mp3s. The variations and limitations in playback speeds in records and tapes were informed by a combination of the physical materials, their respective mechanics and a multitude of cultural and political forces. However, for the sake of not going into a detailed account of the history of the record and the tape, and the consequent evolution in playback speeds, I'm only going to talk about digital media and digital interfaces.

CD playback speed is fixed, unchangeable and uncustomizable for the listener or consumer. Growing up with cds and cd players, it didn't occur to me to play back audio at different speeds, with the same rigidity I wouldn't play a piece of classical music at a different tempo than written. The irony of this is that in comparison to records and tapes, the technical process of playing a cd at different speeds is relatively simple, as if it was designed for it.

The apple "Podcasts" application on an iphone includes a button on the lower left hand corner which you can tap to toggle between 'Speed 1x' (the default), 'Speed 1.5x', 'Speed 2x', (double time) 'Speed 0.5x'. (half time) (Sometimes, I listen to podcasts slowed down when I'm trying to sleep. I've never understood why anyone would want to listen to a podcast 2x the speed, but it must be popular enough to be included as a very accessible option in the podcast design.) This feature seems so easy to include in the interface, I wonder how the culture of listening to music would be different if there was the ability to adjust the playback BPM in itunes, youtube, bandcamp, soundcloud, spotify, iPods, mp3 players, pandora, xm radio, etc?

Of course, the culture of listening to music digitally has changed with the capacity to adjust the BPM, it's just made possible through audio software instead of through playback technology. BPM aside, with audio software one technically has an infinite range to adjust the duration of an audio clip. One could reproduce

a piece of audio that is originally three minutes into three hours, or three seconds, or three days. This manipulation is really more of a process of reproduction than playback, of rewriting than remixing, breaking down the separation between playback technology and production tool, consequently breaking down the boundaries between the consumer, listener and the producer. This access, available to anyone with a computer, an internet connection and a desire to download free audio software, is yielding a new body of audio reinterpretation, performance and playback, in the same vein as the 'flourishing ecosystems' of jazz standard variations.

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Unlike my friend, I'm not a professional dj, I just like the idea of improving my awareness to identify the bpm in music I hear, mostly because it seems like an impressive and unbelievable feat of perception. To ask 'what is the bpm of a song?' is to ask 'what is a minute?' and also 'what is a beat?'

I made a pop song, it is about 126 bpm. I listened to it at night in my studio after a day at work and felt like the song was at a breakneck speed, uncomfortably manic. The next morning after sleep and coffee, driving to work, I listened to the song in the car and it felt impossibly slow. If I had not made the piece and transferred the audio file (from ableton to iTunes to my iPhone) myself I would have insisted that it was a different tempo.

Despite the changing nature of how I perceive time, I can confidently predict the amount of time and mileage covered when I go running. I've been running for about seven years; I know when I have run a mile, I know what ten minutes feels like in my knees, hips, pores, lungs and energy level. I can rely on the physicality of my body, its natural pace given its proportions and training to accurately observe 'clock time.' So I understand that it's possible to train myself to be able to distinguish beats per minute as I have conditioned myself to be aware of miles per minute.

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Entire genres have evolved from the process of speeding up and slowing down songs - ie chopped and screwed, vaporwave, glitch, footwork. Just to be clear, I'm not addressing genres of 'super fast' or 'very slow' music, but genres that sample and foundationally use preexisting audio and dramatically alter their bpm. Although there are a lot of other variables and characteristics that go into these genres, the respective average BPMs are a crucial and defining characteristic. The most interesting and effectively successful of these types of genres are the ones that apply a contrasting BPM to the musical & lyrical tone and emotion. For example, slowing down extremely aggressive rap, speeding up and looping otherwise moderately paced lounge jazz, slowing down energetic reggaeton, etc. This conflicting dynamic is tremendously effective for such a simple operation; the entire emotion of a song can be transformed without changing the key, lyrics, instrumentation, pitch, structure, recording quality or process.

Italian classical music includes an extensive terminology to communicate tempo, changes in tempo and mood associated with tempo. If live performance were our current form of playback technology and somehow we still had the genres and type of musical output of 2015 a score for footwork might include 'playing rap, jazz samples as "saltando" which translates to "jumpy, fast, short" or a witch house score might call for rap samples to be played "misterioso," or "mystical, in a shady manner". The usage of these words and phrases acknowledges the expressive emotional power that tempo has on a song, identifying

a spectrum of emotions that can be manifested through acceleration, deceleration, swiftness and sluggishness.

However, it takes more than just changing the BPM of a song to create an emotion or mental state - a song's bpm does not determine it's mood, as one song at 140 may sound aggressively energetic while another song, also at 140, may be perceived as a type of tranquility. The emotional expression of a piece of audio is a complex structure that includes our physiology, psychology, the environmental and social context, the mode of playback technology, and then the content and structures within the piece of audio itself.

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Sometimes I just want to listen to 'The Dream' slower, lower, and chillier.

Depending on the context, the process of remixing preexisting material through manipulating the BPM can also be considered as a process of customizing the music listening experience. Customization is a very relevant form of expression given an over-mediated, production-oriented and capitalist environment.

Consumers identify themselves by their choices of consumption and these choices have a hierarchy; the more choices the more one has an experience of expression. (what brand of shoe? nike. what type of nike shoe? freerun. what size? 8.5. what customizable color pattern? black and white. etc) Customization can be understood as a form of mediated expression, some more limited and formatted than others. Many digital players include an equalizer with different presets - there is an experience of expression through choosing how you would like to listen to your mp3s - whether you want to boost the bass, the treble, or choose a playlist at the perfect BPM for your gym workout.

THE WORLD IS OVERPOPULATED WITH MUSIC! There is too much audio, there are too many soundclouds, bandcamps, mixclouds, djs, events, bands, electronic musicians, solo artists, labels, music festivals, music blogs, music magazines, mixtapes, tapes, records, cds, mp3s, aiffs, wavs, flacs, torrents, ETC. But for some reason we (I) continue onwards; we produce, surging with output. Often it feels like there is no music product that can be "new." Somewhere in between the blur of streaming, downloading, buying, collecting, archiving, listening, consuming, processing, creating, producing, playing, performing, djing, uploading and sharing there might be some room for innovation, if it's not just the smear of all of those actions itself.

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If there was a slide bar where I could adjust the BPM in iTunes I would use it regularly, but it doesn't exist. It seems to be more common and more accessible to simply adjust the BPM of one's perception, by taking a drug, exercising or being in a specific social setting. Cultural rituals of exercise, dieting, pharmaceutical and recreational drugs develop a type of active relationship with the body as something to be actively designed, customized and maintained, such as a piece of technology or at worst, a consumer object. Simultaneously, the developing relationship with a surging amount of media seems to grow increasingly passive, an acquiescent and relieved trust in an automated spotify playlist.

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Although it might seem like the ultra fast music of 2016 (edm, idm, footwork, etc) is a product of an accelerating culture, there is a long tradition of ultra fast music within and throughout many different cultures and histories, (including punk, flamenco, bebop, gabber, etc). However, the frequency and pace of how music is listened to and consumed has been cranked up to a relative bpm of 3,000 and is certainly a symptom of a technologically accelerating culture. At one point people supposedly listened to entire albums, divided into two halves, first with records and then with tapes. With digital formats, such as cds, people began to listen to albums divided into songs. With streaming, a listener will listen to an individual song, divided into 30 second durations, at which point she may choose to switch to another song.

The more that this division rate accelerates, the more effectively it expedites the demise of the music industry and creates new ways of listening. The sheer amount of music available for anyone to access and listen to necessitates the reconsideration of listening to music. Is it still considered listening to a song if she listens for 30 seconds? 10 seconds? 1 second? What are the limits of the amounts we can consume, or the layering of consumption? Sometimes I wish I could listen to music while I work on producing music; as if it were like putting on techno while working in Photoshop. [The last album I made I attempted to do this, by layering the actions of listening, producing and playing music as well as being interrupted by external music and hearing internal musical memories, all at the same time.]

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In the very free, very easy and very accessible dj software 'virtual dj,' the program automatically reads and lists the BPM of a song (but I've found the algorithm to be delightfully unreliable, yielding amazing and bizarre results). Identifying the BPM of a song is easy. A website like "www.tempotap.com" is useful - you play the song, tap the beat with your spacebar, and the more taps the more accurate the average. You can enter the BPM in itunes by right clicking (control + click) the menu categories (like artist, album, song name, etc) and √ Beats Per Minute.

In this column one can enter in a numeric value, implying that the BPM is fixed and unchanging. But most songs do not fit in this category! If I were to accurately organize my iTunes library by bpm it would have to include three categories: 1) songs with a fixed bpm (ex. Artist, Pop Song, 120) 2) songs with a changing bpm (which could be expressed as a curve relating the BPM over the duration of the song) 3) songs that do not have any BPM (which could be expressed as 0 or n/a).

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Our creation of music with pulses can be interpreted as an externalization of our own pulse, our own heartbeat, our own tangible lifeforce. I acknowledge that this metaphor is a cliché, but it's such a direct relationship that it can't even be considered a metaphor and just a truthful connection. A resting heart rate for an adult lies within 60 - 100 bpm. I once visited someone who was recovering from open heart surgery. While they were recovering, their heartbeat would slip into periods of atrial fibrillation, where the heart would beat irregularly. The heart rate monitor illustrated the chaotic pace of the heart rate, generating anxiety for everyone in the hospital room. Did the heart rate gradually devolve into chaos or would it just hiccup, and then flip into an irregular state? What are the limits of a regular beat before it's considered 'random' or irregular? What does it feel like to have a body operating under a regime of chaos?

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Experiencing and perceiving any type of continuous regularity depends on some form of periodicity or cyclical pattern. These cycles and patterns are made by the fused combination of gaps and events, such as the relationship between drum hits and amounts of time between them in a rhythm pattern. The durations identify one sound from another, form it into a cohesive pattern and give it an entity greater than the sum of its parts. Our perception of continuity is directly related to how often and regularly these events occur, which is really dependent on the durational gaps, the 0's, the durations of emptiness.

In occasionalism, an ancient Islamic theory of the universe, it is posited that god creates the entire universe and all of it's minutia in every instant, constantly 'refreshing' every bit of the world. In some broad ways this theory has a close relationship with modern quantum theory; it allows for the possibility that at any moment anything could happen. If you hold a stick to a flame, quantum mechanics proposes that there is an extremely small chance that the stick could do anything, such as disappear, instead of routinely catching the flame. In occasionalism, although god usually wills the stick to catch the flame there is still the highly improbable chance that god could will the stick to react in any way, such as disappear. This theory acknowledges not only the complexity of continuity and regularity but also its fragility and vulnerability, celebrating every instant as a new miracle of continuous order.

How often does "God" need to refresh and recreate the entire world for us to perceive the illusion of continuity? What is the frequency of a sampling rate before our coherent perception of a song crumbles? When does our perception of reality stop being a series of 'nows' that we can string into a narrative of past and present and become just the present moment or a delusional state of just the past and future? What is the furthest that a 'beat' can be manipulated, stretched, or teased before it's not considered a beat anymore?

The study of a beat is the study of the relationship between the sounds and the durations between them. What are the limits in the durations, the gaps, the periods of nothingness, emptiness, the 0's that hold, frame and give body, distinction and relational context to the sound events? What is their significance in our illusions of continuity?

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On an electribe, the slowest bpm is 0 and the fastest is 240. Beyond the electribe, the fastest BPM song in the guinness book of world records is a song called "thousand" by Moby, at 1,000 bpm. On either end of these extremes (less than 0 and greater than 1,000) lies the same thing; a solid mass, a continuous stream, pure nothingness or pure somethingness, a homogenous entity, entropy, or emptiness.

At this point the metaphor or connection between our bodies and our heartbeats becomes more complicated. Music that transcends a BPM grid is still music. It is still vital, it is still valid, it can still be entertaining, it can still be pleasurable, it doesn't lose it's 'musicness' without a tempo. So music doesn't need a beat, it's just a characteristic that can appear in music. However, the human body becomes severely stressed with an irregular beat and terminates if the beat comes to an end. A body needs a heartbeat and the heartbeat needs to be embodied. There are interpretations and beliefs of the soul as transcendent of the body, where a soul doesn't need a body to exist but it is a physical embodiment, or an aesthetic characteristic. Similarly, music doesn't need a beat to exist but it is an embodiment, or a type of aesthetic or physical characteristic.

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The term 'timeless' is used to describe a quality of 'transcending a cultural location' or as the dictionary states 'without beginning or end; eternal; everlasting,' 'referring or restricted to no particular time,' & 'not affected by the passage of time or changes in fashion.' But to say something is timeless is to literally say it doesn't have duration. To say something doesn't have duration or take time either eliminates it as a physical object, as any physical entity embodies and exists in a temporal dimension or it questions the relationship between "nonphysical" objects, such as ideas or consciousness, with time. To say something is timeless or durationless doesn't mean that it doesn't exist, but that it is empty of time, it is 0, which certainly exists.

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