

Sheng, Guiro Bow, and (De)Familiarisation: On Timbral Techniques in Liza Lim's *How Forests Think*

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This article is an original account of the use and meanings of sheng, a modernised Chinese hand organ, and guiro bow, a modified European bow, in Liza Lim's 2016 work *How Forests Think* (hereafter *Forests*). For the given purpose, I coin and employ two broadly applicable terms, familiarisation and de-familiarisation. Inspired by Nina Sun Eidsheim's comparison of music and body to wine and terroir,¹ familiarisation and de-familiarisation account for the two general modes by which Lim plays with the unusual sounding bodies of sheng and guiro bow. Familiarisation refers to a group of compositional techniques used to minimise the gap between conventional timbral techniques and less conventional sounding bodies. De-familiarisation means another group of compositional techniques used to turn conventional timbres into less conventional counterparts by modifying the associated sounding bodies. I argue that, by practicing familiarisation, Lim challenges the notion of cultural borders as commonly found in colonial and post-colonial contexts. In contrast, by practicing de-familiarisation, Lim integrates her interdisciplinary interests into *Forests*. For the first part of the main discussion, I illustrate Lim's thoughts on cultural borders and her interdisciplinary interests in mycelia and pattern

¹ Nina Sun Eidsheim, 'The Body as Music's Terroir' (lecture, University of Chicago, Chicago, 5 February 2021). The first three years of the 2020s, the time roughly overlapping with the COVID-19 pandemic, saw Eidsheim's discussion of terroir disseminated across American academia. As her discussion took (and still takes) a lecture format instead of a publication format, I would like to note that my consultation relies on lecture attendees' recollections, including my own.

language. I then elaborate familiarisation and de-familiarisation using diverse examples from twentieth-century and contemporary music. Finally, I consider selected examples from *Forests* to show which compositional techniques can be viewed as familiarisation and which as de-familiarisation, and how such techniques empower Lim to address cultural borders, mycelia, and pattern language.

Cultural Borders, Mycelia, and Pattern Language in Lim's Music

Through interviews and writings, Lim has consistently spoken about her concern over cultural lines established during the colonial past, and maintained by the post-colonial present. She would not disagree with the belief that diverse communities constitute today's Australia, and their cultures are respected well through social and institutional efforts. She does, however, seem critical about drawing any kinds of borderlines between such cultures; for the composer, such attempts are hardly free from the darker past exemplified by 'divide-and-rule' and other notorious techniques for colonisation. Consider, for example, Lim's specific criticism of the identifiers that draw lines between heterogeneous communities as well as their cultures: as most of these identifiers emerged from the 'romance of nationalism,' the same terms consciously or unconsciously hide the 'past that's in collusion with ... colonialism' and enhances the 'blind eye to how ... [the] past continues to ... shape continuing conditions of power.'² In this context, it may not surprise us that Lim's music often works against what has uncritically been conceived as cultural lines. As we will see later in her use of sheng, *Forests* rather highlights through familiarisation that 'across a boundary is not an unknowable "them" but in fact, the "us" that we recognise in another way.'³

Lim's provocation against existing lines is by no means limited to the cultural kind. Another area that she constantly contends with is disciplinary lines. This is exemplified by mycelia, a term that would be familiar more to biologists than to musicians, and pattern language, a term originally used by architects. Referring to a complex underground network that connects forestal flora as well as microorganisms, mycelia as an ecological term has inspired Lim's compositions in at least two ways.⁴ One is seen in *Forests'* movement headings as well as topics ('I. Tendril & Rainfall', 'II. Mycelia', 'III. Pollen', and 'IV. The Trees'), and the composer's notes on sheng ('one hears a trace of the wind in the forests').⁵ The other is a

² Andrew Ford, 'Spiritual Ecstasy and Earthly Desire: An Interview with Liza Lim,' in *Earth Dances: Music and the Primitive*, ed. Andrew Ford and Peter Long (Melbourne: Black Inc., 2015), 145–46.

³ Liza Lim, 'A "Hidden Centre": Crossing Cultural Boundaries and Ecstatic Transformation' (paper presented at Sound Scripts: The Inaugural Totally Huge New Music Festival Conference, Perth, 2005), 18. <https://ro.ecu.edu.au/cgi/viewcontent.cgi?article=1002&context=csound>.

⁴ Besides mycelia, Lim has shown consistent interests in ecological crises as well as posthuman alternatives to anthropocentrism. For a few relevant discussions, see Luis Fernando Amaya Muñoz, 'Music Composition as a Means to Connect with the More-Than-Human: A Dialogue Between the Works of Walter Kitundu, Liza Lim, and Luis Fernando Amaya' (PhD diss., Northwestern University, 2022); Chloe Imogen Sinclair, 'Climate and the Concert Hall: How Australian Composers Address Themes of Climate Change and Climate Anxiety' (MM thesis, The University of Sydney, 2022); Judith Lochhead, 'Timbre's Realities: A Phenomenological Study of Liza Lim's *Extinction Events and Dawn Chorus* (2018),' in *The Oxford Handbook of the Phenomenology of Music*, ed. Benjamin Steege, Jessica Wiskus, Jonathan De Souza (New York: Oxford University Press, forthcoming).

⁵ Liza Lim, *How Forests Think* (Berlin: Ricordi Berlin, 2016), vi. The title of the composition comes from anthropologist Eduardo Kohn's eponymous monograph: Eduardo Kohn, *How Forests Think: Toward an Anthropology Beyond the Human* (Berkeley: University of California Press, 2013). For the composer's comment on the borrowed title, see the first paragraph in Lim, *How Forests Think*, 2016, vi.

distributed creativity, as in the allocation of compositional authority to multiple performers and participants other than the composer herself. Nicknamed as 'mycelial' creativity due to its resemblance to the non-centralised operations of mycelia, distributed creativity has never remained in an abstract or theoretical domain in Lim's creativity.⁶ It rather practically guided the 2011 premiere of *Tongue of the Invisible* (performed by the Ensemble MusikFabrik in Cologne), and other premieres of Lim's music such as *Axis Mundi* (2013).⁷ Meanwhile, pattern language was theorised first by a group of architects including Christopher Alexander, Sara Ishikawa, and Murray Silverstein.⁸ In the discourse led by these researchers, the concept is employed in a series of analyses to comprehend architectural patterns, to group them, and to discover the meaningful network among the grouped patterns.⁹ Lim, however, retooled the same concept for her *Invisibility* for solo cello (2009), which engaged with the Yolŋu community and their traditional visual art. The practical yet reductive nature of pattern language, by which anything that resists patternisation would be filtered out in the process of sequential analyses, ironically helped Lim to avoid appropriation or essentialisation of the Yolŋu visual art and its aesthetics.¹⁰ As we will see later in Lim's use of guiro bow and the examples of de-familiarisation, the pattern language likewise helped the composer to complete *Forests* as a respectful exploration of mycelia as a delicate ecosystem.

⁶ Eric Clarke, Mark Doffman, and Liza Lim, 'Distributed Creativity and Ecological Dynamics: A Case Study of Liza Lim's "Tongue of the Invisible,"' *Music and Letters* 94.4 (November 2013): 628–63. This kind of creativity could take more than one manner in practice. On the one hand, Lim's rehearsal process constantly fluctuated between composed and improvised music. This 'shifting relationship' invited the 'members of the group [the Ensemble MusikFabrik] to "retool" musical materials and their ensemble roles as an adaptive and creative response to the contingencies of situation, time, or place' (p. 659). On the other, Lim and her performers were open to the 'displacement of the composer's original narrative in the score by an interaction of social expectations, spatial arrangements, historical traditions, assumed power relations, and other kinds of tacit "scripts"' (p. 659).

⁷ Clarke, Doffman, and Lim, 'Distributed Creativity'; Liza Lim, 'A Mycelial Model for Understanding Distributed Creativity: Collaborative Partnership in the Making of "Axis Mundi (2013) for Solo Bassoon"' (paper presented at CMPCP Performance Studies Network Conference 2, Cambridge UK, 4–7 April 2013), https://www.cmpcp.ac.uk/wp-content/uploads/2015/11/PSN2013_Lim.pdf.

⁸ Christopher Alexander, Sara Ishikawa, and Murray Silverstein, *A Pattern Language: Towns, Buildings, Construction* (New York: Oxford University Press, 1977).

⁹ To give a simple application of the term in its original sense, let us imagine that we investigate the pattern language of a small local town. For that end, our investigation would start from larger pattern groups such as 1) the pattern group that marks the geographical boundaries of the town; 2) the pattern group that determines the traffic systems within/around the town; and 3) the pattern group that accounts for the major infrastructures of the town. These larger pattern groups would then be sequentially connected with smaller counterparts, until we become capable of containing all of them within a single network. Consequently, this network can be compared to a (hypothetical but useful) language behind the architectural patterns of the subjected town. If in a reductive manner, this 'language' will help one to account for both macroscopic and microscopic patterns vital to construct and maintain the town.

¹⁰ As she details in her 2009 commentary on *Invisibility*, Lim once made recurring visits to Arnhem Land, the northern part of Australia and the ancestral territory of the Yolŋu. Spending an extensive amount of time with the community, she found herself charged with the keen insight to the spiritual life and visual art of the Yolŋu. However, she also discovered the impenetrable depth of the same topics, which 'might only be known to a few people and would never be spoken and only passed on by an elder on his deathbed' (p. 3). Thus, to avoid misunderstanding as well as ethically inappropriate representations of the topics, her work *Invisibility* came to keep a careful distance from claiming any cultural authenticity. Instead, as the composer highlights, this piece strictly focuses on what she grasped as the convincing pattern language of the spiritual life and visual art of the Yolŋu. See Liza Lim, 'Staging an Aesthetics of Presence,' *Search: Journal for New Music and Culture* 6 (2009): 1–5.

Familiarisation and De-Familiarisation in Contemporary Art and Film Music

Familiarisation of unfamiliar musical bodies, or de-familiarisation of conventional musical bodies may sound intuitive, but it is at the same time cloudy. Whether a sounding body is unfamiliar or conventional often depends on individual, social, and environmental circumstances or standards. For this and many other reasons, my terminology does not venture to define which musical bodies remain unfamiliar or conventional. Instead, it concerns transformative moments that could be described using *terroir*—the concept coined by Eidsheim.¹¹ Based on its original usage in winery industries, as a generalisation (symbolised as soil) of every environmental factor that shapes the tastes of a grape and eventually of a wine, Eidsheim proposes a new usage of *terroir* as the human or instrumental body that cultivates a distinctive timbre. By doing so, she stresses the unbreakable connectedness between body and timbre, a state often misunderstood by biased listeners: as Ailsa Joyce Clement Lipscombe points out, these listeners tend to seek musical meanings from performers' bodies rather than from performances themselves, defending their racialising attitude with a simplistic understanding of body and timbre.¹² But Eidsheim's *terroir* also seems to be open to the subverting transformations as follows: if a body is perceived to be unfamiliar by a certain circumstance and/or standard, it could also work as the *terroir* that mutates (*de-familiarises* in other words) the timbral techniques perceived conventional by the same circumstance and/or standard; conversely, it is also possible that an unfamiliar musical body is successfully embraced (*familiarised* in other words) by the conventional techniques while not losing its potential as a *terroir*.

Three examples illustrate both possibilities in a more practical sense. The first is about familiarisation (of the unfamiliar body), mentioned in Anthony Sheppard's 2019 monograph on Japonese exoticism.¹³ In his 1964 concert tour to the United States, koto performer Kimio Eto premiered Henry Cowell's *Concerto for Koto and Orchestra no. 1*. As he entered the cadenza section in this performance, this Japanese soloist demonstrated what I would consider to be a familiarisation of koto: per Sheppard, he 'allegedly drew upon nineteenth-century European music for his cadenza [e.g., Wagner, Humperdinck, and Gounod] which caused the audience in Philadelphia to laugh and annoyed Cowell greatly.'¹⁴ Clearly, more details would be needed

¹¹ For an example of the secondary discussions of *terroir* based on the first-hand lectures, see Hannah E. Fulton, 'Singing Lyrics to Life: Melody and Lyrical Meaning in Recent Indie Music' (MA thesis, University of Oregon, 2024), 33–4.

¹² Ailsa Joyce Clement Lipscombe, 'Precarious Bodies: Viral Listening to Sound, Silence, and Trauma' (PhD diss., University of Chicago, 2022), 39. Similar issues have also been discussed in Eidsheim's dissertation and essay. For instance, she recollects in her dissertation the vocal lesson she received at the University of Southern California: her voice professor openly speculated that her 'Korean cheek bones' make her voice different from those of white students, showing no acknowledgement of the (Western) singing educations Eidsheim previously received. Nina Sun Eidsheim, 'Voice as a Technology of Selfhood: Towards an Analysis of Racialized Timbre and Vocal Performance' (PhD diss., University of California, San Diego, 2008), 28. In a later essay that discusses the voice of Marian Anderson—the first African American soprano at the Metropolitan Opera—Eidsheim points out that critics did not hesitate to connect Anderson's physique with her vocal timbre, disregarding her educational background at traditional conservatories. Nina Sun Eidsheim, 'Marian Anderson and 'Sonic Blackness' in American Opera,' *American Quarterly* 63.3 (September 2011): 641–71.

¹³ William Anthony Sheppard, *Extreme Exoticism: Japan in the American Musical Imagination* (New York: Oxford University Press, 2019).

¹⁴ Sheppard, *Extreme Exoticism*, 2019, 144.

to determine what Eto ultimately wanted to achieve, despite the great ire from Cowell. It is not hard to imagine, nonetheless, that Eto would have not minded familiarising his audience with koto's body. While his choices, namely the pastiche melodies and the partially improvised cadenza, may remain debatable, the same choices imply the clear distance between Eto himself and what probably charged the audience before him—that is, the exoticist anticipation of an *alien* instrument and an *alien* timbre.

The second example is about de-familiarisation and comes again from Sheppard. In his discussion of Tan Dun's *The First Emperor* (2006) and its premiere by the Metropolitan Opera, Sheppard shares an episode he witnessed during his observation of the rehearsals. In one rehearsal session, Tan

asked the Met chorus to exaggerate their pitch sweeps from low to high and to use 'Peking opera accent, not Italian or Wagner accent.' He also told the chorus that 'action is more important than sound here, action will help the sound'—perhaps the first time a Met chorus has been instructed by a conductor to place greater emphasis on physical rather than musical performance.¹⁵

In a personal conversation with me, Sheppard further specified his recollection by adding that Tan's request received a mild but unambiguously awkward reaction from the choir.¹⁶ Interpreting this intriguing episode, similar to the example of Eto, may require more details that are currently absent in the recollection above. I would still consider, nonetheless, Tan's request as an attempt to de-familiarise the European vocal convention. Requesting the Met chorus to simulate a Chinese body and accept the spontaneous impacts on vocal timbre, the composer was trying to estrange them in a subversive yet productive manner.

The third example is also about de-familiarisation, though differentiated in terms of intention and field. In Jung Jae Il's soundtrack for Bong Joon Ho's *Parasite* (2019), one cue titled 'Camping' features an angelic la-la melody sung as a duet by two boy sopranos accompanied by chorale-like harmonies. Being part of the European timbral convention for celestial voice, neither of these elements would be unfamiliar to listeners unless they had never heard any Western choral music. In the same cue, however, Jung makes a parasitic inclusion of musical saw, an instrument not commonly perceived of as having a heavenly timbre. Fused into the otherwise angelic ensemble, the musical saw now skilfully mimics a female soprano even though it can never hide the idiosyncratic portamento—the timbral constraint rooted in its body/terroir. Jung's experiment, as a result, does more than de-familiarising the centuries-old vocal convention. By creating a texture in which the comforting voice of angel becomes entangled with that of imposter, Jung realises a musical representation of something (or someone) liminal, between the trustworthy and the very opposite.

Lim's Use of Sheng, and Examples of De/Familiarisation in *Forests*

Throughout the four movements of *Forests*, sheng is indispensable not only for Lim's timbral experiments but also for her manifestation of line-crossing. It would not be an overstatement,

¹⁵ William Anthony Sheppard, 'Blurring the Boundaries: Tan Dun's *Tinte* and *The First Emperor*,' *Journal of Musicology* 26.3 (Summer 2009): 307.

¹⁶ William Anthony Sheppard, in conversation with author, November 12, 2022. I wish to express my sincere thanks to Dr Sheppard, who generously shared his memory of the Met episode through an in-person retelling in New Orleans.

indeed, that this hand organ crosses multiple cultural lines by itself. Known as one of the oldest free-reed hand organs in history, sounding sheng means a constant swinging between ancient Chinese technology and European modernity. As shown in Figure 1, today's sheng continues the antique method to keep the instrument functional and responsive. The warm water within the bottom chamber keeps the inside of the sheng at human temperature, enabling delicate interactions between the air inside of the pipes and the performer's breaths. As Figure 2 shows, contemporary sheng is also characterised with the metallic prosthesis emulating the key system of Western wind instruments.¹⁷ As a result, albeit with idiosyncratic colours, the capacity of modern sheng not only equals but exceeds Western wind instruments. It can offer a wide range of expressions, from a single pitch to a chord, and to a tone cluster.

Figure 1. Sheng performer Wu Wei pouring hot water into the sheng's bottom chamber before playing. Wu Wei, 'Instrument: Sheng,' posted 15 March 2019, by Philharmonia Orchestra, YouTube, <https://www.youtube.com/watch?v=qkkA5yWrvww>.



Not surprisingly, this unusual versatility has been inviting pioneering collaborations between contemporary composers and sheng performers. Proudly adding her name to the list of composers who contributed to these collaborations (for example, Unsuk Chin, Toshio Hosokawa, Jürg Widmann, Tan Dun, Guo Weijing, and Ruo Huang),¹⁸ Lim stresses that her collaboration with Wu Wei was vital for *Forests* and indeed crucial for her practice of distributed creativity.¹⁹ Furthermore, when looking into the compositional details of *Forests*, one can also

¹⁷ For a concise overview of sheng and its modernisation since the mid-twentieth century, see Hyun-Kyung Lee, 'Unsuk Chin's Hyper-Sheng: Sonic and Structural Development in *Su* for Sheng and Orchestra' (DMA thesis, CUNY Graduate Center, 2022), 13–14. For a similar account by Wu Wei, an admired sheng master and a crucial collaborator of Lim, see Wu Wei, 'Sheng player Wu Wei: "My Goal is to Open and Widen the Repertoire for My Instrument,"' interview by International Classical Music Awards, International Classical Music Awards (9 November 2015), www.icma-info.com/sheng-player-wu-wei-my-goal-is-to-open-and-widen-the-repertoire-for-my-instrument.

¹⁸ Note that some of these composers employed local versions or family instruments of Chinese sheng, which vary in name, size, and degree of modernisation. For example, Toshio Hosokawa uses Japanese shō, a family instrument of Chinese sheng that follows local conventions and techniques.

¹⁹ For the composer's commentary on her collaboration with Wu Wei, see 'Liza Lim – How Forests Think,' interview by ElisionEnsemble, posted 17 September 2017, by ElisionEnsemble, YouTube, https://youtu.be/WN_2IU429Zc?si=2oMegysrqF2ktp7c. For a commentary on the significance of the same collaboration in terms of distributed creativity, see Joseph Browning and Liza Lim, 'Sonic Figurations for the Anthropocene: A Musical Bestiary in the Compositions of Liza Lim,' *Journal of the Royal Musical Association* 148.1 (May 2023): 1–34.

Figure 2. Wu Wei playing the modern sheng. Graham Rickson, 'Classical CDs Weekly: Bruckner, Unsuk Chin, Dvořák,' Reviews, News & Interviews, *The Artsdesk*, August 30, 2014, <https://theartsdesk.com/classical-music/classical-cds-weekly-bruckner-unsuk-chin-dvořak>.



find compelling proof that sheng offered Lim diverse opportunities for familiarisation, de-familiarisation, and provocative crossing of cultural lines.

While *Forests* is rich in all three types of examples, I will briefly consider the examples of de-familiarisation and then elaborate the cases of familiarisation as well as line-crossing between sheng and European instruments. First, here are two iconic examples of sheng and de-familiarisation in *Forests'* movement I. These examples, to an extent, may recall Tōru Takemitsu's usage of shakuhachi and biwa. In *November Steps* (1967), the shakuhachi and biwa players perform in front of the symphonic orchestra but simultaneously secure their own sphere with the temporal partitions called 'Ma' (間, 'interval' in Japanese).²⁰ Gavin Lee comments on this distance as follows: 'the composer [Takemitsu] expresses his ... belief in the incompatibility of Japanese and Western music in *November Steps*, which comprises bifurcated sections for orchestra that contrast with sections for the Japanese instruments alone.'²¹ As Figure 3 (bb. 67–9 of movement I) illustrates, the sheng in *Forests* likewise follows the Western convention of chamber ensemble but simultaneously estranges the same ensemble. Here the sheng solo begins with a familiar harmonic item such as the dyad in third (F/A \flat in b. 67.1). After sustaining an inversion (A \flat /F) in b. 69, however, the solo drastically transforms the chord into an elastic but isolated cluster and foregrounds its idiosyncratic timbre. To put this in a different way, we can say that the solo de-familiarises 'third' and the ensemble convention hinging on the identical harmonic paradigm.

²⁰ The notion of the concerto as a conversation between soloist and orchestra, which Takemitsu emulates and simultaneously deviates from, has been discussed by multiple scholars including Joseph Kerman. See Joseph Kerman, *Concerto Conversations* (Cambridge: Harvard University Press, 1999).

²¹ Gavin Lee, 'Postcolonial Bifurcation: On John Sharpley's *Emptiness*,' *Music Analysis* 38.3 (2019): 320.

Figure 3. Sheng solo in Liza Lim, *How Forests Think*, movement I, bb. 67–9 (Berlin: Ricordi, 2016), reprinted with kind permission of Hal Leonard Europe B.V. (Italy).



Figure 4, bars 12 and 13 of movement I, shows another example of de-familiarisation. The stepwise ascending figure starting on d' , played by the alto saxophone in bar 13, is followed by the sheng solo in the same bar. It is not uncommon for an instrument to pick up the pitches of previous instruments—often in unison—in a European chamber ensemble. However, in Figure 4, this otherwise familiar operation becomes distorted through sheng's timbre—or what I would call a sonic *sfumato*. While the term originally refers to a painting technique that blurs or softens the transitions between colors (for example, the background of Leonardo da Vinci's *Mona Lisa*), sheng's *sfumato* effectively blurs the border between monophony and tone clusters.²² To be specific, three pitches comprising the initial melodic figure (D, $E\flat$, and F) deviate from the supposed order of appearance and are clustered in irregular patterns.

Figure 4. Liza Lim, *How Forests Think*, movement I, bb. 12–3 (Berlin: Ricordi Berlin, 2016), reprinted with kind permission of Hal Leonard Europe B.V. (Italy).

Shown in the two examples from *Forests'* movement I, Lim demonstrates that sheng's timbral capacity—or body / terroir—is capable of estranging how a chamber ensemble works in Western classical music. The same first movement, however, also proceeds to the climax where sheng becomes integrated ('familiarised') rather than remaining as an instrument outside of the Euro-Western boundary. Reminding us of Lim's statement that 'across a boundary is ... the "us"', movement I shows how the climax is realised through the otherwise conventional technique such as merging on one single pitch class (see Fig. 5).²³

In Figure 5, from the last beat of b. 100, the sheng in the middle system begins holding d'' . As the same instrument gradually expands its register through the octave doubling (bb. 101–4), the given pitch becomes a sonic blanket under which various instruments in various registers can merge. The peak of this convergence comes in bb. 109–13, where almost every pitched instrument holds the Ds if varying in register, rhythm, and embellishing pitches. As Figure 6 displays, this climactic passage even generates a visibly clean melodic-range spectrograph. In

²² While *sfumato* is not the main concern of my discussion, I believe that historical terms in visual art significantly benefit discussions of musical timbres. Indeed, this kind of collaboration needs not be limited to Western visual arts, as Yayoi Uno Everett shows in her analysis of Chow Wen-Chung's String Quartet No. 2 and the metaphor of Chinese brush strokes. See Yayoi Uno Everett, 'From Exoticism to Interculturalism: Counterframing the East-West Binary,' *Music Theory Spectrum* 43.2 (1 October 2021): 334–5.

²³ Lim, 'A "Hidden Centre,"' 2005, 18.

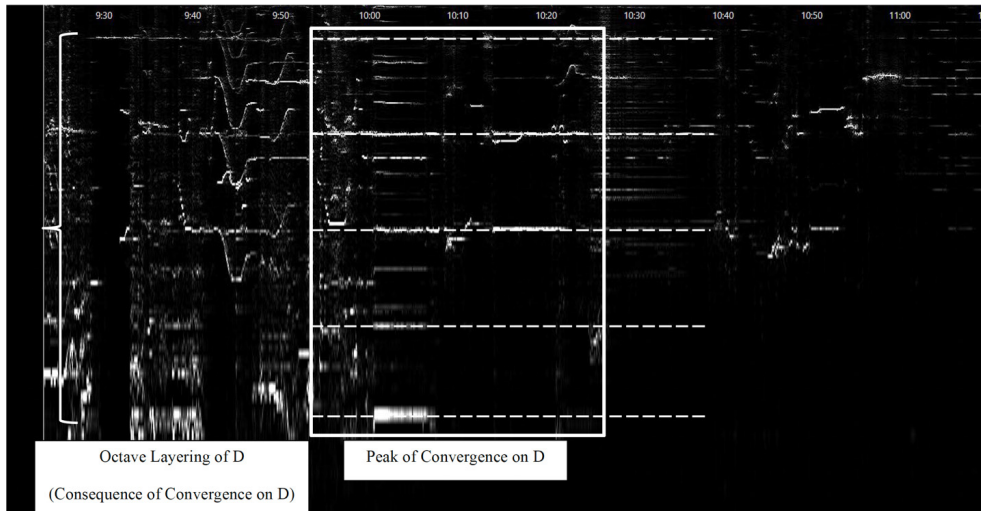
Figure 5. Liza Lim, *How Forests Think*, movement I, bb. 100–12 (Berlin: Ricordi Berlin, 2016), reprinted with kind permission of Hal Leonard Europe B.V. (Italy).

The musical score for Figure 5 is divided into two main sections. The first section, 'Beginning of Convergence on D', spans measures 100 to 112. The second section, 'Peak of Convergence on D', spans measures 107 to 112. The score includes parts for Bass Flute, Alto Sax, Bass Clarinet, Trumpet, Trombone, and Double Bass (Db.). The Sheng part is also present. Annotations specify instrument groupings for each section:

- Beginning of Convergence on D:**
 - Measures 100-101: Bass Flute + Oboe + Vc.
 - Measures 101-102: Oboe + Bass Clarinet + Alto Sax.
 - Measures 102-103: Bass Flute + Oboe + Bass Clarinet + Alto Sax + Vc. + Db.
 - Measures 103-104: Bass Flute + Oboe + Bass Clarinet + Alto Sax + Vc. + Db.
 - Measures 104-105: Bass Flute + Oboe + Bass Clarinet + Alto Sax + Vc. + Db.
- Peak of Convergence on D:**
 - Measures 107-108: Bass Flute + Oboe + Vc.
 - Measures 108-109: Bass Flute + Oboe + Bass Clarinet + Alto Sax + Trumpet.
 - Measures 109-110: Bass Flute + Oboe + Bass Clarinet + Alto Sax + Vc. + Db.
 - Measures 110-111: Bass Flute + Oboe + Bass Clarinet + Alto Sax.
 - Measures 111-112: Bass Flute + Oboe + Bass Clarinet + Alto Sax.

the same melodic-range spectrograph, annotated by the broken horizontal lines for the sake of clarity, the same passage also appears to engender the monotonic texture ranging from D to d''' and thus transform the entire ensemble (including sheng) into *We*.

Figure 6. Liza Lim, *How Forests Think* (melodic-range spectrograph with graphical annotations), movement I, bb. 100–12, generated by the author. Sonic Visualizer (release 4.5 64-bit version) was used for generating this image. The input was 09:19–11:05 of Track 1 on Liza Lim, *How Forests Think*, Huddersfield Contemporary Records, 2017.



Before closing my discussion of sheng in *Forests*, I would like to note that converging on a single pitch class is just one way toward familiarisation. Figure 7, showing bars 74 to 78 of *Forests* Movement III, shows a rhythmically oriented alternative. In this series of homorhythmic cluster chords, the sheng not only becomes familiarised with the rest of the ensemble but also contributes to Lim's subversion of linear time. To be specific, the homorhythmic chords are propelled not by a continuous sense of time but by a fractured alternative as follows:

- 1) b. 74 introduces the original, symmetrical rhythmic idea such as the paired eighth-triplets;
- 2) b. 75, played twice, appears to be a fragmented repetition of the original idea as it leaves the second half of the original pair incomplete;
- 3) affected by the fragmentation in b. 75; b. 76 presents another fragmented repetition in which the first half of the original pair is left incomplete;
- 4) b. 77 then seems to abandon the existing idea such as the triplet pair and proceed to a new idea (the asymmetrical pair of the four- and five sixteenths);
- 5) however, b. 78 soon returns to the original idea of triplet pair through an augmentation (the three eighth notes).²⁴

Lim's Use of Guiro Bow, and Examples of De/Familiarisation in *Forests*

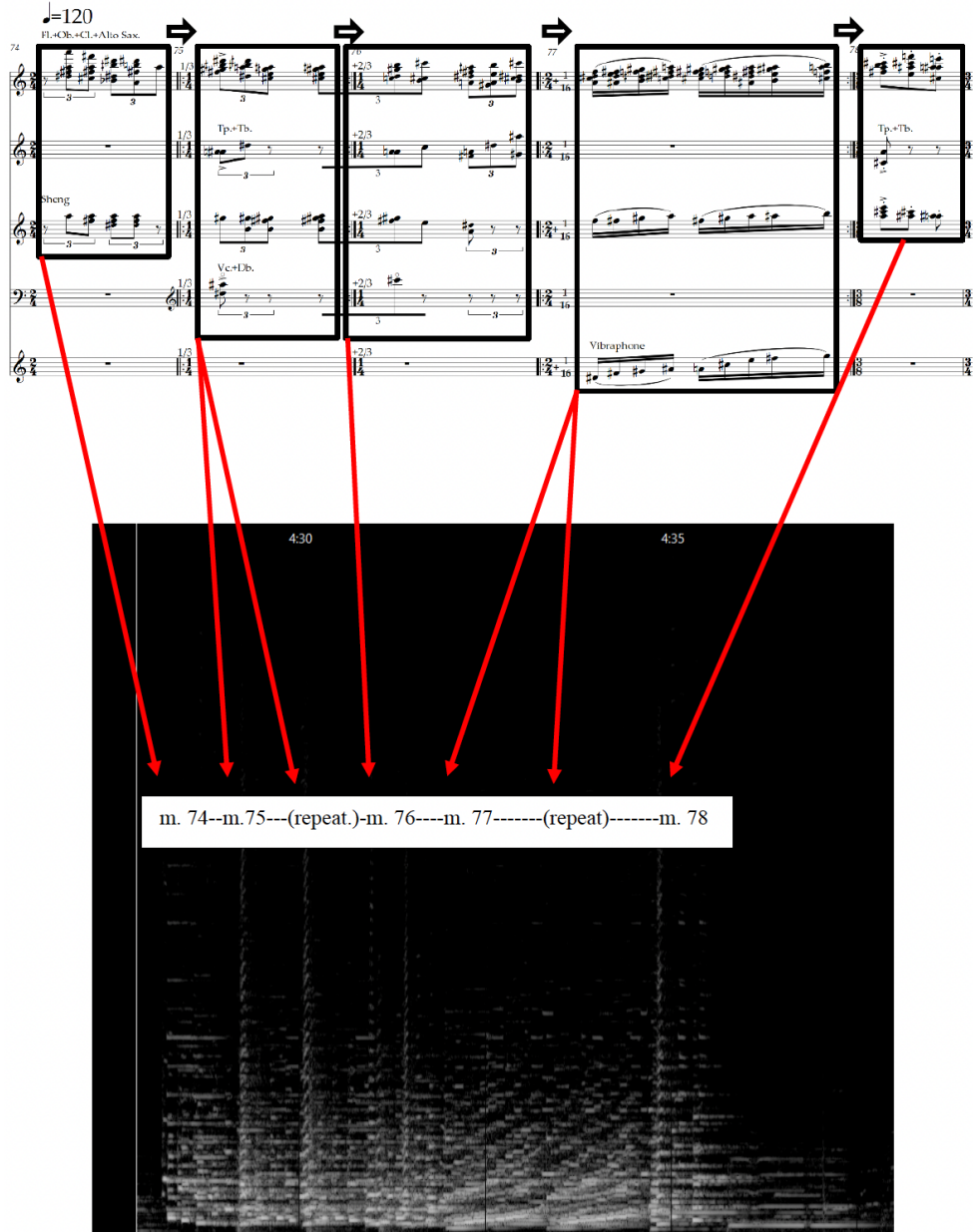
As Figure 8 shows, guiro bow means a cello or bass bow modified through the following simple steps: 1) remove the screw so that the frog, which otherwise holds the horsehair in an even tension, can be detached from the stick; 2) coil the loosened horsehair around the stick; and 3) fix the frog with a strap. As Figure 9 displays, this prepared bow produces sounds by scraping the wooden stick on the strings. Due to the intuitive similarity between this practice and that of guiro, the prepared bow came to be called guiro bow. For average string performers, using this special instrument requires not only a courage to learn new bowing techniques but a great caution—because a traditional bow stick is made to endure tensile forces rather than impact or friction forces. For this reason, it is hard to imagine that Lim would have succeeded in employing guiro bow without persuading and respecting her performers or collaborators. The same reason, furthermore, clarifies how the bow could serve distributed creativity—just like the sheng in the previous discussion—and the pattern language that I call *movement-sound discrepancy*.

This pattern language—to be specific, a set of performing patterns to realise the said discrepancy—also qualifies as de-familiarisation.²⁵ When the guiro bow is applied to the conventional string instrument, it will first make traditional bowing techniques implausible because the stick and horsehair entangle so they produce a less-predictable contact between the bow and strings. Secondly, as Figure 10 exemplifies, the capricious contact would produce a fluctuating discrepancy between movements (of the performer) and sounds (from her instrument)—this effect, indeed, de-familiarises the sounds that would commonly be expected from the string techniques such as tremolo, glissando, *sul tasto*, *sul ponticello*, harmonics, and trill. Note that the said discrepancy does more than bringing a tricky challenge to the

²⁴ Note that bb. 79–84 of movement III present a similar passage, as though a reiteration of bb. 74–8.

²⁵ To be specific, various performing patterns associated with guiro bow could be grouped based on performer's body (for example, a group of performing patterns using the wrist and another using the elbow). Also, networking such groups means that a performer decides which pattern groups can cooperate smoothly with which: for instance, a pattern group involving wrist movements may concur with another involving elbow movements.

Figure 7. Liza Lim, *How Forests Think*, movement III, bb. 74–8 (Berlin: Ricordi Berlin, 2016), reprinted with kind permission of Hal Leonard Europe B.V. (Italy); melodic-range spectrograph with graphical annotations, generated by the author using Sonic Visualizer (release 4.5 64-bit version). The input was 04:27–04:37 of Track 3 on Liza Lim, *How Forests Think*, Huddersfield Contemporary Records, 2017.



performers; it also forces those performers to slip from the control by the composer and her notated score. Though the composer could detail what techniques and ideas are supposed to be attempted, she would not be able to instruct what sounds are supposed to come out in consequence. As indicated by Figure 11, which is one possible visualisation of Figure 10 and

Figure 8. Prepared cello bow or guiro bow. Liza Lim, 'A Mycelial Model for Understanding Distributed Creativity,' 2013, 5. Text boxes added by the author.

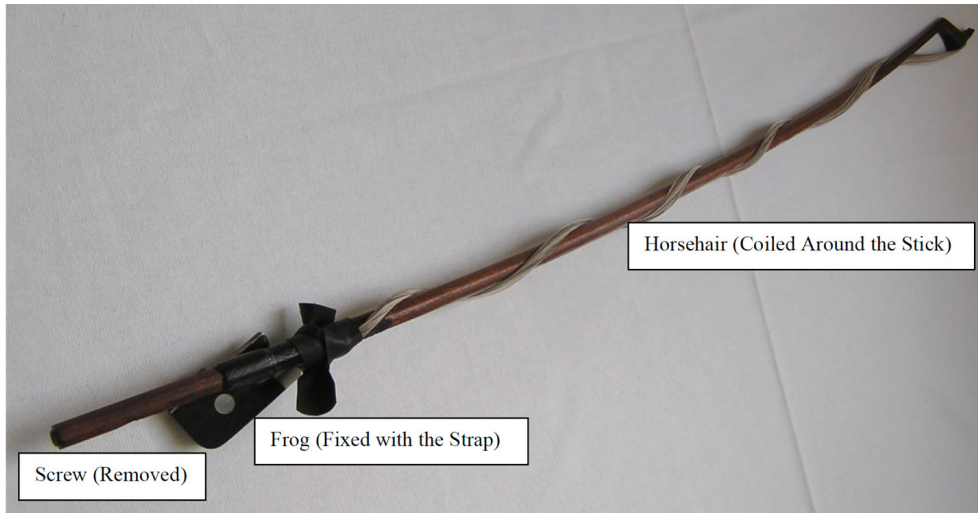
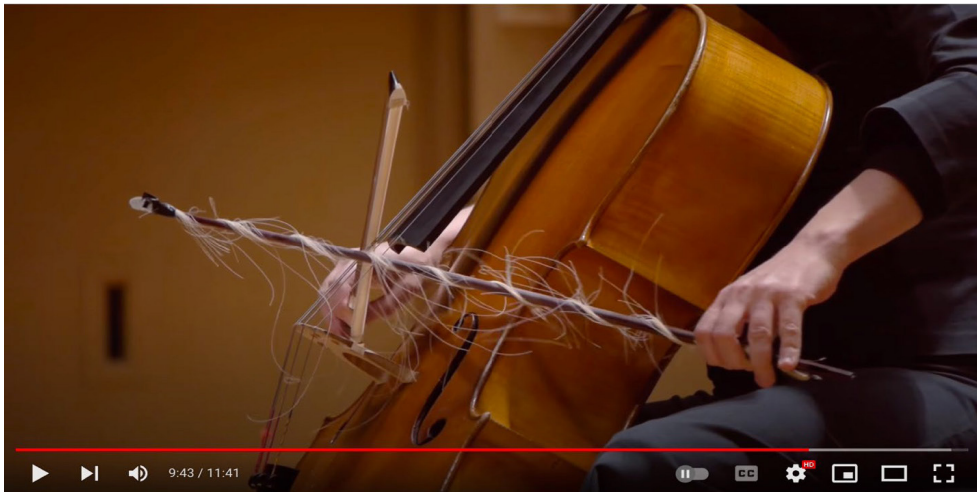


Figure 9. Use of guiro bow besides a conventional cello bow in a 2017 performance of Liza Lim's *Invisibility* for Cello Solo (2009) by Séverine Ballon. 'Liza Lim – Invisibility (2009),' posted 17 September 2017, by Mondayeveningconcert, YouTube, featuring performance of *Invisibility*, <https://www.youtube.com/watch?v=6jqNGQfi108>.



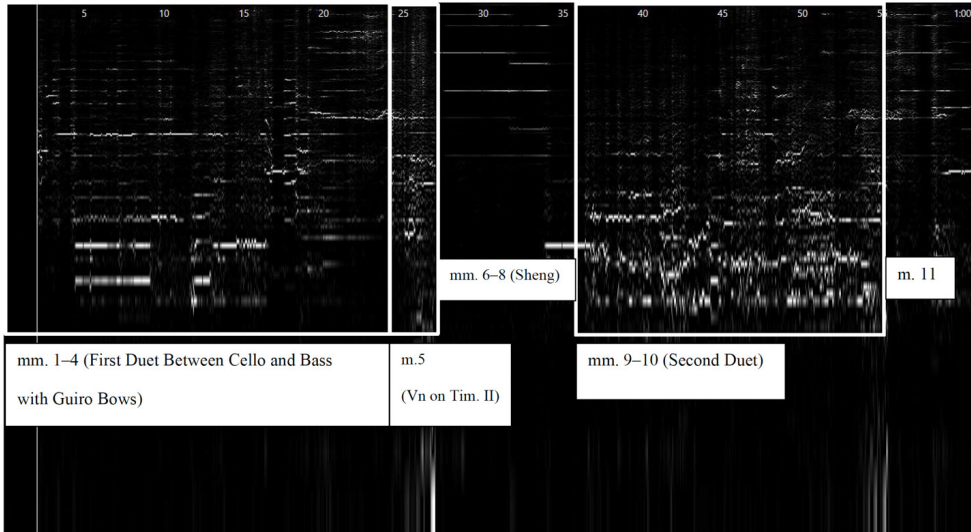
its realisation, the composer is likely to face a dramatic gap between the notated information and the spectre-like auditory outcome. While the score in Figure 10 shows a duet between the cello and bass (bb. 1–4 and 9–10), Figure 11 implies that realising the same duet involves less predictable and more chaotic overtones plus noises.

From the example above, Lim not only explores guiro bow's (de-familiarising) pattern language, but also puts the same instrument in a metonymic relationship with mycelia. If this underground network is prone to work (or *think* as suggested by the full title of *Forests*) in the complexity defying human predictions, the discrepancy discussed above may qualify as a (relatively accessible) puzzle piece within the said complexity. In this light, the pattern

Figure 10. Liza Lim, *How Forests Think* (score reduction), movement II, bb. 1–13 (Berlin: Ricordi Berlin, 2016), reprinted with kind permission of Hal Leonard Europe B.V. (Italy).



Figure 11. Liza Lim, *How Forests Think* (melodic-range spectrograph with graphical annotations), movement II, bb. 1–13, generated by the author using Sonic Visualizer (release 4.5 64-bit version). The input was 0:00–01:00, Track 2 on Liza Lim, *How Forests Think*, Huddersfield Contemporary Records, 2017.



language of movement-sound discrepancy can be understood as Lim’s compositional focus *and* her acknowledgement of the human limit toward mycelia. As though repurposing her careful approach to the Yolŋu visual art, the guiro bow in *Forests* helps the composer to keep her distance from essentialisation, appropriation, and misrepresentation of mycelia.

Consider Figure 12 (bb. 74–79 of *Forests* movement II) as an iconic example of guiro bow and mycelia. There are two notable features in this passage. One is the bass flute improvising a nonverbal ‘love story’ from bar 74 (see the system second from the top). The reason behind

Figure 12. Liza Lim, *How Forests Think*, movement II, bb. 74–79 (Berlin: Ricordi Berlin, 2016), reprinted with kind permission of Hal Leonard Europe B.V. (Italy).

74

Sheng

B. Fl. Tell a love story: vocalise into flute with whispers, murmurs and vocal fry. Improvise accompanying commentary using previous material (breath flutters, glissandi, tongue percussion)

C. A. To Oboe

B. Cl. To Clarinet

(A)

Alto Sax. (without mouthpiece) breath noise

Tpt. breath noise

Tbn. breath noise

T. Singing Bowl on Timp I To Violin on Timp. II

Vc.

D.B.

mp

mf

f

pp

Lx

77

Sheng

B. Fl. [*pp - mf*]

Ob.

Cl.

Alto Sax Tell a love story: whisper/murmur/gasp/sigh/vocal fry
Accompany with air flutters and other rapid breath percussion
[*pp - mf*]

Tpt. [*mf*] [*mp*] [*f*] [*pp*]

Tbn. [*mf*] [*mp*] [*f*] [*pp*]

güiro bow on wood of violin
(placed on Timp.) [*mp*]

Vin.
on Timp. li

(B) (with Güiro Bow)

Vc. mute strings for rattling breath sound [*mf*] [*p*]

D.B. mute strings for rattling breath sound [*mf*] [*pp*]

this strange instruction lies in the preceding recitation in bars 72 and 73, in which the sheng performer reads aloud the following quote in Chinese: 'in a forest far from poetry, love emerged (在远离诗歌的丛林发生了爱情)'. This quote comes from Jimu Langge's (吉木狼格, b. 1963) poem titled 'Chinese Poets,' which originally speaks about naked and plain attractions:

In a forest far from poetry, love emerged
 Young women and men threw away other motivations
 Save wanting to be close to one another
 Don't make love so complicated
 Especially in the study.²⁶

Movement II of *Forests*, however, refocuses the quoted line on the hidden but no-less-passionate world of the underground ecosystem. The world of mycelia might occasionally be charged with erotic attractions, though they would be barely perceptible with human senses.²⁷ In this circumstance, asking the bass flutist to improvise a nonverbal love story may be more than a funny or witty instruction. It rather exemplifies Lim's compositional take on the challenging interdisciplinary topic such as mycelia, indeed marking her respect towards performers as the equal companions. Meanwhile, the other notable feature in Figure 12 is the breathy noises created by the two instrument groups: Group A, consisting mostly of the alto saxophone, trumpet, and trombone, and Group B, consisting of the cello and double bass using guiro bows. In relation to the bass flute mentioned previously, I interpret both groups and their sound makings as the textural expansion of the improvised love story. Furthermore, I ascribe the guiro bow of Group B as the indispensable force to de-familiarise the entire ensemble and to foreground the discrepancy between movements and sounds—that is, a reminder that what is heard from the ensemble is just a metonymic indicator of the larger complexity known as mycelia.

Conclusion

Familiarisation and de-familiarisation, coined and illustrated in my analyses of *Forests*, call for future developments as well as expansions. These studies, clearly, need not follow a single direction. For instance, (de)familiarisation will have to be polished when Eidsheim updates her discussions of terroir. As noted in my discussion, it has been less than five years since the scholar introduced the concept of terroir to American academia. (De)familiarisation and other derivative ideas, thus, will benefit once Eidsheim publishes or delivers anticipated updates. Regarding another promising direction, I believe that (de)familiarisation can serve as a productive framework for other compositions by Lim. Lastly, the third direction worth pursuing in the future is an accessible discourse on timbral techniques and their reflections of borderless creativity. As the examples used in my discussion imply, Lim and other contemporary composers are constantly resisting bordered creativity so that they could 'reframe art in terms of the material and imaginative presences that inhabit the world.'²⁸ In this context,

²⁶ In original Simplified Chinese: 在远离诗歌的丛林发生了爱情/年轻的男女抛开其他目的/他们只想彼此靠近/不要把爱情搞复杂了/尤其在书房里。For both the complete Chinese text and the English translation, see Jimu Langge, 'Chinese Poets,' in David Dayton, 'Big Country, Subtle Voices: Three Ethnic Poets from China's Southwest' (MA thesis, University of Sydney, 2006), 200.

²⁷ Note that Lim returns to a similar interest in the last three bars of *Forests*, where her instruction is: '[improvise] very sparse whistling and sung sounds ... and make soft rustling sounds with percussion instruments like animals and insects moving through the undergrowth.' Admittedly, this may invite questions rather than answers (such as, what do the underground creatures sound like and how can human performers emulate their sounds?). Nonetheless, her imaginative instruction is unambiguously dedicated to the following manifestation or alike: underground lives have their own voices and expressions, whether or not humans can perceive them.

²⁸ Browning and Lim, 'Sonic Figurations for the Anthropocene,' 11.

diverse timbral experiments deserve broader recognition, as they mirror what these composers produce beyond any kinds of enclosure. Being one of the accessible frameworks for this goal, (de)familiarisation can help us to broaden the appreciation of diverse compositional endeavours and their outcomes—that is, the fresh sounds exemplified and envisaged by sheng, guiro bow, and Lim's chamber ensemble in *Forests*.

About the Author

Gui Hwan Lee is Assistant Professor of Music Theory at James Madison University. As an interdisciplinary music theorist, Lee explores groundbreaking creativity in contemporary art music, film music, and East-Asian popular cultures. He completed a PhD in Critical Music Studies at Stony Brook University in 2023.