

earliest of the five works collected here, also addresses aspects of neurological disorder. The psychiatric condition *echopraxia* is a kind of involuntary imitation, often associated with Tourette's syndrome, autism, or schizophrenia. Performed by a string sextet made up of musicians from the Ensemble Modern (Frankfurt am Main), the composition foregrounds the passing of physical gestures between instrumentalists to create complex imitative textures susceptible to quicksilver changes. Imitation and interaction have, of course, always been part of string chamber music, but the metaphor of echopraxia rethinks them in a new dynamic. While the work starts with textures involving all six string players, they eventually break into fragile subgroups that seem to compete with one another to take over the full ensemble. Moments of stasis (completely absent at first but emerging and becoming longer as the piece progresses) may change entirely in an instant as a new gesture cascades across the instruments. The string quartet *Πίμex – Rhymes* (2012) is similarly virtuosic, gestural, and rich in diverse timbres, an acknowledgement perhaps of the expertise of the Arditti Quartet (to whom the work is dedicated) in extended string techniques. Individual sections of the work seem to be free-standing timbral miniatures, often (like *Echopraxia*) premised on the “processes of multiplication” (as described by Salvatore Sciarrino)⁵ The composer's deep engagement with timbre is also evident in the album's three-movement final work, *Engravings* (2013) for large ensemble. The outer movements, “Chalcography” and “Xylography / Lithography” refer to the materials used in traditional engraving methods (copper, wood, and stone respectively). Talking about the material of a sounding body is, scholars have observed, one of the principal ways we describe timbre⁶ “Chalcography” begins with an intense texture that evokes the hardness and malleability of metal, constantly transforming but harmonically fixated on the single pitch G. In the last movement,

there is a shift in timbral focus from the drums, bowed strings, and marimba (all suggesting the materiality of wood) to a “cooler,” “harder” timbre with extensive use of the brass, metallic percussion, and pianos, culminating in a fading overtone chord over a lingering bass G.

Marco Fusi, Charles Deluga, Lei Liang

Lei Liang: Six Seasons

Kairos, 0022054KAI, October 2024

Mivos Quartet

Lei Liang: Six Seasons

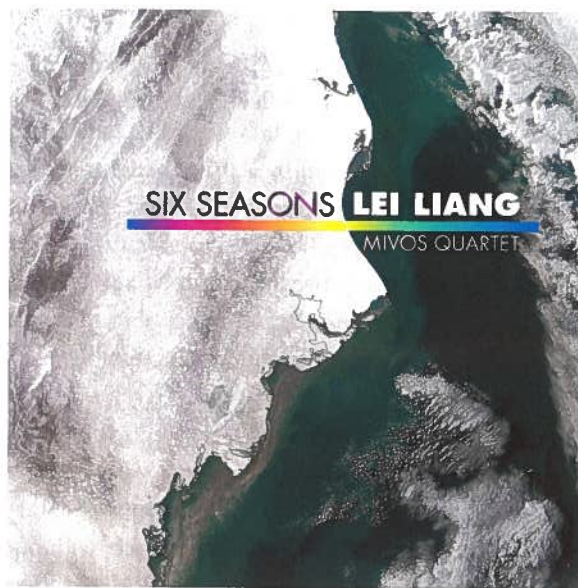
New World Records, NW80840, June 2023

Two recent CDs—by Marco Fusi and the Mivos Quartet—offer alternative versions of a recent composition by Lei Liang (b. 1972), *Six Seasons* (2022). The work is unusual in its straddling of the categories of electroacoustic, mixed, and improvised music: what the composer calls the “living score” of the work is a collection of curated recordings emerging from an extensive collaboration with oceanographer Joshua Jones of the Scripps Institution of Oceanography at



the University of California, San Diego. Liang drew on over ten years (from 2005 to 2017) of recordings from Jones's Whale Acoustic Lab, which were made in high resolution, using hydrophones 300 metres below the surface of the Arctic Ocean. The recording site is at the edge of a coastal shelf in the Chukchi Sea, some 160 kilometres north of the city Utqiagvik (the northernmost community in Alaska and the location of an Inupiat settlement for more than 1,500 years). The use of acoustic recording in oceanographic and marine biology research offers a window into an otherwise inaccessible environment, deep under the sea in a location that experiences polar night for two months of the year and is covered with ice for nine. To make the "living score," Liang selected, organized, and adapted excerpts of Jones's recordings into six electronic file folders corresponding to the six seasons of the title. The Inuit recognize six seasons in the year, defined by environmental changes such as ice thaw and formation and the conditions for activities such as hunting and fishing. The song cycle begins, Liang explains in his CD notes, just after new ice has started to form, in a recording from 29 October 2015. The first three seasons are "ice seasons" (Liang, liner notes, 10) with migratory marine mammals returning to the site in the warmer seasons 4 to 6.

While the CDs reviewed here are both for a soloist and a string quartet, the piece is conceived "for any number of improvising musicians and pre-recorded sounds." It can thus exist in many different versions, several of which (including one for large ensemble) are currently in the planning phase. Liang's approach is not an instance of what Daryl Jamieson has called a "non-fictional" field recording,⁷ aiming to document the passage of time in a single time and a single take, but rather a careful curation of the hydrophone audio into categories (the "living score") and the real-time projection of the excerpts into the performance space by the composer in reaction to the playing of



the musician(s). The source field recordings are often modified extensively, layered and spatialized into a reimagined "idealized icescape." Comparing the two CDs gives a sense of the flexibility of the piece: the timings of movements vary, and while one can recognize certain landmark sounds in the electroacoustic part for each season, the overall musical shape can differ considerably.⁸

"Season 3: Sunrise" offers a case in point. The sounds of this movement were collected at the time of the sun's first return in mid-March when the temperature is at its coldest. The recording by the New-York-based Mivos Quartet (Olivia De Prato, Maya Bennardo, violins; Victor Lowrie Tafoya, viola; Tyler J. Borden, cello) captures the complex dynamics of group improvisation and the quartet's interaction with the composer's pre-recorded sounds. The sound files projected to the instrumentalists begin with relatively small, continuous sounds of friction and crackling, prompting a fragile, half-pitched response from the strings. As the movement progresses, the texture deepens and thickens and the electronics drive a powerful

crescendo in the quartet. By the two-thirds mark, the overall texture is layered and highly physical with a sense of great energy reflecting the intense pressure of the ice. Overpressure bowings and layers of furious rhythmic activity push headlong to a moment of maximal intensity, with the recorded sounds integrated inextricably into the activity of the quartet. The long silence at the end of the movement offers a powerful sense of emptiness, opening the listener's ears for the next movement. The version of "Sunrise" on the more recent CD by Marco Fusi takes a strikingly different tack. While the electronics still build towards a wall of noise at the centre of the movement, Fusi's violin is minimal, accenting the edges of the sound with high tremolando gestures at the threshold of audibility, often with muted strings drawing attention to the sounds of bowing rather than pitch. The end of the movement is quiet and contemplative, giving a sense of the vastness and emptiness of the sea, marked by a few distant and mysterious chirps foreshadowing the immanent return of animal life.

In both recordings, "**Season 4: Migration**" marks a significant point of articulation. As observed in the Fusi recording's liner notes (15), the movement begins with "the violent sound of ice ridging" (the buckling and breaking caused by the collision of ice floes) before introducing the distinctive calls of bearded seals: a warbling rise followed by a longer, more gradual trilling fall. Liang's combination of these rising and falling calls creates a complex polyphony of intersecting lines. The seals are the first of the marine mammals to return to the site as the ice breaks up: Fusi describes the sound of their arrival as a pivotal point in the piece and a joyous moment (liner notes, 13). In the Mivos recording, the quartet leaves space for the calls to unfold on their own before a first tenuous violin glissando finds a place within the texture. The high string gestures that follow are clearly inspired by the sonic context, but with a different kind of temporal

unfolding that distinguishes them from the seals. Later in the movement, we hear the high-pitched chirps, sizzles, and whistles of belugas and ultimately the lower tones of the bowhead whale, with the cello engaging with the bowheads in its own low register. Fusi's interpretation is longer (11:00 to Minos's 8:06) and introduces the warmer timbre of the viola d'amore, with its lower register and seven sympathetically vibrating strings. Compared to the quartet rendition, Fusi's viola d'amore is more present, emerging gradually until tracing its own, sympathetic swoops and glissandi over a central drone. The end of Fusi's "Migration" is largely in the low register of the viola d'amore, where it overlaps with the bowhead's sonic niche before a final, reflective solo.

In a short video on his "Hearing Seascapes" courses at UC San Diego, Liang describes his vision of how artists can collaborate with scientists: "as artists, perhaps we can make a record of what we know during our time—what is nature for us. The great composers in the past have written many works inspired by nature... but now we know nature in a very different way. And how do we respond to that as artists? How do we create artwork, in 2019, that reflects human understanding of nature?"⁹ The close listening to nature foregrounded in Liang's project is a recognition of the fragility the Arctic ecosystem that it documents. Threatened by climate change, shipping, and fossil fuel exploitation, the Chukchi Sea and its wildlife is a delicate and endangered ecosystem. Hildegard Westerkamp has argued that conscious listening can "deepen our understanding of relationships between living beings and the soundscape," particularly when the listener "knows the place, time or situation of which the piece speaks."¹⁰ Some knowledge of the sound sources adds an important dimension to the listening experience: the Mivos Quartet CD's liner notes include "A Listening Guide to the Pre-Recorded Sounds" by Liang and Jones, and the "Voices of the Sea" website

(with Jones as Program Director) hosted by the Scripps Oceanographic Institution offers a chance to hear animals individually, from the deep voices of bowhead whales to the startlingly high-pitched clicks and buzzes of the beluga.¹¹ Source identification (as opposed to a more abstract, acousmatic listening) lends urgency to the work's brief coda—as described in the Mivos Quartet's listening guide and Marc Medwin's thoughtful liner notes, the coda captures the distress call of an isolated beluga whale, a reminder of the precarity of life in this Arctic environment.

1. Gérard Grisey (2000), "Did You Say Spectral?," *Contemporary Music Review*, Vol. 19, No. 3, p. 1-3.
2. Philippe Hurel has suggested that younger composers engaging with the legacy of spectralism differ from their forebears in their engagement with more varied and heterogeneous sonic materials: "la musique des jeunes compositeurs regorge de matériaux prégnants, variés et hétéroclites et c'est là une de ses différences fondamentales avec le spectralisme de Grisey." See "La musique spectrale... à terme!" at <http://www.philippe-hurel.fr/musique_spectrale.html> (accessed on August 25, 2025).
3. The commissioning project, led by Dutch architect and artist May Kooreman and the Mousai Foundation, also includes works by composers Iris ter Schiphorst, Nikolaus Brass, and Bernhard Lang, all premiered at Donaueschinger Musiktage 2022. The various works

in the project draw on various combinations of the sextet plus bass clarinet, sometimes with electronics or multimedia as well. See <<https://www.neuevocalsolisten.de/en/produktion/parkinson-projekt/>> (accessed on August 25, 2025) for further details.

4. Joseph N. Straus (2018), *Broken Beauty: Musical Modernism and the Representation of Disability*, New York, Oxford University Press, p. ix. See also *Circuit's* recent issue "Créativité musicale et situations de handicap" (Vol. 32, No. 3), particularly the Cahier d'analyse by Simon Grégoric on R. Murray Schafer's *Alzheimer's Masterpiece*: "R. Murray Schafer et la métaphore musicale de la maladie d'Alzheimer: une analyse de *Alzheimer's Masterpiece*," p. 65-79.
5. Salvatore Sciarrino (1998), *Le figure della musica da Beethoven a oggi*, Milan, Ricordi, p. 41-58.
6. Zachary Wallmark (2018), "A Corpus Analysis of Timbre Semantics in Orchestration Treatises," *Psychology of Music*, Vol. 47, No. 4, p. 585-605.
7. Daryl Jamieson (2021), "Field Recording and the Re-enchantment of the World: An Intercultural and Interdisciplinary Approach," *The Journal of Aesthetics and Art Criticism*, Vol. 79, p. 213-226.
8. Luke Nickel considers the role of oral transmission and the idea of "living scores" in a recent article: Luke Nickel (2020), "Scores in Bloom: Some Recent Orally Transmitted Experimental Music," *Tempo*, Vol. 74, No. 293, p. 54-69.
9. The Qualcomm Institute, "Hearing Seascapes – Lei Liang," YouTube video, 26 June 2020, <<https://www.youtube.com/watch?v=hnZDMKbh-z4>> (accessed on August 25, 2025).
10. Westerkamp, Hildegard (2002), "Linking Soundscape Composition and Acoustic Ecology," *Organised Sound*, Vol. 7, No. 1, p. 51-56.
11. See <<https://voicesinthesea.ucsd.edu/index.html>> (accessed on August 25, 2025).