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EXTREME TEMPORALITIES IN EXPERIMENTAL ELECTROACOUSTIC MUSIC AND SOUND ART

Western music history offers students a series of remarkable endurance tests. At various points in a narrative survey, students will likely encounter descriptions of works, performances, and sonic practices of unusual and even staggering durations: the productions of dramatic trilogies followed by satyr plays at the Festival of Dionysus, the observance of the Divine Office through daily and weekly cycles, the organa of Léonin and Pérotin embedded within liturgical services, the Renaissance *intermedio* as a spectacle interpolated within wedding celebrations or theatrical productions, the “musical academies” in which Beethoven’s symphonies were premiered, the *Ring* cycle, Karlheinz Stockhausen’s *Licht*, the marathon performance of Erik Satie’s *Vexations* spearheaded by John Cage in 1963 (lasting 18 hours and 40 minutes), La Monte Young’s *The Well-Tuned Piano* (an open, improvisatory work of up to 6 hours in duration), and Morton Feldman’s String Quartet No. 2 (approximately 6 hours long). Many of the canonic works included in anthologies, although less extreme than these examples, nonetheless make formidable demands on our listening attention – and more bluntly, on our time. Yet however taxing these demands might prove to be, the musical works that instructors assign for listening are typically anchored to the possibility of perceptual experience. The notion of a ‘work’ itself within pedagogical contexts – that is, the type of object students are expected to listen to and analyze – is perhaps often determined by an implicit sense of what can be experienced as a whole, even if this whole has been extracted from a more complex event or context.

If we choose to explore the history and aesthetics of electronic music with students, the transgressing of perceptual boundaries will become increasingly frequent as well as radical. Microsound works, for instance, may hover around the threshold of perception, such that listeners can be quite certain that they are actively missing information that is nonetheless inaudibly there.¹ At another extreme, certain forms of drone composition and sound installation, often

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¹ See J. DEMERS, *Listening through the Noise: The Aesthetics of Experimental Electronic Music*, Oxford, Oxford University Press, 2010, pp. 71-79; a succinct overview of the development and techniques of microsound and granular synthesis can be found in T. HOLMES, *Electronic and Experimental Music: Technology, Music, and Culture*, 6th edition, New York - London, Routledge, 2020, pp. 102-103.

reliant on algorithmic techniques, make ‘listening’ to a ‘work’ in most traditional senses of both words impossible. Leif Inge’s *9 Beet Stretch* digitally extends a recording of Beethoven’s Ninth Symphony into a 24-hour-long drone. When presented as an installation in a gallery, it may be synchronized with the local time in which it is presented; it is also perpetually present as a virtual installation, whose online stream began at “the hour of sunset” in Vienna on “March 26th, the date Ludwig van Beethoven died”.² La Monte Young and Marian Zazeela’s *Dream House*, an electronic drone and light installation that has been realized in many different settings, may extend in duration from months to years, achieving what Kyle Gann has described as a “quasi-endless immobility”.³ This intermedial work or assemblage creates an immersive space and occupies this space like sculpture, yet it presents a form or process that can only be sampled – and never completed – by a visitor to the installation. A similar spatial transformation of a musical work is the ongoing performance of John Cage’s *As Slow as Possible* (*Organ²/ASLSP*) in Halberstadt, Germany, which began on 5 September 2001. This installation has been promoted as “the slowest and longest music piece ever” and will occupy the St. Burchardi Church in Halberstadt for 639 years, lasting until 2640.⁴

The Halberstadt realization of *As Slow as Possible* has entered into what seems like an arms race of conceptual projects imagined on glacial or geological time spans. Alexander Rehding has positioned two other projects alongside *As Slow as Possible* and *9 Beet Stretch*: Jem Finer’s “Longplayer”, which is streaming online and located as a permanent installation in London, is designed to last one thousand years;⁵ the “Clock of the Long Now”, a mechanical clock designed by Danny Hillis, is currently operating in prototype form and is envisioned to last for 10,000 years.⁶ For Rehding, the projects of Inge, Finer, Hillis, and Halberstadt/Cage, clustered around the millennium and reflecting on the broad passage of time, exemplify Jean-François Lyotard’s conception of the postmodern sublime as “that which in the modern invokes the unrepresentable in presentation itself, that which refuses the consolation of correct forms, refuses the consensus of taste permitting a common experience of nostalgia for the impossible, and inquires into new presentations – not to take pleasure in them,

² [Http://www.9beetstretch.com](http://www.9beetstretch.com) (last access to this link and to the others in this essay 16.09.2024).

³ K. GANN, “The Outer Edge of Consonance: Snapshots from the Evolution of La Monte Young’s Tuning Installations”, in *Sound and Light: La Monte Young and Marian Zazeela*, ed. by W. Duckworth and R. Fleming, Lewisburg, Bucknell University Press, 1996, p. 153.

⁴ [Https://universes.art/en/specials/john-cage-organ-project-halberstadt](https://universes.art/en/specials/john-cage-organ-project-halberstadt).

⁵ [Https://longplayer.org](https://longplayer.org).

⁶ [Https://longnow.org/clock](https://longnow.org/clock).

but to better produce the feeling that there is something unrepresentable”.⁷ The projects of Finer and Hillis – *projected* into distant, speculative futures – also evoke the deep time and vast scale of phenomena theorized by Timothy Morton as “hyperobjects”: these include black holes, planets, geological formations, global warming, and the “sum total of all the nuclear materials on Earth”.⁸ Extending the concept into aesthetic theory, the essential feature of what we might call the ‘aesthetic hyperobject’ or the ‘sonic hyperobject’ is that its spatiotemporal form intensively challenges or exceeds the biological frame of the individual human.

Sonic hyperobjects offer a timely and perhaps ideal challenge to the ‘presentist’ moment. Because they are perceptually difficult, even unendurable, and to varying degrees inaccessible and unrepresentable, they bring into awareness a difficulty that extends into more and more local or familiar territory with the scale of a work such as *Tristan und Isolde* or *Music for 18 Musicians*. They may reveal to us that in relation to the Western art music tradition, our position is already precarious, as attention spans seem to be shrinking and ‘normal’ musical perception already struggling with ‘normal’ timescales. My inquiry in what follows will therefore take two distinct yet intersecting routes. I first explore how music history instruction deals with temporal parts and wholes through in-class exemplification and extended listening assignments outside of class, here considering how attentional frames may shape both types of listening experience. I then explore the value of teaching forms of electroacoustic music and sound art that challenge human perceptual capacities and resist attempts at documentation and representation. I suggest that encounters with “extreme temporality”, to borrow a term from Hans Ulrich Gumbrecht, may open a constructive dialogue with assumptions about attention and musical duration that shape our everyday listening habits.⁹

Pedagogical Sampling and Attentional Frames

Teaching complete musical works of long duration is particularly difficult in the present moment – in the limited timespan of a class meeting and for students grappling with the lure of personal digital devices and the capture of

⁷ J.-F. LYOTARD, *The Postmodern Explained: Correspondence 1982-1985* (1988), Eng. trans., Minneapolis - London, University of Minnesota Press, 1993, p. 15, quoted in A. REHDING, “The Discovery of Slowness in Music”, in *Thresholds of Listening: Sound, Technics, Space*, ed. by S. van Maas, New York, Fordham University Press, 2015, p. 208.

⁸ T. MORTON, *Hyperobjects: Philosophy and Ecology after the End of the World*, Minneapolis - London, University of Minnesota Press, 2013, p. 1. See also J. DEMERS, *Drone and Apocalypse: An Exhibit Catalog for the End of the World*, Winchester (UK), Zero Books, 2015, pp. 7-8.

⁹ See H. U. GUMBRECHT, *Production of Presence: What Meaning Cannot Convey*, Stanford, Stanford University Press, 2004, p. 58.

mental focus through frequent task-shifting. What instructors make present in the classroom is also typically fragmentary: an excerpt, a piece, or a movement, perhaps selected from an anthology, itself a patchwork. An oratorio, a *tragédie en musique*, and a monumental symphony become things to mine or distill. Pedagogical sampling is an extractive process, perhaps akin to the sonic appropriation and slicing of sampling-based electronic music. The necessity of some form of exemplification and excerpting (i.e., cutting down to size) in instruction long preceded current anxieties about the shrinking of student attention spans, yet we should consider whether shorter attentional frames may be influencing the compression of musical examples into more and more manageable parts.

Through exemplification we gesture towards totalities that can often only be experienced outside of the classroom. How deep and focused (let alone complete) is this listening experience? With changes in student demographics and lifestyles, including part- or full-time work, internships, and activity on social media, the space of independent listening in which we thrust complete works seems increasingly utopian. In addition to inquiring into whether students are completing listening assignments, we should also inquire into the ways in which they listen. For instance, do students listen to complete works multiple times (to *learn* them), or is each listening a first and only encounter, of the phenomenologically naïve form that often appears in psychoacoustic research in listening behavior and competence?

Empirical studies of long-form reading in university instruction offer potentially useful parallels to some of these issues. In recent research that targets the comprehension of complex texts and the completion of reading assignments, Naomi S. Baron and Anne Mangen have charted the decline of “sustained, mindful reading” among college students.¹⁰ Baron and Mangen observe that in this research “one indisputable conclusion emerges: vast numbers of students have not been doing the reading”.¹¹ They also report on accumulating evidence that the migration of texts from print to digital formats is negatively impacting the ability of students to understand what they read. At the same time, they document a reduction in assignments of “long long-form” texts (novels and monographs) in preference to shorter texts. More recently, Mangen, Inge van de Ven, and Frank Hakemulder have argued for the importance of the development of “cognitive patience” in reading, extending a concept introduced by Maryanne

¹⁰ N. S. BARON - A. MANGEN, “Doing the Reading: The Decline of Long Long-Form Reading in Higher Education”, *Poetics Today*, 2021, XLII, n. 2, pp. 253-279: 275.

¹¹ *Ivi*, p. 258.

Wolf.¹² They contrast the benefits of concentration and perseverance with the habits of skimming, scanning, and skipping ingrained through the ‘hyperreading’ of digital media.¹³ (If music and literature are in parallel here, music history instructors face a double challenge, as we typically include complex texts as well as musical works in assignments.)

Accounts of listening behaviors in musicology and music education seem more ambivalent about the values of depth and focus. In counterpoint with the interrogation of “structural listening” by Rose Rosengard Subotnik¹⁴ and critiques of absolute music and autonomy in the 1980s and 1990s, scholarship on listening over the past several decades has responded to the rise of the mp3 format, iPods, and digital streaming to claim a legitimate place for, and even celebrate, various forms of ‘everyday listening’ – particularly background and ambient listening.¹⁵ Such practices are not consigned to one side of a binary split between passive and active listening, one that would map onto a simplistic distinction between popular music and art music. Ruth Herbert and Rebecca Rinsema have identified a varied range of everyday listening behaviors: background listening, to be sure, yet even this proves to be highly differentiated in practice, as it is keyed to specific activities, spaces, and moods; the active curating and sharing of playlists; the experience of absorption and trance; skipping through songs to listen, perhaps obsessively, to favorite passages; or skipping over undesirable passages, such as cameos by guest artists listeners dislike.¹⁶

¹² I. VAN DE VEN - F. HAKEMULDER - A. MANGEN, “‘TL;DR’(Too Long; Didn’t Read)? Cognitive Patience as a Mode of Reading: Exploring Concentration and Perseverance”, *Scientific Study of Literature*, 2023, XII, n. 1, pp. 68-86.

¹³ *Ivi*, pp. 69-71. A growing subset of self-improvement literature is marked by the desire to reclaim attention from the distractions, task-shifting, and fragmented perception fostered by digital media environments. The proliferation of English-language literature in the field seems to have been initiated by Nicholas Carr’s 2010 book *The Shallows: What the Internet Is Doing to Our Brains*, New York, Norton. The field includes Cal Newport’s *Deep Work: Rules for Focused Success in a Distracted World*, London, Piatkus, 2016 and *Digital Minimalism: Choosing a Focused Life in a Noisy World*, New York, Portfolio - Penguin, 2019, and more recently, Johann Hari’s *Stolen Focus: Why You Can’t Pay Attention*, London - Dublin, Bloomsbury, 2022.

¹⁴ R. R. SUBOTNIK, *Deconstructive Variations: Music and Reason in Western Society*, Minneapolis - London, University of Minnesota Press, 1996, pp. 148-176.

¹⁵ This perspective is perhaps best exemplified by A. KASSABIAN, *Ubiquitous Listening: Affect, Attention, and Distributed Subjectivity*, Berkeley - Los Angeles - London, University of California Press, 2013.

¹⁶ See R. HERBERT, *Everyday Music Listening: Absorption, Dissociation and Trancing*, Farnham (UK) – Burlington (VT), Ashgate, 2011, and R. M. RINSEMA, *Listening in Action: Teaching Music in the Digital Age*, New York, Routledge, 2017.

Everyday listening, then, is not reducible to passive, ambient background listening. If there is a common element that characterizes everyday listening experiences, it is likely the availability and mobility of music as mediated through digital technologies. These technologies have rendered music both ubiquitous and portable: as Rinsema has observed, they “provide listeners the ability to listen to virtually any song at any given moment, wherever they happen to be located”.¹⁷ Participants in this musical culture have acquired a tacit form of digital mastery: we hold devices in the hand or carry them in our pockets, and these devices allow us to control time and musical structure. Skipping, repeating, and shuffling, we not only listen to but routinely transform musical works and their contexts, as if transferring the procedures of *musique concrète* or ‘plunderphonics’ to everyday aurality. Have digital technologies therefore turned listening into a default form of ‘hyperlistening’ that parallels the emergence of digital ‘hyperreading’?

Returning to a pedagogical context with a suggestion that may at first appear counterintuitive, if not simply perverse, perhaps we should encourage students to be less active at times, or to assume a different type of action, in listening. The ubiquitous agency we have acquired keeps music always “at hand” and risks turning listening into a form of what Martin Heidegger characterized as the movement of “Enframing” (*Gestell*) in modern technology, the impulse to treat things and people as a stock of raw material and a resource to plunder.¹⁸ This kind of agency instrumentalizes music by repurposing and reworking it – a process exemplified in a striking way by Inge’s *9 Beet Stretch*. The act of listening becomes virtually anything except letting a work, event, or performance be, letting it happen without disrupting it and bending it to one’s control. In confrontation with digital mastery, we might experiment with listening stances informed by Heidegger’s concept of *Gelassenheit*, which Gumbrecht glosses as “the capacity of letting things be”.¹⁹

Extreme Temporalities

Underlying the various sampling practices I have been exploring is the assumption that these totalities are typically accessible in some way. Long-form works such as Wagner’s music dramas, however difficult for students they may prove, are merely difficult; these works are still available to experience. As an exercise in defamiliarization, rather than assigning complex and difficult works such as complete symphonies and operas, which students can choose to listen

¹⁷ RINSEMA, *Listening in Action* cit., p. 56.

¹⁸ The concept of *Gestell* is introduced and developed in M. HEIDEGGER, “The Question Concerning Technology,” in ID., *The Question Concerning Technology and Other Essays* (1950, 1954, 1962), Eng. trans., New York, Harper & Row, 1977, pp. 3-35.

¹⁹ GUMBRECHT, *Production of Presence* cit., p. 71.

to (or not) outside of class, we can move outside of the bounded work concept and encourage encounters with extreme temporalities, ranging from works such as *The Well-Tuned Piano* that stretch one's perceptual focus and endurance ("ambiguously poised between forward movement and a potential auditory eternity")²⁰ to aesthetic hyperobjects that simply cannot be fully experienced or mastered in the ways that we have come to expect of works in the Western classical tradition. Some of these works, such as *9 Beet Stretch* and the Halberstadt Cage project, involve interventions into music produced within this tradition; others will set us on a path through experimental electroacoustic practices into new media art and sound art. Composers and artists who work is centrally concerned with temporal and perceptual boundaries include Maryanne Amacher, Max Neuhaus, Éliane Radigue, Bernhard Leitner, Annea Lockwood, Ryoji Ikeda, Christian Marclay, and Bill Viola, as well as more familiar figures in music history surveys such as Pauline Oliveros, Alvin Lucier, Terry Riley, and La Monte Young.²¹

Works of extreme temporalities works not only invite the crossing of the boundaries separating music from sound art, works from events, and performances from installations; they invite the exploration of alternate types of listening experience, informed by a perspective of sonic experimentation with embodied experience and modes of consciousness, that challenge the ubiquity and closure of most digital musical artifacts. For students accustomed to their disposition over these types of artifacts, extreme temporalities stress the absence of one's mastery over sound. With such works, we can often only imagine – not experience – the whole. What then is a 'work', what is a 'structure', and what is 'structural listening' for sonic art that separates its conceptual structure, which may be quickly grasped, from the continuous sounding embodiment of a whole that extends beyond the attention one can bring to it? Would it be in poor taste, given the present climate of anti-oppressive pedagogy, or would it be merely quaint, to invoke the potential ethical effect of sublime experience – that paradoxical movement in which the individual subject is at once overwhelmed and elevated by the sublime object? Perhaps one of the key values of sublime objects is precisely their distance from the familiar, the confrontation they enact with the comforts of the everyday. The types of conceptual works that I have characterized as sonic hyperobjects only intensify this confrontation; in a countermovement to these intensities, perhaps the expansion of scale made

²⁰ GANN, "The Outer Edge of Consonance" cit., p. 153.

²¹ This highly selective list of some of the most prominent figures is intended only a starting point for exploration; in addition to J. DEMERS, *Listening through the Noise* cit., useful orienting texts for this heterogeneous field include C. COX, *Sonic Flux: Sound, Art, and Metaphysics*, Chicago - London, University of Chicago Press, 2018, and A. LICHT, *Sound Art Revisited*, New York - London, Bloomsbury Academic, 2019.

possible through electronic media and conceptual art will place traditional forms in a new light for students, even making them newly accessible. In returning to the ‘human’ scale of appreciable forms, perhaps we are recuperating the “consolation and pleasure” in form that Lyotard described as the characteristic feature of “nostalgia” in modernist aesthetics.²²

Extreme temporalities also prompt reflection on agency and technological determinism: to what extent is our perception of music shaped by the affordances of various devices, formats, and media environments? Our access to many such examples is likely mediated through the Internet. Some works, such as *9 Beet Stretch*, migrate across virtual environments and ‘real’ spaces such as art galleries. More commonly, the documentation of sound installations and site-specific works on the Internet will be inherently incomplete and point to the necessity of physical presence within the gallery or other installation sites. These works encourage reflection, too, on broader questions of cultural, societal, and ecological continuity. At some point, virtually every account of the Halberstadt installation of *As Slow as Possible* poses the question: How long will this really last? We may also wonder: How many other endurance tests in music history – so many of the ‘classic’ works that populate our narrative surveys – will endure if they can no longer hold our otherwise captured attention?

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²² LYOTARD, *The Postmodern Explained* cit., p. 14.