Toward an aural aesthetics of 24/7 environments: Beethoven, audio stretching, and techno-indeterminacy

Joshua Dittrich

Program in Communication & Culture, York University, Toronto, Canada

ABSTRACT
This essay offers a critical analysis of Leif Inge’s sound installation 9 Beet Stretch, exploring the piece’s complex relations both to its musical “source” (a recording of Beethoven’s 9th Symphony) and to the technical process (audio stretching) that sustains it. The Stretch effectively allows us to listen to Beethoven’s 9th for a duration of 24 hours without distorting the pitch or other sonic qualities of the original recording. The result is an acoustically impossible experience that brings us uncannily close to Beethoven’s masterpiece in its structure and sonic materiality, while simultaneously pushing Beethoven into the background of a diffuse sonic environment in which our own embodiment and experience of listening come to the fore. I propose the term “techno-indeterminacy” (based on John Cage’s notion of indeterminacy in composition) to describe the imbrication of musicological, aesthetic, and material registers that Inge’s piece both celebrates and suspends by means of a technical process. Moving critically from Cage’s indeterminacy to Mark B. N. Hansen’s theory of affective embodiment, I argue that the sonic environment of Inge’s 24-hour installation ultimately merges with the totalizing 24/7 environment of digital capitalism as recently sketched out by Jonathan Crary—and prefigured philosophically in Adorno’s writings on modern music. Techno-indeterminacy characterizes not only the aural aesthetics of Inge’s piece, but also our lived experience in the total technological environment of digital capitalism.

“Are sounds just sounds or are they Beethoven?”
John Cage

In this essay, I explore a new mode of listening that emerges as both a token of the banality of contemporary digital culture and as a radical challenge to classical and contemporary musical aesthetics. This mode of listening—which I call techno-indeterminate (adapting John Cage’s [2011] notion of indeterminacy)—derives from audio stretching, a digital process that can extend the duration of a recording indefinitely without distorting its other sonic qualities. I examine in detail Norwegian artist Leif Inge’s sound installation, 9 Beet Stretch (2002), which stretches a recording of Beethoven’s 9th Symphony to a duration of 24 hours, asking the deceptively simple question: what exactly are we listening to when we listen to the 9 Beet Stretch? I argue that Inge’s installation suspends the listener in an aesthetic elsewhere that is uneasily situated between the transcendent musical spaces of European art music and the grim reality of 24/7 environments recently sketched out by Jonathan Crary (2013). The Stretch pulls us impossibly close to the materiality of the orchestra and the voice; the archival reality of a recording; the imaginary mechanics of a digital process; and the compositional structure of Beethoven’s masterpiece. At the same time, the piece constantly pushes us away toward a timeless sonic flux, “sounds in themselves” that we may experience variously as sublime, ambient, boring, annoying. The ambivalence of the piece extends to its very duration, in which the immense, otherworldly aesthetics of the stretch meets the mundane tempo of our daily lives, where digital processes operate in and around us ceaselessly, whether we take the time to listen to them, or not. In search of aesthetic solutions at formulating the seeming incommensurability between a technical process of nonstop duration and the human act of listening, I move from Cage’s notion of indeterminacy to Mark B. N. Hansen’s (2004) theory of affective embodiment, critically situating the latter against the 24/7 world of digital apparatuses outlined by Crary. Moving finally back to Beethoven (via select musical and philosophical reflections of Theodor Adorno [2002, 2006]), I read the Stretch as an index of the inexorable continuity of the 24/7 world that, precisely in exploiting us round the clock, does not give us the time of day.

***

Nine minutes into the final choral movement of Beethoven’s 9th Symphony, we encounter a remarkable rift in the musical fabric. It consists first of an
extended fermata—in which the orchestra and chorus sustain a single chord for a seemingly endless interval—followed by an equally long silence, or caesura. In the moments leading up to this break, we hear the delicate elaboration of that famous “Ode to Joy” theme by the solo singers, interspersed with grand entrances of the entire choir. The orchestral playing emphasizes the upbeats of each measure, moving against the dominant flow of the vocal theme, and creating a powerful, if also powerfully imbalanced sense of dynamism and energy.

Just when it finally seems that the orchestra and the voices will coincide on the downbeat and restore balance to the piece, there are two abrupt key changes. Repeating the lines “und der Cherub steht vor Gott,” the singers resolve a cadence in the tonic key of D, but swiftly move back to the dominant A and then, unexpectedly, to F, where the fermata takes hold. In the first shift to A, it is as if the piece attains a new height, and though we may not have expected it, the move from tonic to dominant works harmonically, and the elevation of the overall tone works musically as well. Yet the shift from A to F is more radically unsettling, even jarring. All the upper voices hold the same high note, the A, but the lower registers all drop to F. It is as if the bottom has dropped out from under the piece, as if the newly modulated A had become distorted, stretched itself to a kind of breaking point. And it is precisely here that the piece rests, sustaining that F chord for seconds that feel like hours, forcing us to question if this is the new musical ground on which the piece will stand, or if it is a mere interruption or deviation which will eventually take us back to familiar territory. After the challenging pause comes an equally challenging silence, refusing to resolve any of our questions, suspending us in a stunning cessation of musical time.

If we add to this pause not just the preceding nine minutes of the choral movement, but also the entire 40-odd minutes of the first three movements of the piece (already in themselves longer than most entire symphonic works), we begin to feel the truly crushing weight of musical energy and time that has come to rest on this moment of sustain and pause. An entire piece has derailed itself, and the listener—whether novice or expert—may, at each listening, have virtually no idea how the piece could continue after such a monumental disruption.

I have just written nearly 500 words about a passage that occupies 12 bars in the score (319–30) and roughly 30 seconds of empirical time (Beethoven 1997, 126–27). It is one of the great privileges in writing about music that you can allow yourself a potentially infinite time for reflection and analysis (not to mention all the literary resources of metaphor) to express your thoughts on mere seconds of actual music. Writing about music depends on the fantasy that you can fully separate the aesthetic time of the piece in question from the empirical time of its performance, and dwell, seemingly indefinitely, in a frozen moment of musical time, safe from the ticking-away of the clock that only moves you further and further away from the sounds that initially captured your attention.

Listening to music is far more difficult than writing about it because, from the position of the listener, the piece always rushes ahead in empirical time, and indeed, in musical time as well. If we choose to linger in our minds on a particular passage, we risk missing what follows it and thus lose the flow of the piece. And indeed, the more I think about this particular passage without regard for the whole, the further I am from what it actually sounded like, the more I am filling it out in my memory. Even if I use a recording to find it and play it back, I would notice that breaking and resetting the flow of empirical time also compromise the aesthetic effect of the musical time. When I play back a passage half a dozen times, it loses the effect it has when it comes only once in the temporal flow of all that precedes and follows it.

This deficiency in listening to music, its built-in belatedness, is of course also what makes listening and re-listening to music endlessly fascinating and productive for thinking. But, to come to the technique of audio stretching, and the 9 Beet Stretch in particular, it also leads to a series of questions: What if we had more time for listening to music while we were in fact already listening to music? What if we could adjust the ratio of aesthetic time to empirical time in a piece of music so that we could more substantively integrate the time of our musical reflection into the actual empirical time of listening? Rather than speeding up our thoughts, what if we could, in effect, slow down the music, but in such a way that we could still hear it and think with it at the same time? And what would such a piece sound like, anyway?

Norwegian artist Leif Inge’s 9 Beet Stretch is a composition/installation that digitally “stretches” the length of a recording of Beethoven’s 9th Symphony to a duration of 24 hours. Conceived in 2002, the work premiered in Madison, WI in 2004, with subsequent performances in Vienna, Shanghai, New York, and Toronto, as well as a 24/7 webcast streaming since 2005 and a free app that was, until recently, available for download. The “stretch” uses a technical process called granular synthesis that extends the length of the recording without pitch distortion so that the listener can hear Beethoven’s symphony extremely “slowly,” yet without losing the tonal frequencies...
and other sonic qualities of the recording played at its normal speed. The result is an impossible listening experience, a clash of temporalities in which a piece originally scored for a performance of roughly 70 minutes can be experienced as a 24-hour event.

The immense scale of the 9 Beet Stretch, along with the unrelenting, “time-release” uncanniness of hearing accurate musical pitches vibrating with physically impossible (yet digitally possible) slowness, force the audience to reconsider its fundamental assumptions not only about sound, time, and listening, but also about the limits of live performance and the hidden depths of recorded sound. Yet, as an experimental work, Inge’s piece stands out for two more reasons: (1) its insistence on a fixed, if radically extended, performance time and (2) its explicit reintroduction of classical European musical content into the field of experimental music and sound art. In turning away from temporal indeterminacy (as theorized and practiced by John Cage, among others) and in turning back to a 19th-century masterwork, the 9 Beet Stretch seems to demand an uneasy synthesis of two incompatible sonic aesthetics: the structured, time-objective, individual-expressive qualities of Beethoven’s composition with an ambient, time-arbitrary sound environment. Inge seems to ask us to rethink the fundamental nature of listening while, at the same time, listening to a fixed, and indeed quite famous piece of music; or, to put it in the terms I used previously, to integrate listening and reflection into a single sensory-intellectual experience that unfolds in a continuous timeline.

Yet the integration of listening and reflection already has a powerful precursor in 20th-century musical aesthetics, namely John Cage’s notion of indeterminacy, and it is Cage’s playful, yet incisive distinction between “just sounds” on the one hand and “Beethoven” on the other that marks the point of departure for my notion of techno-indeterminate listening. For Cage, the single proper name “Beethoven” evokes the entire tradition of European art music, with its emphasis on individual authorship, teleological form, subjective expression, and the performance conventions of the concert hall. In seeming opposition are “just sounds,” that is, the notion of “sounds themselves” produced through compositional techniques involving chance and experimentation, as well as performance practices that subvert the aesthetics of the concert hall. Indeterminacy, for Cage, names the processes that sought to liberate time, space and indeed sound itself from the constraints of Western music, processes that culminated famously in 4′33″ (1952), the “silent” piece that effected a redirection of audience attention from the structure of performed music to the incidental ambience of the environment. Rather than listen merely to “Beethoven,” one can listen to literally any sound, and discover a hidden musicality, an implicit aesthetic dimension to any experience that emerges out of the perceptual act itself. Indeterminacy is, then, as much a mode of listening and a form of attention as it is a process of composition and performance. When Cage composed a kind of sequel to 4′33″, namely 0′00″ (4′33″ No. 2) (1962), he expanded the perceptual field from the hall to the world of everyday life, inviting an open-ended, potentially infinite merging of perception, aesthetic experience, and the act of living under the auspices of indeterminacy.

In his 1958 lecture “Composition as Process II: Indeterminacy,” Cage writes, “It is high time to let sounds issue in time independent of a beat in order to show the necessity of time […]” (2011, 40), a somewhat paradoxical statement I would interpret as follows: Cage would reject from the outset the duality of aesthetic to empirical time, insisting on only a single, unified but indeterminate time (what he calls “the necessity of time”) in which musical sounds should be organized, performed, and heard. The more a musician or composer work in fixed units of time and under the compulsion to make sounds go somewhere in time—to endow them with a temporal teleology—, the more time itself recedes from the experience of composition, performance, or listening. Rather than rendering time inaudible by subordinating it to musical form, composers should strive to make time something we can hear along with sound.

Some of the more notable compositions to follow in Cage’s theoretical footsteps emerged from the Fluxus moment, such as Takehisa Kosugi’s composition South No. 2 to Nam June Paik, in which the word “south” is pronounced extremely slowly, for a duration of at least 15 minutes; or La Monte Young’s Composition 1960 #7, for which the only scoring is to hold a B and an F sharp “for a long time.” Douglas Kahn (2011, 37) has remarked that these Fluxus experiments reveal that “any single sound contain[s] exceedingly complex processes of production, of internal configuration: that a single sound’s interaction with corporeal and environmental space transform[s] it from one moment to the next; and, therefore, that a simple musical structure of repetition or sustainment [is] not simple at all”. In other words, the indeterminacy of time, or merging of musical time and empirical time, lets us hear a hitherto unheard-of complexity in the production of simple or repeated sounds. Musical content organized in time in fact obstructs our sensation of sound, and a composition for which musical time is irrelevant, or which fuses musical and empirical time, gives us a wider, deeper knowledge of the sonic environment.

If Cagean indeterminacy blurs the distinction between art and life, between a world of mere noise (including “Beethoven”) and a world of silence populated by aestheticized sounds, then techno-indeterminacy introduces a third term into the fluid dualism of “Beethoven” and “just sounds:” the
technical process itself (here, audio stretching) which both enables our listening and stands in as its object at the same time. I would argue, in other words, that when we listen to the 9 Beet Stretch, we listen to three things at once: Beethoven, just sounds and audio stretching in and of itself. The stretch process paradoxically virtualizes and concretizes the sounds and the music into an excess that our listening ears ceaselessly sample in a frustrated attempt to connect with a process that defies the psychoacoustics of listening. Ordinarily, when we listen to the complex sounds that compose a piece like Beethoven’s 9th Symphony, the ear is not so much absorbing the totality of the sound, but rather constantly filtering, simplifying, aggregating or, to use Aden Even’s (2005, 1–7) term, contracting the infinitely more complex layerings of sound waves that make up the tone of a single violin, let alone a full orchestra, or the concert hall itself. Listening both reduces and synthesizes a far more complex materiality comprised of a continuum of sound and noise, contracting it into the timbres that we may experience as pleasing, and the melodic or harmonic configurations that we find expressive. Yet when we listen to a stretched recording, there takes place a particular kind of reversal of the usual “contraction” that our listening ears make. Rather than contract an infinitely complex acoustic materiality into distinct timbres, that is to say, rather than move from noumenal noise to organized sound, audio stretching allows us, or forces us, to move from organized sound back to noise. As we listen in to a given segment from the 9 Beet Stretch, we may hear sounds that we initially recognize as human voices, violins, trumpets, etc., but that initial recognition slowly dissolves into an indeterminate timbral texture. The individual tones that are, from the compositional point of view, the building blocks of the piece, are revealed to be unstable, uneven, and highly composite acoustic entities. In an unstretched audio world, we may know this to be the case—that erratic, recalcitrant, and boundless sounds compose the acoustic reality underlying the fiction of expressive music—but we cannot hear it directly. Yet in a stretched audio world, we can hear the very material conditions of hearing itself; we can listen to the psychoacoustics of listening via a technical process that both reverses and plays back the very process of listening.

When indeterminacy is accomplished in this way—not at the level of composition or performance, but rather through a technical process of remediation—we encounter the form of technoideterminacy characterized not just by the fluidity of music/sound, but also that of object/process. To return, in stretched form, to Beethoven’s 9th and, in particular, to the fermata of that dramatic key change I described earlier, the “sudden” shift to the key of F would take on a completely different character, approximating the purely sonic and leaving behind the merely musical. We would hear not just a dozen sopranos hitting a high A; we would hear the protracted whirring and warbling of dozens of voices as they searched, in the microseconds of their vocal attack, for the precise pitch, followed by the meandering flux of volume and pitch as uncountable hidden rhythms appear and disappear in the micro-fluctuations of the voices (not to mention the ever-so-lurching crossfade from one granulated sample to the next). Likewise, instead of hearing the strings drawing double forte on F chord, we would hear the skittering of hundreds of thousands of strands of horse hair pulled at minutely different speeds with minutely different degrees of friction and tension across a hundred steel strings, each string scraping and coming to life in a sonic cluster of vibration that we are otherwise accustomed to call, merely, “playing in tune.” We could similarly break down the sonic contribution of each section of the orchestra, as that extended F chord surges and trembles in prolonged transition. Even the “sudden” break from sound to silence in the ensuing caesura would be rendered into a gradual process, an turbulent gray area of sound decaying, unevenly, in fits and starts, into a silence that lasts for minutes, pulsing and hissing with echoes and room-tone. The abruptness of this passage of the symphony—its syncopated buildup, rapid key changes, and the monumental fragmentation of the fermata—would be transformed into a murkily gradual transitional process, the stark musical contours softened into an ambient flux. The fixed, written score of Beethoven would thus yield an excess of spontaneous sounds, rhythms, and textures that co-originate with the performance of the notes on the page, but could not themselves be reduced to Beethoven’s composition.

But we would go too far to say that the 9 Beet Stretch effectively transforms “Beethoven” into “just sounds” because we are not dealing with infinite or variable duration, but rather a fixed, if distorted scale of listening (in which one second of Beethoven’s 9th is stretched to roughly 22 seconds of 9 Beet Stretch). In other words, the piece still moves “forward” in time and as it does so, we hear not so much music-as-sound, but rather the becoming-sound of music. Within the fixed temporal parameters of the piece, we can hear the hidden depths, the micro-tonalities, and accidental rhythms of the stretched recording, we hear the sound within Beethoven’s music, not just the sound of it.³ For this reason, it would also be unfair to assert that the 9 Beet Stretch completely eliminates Beethoven as the author the work, for we are still immersed in his composition, and are merely being asked to
listen to it on a different scale or listen for different things in it than we other otherwise would.\textsuperscript{4}

Yet the immense scale of the \textit{Stretch} would seem to defy the human ability to attend to the interstitial excess of sound for its programmed duration of 24 hours. Gaston Bachelard’s (1994) notion of “intimate immensity” might give us a way of formulating the symmetry between the technical process of audio stretching and our process of listening. Bachelard describes the experience of immensity as a daydream, as a particular form of contemplation in which the thinker does not approach a particular object with his consciousness, but rather recedes from it and finds himself in a distant “elsewhere,” the space of the daydream. He calls this state “phenomenology without phenomena; or stated less paradoxically, one that, in order to know the productive flow of images, need not wait for the phenomena of imagination to take form and become established in completed images. In other words, since immense is not an object, a phenomenology of immense would refer us directly to our imagining consciousness. In analyzing images of immensity, we would realize within ourselves the pure being of pure imagination.” (184). Adapting Bachelard’s language to listening and sound, we could say that Inge’s piece allows us to recede from Beethoven’s masterwork, situating us in a sonic “elsewhere” in which we listen to an uninformed, yet constantly forming flux of sounds, and, in effect, listen to listening itself in the interstices of music and sound that Inge’s piece reveals.

Mark B. N. Hansen (2004, 197–232), in his discussion of Robert Lazzarini’s \textit{skulls} (2000), elaborates a similar model of the feedback loop of perception and reflection (here mediated by a digital process). But whereas in Bachelard the redirection of perception folds back on the imagination itself in a strictly imaginative elsewhere, Hansen describes how a short-circuit in digitally mediated perception takes place paradoxically in the body, not the mind. \textit{Skulls} is a sculptural installation consisting of four skull-like objects mounted at eye-level on four walls of a room. The objects are physically realized sculptures based on digitally distorted CAD scans of an actual human skull. They appear, as Hansen notes, initially as anamorphic images that recall Hans Holbein’s famous anamorphic skull in \textit{The Ambassadors} (1533). Yet, unlike Holbein’s skull, Lazzarini’s \textit{skulls} presents three-dimensional objects derived from a two-dimensional distortion in the computer. As such, the very physical depth of the objects constantly interferes with the eye’s effort to undo the distortion: “\textit{Skulls} confronts us, in short, with a spatial problematic we cannot resolve: with the ‘fact’ of a perspectival distortion that can be realized (and corrected)—and that ‘makes sense’ visually—only within the weird logic and topology of the computer” (202).

For Hansen, \textit{skulls} “furnishes what amounts to a cipher or index of a process fundamentally heterogeneous to our constitutive perceptual ratios” (204). And yet the strangeness of this eruption of the digital into the human sensorium produces an embodied, rather than abstract response. We feel the skull-like forms in our bodies precisely because we cannot see them in human-scaled visual space. The work “functions by catalyzing an affective process of embodied form-giving, a process that creates place within our bodies. And since it is through such a creation that we get a sense for the ‘weirdness’ of digital topology, we might well think of it as a correlate to the impossible perceptual experience offered by the work” (203). \textit{Skulls} is exemplary of the reconceptualization of the digital image that Hansen develops throughout the book, whereby the image no longer refers to fixed objects or forms, but rather to the very perceptual process by which the body “gives form to, or informs information” (10). Paradoxically, it is precisely as a digital image that \textit{Skulls} is also essentially a “post-visual” work because the response it provokes is proprioceptive, haptic, bodily rather than the disembodied abstraction that one might initially associate with the digital. Hansen will later go on to link that bodily response to Gilles Deleuze’s cinematic concept of “any-space-whatever” and Marc Augé’s “non-place,” elaborating his thesis that digital art catalyzes a hapticity that both supplements the (incommensurability of) the digital world with human sensation, but at the same time creates an originary space in the body itself.\textsuperscript{5}

It is tempting to see in Hansen’s discussion of the digital distortion of the visual a direct analogy both to the aural logic of the \textit{Stretch} and the imaginative flux of Bachelard. By manipulating the duration of the recording, but otherwise leaving the pitches and timbres intact, the \textit{Stretch} allows us to listen to sounds that are, outside a computer, physically impossible to produce and thus otherwise acoustically impossible to hear in the first place. When, in the \textit{Stretch}, we listen to the full chorus sustaining single notes for minutes on end, we cannot help but become aware of the regularity of own respiration against the sound of human voices vibrating in a breathless digital beyond. We feel the incommensurability of those two worlds in our bodies, and even as our mind explains to us the 1/22 ratio of the audio stretching, our body hovers in a corporeal elsewhere of embodied listening. At times, it is unsettling, uncanny; at other times, it approaches a kind of sublimity, the kind of transcendent reflexivity that Bachelard describes. But the sheer scale of the piece would seem to complicate Hansen’s aesthetic of digital embodiment because the duration is beyond the span of human attention and indeed beyond with limits of what the human body can endure.\textsuperscript{6} Built into the very structure of a
24-hour duration are moments of inattention, distraction—not to mention the need for food and sleep—that are at odds with the relentless physical and aesthetic continuity demanded by the installment. A theory of affective embodiment can only exclude the real bodily needs that are the necessary obverse of a technical process of 24-hour duration.

***

Searching for the *9 Beet Stretch* online, one will encounter images or videos shared on social media of the various performances of the piece over the past dozen years. And among those images, one will invariably see young people in sleeping bags, on couches, reclining with blankets and pillows. Because no one can stay awake for 24 hours, not even when they attend a 24-hour music installation. Yet following Crary’s argument in 24/7, which at the outset invokes military research into sleeplessness as well as torture techniques of sleep deprivation, one cannot help but think of some of the other great “sound installations” of the early 21st century, namely US military bases and various “dark sites” hidden around the globe where 24/7 high-intensity lighting and loud amplified music are the conditions of an excruciating reality of enhanced interrogation (Cusick 2008). Such sites are, for Crary, both extreme and exemplary of “the expanding, nonstop life-world of 21st century capitalism,” the temporality of which “can be characterized as the generalized inscription of human life into duration without breaks, defined by a principle of continuous function. It is a time that no longer passes, beyond clock time” (8). Crary further formulates the temporality of 24/7 as “time without time, sequence or recurrence” and “non-time” (29). What is at stake is the unprecedented intrusion of the incessant access and availability afforded by digital technologies into the social, intimate, and bodily dimensions of contemporary life. For Crary, digital technology transforms the traditional forms of alienation associated with industrial capitalism into a round-the-clock environment that seeks to unmoor the individual from any other rhythm (even that of day and night) that does not beat at the same pace as global capitalism. The result is a new version of modernist alienation in which the individual, completely cut off from any meaningful social context, must manage his own alienation through the technological apparatuses that have assumed dominance over the social.

Visually, and with an eye to the round-the-clock illumination of US torture facilities, Crary argues that a 24/7 logic eliminates shadow and light, texture, ambiguity. It introduces a constant glare in which we all live: “Glare here is not a phenomenon of literal brightness, but rather of the uninterrupted harshness of monotonous stimulation in which a larger range of responsive capacities are frozen or neutralized” (34). Glare is thus the enemy of indeterminacy in that its effects amount to the equalization, reduction, and foreclosure of responsiveness, exactly the opposite of what someone like John Cage surely meant by his open-ended durations. Crary’s notion of a constant glare, beyond the rhythm of day and night, is crucial for the sensory, metaphorical and (ultimately) political significance of 24/7. It is intrusive, homogenizing, paralyzing, and it reveals a chilling continuity between the political infrastructure of round-the-clock torture and the economic infrastructure of digital capitalism. Translating Crary’s glare into sonic terms—and imagining what it might be like to listen to “Enter Sandman” or the Sesame Street theme at full volume for days on end—we might begin to hear the din of a 24/7 world.

According to Crary’s thesis, I have to admit that there is contradiction at work in my notion of techno-indeterminate listening (and arguably, in the *Beet Stretch* itself), namely the fantasy that you can separate a technical process from the technological (and thus geopolitical) infrastructures that make it possible. In her discussion of the militarized use of 24/7 music as torture, Cusick (18) points out the “[e] very amplified sound in the camps, and therefore every bit of music, is the United States’ transformation of the energy in Middle Eastern oil into violent, violating sonic energy aimed directly at the people whose land yielded that oil” (emphasis in the original). In other words, it is ultimately impossible to think of 24/7 music(al torture) separately from the exploitation of the resources that sustain it because the music is that very exploitation. As much as techno-indeterminacy blurs the distinction between an object of listening (i.e. sounds, Beethoven) and the process of remediation itself, it also excludes the structures of global capitalism in which digital technologies are ultimately embedded. To put it crudely, but, I think, undeniably: techno-indeterminacy is itself determined in the last instance by the economic, that is, by the 24/7 logic of late capitalism. The elsewhere in which we are situated by the *Stretch* is necessarily also the everywhere, the total environment of global capitalism. Likewise, when Mark Hansen develops a notion of embodiment in response to the alienness that digitally distorted works like *skulls* impose on human perception, what is missing is the larger structure of technological alienation that such artworks derive from, even if they attempt to mirror it back critically. Technical processes can be separated from the larger technological apparatuses that dominate social life only at the risk of creating a fetishizing fascination that obscures the banality and violence of their operation. Holbein at least had the sense to project an anamorphic skull—that is, a
cipher of violence and human finitude—as the foreground and frame of the tools of world domination (gloves, sundials, astrolabes) depicted in the painting.

***

Looking back over the multiple senses of indeterminacy I have employed in this essay, I would hypothesize their interrelation as follows: if the indeterminacy of 4′33″ revealed the hidden musical continuity between sound and “silence” and if 0′00″ sought to uncover a hidden aesthetic continuity between art and life, then the 24/7 logic of the 9 Beet Stretch discloses a continuity between life and digital technology whose sheer possibility is already implicated in the latter’s necessary domination over the former. The aesthetic suspension of time accomplished by the 24/7 duration of the 9 Beet Stretch (and other cyclical, continuously streaming, 24/7 digital works) is in fact not incompatible with the scale of human experience, but on the contrary constitutes precisely the ceaseless, (a)temporal environment in which we currently live.

There is a philosophical precursor to Crary’s argument that draws together time, technology, and musical aesthetics into a sustained critique of modern capitalism, namely Theodor Adorno. In moving to a conclusion, I want to make explicit the Adornian/Frankfurt School underpinnings of Crary’s sweeping critique by first turning to Adorno’s (2006) prescient formulations of 24/7 time in his Philosophy of New Music, and then returning to the dramatic caesura from Beethoven’s 9th that initiated my analysis. According to Adorno, 20th-century music had already given up on time with the debut of Stravinsky’s Rite of Spring in 1913, a work that heralded a new compositional style that sought to replace the experience of musical time by a technique of musical spatialization. For Adorno, musical spatialization involves a series of structural shifts in the art of composition: repetition replaces development; modality replaces tonality; form is suspended in favor of excessive coloration; and counterpoint gives way to a diffuse musical atmosphere. Stravinsky is not original in this regard, for he merely radicalizes a tendency toward spatial composition already seen in Wagner (where the concept of the musical drama predominates over musical time) and in Debussy (where atmosphere absorbs temporal progress into an impressionistic stasis). Stravinsky intensifies this trend by subordinating all other musical effects to the sole aim of spatializing musical time. Adorno writes, “One trick defines every manipulation of form in Stravinsky and is soon used to exhaustion: Time is suspended, as if in a circus scene, and complexes of time are presented as if they were spatial” (142–43). Practically, this means that, in Stravinsky, we here a music that has “renounced all possible means for the production of time-relationships—transition, intensification, the distinction between the field of tension and the field of release, further of exposition and continuation, and of question and answer […]” (143). The montage-like process of composing music in rhythmic and melodic complexes without any organic connection or development has the result that “the musical continuum of time itself is dissociated,” abandoning “the dialectical confrontation with music’s temporal progression” (138).

For a thinker like Adorno, for whom art, society, history, and technology are in permanent dialectical interaction, this is no mere stylistic deviation. The musical abandonment of time expresses the profound impasse of culture in the era of high capitalism and may be linked to the—at the time of his writing (ca 1948)—newly emerged and even more aggressive forms of domination associated with totalitarianism and fascism. Commenting in the same essay on Wagner’s tendency toward spatialization, Adorno writes, “The suspension of musical time consciousness corresponds to the entire history of the bourgeoisie, which, no longer seeing anything in front of itself, denies the process of history itself and seeks its own utopia through the revocation of time in space” (140). Indeed, the fantasy of a spatialization of (musical) time could only emerge out of a social class that believes it has itself triumphed over history, that sees time as a given and space as the only dimension in which it exists, spread out before it like some open territory waiting to be claimed. Yet the flipside of that triumph is the paradoxical domination of the middle class by the very capitalist processes that ostensibly empower it. And that domination extends most sinisterly into the domain of time, for Adorno seems to suggest that the most dangerous outcome of bourgeois ideology is an individual who cannot think for himself because he has no time to think for himself.

In an earlier text, the famous chapter on the culture industry from the Dialectic of Enlightenment, Adorno and Horkheimer (1972) write, “The bourgeois whose existence is split into a business and a private life, whose private life is split into keeping up his public image and intimacy, whose intimacy is split into the surly partnership of marriage and the bitter comfort of being quite alone, is already virtually a Nazi, replete with both enthusiasm and abuse […].” The individual who is forced to subordinate his life into increasingly smaller units and “time-manage” his own alienation has in fact forfeited his individuality to a system that dictates his actions at all times because it has eradicated the spontaneity of “unscheduled,” free thought. Even when he is alone, the bourgeois is still on the clock, his solitude sterile and unproductive because it beats time to a rhythm prescribed by a system he obeys without question. Turning back to Adorno’s essay on Stravinsky, we note an astonishing link
between the reified, proto-Nazi consciousness of the culture industry and the rarefied products of European art music, for Stravinsky’s music produces almost exactly the same attitude of distraction and submission. Adorno insists that Stravinsky’s abandonment of musical time must be understood not so much as aesthetically motivated, but also as the result of “the pressure of a system whose irrational superiority over everything subjected to it maintains itself exclusively on the basis of estranging people from the effort of thinking and reducing them to mere centers of reaction, to monads of conditioned reflexes” (146). The listener of Stravinsky finds himself in the same position as the consumer of the products of the culture industry in that all his reactions are calculated in advance. The music, spatially conceived, does not allow for a becoming in time, for the free play of subjective thought in dialectical tension with the objective act of listening. His music produces a passive listener, at best, and taking that passivity to a dialectical extreme, Adorno writes: “Stravinsky’s fabula docet is versatile complacency and obstinate obedience, the model of that authoritarian character that today proliferates on all sides” (146).

Adorno’s treatment of Stravinsky may be heavy-handed and polemically charged, yet what underlies it is a distinction between two modes of listening that will help us to understand what the 9 Beet Stretch does with time, and, perhaps not by chance, with Beethoven. Adorno names an “expressive-dynamic” and a “rhythmic-spatial” mode of listening and suggests that the two modes interact throughout the history of Western music, with either one predominant at a given time:

The former [expressive-dynamic] has its source in singing: it aims at surmounting time through its fulfillment and, in its supreme manifestations, inverts the heterogenous movement of time as a force of the musical process. The other type obeys the beat of the drum, intent on the articulation of time through its division into equal quantities that virtually abrogate and spatialize time. The two types of listening diverge by virtue of social alienation, which tears apart subject and object, separated by force of that social alienation which separates subject and object. [...] The idea of great music consisted in a reciprocal interpenetration of these two types of listening and compositional categories that conformed to them. (144)

Adorno defines listening not so much in relation to our perception of musical form unfolding in time as to our understanding of music’s interaction with time itself. In this regard, he estimates, in the Philosophy of New Music, Beethoven’s 7th Symphony most highly as a work, both in its formal construction and at the level of his dual typology of listening, that offers a musical and philosophical synthesis of expression/rhythm, song/dance, and subject/object. Yet, in passing, he remarks that the late works of Beethoven (which would include the 9th symphony), renounce precisely the dialectical synthesis attained in the 7th: “[Beethoven] himself in his late phase surrendered this paradoxical unity and, as the highest truth of his music, allowed the absence of reconciliation between the two categories to obtrude baldly and eloquently” (145). What is crucial for the polemic is the contrast between Stravinsky’s cheap, pseudo-dialectical spatialization of musical time as montage, and the more profound fragmentation of time in the late Beethoven.

Though Adorno remains focused on Stravinsky for the remainder of his Philosophy of New Music, the short essay “Late Style in Beethoven” (2002) dilates upon the breakdown of dialectical time in Beethoven. Here, Adorno argues that “late style” in Beethoven and other artists, is characterized by a kind of abandonment of the subjective shaping of artistic material that we normally think of as “style.” What emerges are not smooth interpenetrations of form and content, style and idea, but rather radical breaks which interrupt the work of the artist like death itself:

The caesuras, the sudden discontinuities that more than anything else characterize the very late Beethoven, are those moments of breaking away; the work is silent at the instant when it is left behind, and turns its emptiness outward. Not until then does the next fragment attach itself, transfixed by the spell of subjectivity breaking loose and conjoined for better or worse with whatever preceded it; for the mystery is between them, and it cannot be invoked otherwise than in the figure they create together. [...] He does not bring about their harmonious synthesis. As the power of dissociation, he tears them apart in time, in order, perhaps, to preserve them for the eternal. (567)

Bracketing for now the difficulty of what Adorno implies in the late work’s imbrication of form, matter, life, and death, we can at least say that the relentless continuity of a 24/7 work like the 9 Beet Stretch indicates a world that radically denies the possibility of fragmentation, cessation, and release from its otherwise unendurable duration. The ultimate indeterminacy of listening would not be sought in Cagean continuities, Hansen’s embodiment, or Bachelard’s imaginative elsewhere, but perhaps in that exemplary caesura from the fourth movement of the 9th where a maximum of musical expression dissolves into a pause which, however artificial, calculated, and excessive it may be, at least interposes a fleeting fiction of possibility amidst the notes on the page and the sounds in the air.
Although Douglas Kahn (1997), among others, is critical of the extent of Cage’s departure from the privileged aesthetics of the concert hall.

Evens’ opening chapter is a tour de force that links psychoacoustics, musical performance, and recording technology to an all-encompassing sonic materialism enacted through the contraction of hearing.

In this sense, 9 Beet Stretch is not dissimilar from Douglas Gordon’s 24 Hour Psycho (1993)—another work premised on 24 hour remediation of a canonical work—in that the defamiliarization of the altered playback speed is matched frame by frame, grain by grain, with the formal refamiliarization of a Hitchcock’s masterpiece. Never having attended a screening of the 24 Hour Psycho myself, I have been unable to ascertain how (if at all) Gordon incorporates sound into the installation.

It is worth noting that Beethoven himself experimented with compositional conventions to show how musical form itself can be "stretched." For example, the second movements of op. 57 and op. 111 (piano sonatas no. 23 “Appassionata” and 32 respectively) as well as the third movement of the String Quartet in A minor (op. 132) play with duration, variation, and modulation in ways that anticipate the effects of audio stretching. I am grateful to one of the anonymous reviewers for these references.

For a lucid critique of Hansen’s positing of the primordiality of the body with respect to technology and language, see David Cecchetto (2011).

In a separate chapter, Hansen does discuss Gordon’s 24 Hour Psycho, but his focus is the work’s foregrounding of viewer anticipation in the slowness of its playback. He mentions in passing that the screening of the film would have to be limited “to the opening hours of a museum or gallery” and that “no perception of the whole film is possible” (244). In the digital light years of cultural time that have elapsed since the 2004 publication of Hansen’s book, 24-hour works like Christian Marclay’s The Clock (2010) regularly play in full duration at major galleries and venues, not to mention the 9 Beet Stretch itself in its “live” installation and portable formats. A more recent 24-hour music video, Pharrell Williams’ (2013) 24 Hours of Happy (directed by Yoann Lemonie and We Are From LA) has been reviewed, in its full duration by a number of bloggers. Both Marclay’s and Williams’ pieces (the latter via its continuous playback on its web site) are synced to the actual clock time, whereas the online incarnations of Inge’s piece are synced to the original start time of the debut of Beethoven’s symphony in Vienna at 7 pm (on May 7th, 1824). In any case, further on in the essay I address the gap between Hansen’s putative impossibility of a 24-hour duration circa 2004 and the seeming plausibility of devoting 24 hours (continuously, or in digitally separated chunks) just over a decade later.

For an insightful review of Crary’s book that both appreciates its critical gesture and draws attention to some of the overgeneralizations that such a broad argument (arguably) employs, see Parry-Davies (2016).

Notes

1. Although Douglas Kahn (1997), among others, is critical of the extent of Cage’s departure from the privileged aesthetics of the concert hall.

2. Evens’ opening chapter is a tour de force that links psychoacoustics, musical performance, and recording technology to an all-encompassing sonic materialism enacted through the contraction of hearing.

3. In this sense, 9 Beet Stretch is not dissimilar from Douglas Gordon’s 24 Hour Psycho (1993)—another work premised on 24 hour remediation of a canonical work—in that the defamiliarization of the altered playback speed is matched frame by frame, grain by grain, with the formal refamiliarization of a Hitchcock’s masterpiece. Never having attended a screening of the 24 Hour Psycho myself, I have been unable to ascertain how (if at all) Gordon incorporates sound into the installation.

4. It is worth noting that Beethoven himself experimented with compositional conventions to show how musical form itself can be “stretched.” For example, the second movements of op. 57 and op. 111 (piano sonatas no. 23 “Appassionata” and 32 respectively) as well as the third movement of the String Quartet in A minor (op. 132) play with duration, variation, and modulation in ways that anticipate the effects of audio stretching. I am grateful to one of the anonymous reviewers for these references.

5. For a lucid critique of Hansen’s positing of the primordiality of the body with respect to technology and language, see David Cecchetto (2011).

6. In a separate chapter, Hansen does discuss Gordon’s 24 Hour Psycho, but his focus is the work’s foregrounding of viewer anticipation in the slowness of its playback. He mentions in passing that the screening of the film would have to be limited “to the opening hours of a museum or gallery” and that “no perception of the whole film is possible” (244). In the digital light years of cultural time that have elapsed since the 2004 publication of Hansen’s book, 24-hour works like Christian Marclay’s The Clock (2010) regularly play in full duration at major galleries and venues, not to mention the 9 Beet Stretch itself in its “live” installation and portable formats. A more recent 24-hour music video, Pharrell Williams’ (2013) 24 Hours of Happy (directed by Yoann Lemonie and We Are From LA) has been reviewed, in its full duration by a number of bloggers. Both Marclay’s and Williams’ pieces (the latter via its continuous playback on its web site) are synced to the actual clock time, whereas the online incarnations of Inge’s piece are synced to the original start time of the debut of Beethoven’s symphony in Vienna at 7 pm (on May 7th, 1824). In any case, further on in the essay I address the gap between Hansen’s putative impossibility of a 24-hour duration circa 2004 and the seeming plausibility of devoting 24 hours (continuously, or in digitally separated chunks) just over a decade later.

7. For an insightful review of Crary’s book that both appreciates its critical gesture and draws attention to some of the overgeneralizations that such a broad argument (arguably) employs, see Parry-Davies (2016).

Notes on contributor

Joshua Dittrich is a doctoral candidate in the Communication & Culture program at York University. His research focuses on sound, digital media and environment. He also holds a PhD in German Studies from Cornell University where he researched aesthetics and materiality in German modernism. He is currently a lecturer in Professional Writing & Communication at the University of Toronto, Mississauga.

Disclosure statement

No potential conflict of interest was reported by the author.

References

Adorno, T. W. 2002. Essays on Music. Introduction and Commentary by Richard Leppert. Translated by Susan H. Gillespie. Berkeley: University of California Press.

Adorno, T. W. 2006. Philosophy of New Music. Edited and Translated by Robert Hullot-Kentor. Minneapolis: University of Minnesota Press.

Adorno, T. W., and M. Horkheimer. 1972. Dialectic of Enlightenment. Translated by John Cumming. New York: Continuum.

Bachelard, G. 1994. The Poetics of Space. Translated by Maria Jolas. Boston: Beacon Press.

Cage, J. 1952. 4′33″ (performance). Woodstock, NY.

Cage, J. 1962. ‘000″ (4′33″ No. 2) (performance). Tokyo.

Cage, J. 2011. Silence. 50th Anniversary Edition. Middleton, CT: Wesleyan University Press.

Cecchetto, D. 2011. “Deconstructing Affect: Posthumanism and Mark Hansen’s Media Theory.” Theory, Culture & Society 28 (3): 3–33. doi:10.1177/0263276411411589.

Crary, J. 2013. 24/7: Late Capitalism and the Ends of Sleep. London: Verso.

Cusick, S. G. 2008. “‘You are in a Place that is Out of the World…’: Music in the Detention Camps of the ‘Global War on Terror’.” Journal for the Society of American Music 2 (1): 1–26. doi:10.1017/S1752196308008012.

Evens, A. 2005. Sound Ideas: Music, Machines and Experience. Minneapolis: University of Minnesota Press.

Gordon, D. 1993. 24-Hour Psycho (installation). London.

Hansen, M. B. N. 2004. New Philosophy for New Media. Cambridge, MA: MIT Press.

Inge, L. 2002. 9 Beet Stretch (installation). Oslo.

Kahn, D. 1997. “John Cage: Silence and Silencing.” The Musical Quarterly 81 (4): 556–598. doi:10.1093/mq/81.4.556.

Kahn, D. 2011. “The Latest: Fluxus and Music.” In Sound: Documents of Contemporary Art, edited by C. Kelly, 28–42. London, UK: Whitechapel Gallery.

Lazzarini, R. 2000. skulls (sculpture/installation). New York.

Marclay, C. 2010. The Clock (installation). London.

Parry-Davies, E. 2016. “24/7: Late Capitalism and the Ends of Sleep by Jonathan Crary (Review).” Cinema Journal 55 (2): 177–181. doi:10.1353/cj.2016.0007.

van Beethoven, L. 1997. Symphony No. 9 in D Minor, Op. 125 “Choral.” Mineola, NY: Dover Publications.

Williams, P., Lemoine, Y., and We Are From LA. 2013. Pharrell Williams - Happy (online). Accessed 8 December 2017. http://24hoursofhappy.com.

"Notes on contributor"