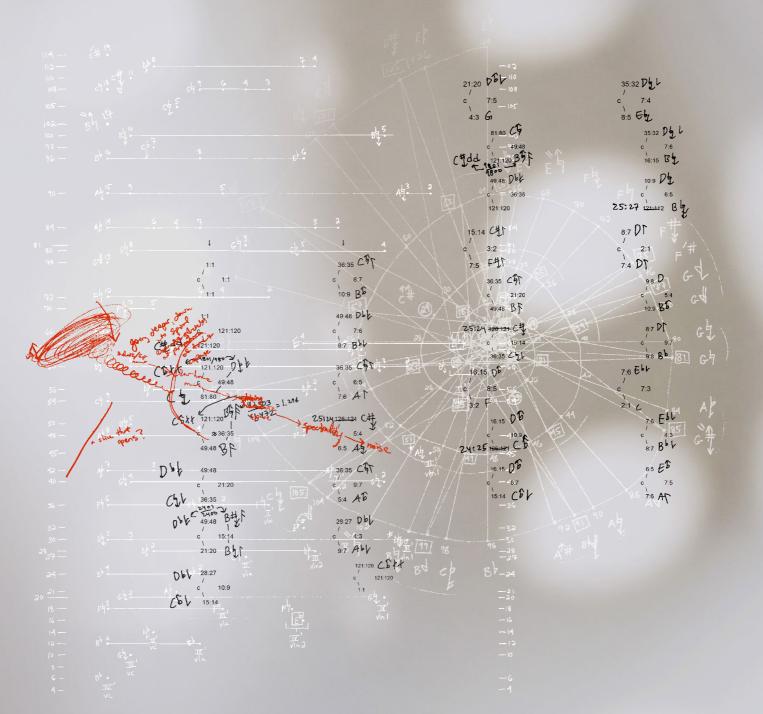
Catherine Lamb aggregate forms



prime gradation

2/3/5/7/11/13/17/19/23/29/



Catherine Lamb: aggregate forms

JACK Quartet: Christopher Otto (violin), Austin Wulliman (violin), John Pickford Richards (viola), Jay Campbell (cello)

CD I

1.	string quartet (two blooms) (2009)	46:45
	divisio spiralis (2019)	
2.	I .	06:58
3.	II	03:54
4.	III	03:36
5.	IV	08:07

Total length: 69:22

4

CD II

divisio spiralis (2019)

1.	V	07:22
2.	VI	07:28
3.	VII	07:27
4.	VIII	09:20
5.	IX	08:17
6.	X	14:22
7.	XI	12:23
8.	XII	03:45
9.	XIII	06:11

Total length:

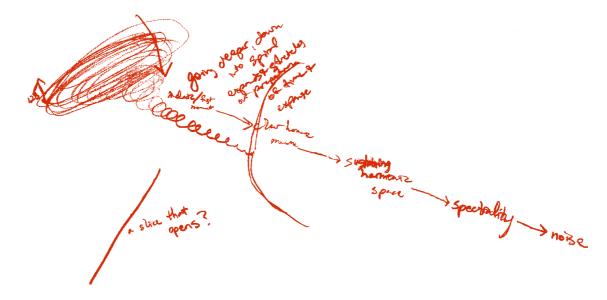
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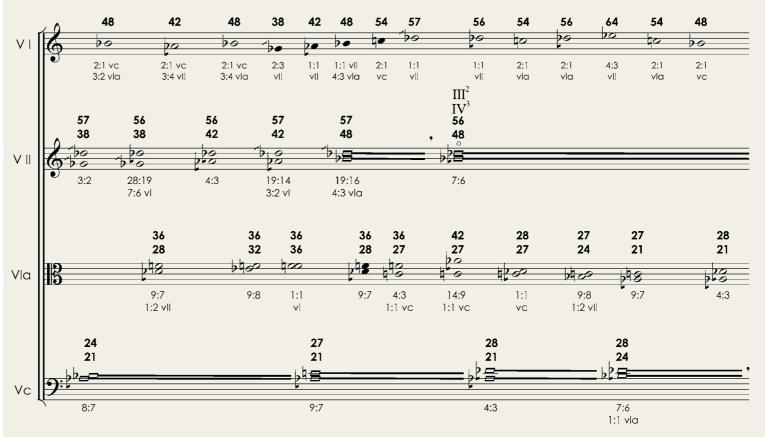


Crystal, Spiral, Lamb

In summer 2019, I attended Antoine Beuger's Klangraum in an empty art gallery in Düsseldorf immersing myself in Wandelweiser-adjacent sound. I was there for the third year in a row, but I was particularly excited that year because Catherine Lamb and collaborators had traveled from Berlin to participate in Beuger's events as well as André O. Möller's concert series "Incentive Incidents." I'd heard of Lamb but didn't know her music intimately. I spent the days in advance of her arrival listening. Little prepared me for the effect of her music in real life. In late July, I settled into my seat as cellist Deborah Walker and flutist Rebecca Lane began Lamb's piece Frames (2009/13). Walker and Lane begin sounding a unison C. Walker held it as a drone for the next several minutes as Lane deviated from it proportionally – spiraling around the C in a gyre that widened at one moment, narrowed another. The harmonic constellations produced by these subtle effects took on structural forms in the resonating chambers of my head and the gallery. Glossing Wagner, time became space became time with each new harmonic relationship. A whole other world opened up inside the one I inhabited. With her deft explorations of harmony via justly tuned intervals, Lamb's music lifts the veil of the world, letting us hear the plenitude that's just on the other side of our everyday hearing.

Roland Barthes describes the opening E-flat of Wagner's *Das Rheingold* as a "cosmic widening." His description gets at something profound – about Wagner, certainly, but also at something about Lamb's music and musical space more generally. A single sound might open up a world. Such widenings – cosmic or otherwise – provide a rich archive of feeling through which to appreciate and critique millennia-long explorations of harmony by musicians and composers. Her theoretical writings and compositions emphasize the spatial affordances of music. They call for invigorated attention to supposedly shopworn harmonic structures. These concerns were given the full force of lived experience in my first live encounter with Lamb's music. They offer a grounded phenomenology with which to reflect on the works offered on this recording.





36:35 CFT

c 8:7
10:9 BF

49:48 DF

c 7:6
8:7 BF

36:35 CFT

c 6:5
7:6 AF

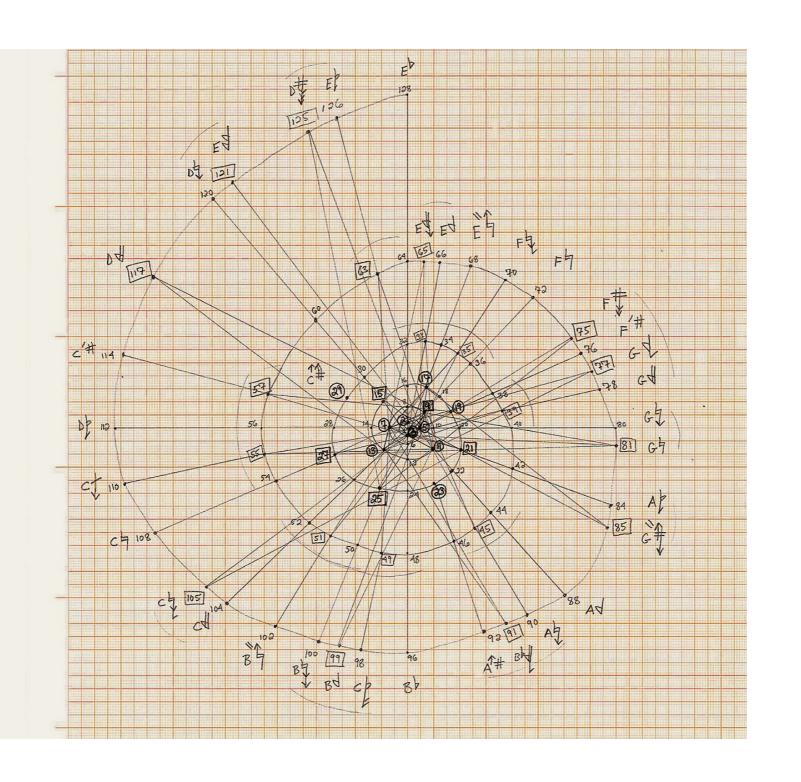
6:5 49

In a talk given in both Chicago and Cambridge, Massachusetts in the 2019–20 season, Lamb described the development in her spatial thinking in line with my experience of *Frame* (which she and Lane performed following her lecture in Chicago). Whereas earlier works inclusive of the early *String Quartet* (2009) had made audible their crystalline structures experienced both harmonically and formally, Lamb described how the form of the spiral had moved to the forefront of her thought. The spiral's role as a generative concept-metaphor had been latent in her earlier work. *Frame* for instance, plays with pitches spiraling away from and towards a drone. But in the last few years, Lamb has made it the foundation of her compositional practice. We experience this in the recent quartet *Divisio Spiralis*, of which she writes:

"Since I was a child, I have possessed a kind of synesthesia with numbers. Rather than light/color phenomena association, this has generally regarded forms, shapes, and structures. When I first began to count, I imagined a long thread extending upwards and when looking up, at some point I began to see a curve forming in the line until eventually the line transformed into an infinite spiral, with my foot planted at the number one. The first time I discovered Erv Wilson's 1965 organization of the overtone series as a logarithmic spiral, the image immediately resonated with me as a lucid means to describe harmonic space as numbers in repetition and interaction, generating/blooming outwards with each new prime and composite. I absorbed this image while working on the piece for JACK, and after applying a 29-limit reductionis/palindromic omission to the tonal palette (29x1, 23x2, 19x3, 17x5, 13x7, 11x11) and situating the four string instruments inside it as distinct resonating chambers, I utilized this image as an inspiration for the total piece."

35:32 D4 L 16:15 3 10:9 P 25: 27 121:112 B 9/ 8:7 DT 7:4 DT 10:9 BE 9:8 86 7:6 E 6 V 7:3 2:1 C 7:6 EPP 1 B b 7:6 AT

35:32 D5 L



Lamb's preceding interest in crystalline structures was developed following her teacher, James Tenney. She wrote of this in relation to her *String Quartet (two blooms)*:

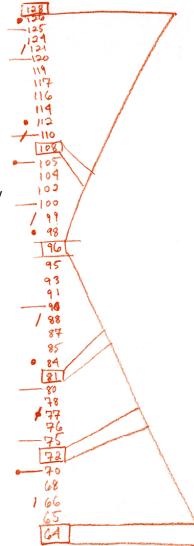


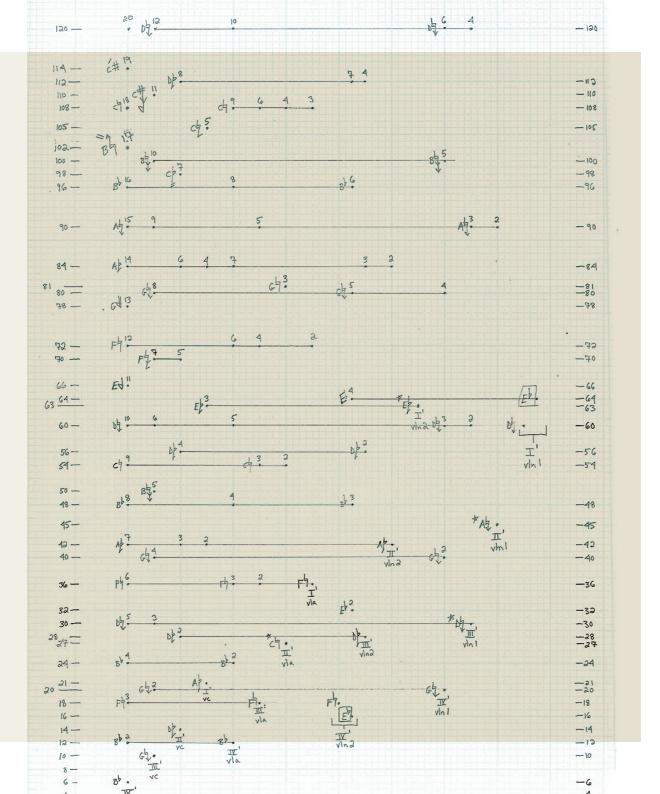
"This [quartet] came out of a period of form writing where I was interested in the building blocks of proportional (pitch-spaced) relationships, where each structure fit directly into the next, expanding out from a central point. I was inspired by crystalline growth patterns and the perceptions around those shapes, and from a glissandi-directed piece I had just finished for any four bowed string instrumentalists entitled grow (out). Keeping the same macro shape of opening as two slow, displaced blooms, I became focused on the details of each micro growth within and tried it as a classical string quartet arrangement. I was much more satisfied with the result – the structures began to take on a clearer vibrancy and movement (out). I wanted to see how far the micro and macro structure could remain of the same substance, only displaced in dimensionality through our own cognition of what is large or what is small."

Uniting both structures, the spiral and the crystal, is a fundamental concern with the production of a musical space perceptible to listeners. Her instruction to performers in the String Quartet expresses this beautifully: "time is slow so that tones fill the space / tones are held in relation to one another / tones are guiet, clear and smooth; / blooming over time / in isolation / and in fusion". She is too modest here – her tones do not simply fill the space. They compose space. Maurice Merleau-Ponty has captured the kind of effect Lamb produces. In his *Phenomenology of Perception*, he writes: "The music insinuates a new dimension across visible space where it unfurls just as, for persons suffering hallucinations, the clear space of perceived things is mysteriously doubled with a 'dark space' where other presences are possible." Thus my sensation of "hearing more" of the world in my encounter with Frames as well as with the String Quartet, whose formal process presents us with bountiful crystalline structures that "bloom" and grow only to collapse on themselves again and again. This "mysterious doubling" of space takes us up into another place and its dissolution throws back into the visible world. The effect is not dissimilar in *Divisio Spiralis*. We experience space as veridical spirals that set our hearing into disorienting motion. The centrifugal force of the harmonic rhythm propels us back into visible

space, only to reverse motion and centripetally pull us back in. Lamb's interest in crystalline and spiral harmonic structures has phenomenological consequences for how we experience the music. Her theory is always realized in practice.

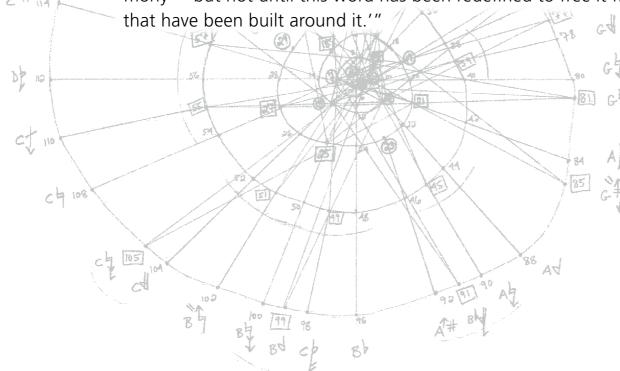
Tenney, already in the early 1980s, called upon composers to re-conceive both harmonic space and harmonic theory. Taking up Tenney's call, Lamb critiques her early 21st century peers: "Composers have either taken standardized harmony for granted, or have gone completely in another direction more linked to the practice of other art forms by utilizing conceptual, theatrical, performative, or visual pursuits in a manner where harmony is not an important factor." Lamb argues for a middle way, proffering a "multi-dimensional harmonic space" in lieu of a flattened vertical one. With this theoretical elaboration, and with the bountiful offering of her own music, Lamb has deepened a line of inquiry within experimental music that has been less public and perhaps less fashionable because of its attachment to millennia-old concerns with "harmonia". This is not to suggest that Lamb or Tenney's emphasis on harmonic space is conservative or regressive – far from it – but that rethinking harmony as a pluralistic space of tonal interaction has yet to be exhausted.





tonal palette 1 = 10 Hz (partial x 10 = Hz)29 limit, reductionist* vaIV¹ vcIV² v_2IV^i veIV vcIII vcII 2 3 4 **(5**) 6 7 8 9 10 (11)12 (13) 14 15 16 70 10 40 4-20 J 20 **)** þ- (20 Hz 30 Hz...) $\begin{array}{c} vaIV^2 \\ vcIV^4 \end{array}$ vaIII¹ vcIV³ $v_{i}IV^{l} \\$ vaII $v_2III_2^1$ $\begin{matrix}v_1III^1\\vcIII^3\!\!/IV^5\end{matrix}$ $v_2 IV^2 \\$ vcI^{i} vcIII² vcII² 21 (17) 18 20 22 23 24 25 27 28 29 30 (19) 26 32 v₂IV³ vaIV⁴ vcIV⁸ $vaI/\!\!\!/III/\!\!\!/IV^3$ $vcIV^6$ $\begin{array}{c} v_i IV^2 \\ vc III^4 \end{array}$ $v_2II^1\\v_2II^3/IV^7$ $v_l II^l$ 33 35 45 39 42 34 36 38 40 44 46 48 5. 00 $v_1III/^2IV^3$ $vaII^{2}/III^{3}$ $vcIV^{9}$ $\begin{array}{c} v_1 I^1 \\ v_2 I V^4 \end{array}$ $\begin{array}{c} v_2III^2 \\ vcII^4 \end{array}$ $\begin{array}{c} v_2 I^t \\ vc I^3 \end{array}$ vaIV⁵ vcIII/IV¹⁰ vcIII⁵ 49 50 51 52 54 55 57 60 63 56 64 20 10

While John Cage has largely been received as an advocate for the music that "utiliz[es] conceptual, theatrical, performative, or visual pursuits," Tenney read Cage against the grain, not as the emancipator of noise, but as the liberator of harmony: "Cage has always emphasized the *multidimensional* character of sound-space, with pitch just as one of its dimensions." And Tenney takes this image from Cage, arguing for a conception of "total sound-space ... more complex than Cage could have known: 'Within it a place will be found for specifically *harmonic* relations – and thus, for 'harmony' – but not until this word has been redefined to free it from the walls



Cage himself seems to have achieved a rapprochement with harmony – something audible in his late "number pieces." With him and Tenney in mind, we might follow a further lineage that Lamb traces when she identifies the importance of Eliane Radigue and Maryanne Amacher to her music. They, Lamb notes, "have arguably been most directly capable of divorcing themselves from standardized harmonic musical theory by diving rather into pure acoustical materiality." This immersion in pure sonic materiality has brought about, in Amacher's words, a "listener's music, based on [a] listener's initiative." We might ask Lamb – is sound ever *pure*, is it not always already an amalgam, plural and more than itself? Yet, Lamb productively imagines our contemporary transformation into new listeners and, more accurately, new perceivers. Using her engagement with harmonic space, Lamb does not depend upon the preexistence of her ideal perceivers. She makes them. Human perception, even more than harmony, is the material with which she composes. Lamb's compositions extend the capacities of perceivers, making new listeners by unmaking old ways of hearing. Suddenly, inexplicably, I hear more. And keep hearing more.

Ryan Dohoney





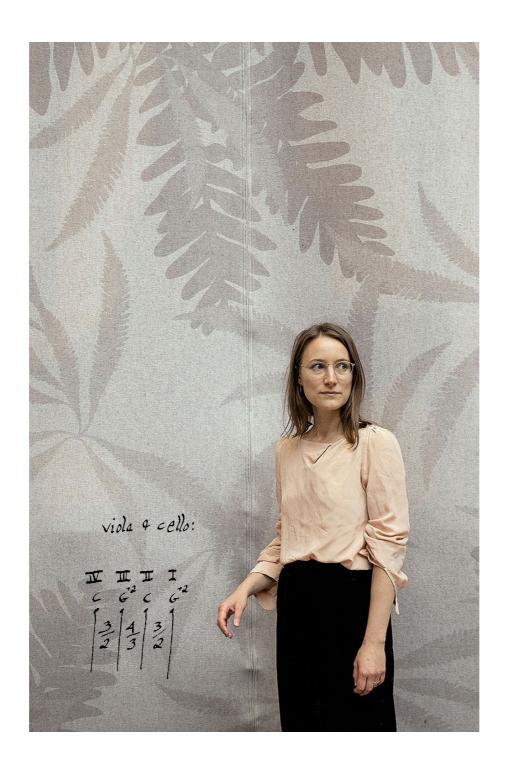
Catherine Lamb

Catherine Lamb (born 1982, Olympia, WA. U.S.) is a composer exploring the interaction of elemental tonality and their summation of shapes, the long introduction form, points of phenomenological expansions, and the architecture of the liminal. She began her musical life early, later abandoning the conservatory in 2003 to study Hindustani music in Pune, India. She received her BFA in 2006 under James Tenney and Michael Pisaro at CalArts in Los Angeles, where she first developed her research into the interaction of tone and continued to compose, teach, and collaborate with musicians (such as Laura Steenberge and Julia Holter on Singing by Numbers). In 2008 she received a W. A. Gerbode Foundation and W. & F. Hewlett Foundation Emerging Composers initiative for Dilations, premiered at the Other Minds festival in San Francisco. She mentored under the experimental filmmaker/Dhrupad musician Mani Kaul until his death in 2011. In 2012 she received her MFA in music/sound from the Milton Avery School of Fine Arts at Bard College in New York. She toured Shade/Gradient extensively and was awarded the Henry Cowell Research Fellowship to work with Eliane Radigue in Paris. In 2013 Lamb relocated to Berlin, Germany where she lives currently, and has written for ensembles such as Konzert Minimal,



violizs:

 $\nabla \Pi \Pi \Pi \Pi$ $G^{2} C G^{2} C$ $\left[\frac{4}{3}\right] \frac{3}{2} \left[\frac{4}{3}\right]$



Dedalus, Ensemble neoN, the London Contemporary Orchestra, as well as the JACK Quartet; while collaborating Catherine Lamb regularly with Marc Sabat, Johnny Chang (Viola Torros), Bryan Eubanks, and Rebecca Lane. Her first orchestral work, *Portions Transparent/Opaque*, was premiered by the BBC Scottish Symphony Orchestra at the 2014 Tectonics Festival in Glasgow and was conducted by Ilan Volkov. She completed a series of nine pieces entitled Prisma Interius (2016–18) in which the infinite opening filter from inner to outer perceptions are deeply explored. She is a 2018 recipient of the Grants to Artists award from the Foundation for Contemporary Arts, a Staubach Fellow for the 2016 Darmstadt Summer course as well as a 2016–2017 Schloss Solitude Fellow. Her writings/recordings are published in KunstMusik, Open Space Magazine, QO2, NEOS, New World Records, Another Timbre, Other Minds, Winds Measure, Hubro Records, Black Pollen Press, Sound American, and Sacred Realism.

sacredrealism.org

Hailed by *The New York Times* as "our leading new-music foursome", the JACK Quartet is one of the most acclaimed, renowned, and respected groups performing today. JACK has maintained an unwavering commitment to their mission of performing and commissioning new works, giving voice to underheard composers, and cultivating an ever-greater sense of openness toward contemporary classical music. The quartet was selected as Musical America's 2018 "Ensemble of the Year", named to WQXR's "19 for 19 Artists to Watch", and awarded an Avery Fisher Career Grant. Recent engagements during the 2020/21 season included performances at the Miller Theatre, National Sawdust, Library of Congress, and Walker Arts Center, as well as a project with Eliott Reed at the MoMA PS1 entitled *This Longing Vessel*, and *Beautiful Trouble*, a digital billboard truck performance with Natacha Diels.

Through intimate relationships with today's most creative voices, JACK embraces close collaboration with the composers they perform, leading to a radical embodiment of the technical, musical, and emotional aspects of their work. The quartet has worked with artists such as Julia Wolfe, George Lewis, Chaya Czernowin, Helmut Lachenmann, Caroline Shaw, and Simon Steen-Andersen, with upcoming and recent premieres including works by Tyshawn Sorey, Sabrina Schroeder, John Luther Adams, Clara lannotta, Philip Glass, Catherine Lamb, Lester St. Louis, and John Zorn.



JACK's all-access initiative, JACK Studio, commissions a selection of artists each year, who will receive money, workshop time, mentorship, and resources to develop new work to be performed and recorded by the quartet. JACK has been covered by all major news outlets, with the *Boston Globe* calling them "superheroes of the new music world", the *Washington Post* heralding them as "the go-to quartet for contemporary music, tying impeccable musicianship to intellectual ferocity and a take-no-prisoners sense of commitment", and *NPR stating* "no one today has the command of [contemporary] music like the young JACK quartet."

JACK has performed to critical acclaim at Carnegie Hall (USA), Lincoln Center (USA), Berlin Philharmonie (Germany), Wigmore Hall (United Kingdom), Muziekgebouw aan 't IJ (Netherlands), The Louvre (France), Kölner Philharmonie (Germany), the Lucerne Festival (Switzerland), La Biennale di Venezia (Italy), Suntory Hall (Japan), Bali Arts Festival (Indonesia), Festival Internacional Cervantino (Mexico), and Teatro Colón (Argentina). Additional awards include Lincoln Center's Martin E. Segal Award, New Music USA's Trailblazer Award, and the CMA/ASCAP Award for Adventurous Programming.

According to Musical America, "many of their recordings are must-haves, for anyone interested in new music." Among their dozens of releases, their Cold Blue Music album of John Luther Adams' *Everything That Rises* was praised as "a wise and eloquent performance" by the *San Francisco Chronicle*,

their concept album *Imaginist* with the Le Boeuf Brothers was nominated for a GRAMMY award in 2018, and their complete *Xenakis: String Quartets* was named one of *TimeOut* New York's "Top Recordings of the Year." Other albums include music by Helmut Lachenmann, Du Yun, Amy Williams, Elliott Sharp, Hannah Lash, Horatiu Radulescu, and more.

Committed to education, JACK is the Quartet in Residence at the Mannes School of Music, who host the JACK Frontiers Festival, a multi-faceted festival of contemporary music for string quartet. They also teach each summer at New Music on the Point, a contemporary chamber music festival in Vermont for young performers and composers, and at the Banff Centre for Arts and Creativity. JACK has long-standing relationships with the University of Iowa String Quartet Residency Program, where they teach and collaborate with students each fall and spring, as well as with the Lucerne Festival Academy, of which the four members are all alumni. Additionally, the quartet collaborates with young composers at schools including Columbia University, Harvard University, New York University, Princeton University, and Stanford University.

Comprising violinists Christopher Otto and Austin Wulliman, violist John Pickford Richards, and cellist Jay Campbell, JACK operates as a non-profit organization dedicated to the performance, commissioning, and appreciation of new string quartet music.

jackquartet.com

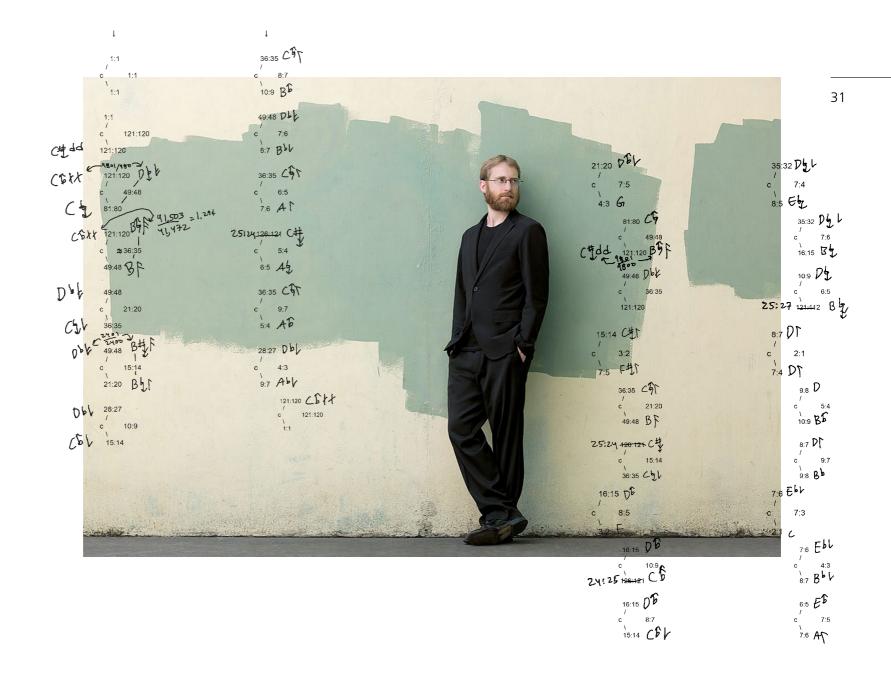
Christopher Otto

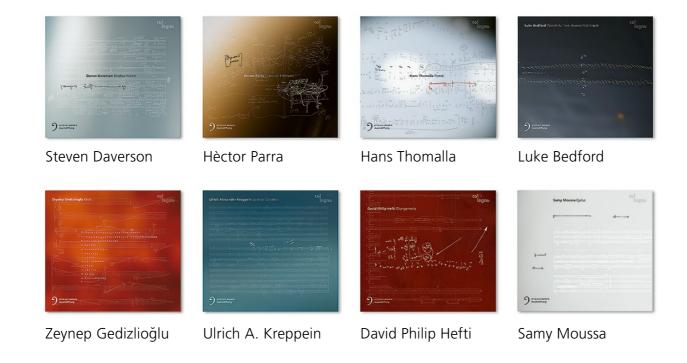
The radically mind-expanding challenges of Catherine Lamb's string quartets have given me great joy and satisfaction. Imagining and creating the sonic relations yields an integration of number and sound, offering a pathway toward ultimate oneness. Opening ears and mind to infinitely rich patterns, these resonances penetrate deeply to the core.

Each collection of tones defines a unique set of periodicities, and reveals its distinct quality over time. The smallest intervals become rhythms, and yield subtle but vast changes in character.

As performer and listener I try to clarify these patterns, focusing on reinforcing specific harmonic alignments and slowing down certain beatings, bringing forth additional tones (difference tones, overtones), while accommodating the idiosyncrasies inherent in human-made sound. Aware that the idea of perfect intonation, slowing down the undesired beating all the way to zero, can exist only in the mind, I enjoy the relation between the acoustic reality and the transcendent space toward which it points.

The recording is not an endpoint, but part of a broadening process, a continuous evolution of abstract relationships becoming concrete, erasing artificial divisions between melody, harmony, and timbre, between body, mind, and spirit.

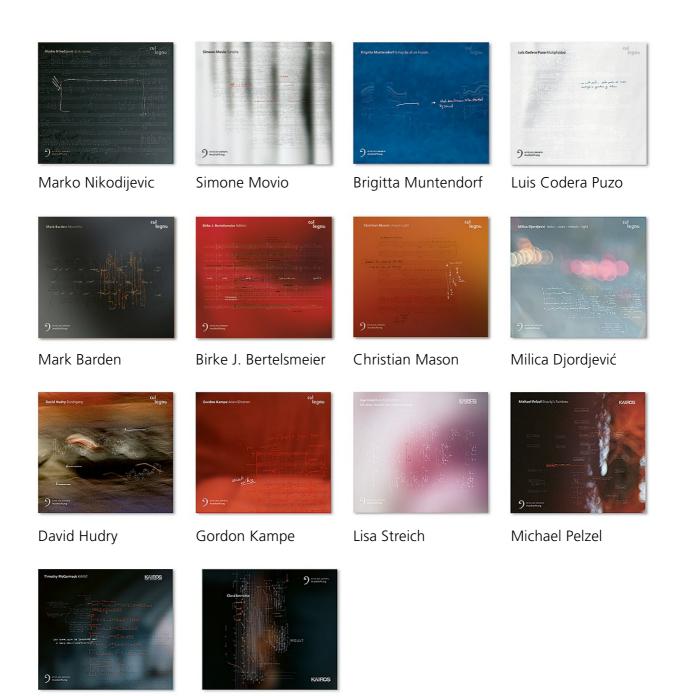




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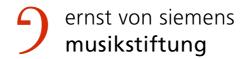
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string quartet (two blooms) (2009)

to James Tenney Dedication:

> March 26th, 2015, Harmonic Series, World Premiere:

> > Royal Festival Hall, London

Contemporary

Daniel Pioro (violin), Galya Bisengalieva (violin), Orchestra soloists:

Robert Ames (viola), Oliver Coates (cello)

February 24th, 2021, Oktaven Audio, Mount Vernon, Recording:

New York

JACK quartet: Christopher Otto (violin), Ensemble:

Austin Wulliman (violin), John Pickford Richards (viola),

Jay Campbell (cello)

Christopher Otto Artistic producer:

Ryan Streber Sound engineer:

Ryan Streber, Charles Mueller Editors:

Christopher Botta Final Editing/Mixing:

Ryan Streber Mastering engineer: **Edwin Huet** Mastering assistant:

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divisio spiralis (2019)

string quartet

Commissioned by: Chamber Music America, 2018

Dedication: to Zia Mohiuddin Dagar

World Premiere: December 17th, 2019, New York, Frontiers Festival

(at the New School), JACK Quartet

Recording: February 25th-26th, 2021, Oktaven Audio, Mount Vernon, New York

Ensemble: JACK quartet: Christopher Otto (violin), Austin Wulliman (violin),

John Pickford Richards (viola), Jay Campbell (cello)

Artistic producer: Christopher Otto

Sound engineer: Ryan Streber

Editors: Ryan Streber, Charles Mueller

Final Editing/Mixing: Christopher Botta

Mastering engineer: Ryan Streber
Mastering assistant: Edwin Huet



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