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## Sustained tones, sustained durations

Richard Glover

For me, the sustained tone is a powerful tool for deployment in extended, immersive environments. Sustained tones provide us with a unique landscape upon which expectancies, imaginations and temporalities can be flexible and entirely individual. These pitches are continuous, promoting an experience of extended presents. They can provide a much-enhanced appreciation of the effects of sound on our auditory systems, memory processes and our being as a whole; they can prompt to us examine our way of understanding the world at a greater level.

This chapter will explore the human experience of sustained tone music, and the role our perceptual and cognitive processes play in this experience. Throughout the chapter, I use the phrase ‘sustained tone’ where others may use the word ‘drone’; drones are often understood as a somewhat redundant form of musical information, or, as Joanna Demers describes them, a form of sensory deprivation (2010, 93), that allows a heightened performance from perception by prompting the listener to attend to nuanced variations in the surface of the sound, which in turn gain a greater significance. Whilst I align with the latter half of that statement, the former projects the notion of inertia and a fixed pitch (in terms of construction, rather than the experience of audition), and to some degree, therefore, a fixed experience. However, what this chapter argues is that the transformational nature of the material, the extended duration and the subjective experience all lead to evolved auditory and cognitive processing, rather than a ‘redundant’ view of the material.

A common feature of discussion around sustained tone music is that individual pieces are often grouped together under very general headings or issues; however, once individual composers and pieces are explored, it becomes clear that there are widely varying experiences to be gained from the

different approaches taken. This provides the impetus to describe individual pieces throughout this chapter, as emphasised in the introduction, so as to avoid these generalisations and investigate specific instances, thereby allowing a more rigorous approach. Individual composers and individual pieces can communicate individual intents, which should be ascertained to illuminate the discussion and provide further insight. I aim to give enough context for each piece to lead the reader through the discussion, but I do not analyse the construction of the music in great detail (except where it illuminates an argument); rather, it is the experience of listening to the results of that construction, throughout the duration of the piece, which is of primary concern.

## Listening

[W]hen the sounds are very long ... it can be easier to get inside of them.  
(Young 1965, 81)

La Monte Young has made a lifetime's work of investigating music of this type. Sustained tones invite their own particular listening mode, or modes, which prompt the listener to comprehend the music, and their relationship to it, for themselves. This approach is less what the theorist Ian Quinn calls 'quarendo' (to obtain, to get), which is familiar to more traditional compositional syntaxes, and more what he calls 'audiendo invenietis' (to discover on hearing) (2006, 287). It is an environment in which to discover the manner in which music is built and performed, and more significantly how it is experienced. The cellist Charles Curtis, when considering the sustained tones and acoustic phenomena of Alvin Lucier, considers the role of the listener as a pro-active, performative agent:

[T]he listeners, or audience, due to the perceptual challenges posed by the music, are placed in a sort of performing posture, actively seeking

out these borderline effects that are by no means obvious or spotlighted.  
(2012, 3)

Curtis's comments stem from his vast experience of playing music by Young, Eliane Radigue, Terry Jennings, and Alvin Lucier, amongst others, and reflect his feeling that listeners and performers share the crucial act of listening, which he sees as being central to the act of music-making itself. He also makes the claim that performing is itself a listening event, but a listening infused with the engaged and active focus of performance. The roles traditionally reserved for the performer and listener are reversed, and Curtis intriguingly points towards Young's *Composition 1960 #6*, in which performers act as audience, wherein their perceptual processes (not just the auditory) are heightened to a degree beyond that of the audience observing them. In sustained tone music, the listener is tasked with perfecting their auditory art throughout the duration, and to perform at a high level for edifying results.

Much of this ties in with recent theoretical work undertaken by the psychologist Alva Noë, who argues that we should consider the role of our perception in terms of the sense of touch: a haptic approach to perceiving the world. Most often, the visual and aural senses become the mandatory representations of the perceptive processes, and we quickly acclimatise to what the consequences of our perceptions working in this manner are: the act of passively *receiving*. However, when perception becomes an *action*, a reaching out, or a searching, then the actual process of gaining information by perception shifts responsibility to the perceiver, rather than external sources *providing* sensory information to the individual, who then receives. We enact our perceptual content through a skillful activity of the body. This powerful concept helps frame our perception in a much more pro-active manner, and only helps to reinforce Curtis's comments concerning the performative nature of listening – the 'seeking out' and 'handling' of auditory material to be processed. When framed in this way sound assumes a more tactile form

that the listener is able to grasp at will, and sustained tones provide a form of decentralised landscape in which the sounds are there to be grasped freely.

### **Rytis Mažulis**

I begin this exploration of enacting our auditory processes with *Ajapajapam* (2002), a piece for mixed choir, string quartet and sine tones by the Lithuanian composer Rytis Mažulis. Over its 35 minute duration the piece provides a sustained immersive environment in which close pitch clusters within the choir and string quartet generate harmonics that interact with the continuous sine tones at a higher pitch. The cellist Anton Lukoszevicius states that the piece gets to the very core of what it can mean to ‘listen’ as opposed to just hearing music (quoted in Janatjeva 2006), and I aim to expand upon his observation to elucidate exactly what it is about a sound environment such as this that can engender a more concentrated approach to listening.

The voices’ and strings’ sustained tones meld together and soon lose a strong sense of either identity, as focus shifts to tracking the changes in density created by the continual entries for individual singers, which are then lost as they enter the global sound mass. Occasionally, individual voices rise out of the texture, but then quickly recede; we again perceive the homogenised nature of the pitch clusters. From this, our own sense of curiosity impels the performative act of our listening to detect more within the sound, so as to satisfy our perceptual processes in the intensive listening environment of the concert hall. Once we adopt this active, performative listening, we are able to perceive repetition, pattern development and gradual transformation within the sound, both from the various fundamental pitch and harmonics, and the resultant beating patterns generated by the clusters. The relationship between the voices and strings, and the sine tones feels as though in continual adaptation; whilst the sine tones maintain a clearly separate timbral field that can be parsed from the voices and strings, the rhythms of their beating patterns occasionally meld with the beating patterns from the voices and

strings. Active listening, a reaching out to touch the auditory environment and pull apart the separate strands, can at once hear pure octave unisons between the sine tones and choir, or intervals just wider than octaves, or the multitude of beating pattern layers within the sine tones themselves. The close tone clusters become difficult to parse into single tones until pitch intervals expand past the critical band (the intervallic range in which two pitches cannot be parsed); however, individual perceptual systems interpret this differently, resulting in widely-contrasting individual experiences as clusters form and dissipate uniquely in individual auditory systems. This fuzziness in perception is intriguing: there is not one single ideal of what this piece is, as each participant experiences it in their own individual manner.

The higher sine tones of *Ajapajapam*, and the manner in which the harmonics of the singers and strings interact with them, provide considerable transformation throughout the piece, as do the dramatic changes in densities (albeit gradually). This clearly points to what psychologist Bob Snyder has termed ‘articulations’, suggesting that small parametric changes do not constitute major sectional boundaries, but rather articulations within those boundaries. Snyder uses the term ‘syntax’ to define sets of relations between identifiable patterns, and we can therefore perceive that syntax generated by different beating patterns in Mažulis’s piece. The syntax is in continual transition, as articulations appear at sporadic moments dependent entirely on performers, instruments, room acoustics and so on.

When beating patterns, density, pitch strands and other parameters remain stable for a short duration, a sense of the present extending is brought about. When an articulation then occurs, that feeling subsides and we ‘re-perform’ our listening approach appropriately for new beating pattern speeds, or whatever it may be that the new articulation brings. When articulations appear infrequently, we experience an ‘extending’ of the present, which seems to derive from the specious present, a time period of roughly three seconds during which we are able to perceive all incoming data before it is transformed into memories in our short-term memory. I am not suggesting

that the specious present itself extends, but if there are sections of, say, six seconds wherein no perceivable articulations occur, then the overlapping specious presents may well be experienced as an extended continuum. These moments certainly occur within *Ajapajapam*, and since our performative listening approaches drive a heightened sense of awareness, we are then likely to become more aware of this localised lack of articulation for this short duration. Focusing on the temporality of that time period results in its being experienced as longer.<sup>1</sup>

Jonathan Kramer notes that what he calls ‘vertical music’, which would include *Ajapajapam*, does not provide clear chunking cues, resulting in the music’s seeking to ‘defeat memory’ (1988, 336). Whilst the chunking cues require higher demands from the listener’s perceptual processes, they are still evident in *Ajapajapam*, as articulations – it is simply a case of adapting to each piece’s individual auditory environment.

What is clear when experiencing this music is the difficulty of recalling specific articulations, separate from others; Merleau-Ponty states that ‘the present experience has, in the first place, to assume form and meaning in order to recall precisely this memory and not others’ (1962, 20), and in low-information scenarios such as *Ajapajapam*, the form and meaning of each of these various present experiences are much more difficult to distinguish, and lead to problems in the recall process. This consequently reinforces the difficulties with distinguishing and recalling similar experiences from the past. However, when we recall a recent articulation, this constitutes what is known as ‘rehearsal’, which reinforces our memory’s ability to store and recall that articulation correctly.

What I find is that these memories accumulate, and I am able to compare memories with each other and with the presently perceived articulations. However, what I find powerful is that this accumulation of memory prompts

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1 Richard A. Block concluded that activities that included an attention to time have a strong influence on perceived length – making it appear longer. See Snyder (2000, 214).

me continually to discover *new* patterns within the sound; to be able to discover the new, I must have an idea of what has already occurred, so that, to some degree, I am able to recognise it as a pattern that I have perceived before. It becomes increasingly difficult to maintain any standardised time-ordering capabilities with these memories; they act not as indicators of a timeline, but rather as reference material, which become increasingly difficult to parse between in recall due to their similarities. Whilst I may not be able to recall the precise sound of that articulation, I can certainly recall what Curtis calls the ‘experience of sound’ – the feeling of the articulation, the knowledge that these articulations occurred.

As I strive to discover the new patterns, I have to ascertain how I can reveal them: I start to touch and untangle the various threads, uncovering new articulations, all the time comparing them with varying degrees of accuracy with what has already occurred. The continual accumulation of all these articulation memories prompts me to conceive of new ways to listen to the sound, and consequently acquire a greater understanding of my own perceptual processes. I perform my listening, I reach out into the sound, and in so doing, its ability to parse, store and recall articulations improves. In this way, ‘listening’ begins to include more than the interpretation of auditory information, both perceptually and cognitively. It involves memory and anticipation, evolving knowledge and heightened perceptual processes informed by comparative recall. Curtis describes the process not as ear training, from the traditional musical-familiarity exercises, but rather ‘mental training’, a kind of developed aural analysis (2012, 6).

As these articulations are very much part of the surface layer of the auditory environment, the process of listening to *Ajapajapam* occurs against a ground of the sustained textures of the voices, strings and sine tones. This aural continuity of the background is less timbral, as the spectral palette is often intertwined with the surface layer articulations. Rather, it is a constant *guide* for the global pitch shape of the piece. The shape is a significant aspect; whilst it is difficult to perceive motion in the shape at any one moment due



to both the extremely gradual pitch change and the focus towards the surface layer, I do experience the shape over a certain longer duration, as a result of this continuous background texture. Whilst the ordered structuring of the surface articulations is difficult to comprehend due to the small variances between them complicating memory recall, the global pitch shape can be comprehended through memory much more easily ('the pitch cluster I am experiencing now is lower in pitch than before' / 'the pitch cluster descended steadily throughout the piece'). At points where endurance may result in my active, performative listening receding, I find myself experiencing this background pitch continuum; *Ajapajapam* has a global pitch shape that descends over a perfect fifth throughout, and the use of pitch clusters means that it is only the beginning and end that employ octave unisons between the different parts, therefore ensuring that the pitch clusters do not bring focus upon themselves throughout the duration until the end, as the size of the pitch clusters remains largely continuous throughout. The ability to comprehend this type of shape, and yet simultaneously focus on the surface layer, is what phenomenologist Don Ihde names the temporal focus: he states that the 'narrower the focus, the more the background recedes into a fringe appearance' (2007, 90). The shape is so continuous and simple in *Ajapajapam* that although it remains in the fringe it is still comprehensible. Sculptor Robert Morris has stated that the simpler the shape of an object, the stronger the gestalt, as basic forms appear more whole and unified than complex ones. Despite the duration, the basic shape of the pitch cluster of *Ajapajapam* can be perceived as a whole, unified object, both during and after the experience.

This concern of a singular, global shape to *Ajapajapam* recalls sculptor Donald Judd's remarks that works of art 'should have a definite whole and maybe no parts, or very few' (quoted in Lippard 1968, 154). His own approach to structure was against the idea of setting up relationships between contrasting parts, as he wanted to sustain the idea of the entirety: '[t]he whole's it' (1968, 154). A music that creates little sense of variation or development in construction, where homogeneity overrides contrast, is a music that tends

towards being perceived as a whole. This can lead the listener to focus on various aspects of the music that often go unnoticed when there are a number of parts.

In a similar vein, composer and theorist James Tenney has said: 'I think of form as the same thing, on a larger temporal scale, as what's called content on a smaller scale' (quoted in Young 1978, 16). This reflects the tendency in some of Tenney's music to focus on the exploration of a single gesture, and how its formal shape is created directly from the material. *Having Never Written a Note for Percussion* (1971) consists of a single dynamic swell performed tremolando, usually played on tam-tam, over a 'long time' (often fifteen minutes or more). The swell is the formal shape, in that there are no other structures present in either the local material level, or at a global level: the form is the content. Mažulis builds a simple formal shape in *Ajapajapam*, which then allows for the smaller articulations to be perceived.

This relates to some degree to what James Tenney would call Temporal Gestalts (Tenney, 1988), which are sections of varying sonic parameters. These are different to articulations, however, as they are understood as implying a distinct change in the temporal continuum. Even within Tenney's own compositional output, the existence of articulations is evident: the slight temporal variations in the tremolo *Koan* (1971) and the shifting spectral energy in *Having Never Written a Note for Percussion* are similar to the transitive harmonics and beating speeds in *Ajapajapam*. These articulations usually arise out of change within a single parameter; they don't form new temporal gestalts due to the low entropic nature of the change, but there is a perceived alteration within the sound. Importantly, in *Ajapajapam*, the singular form – the content of the piece – is not compromised, as the object remains as one large temporal gestalt, but the articulations are what maintain our active, performative listening throughout the piece, and what enables our auditory processing faculties to develop.

## Phill Niblock

Another sustained tone composer whose music describes simple formal shapes is Phill Niblock. The majority of Niblock's pieces are somewhere around the 20' mark, including all the pieces discussed in this section. The structures from a number of other Niblock's pieces involve a move either from divergence to convergence, or vice versa, employing very gradual linear glissandi (some pieces are more strictly linear than others), for instance the gradual convergence of *Five More String Quartets* (1993), and gradual divergence, for instance, *Sethwork* (2003), which ends with a mirrored convergence back to the unison from the beginning of the piece. A similar experience is provided to *Ajapajapam* in these pieces, in which an active, performative listening approach is capable of perceiving the surface articulations of transitory harmonics, beating patterns and combination tones, and exploring relationships between these. The global shape of the piece is comprehended not within a single present, as the movement is again too gradual, but by comparison throughout the piece. The different shapes employed by Niblock result in different experiential results: whereas in the case of a divergence pitch shape, the harmony expands outwards and more pitches are revealed to the listener, the convergent structure gradually reduces the harmony down to a single point, resulting in a distinctly different perceptual experience. The convergences in a piece such as *Five More String Quartets* provide an experience different to that of *Ajapajapam* in that, although this convergent point is the first time we hear unisons on their own, the clusters we have experienced throughout the piece have always bordered these unison frequencies, and they narrow very gradually – but in a completely linear manner – so that the close of the piece may be largely anticipated by the listener. In *Ajapajapam* there is no grouping around the final unison cluster until the very close of the piece. In *Five More String Quartets*, as we near the final point of convergence onto unison where tones are clustered so close together as to be within the critical band – and therefore cannot be parsed by even the most active of

listeners – the surface beating patterns gradually slow down, reinforcing our sense of anticipation towards the unison. Interestingly, here it is the surface layer articulations that describe the final stages of the piece's shape for our perceptual processes; although the tones are still actually converging, we can only trace the shape through the beating tones. Form as content now takes on a significantly different meaning, wherein the foregrounded surface layer – described so far through this chapter as the primary object for a developed, performative listening – fuses with the background comprehension of the global shape, which we are now able to trace in real time (through the beating patterns) rather than just in retrospect. My own piece *Gradual Music* (2009) also reflects this experience, wherein the surface layer actually directs the pitch shape of the piece, due to the compact pitch clusters. The piece employs a structure of gradually expanding convergence-divergence shapes, before reaching a semitone cluster width, after which the structure reverses. These expanding and contracting clusters are perceived through the transforming beating patterns and help to guide the listener through the pitch shape of the piece.

To explore further the nature of the experience in Niblock's music, I will investigate the differences between *Disseminate* (1998), an orchestral piece, and *Valence* (2005) for viola played by Julia Eckhardt created within ProTools by multitracking pitch-shifted samples of the viola. Often Niblock's pieces are realised in a performance installation format, with performers placed throughout the space, so as to excite particular acoustics from the room. Whilst this is an important aspect of experiencing Niblock's music, the discussion of experience in an installation environment is left until the following chapter so as to allow this current chapter to explore shape and temporality in greater detail within concert and domestic listening environments.

Both *Disseminate* and *Valence* utilise sustained tones that gradually diverge from a unison into dense microtonal clusters, before converging back to unison. However, for all this similarity in approach to form, the construction and performative realisation of both pieces differs significantly. The importance of

*ensemble* in *Disseminate*, as opposed to a solo player in the studio, is significant with regard to experiential differences. Although players are instructed to maintain stability on their own pitches within very tight microtonal clusters, they may well drift towards other pitches close by, therefore inducing further beating patterns and generating more perceptual articulations. The highly varying timbres in *Disseminate* result in a less homogenised global sound than in *Valence*, which is comprised solely of versions of the same sample, such that a high order of homogenisation would be expected. Again, the heterogenous orchestral sound of *Disseminate* results in the production of a greater number of auditory fluctuations, due to the combinations of the many varied instrumental spectra. This means that note entries and exits from the orchestral players – of which there are necessarily far more compared to the studio version of *Valence* – are more noticeable, despite the best efforts of the players, resulting in a multitude of actively-changing densities within the global sound.

*Valence*, which is also constructed using microtonal pitch clusters, sustains pure viola tones without the timbral differentiation of the orchestral piece. There are far fewer performed shifts in density as the tones extend without the kinds of indeterminate dynamic swells that occur when larger ensembles sustain tones; the listener therefore tends to be drawn towards the beating patterns within the sound, resulting in a vibrancy of dynamic articulations and the perception of a different type of transforming density. The potency of any articulations is magnified as there are fewer contrasting timbral factors towards which perception is drawn, and the stronger overall homogeneity means that our active listening is able to reach further inside the cluster of viola tones. Due to the sustained tone material, *Disseminate's* diverse instrumental timbres fuse within our perceptions to some degree, but the many different performative techniques (both in terms of players' approaches, and the actions needed to generate tones from the assorted instrumental groups) ensures perceptual groupings occur from within the nature of orchestral playing as much as on the surface layer of the sound.

A performer in *Disseminate* is fully aware of how their current pitch relates to the overall global soundworld, due to immediate sonic feedback from the ensemble sound, and can balance their own tone accordingly. In contrast, the solo player recording extended tones in the studio hears only their own tone, and is able to focus in detail on maintaining a high level of consistency in timbre and pitch throughout its duration; there are no other simultaneously performed tones with which to interact, therefore sonic parameters retain a lower level of variance. The listener focuses more upon the finer articulations, but also becomes more cognisant of the overall divergence-convergence pitch shape of the piece as there are fewer, more overt transformations occurring with the clusters. This given, these smaller-scale articulations adopt a greater dominance within the global experience, and co-exist with comprehension of the larger-scale pitch shape.

These examples from Mažulis and Niblock show composers working with immersive sustained tone environments over relatively shorter durations who concern themselves with global pitch shapes that can be discerned throughout the piece. Another composer to whom this applies is Alvin Lucier, whose pieces *In Memoriam John Higgins* (1984), *In Memoriam Stuart Marshall* (1993), and *Charles Curtis* (2002), which each trace simple sine wave sweeps, are 20'06", 15'25" and 13'45"<sup>2</sup> respectively, indicating the shorter duration for perceiving these shapes. The orchestral pieces *Crossings* (1982) and *Slices* (2007), which also trace simple shapes, also last a shorter duration (16'06" and 19'00"). The concepts of these pieces – to demonstrate beating patterns at differing frequency points – demand certain kinds of shapes over others; however, in retaining the acoustic phenomena as clearly audible for the listener, Lucier projects a clear formal shape that can be experienced throughout the piece as a function of the beatings concept. The content demands the form.

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2 *In Memoriam John Higgins*, *In Memoriam Stuart Marshall*, and *Charles Curtis* released on Alvin Lucier (ANTIOPIC ANSI002, 2005), *Crossings* released on Alvin Lucier: *Crossings* (Lovely Music LCD 1018, 1990), *Slices* duration specified at <http://www.materialpress.com/lucier.htm>.

## Eliane Radigue

Eliane Radigue is a composer of longer duration sustained tone music. Her work presents a somewhat different approach to creation and experience to that of Mažulis and Niblock. *Koume* is the third section of Radigue's *Trilogie de la Mort*, and was made in 1993; the *Trilogie* is inspired by the Tibetan Book of the Dead, and *Koume* is motivated in particular by the deaths of both her son soon after the completion of *Kyema* (the first *Trilogie* chapter), and her Buddhist master Nenang Pawo.

*Koume* is nearly twice as long in clock duration as *Ajapajapam*. It is a tape piece, and consists of very gradually shifting oscillator tones made using Radigue's ARP synthesiser. Upon listening to this piece, what I find is that the longer duration does not project a feeling of global shape as with the previous pieces in this chapter, but rather a much more reflective space for one's own personal inquiry. The nature of the piece is more about the changes we, as the listener, undergo, rather than what changes the material itself undergoes.

When making the piece, Radigue performs each strand of the global sound individually on the oscillator – each in one extended take – making pre-determined gradual changes on potentiometers (Kyle Gann uses the term 'glacial' to represent not just the speed but the awe-filled nature of the movement (Gann, n.d.)). In comparison to the performances on acoustic instruments in the Mažulis and Niblock, this electronic soundworld has less activity upon the surface layer in terms of fluctuations of beating patterns and transitory harmonics and overall density, as the continuity of each pitch is far more stable than even the viola in *Valence*. The beating patterns remain constant for longer as pitches remain fixed; our active listening has to expend more effort to retain memories of extended presents due to the lack of articulations. However, *Koume* never remains in a constant state for what feels like an overly-long duration, as another tone may gradually fade in, or a present tone fade out, resulting in a shifting articulation and prompting further surges from our outwardly-reaching perceptual processes.

The nature of this soundworld generates the more reflective state that Radigue herself acknowledges she is interested in creating. As she notes, '[t]he music acts as a mental mirror, reflecting the state of the receptive listener at the time' (Winship, 2010), and this state will likely transform throughout the piece's extended duration. Her sounds are intended to reflect something from the mind (Dax, 2012), and the constancy of electronic tones enables an achievement of this aim of an order higher than performers of acoustic instruments may be able, due to inevitable fluctuations in their sound that reflect the technique of performance and the performer themselves, rather than the listener.<sup>3</sup> This constancy of tone, and therefore surface phenomena such as beating patterns, contributes to a lessening of focus on a single, specific 'shape' that unifies the piece, and places emphasis upon the repetition of those patterns and the sustained nature of the tones at a given present moment.

For me, at a clock point similar to the full duration of *Ajapajapam*, I begin to comprehend, or actually *experience*, the entire scope of the whole work. It is clear that much of what I have heard already in the piece has prepared me for this enhanced experience of scale; it could not have occurred earlier in the piece, even with the same material. So, at some point, what had been termed 'form as content' in the case of Niblock and Mažulis, becomes 'form as scale'; the notion of shape has entirely dissolved, and been replaced by an expanded continuum. The previous material has not coalesced to generate a singular formal shape in which the present material can be placed, but rather, the material itself *expands*, projecting an image of a monumental scale. Clearly, there is no one universal durational point at which this occurs, but it is entirely dependent on materials used by the composer, the pacing over those materials over the duration, and the manner in which listening strategies have been adopted by the listener.

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3 However, since 2001 Radigue has found great satisfaction in working with instrumental performers such as Charles Curtis, Kasper T. Topf, Carol Robinson, Bruno Martinez and Rhodri Davies. She has since stated that when working with the ARP synthesiser, 'every piece felt like a compromise between what I wanted to do and what I could achieve' (Wyse, 2011).



In contrast to my descriptive approach above, Joanna Demers describes the listening experience of *Kyema* (the first piece of the *Trilogie*, but with a soundworld not dissimilar to *Koume*), in a discrete sectional manner, wherein separate blocks of texture are differentiated, and transform into one another at clear boundary points (2010, 94). To me, what seems to be missing in her account is the acknowledgement that, once we reach certain later stages of the piece, our listening approaches have been transformed, and we may not be assuming an analytical mode of listening that instinctively breaks the sound into discrete sections based on variance within sonic parameters. It is the extended duration that is the primary tool for engendering these transformations in our listening. The active, performative listening that we may adopt initially in the piece, and that we can maintain to some degree throughout *Ajapajapam*, *Valence* and *Disseminate*, transforms into a listening approach focussing upon the temporal field, as much as (if not more than) the current and past material. The music is comprehended as existing on such a vast scale that it seems easy to adopt the more reflective listening approach that Radigue discusses; it is not an acknowledgement of the global shape, in the manner possible with *Ajapajapam*; rather, it is an acknowledgement of the *breadth* of the piece. The immersive nature of the piece, in which continuity of material and duration overcomes surface layer articulations, prompts both expansion of comprehension of the sounding present, and an inward reflective state. Phenomenologist Thomas Clifton states that ‘the identity of the present is established by what the past and future “see” of it’ (1983, 57); I am able to grasp what the experience of the future of the piece will resemble (different to anticipating short-term upcoming material), which then – along with memories of experiences from what has already occurred in the piece – inform the knowledge and experience of what is occurring in the present. It is to experience the large-scale comprehension of the work itself.

However, once a transformation such as this has transpired, a single listening mode is not assumed over all others for the rest of the duration. Rather, the experience varies between and across these modes, wherein I

am able to choose to listen actively to continuous beat patterns or densities, or *hear* them as a single continuum, or recede further and experience the scale of the piece, as a whole. In this sense, I remain active in following where my perception leads me; gradual transitions still occur within the material, and occasional articulations may reintegrate a more performative listening approach from one that focuses on scale. Likewise, the movement may become more and more gradual, so that I eventually cease to explore articulations and slowly transition into an approach exploring the expanded present, before transforming again due to the prompting of a higher activity in the perception of present material.

In an effort to explore this mode of listening further, I want to approach discussion negatively, by introducing a term that I feel does *not* describe my experience: ‘timelessness’. For me, this is a term I tend to deliberately avoid in my writing, as it seems to curtail discussion, or put a barrier upon what could be further considered; in this music, I am experiencing temporality in some fashion, and it is my task to describe that to the best of my abilities. To explore the term further, we can turn to the work of analytic philosopher Robin Le Poidevin, who suggests that (away from discussing music specifically) when we describe something as ‘timelessness’, we might mean ‘tenselessness’: time without the flow of time. In relation to his work on John McTaggart’s B-series, Le Poidevin explains that, whereas the A-series describes events that possess specific temporal properties of being either past, present or future, the B-series points to an underlying structure of events ordered by their unchanging relations to one another (before, simultaneous and after). Le Poidevin’s ‘tenselessness’ derives from the distinction between tensed verbs employed for describing the A-series, to indicate whether an event is happening, say, in the future, and the ‘tenseless’ verbs used for the B-series, which do not point towards the ‘flow’ of time, or the individual’s position on the timeline. Therefore timelessness, in this light, indicates the tenseless nature of the B-series: time without the flow of time. Le Poidevin states that what may be described as timelessness can be equated to a lack

of past-present-future, in which we are left with events that ‘be’, rather than ‘were’, ‘are’ or ‘will be’ (Le Poidevin, 1990).

My issue is not with the above description, but rather with application of the term to the experience of music. Jonathan Kramer states that, despite its etymology, there is a ‘time of timelessness’, in which ordinary time has become frozen in an ‘eternal now’ (1988, 378); however, I see this receptive state, as described above, as an awareness of the larger scale of the piece, and a perception of the present through previous experiences of the piece, and through what experiences may transpire. It is an active state of perception and cognition, but of a different order to the performative listening described in the Niblock and Mažulis discussions. Timelessness – the time of timelessness – for me suggests too fixed and redundant an experience. I do not propose that this is an issue with semantics; whilst Kramer’s time of timelessness, and my own listening approaches, describe similar areas, I see it as emerging from an active listening perceptual state, which gathers memories of experiences that then inform experience of the present; the music heard up until the present moment in the piece actively influences what, and how, listening occurs. I am a tensed listener, experiencing the music as I perceive it, with an evolved, adaptive listening approach.

In *Koume*, I don’t experience a ‘frozen time’, but rather some sort of understanding of where I reside within the widened scope of this piece. The music does not *stop*, nor does my temporal experience; rather, my focus has been widened towards the scope of the piece, and how what I am listening to *now* fits within it. The primary material (the oscillator tones, whose sonic parameters continue to transform gradually) becomes the ‘background’, whilst the scope of the piece, the acknowledgement of a continuum, and one’s temporal position within that, becomes the focus. This transformation of perception can only occur after some sort of extended duration, and within some kind of continuous auditory material – for which sustained tones are ideally suited. It is a transformation within the listener (rather than a transformation within the auditory material, which is continuous), who

is then able to shift between these fluid temporal modes at will, deploying recollection and anticipation to the current sounding material to bring that back into the foreground. A simple analogy would be Pauline Oliveros's distinction between focal attention, which produces clear detail upon the object of attention, and global attention, which continually expands to include the whole of the space/time continuum of sound (2005, 13). Whilst what I am describing is quite different to Oliveros's deep listening, there is a sense in Radigue's music of shifting towards a comprehension of the entire scope of the piece, once duration takes hold.

Curtis notes that, by working with Radigue on her piece for solo cello, he learnt to hear as she hears (Curtis, n.d.), but I feel that there is a strong sensation of being guided towards this state by experiencing this music as well. Guided, rather than being told exactly what to listen to; patiently having expanses revealed within us. The nature of the submergence over the full duration begins to reveal a more comprehensive awareness of scale, and how material can create that scale. Perhaps we end up with form as content as scale; *Koume's* sound continuum enables our listening to progress to a heightened awareness of overlap between material, duration and temporality as experienced. When writers bemoan a piece's extended duration (eg Clements, 2011), they ignore the constructive reasoning behind it; *Koume* demonstrates that the durational decision is as significant a part of the auditory experience as is the material, and it heavily informs the transformation into awareness of the scope of sound.

### **La Monte Young**

To conclude this chapter, I want to discuss one of the most well-known sustained tone pieces, La Monte Young's *Compositions 1960 #7*. Middle B and F# are to be 'held for a long time', and Young notoriously demands that performances be played on continuously tunable instruments, and in no case on keyboards and synthesisers. The composer preferred to perform the piece

in a concert setting, which places much more emphasis upon the fluctuations actualised by instrumental performance, however slight they may be, due to virtuoso performer technique. Whilst the listener tends to understand from the outset that there will be no structural change throughout the duration, they are prepared for transformations to occur within both the sonic result of the performance, and their perceptual processes and conscious awareness of the situation, as articulated within the discussion of *Koume* above. Our active, performative perceptual processes are able to extend outwards and ‘touch’ the various aspects of not only the auditory environment, but also the temporal flow as experienced, as we may choose to move the focus away from the surface fluctuations and towards what was the previously background continuum of the perfect fifth interval. Our temporal experience is in motion, a motion generated through our own perceptual processes. Clarinettist Anthony Burr has talked of the ‘responsibility’ being left with the audience to parse the overall experience (2012, 6), and this parsing can be applied to *Compositions 1960 #7* on a variety of orders: the two fundamental pitches can be experienced as an inseparable dyad sonority, or at the other extreme as separated pitches with a vast chasm of pitch space between them; the points of contact with standing waves, revealed through slight shifts in head position; the continuous flow of harmonic clusters arising from the two fundamentals, continuously shifting due to bow/breath pressure; and so on. This responsibility is quite separate from *Koume*’s reflective durational experience, or *Ajapajapam*’s comprehension of shape and surface articulation; whilst all of these may combine in the experience of *Compositions 1960 #7*, the fixed nature of the interval precludes gradual transformation. Articulations are still prevalent, but the anchored pitch continuum dominates my comprehension of the experience; it is not that I experience shape, as with *Ajapajapam*, but rather it is continuity, first and foremost, that drives my cognitive faculties. The experience is not of a duration, it is continuous; it maintains an inner momentum, a relentlessness of which it is our responsibility to process.

As Jeremy Grimshaw states, the concept is a raw statement upon notions of what music might be (2011, 49). Whereas Radige's *Koume* invites inward reflection of the individual through its oscillators' repetitive beating patterns, the perpetual dyad of *Compositions 1960 #7* is more of a declaration. However, this declaration has a pitch interval, which is performed by instrumentalists, with whom listeners develop a relationship throughout the duration of a performance. This relationship occurs within the enduring pitch continuum, and develops despite the fixity of actions performed. This continuous aspect of *Compositions 1960 #7* provides a link to the following discussion of experience in performed installations, which are as continuous and ever-lasting as the visiting listener wishes them to be.