Magic Constructivism: Desiderata of a Musical Practice

Citation

Permanent link
http://nrs.harvard.edu/urn-3:HUL.InstRepos:33493325

Terms of Use
This article was downloaded from Harvard University’s DASH repository, and is made available under the terms and conditions applicable to Other Posted Material, as set forth at http://nrs.harvard.edu/urn-3:HUL.InstRepos:dash.current.terms-of-use#LAA

Share Your Story
The Harvard community has made this article openly available. Please share how this access benefits you. Submit a story.

Accessibility
Magic Constructivism:
Desiderata of a Musical Practice

A dissertation presented
by
Trevor Bača

to
The Department of Music

in partial fulfillment of the requirements
for the degree of
Doctor of Philosophy
in the subject of
Music Composition

Harvard University
Cambridge, Massachusetts
May 2016
Magic Constructivism:

Desiderata of a Musical Practice

Abstract

This dissertation collects the scores to eight recent works: *L'archipel du corps* (2011) for flute, guitar, accordion and percussion; *Traiettorie inargentate* (2013) for cello; *Krummzeit* (2014) for seven players; *Ins Wasser eingeschrieben* (2014) for two violas; *Al-kitab al-khamr* (2015) for chamber orchestra; *Myrkr* (2015) for bass clarinet; *Akasha* (2015) for string quartet; and *Ikribu* (2016) for bass clarinet, violin, viola and cello. The scores are ordered chronologically by their date of composition and given in their entirety as the numbered chapters of the dissertation. An introduction precedes the scores. The contents of the introduction supplements the scores included here with short descriptions of all sixteen works in my catalog to date.
This page intentionally left blank.
# Contents

**Introduction**

1  *L'archipel du corps* (2011)  
2  *Traiettorie inargentate* (2013)  
3  *Krummzeit* (2014)  
4  *Ins Wasser eingeschrieben* (2014)  
5  *Al-kitab al-khamr* (2015)  
6  *Myrkr* (2015)  
7  *Akasha* (2015)  
8  *Ikribu* (2016)
For Mom & Dad.
And for Rourke.
To the memory of Brian Dodson, my first partner in magic, who knew that the world is other than what we believe and enchanted in ways we can not see. To the memory of Stefano Scodanibbio, and to Maresa Scodanibbio, who took me into their home at the beginning of my search, and who effortlessly introduced me to music at the very highest levels. To Yuwei Huang, for teaching me to count. To Leo Zhao, who put D&G in my hands, opened to becoming-bird, and helped me fly. To Damon Williams, for a lifetime of friendship, for pushing for the hard work of actualization, and for showing me what love meant, just by going dancing. To Piraye Yurttaş, who has stood next to me through sadness and joy, and for whom I will be ready, again, to do the same. To Jason Hammond, for the most important listening sessions of my life. Whatever analytic abilities I carry with me now come from those afternoons and nights. To Paul Woodruff, the example of whose thought reminds me to this day of the ethical responsibility inhering in our work. To Douglas Biow for showing how Æneas read the future in the flight of birds. To Brian Bremen for those first steps towards an understanding of what it might mean to read. To Gene Oden, for giving me the tools not just to code but to design, and for late nights of collaboration exceeded in their value only by the years of friendship that made it all possible. To Dan Smith, for helping me solve so many problems I wouldn’t even know where to begin, and for the pho. To Brian Kirk, for acts of leadership and for endless runs in the 100° sun of the Austin afternoon. To Walt Fullerton, my partner in understanding that the details, all of them, will pass and that this is what makes love important now. To Aaron Lee, for wrapping love in structural brilliance and collaboration, and for pushing, always, to better all three. To Dan Payne, for honesty. And for joy. To Martin Iddon, for proving that music is not, in fact, a theory-free zone. To Ian Power, for integrity. To Carin Levine, who lit my mind on the fire with an intensity of performance I had never known, and who extended me the chance to think intensity on my own. To Helena Hughes, for the irises in the garden every spring, and for not minding too much when Sumner ate them. To Ann Cleare, for the colors. To Sabrina Schroeder, for the dumplings. To Sivan Cohen Elias and Rey Hulme, for the hospitality. To Justin Hoke, for the best meals of graduate school. To Manuela Meier, for the encouragement. To Florian Hollerweger, for giving me the unearthly experience of knowing the meaning of my words better than I do. To Harry Eiler, for hosting the space that introduced me to some of the best musicians of my generation. To the surpassingly talented musicians who have redirected my musical thought and pushed me towards a musical excellence I didn’t know was possible: to Brian Archinal, Séverine Ballon, Nico Couck, Richard Haynes, Jonathan Hepfer, Corrado Rojac, Jessi Rosinski, Alice Teysier, Alan Toda-Ambaras, and many others. To Josiah Oberholtzer, the technical and artistic collaborator who understands my work exactly, and who pushes for me to better both art and artistry every day. And for the bitters. And Deepchord. To Jon Payne, for the years of friendship when we both needed it the most. To Alex Rehding, for the espresso. And for meeting thought with thought at every turn. To Chris Hasty, for the most penetrating conversations about the phenomena of music I am sure I will ever have. To Hans Tutschku, for the thoughts about harmony and pacing that, in the end, were reminders to keep an open heart in the music, in life and in the combination of the two. To Steven Takasugi, for making it all possible in the first place. And for memories of Hawelka. To Chaya Czernowin, for the purple magic.

To Rourke, the love of my life.

And to Mom and Dad, and Jeremy and Courtney, for the years at home that it made possible for me to dive so deep, to listen so closely to sound and think music so completely, knowing the whole time there was an enormous, loving safety net underneath me. We configured a family, somehow, that made it a joy to dream, from piano lessons to graduate school. This whole undertaking has been possible only because of the love that’s powered it from the beginning.
This page intentionally left blank.
Introduction

In the pages that follow I introduce the collection of scores in my catalog to date. There are sixteen of these, dating back to 2005, and I provide a brief description of the formal experience of each. For reasons of space only eight of the scores are included as chapters in the present portfolio, though all the scores, together with recordings, are available online.

Inasmuch as musical form can be equated to a through-time experience of listening for moments of musical change, the formal experience of my earlier music suggests what can understood as a phenomenological, as opposed to narrative, point of departure. Poème récursif, for sixty-four pieces of percussion, was written in 2005 and recorded by percussionist Brian Archinal in two different mixes on his album self | space. The music provides what is an essentially unarticulated experience of form. Tempo is fixed at the beginning of the piece and thousands of attackpoints, all played on unpitched instruments left to the choice of the performer or performers, comprise the seething texture of the music: these provide no shape equivalent to the musical phrase or section. The music ends only at the end of the piece. But the music begins many times, again and again, producing a sense of un-ending upwelling. Because the materials in Poème récursif expose no musical events likely to be construed at the level of narrative — no sudden stops or starts, no reversals, no enching of materials in such a way as to allow for ascriptions of causality — perception of the music leads instead to an awareness of the act of perception itself. This metaperception is what I intend in invoking the phenomenological in the description the music: recurrent moments when the mind becomes aware of the ways that the mind experiences the music's currents as phenomena that arise, persist and depart, overlapping in the field of perception. The materials and title of the music point to the recursion that produces these effects: every attackpoint derives from the compositing of two cellular automata over a matrix of 256 columns and 64 rows. These are interpreted, respectively, as the measures and parts of the score, dimensions comparable in some respect to the massing of 100 metronomes, though in the service of a determinism of music rather than its open specification.

Red Shift Hijinks, a fifty-nine-second duet for violin and piano, was written in 2005. The Argento Ensemble gave the world premiere of the piece in October 2012 in Paine Hall at Harvard University. Red Shift Hijinks shares with Poème récursif a formal experience of calculation: the piece is conceived as a single expression understood as a statement from the deductive consequences of which flow considerations of detail. With the exception of the unexpected grand pause that constitutes a too-early end to the music seconds before the appearance of the double bar, the formal experience of the music proceeds without articulation: the working-out of the piano’s rhythmically independent cross-arpeggios reinforces this sense of the music as calculation, rather than contradicting it. That the music carries with its sense of calculation a quality of the poetic follows as a consequence of the music’s absence of climax and diminutive scale.

Čáry, for bass flute, was completed in 2006. Sekka, for C flute, was finished in 2007. Čáry was written for American-German flutist Carin Levine, who gave the world premiere in May 2009 in Bremen, Germany. The music is intended illocutionarily as sorcery: the rhythmic and articulatory difficulty of the score — the breath and the fingers notate on separate staves with an invented tablature allowing for an inventory of hundreds of phonetically distinct articulation-types — are constructed not by analogy to sorcery but as sorcery: the score is a spell and the performance is spellcasting. The score can not be read because it must be internalized. The same is true of Sekka — the title combines the Han character for snow with one of the two characters for flower — written for the Japanese
flutist Reiko Manabe, who gave the world premiere of the piece in May 2008 at Unerhörte Musik in Berlin. **Sekka** carries the separation of parameters even further in the notation of fingers, breath, rotation of the instrument and movement of the instrument towards and away from the flutist on four rhythmically independent staves. The formal experience of this music, and especially of watching it performed, participates in the phenomenological identified above in the unending beginning-again of *Poème récursif*: as the combinatorial details of the music multiply, the fire-magic and snow-magic move like flames or the glint of ice, effects deriving of combinatorial determinations of pitch, rhythm and silence made simultaneously, together with the players’ very public acts of concentration. The climax in Čáry is given in the repetition vortex near the end of the piece: fifteen silence-delimited iterations of A-quarter-sharp: the only explicit microtones in the score, the only swell-enveloping in the piece, utterly unprepared by anything in the music that comes before. In **Sekka** it is a pair of protracted whistetones near the end of the piece — the first in partials above D and the second above C — that fill a similar function: utterly unprepared by materials given earlier in the piece, the whistetones sound as though they emanate from offstage, beckoning from elsewhere, moments of beautiful disembodiment in music that derives so directly from the movements of the flutist’s body. These moments — the repetition vortex in Čáry and the whistetones in **Sekka** — effect the climacteric while leaving open questions of climax: clearly consequential in the experience of the music, the unpreparedness of these moments unsettles their function as climax. The argument, made in the music’s materials, is for a recognition of magic in an experience of unanticipated consequentiality.

**Lidércfény**, for flute, violin and piano, was written in 2008. The piece was given its world premiere that year at the University of California, San Diego by Alice Teyssier, Christopher Otto and Katalin Lukács-Snow, all under the direction of Jonathan Hepfer. In many ways an extension of the glittering rhythmic technique of the earlier flute solos — the two-staff tablature for the flute returns with a similar decoupling of the violinist’s left hand from the right — the formal experience of the music is manifestly sectional and suggestive of narrative experience of uncertain meaning. The title of the piece is the Hungarian word for the phenomena that are will-o’-the-wisp in English and Irrlichten in German: in the repository of the prerational of all three languages these are the otherworldly flickers that draw travelers from the safety of the path. “Lidércfény names the light that hovers at night above waters and in the woods. A sometimes-blue, sometimes-pink, sometimes-yellow shining, alternately brilliant and dim. Here we read the lidércény as a type of code — sometimes a special marker, sometimes merely an outline, sometimes an after-image. Or else a false beacon, an empty reference.” The disjunction of the music’s fourteen or fifteen progressively shorter sections is effected, in large measure, by a combination of fixed timbre and fixed ambitus ascribed to each of the instruments at each change of section: crossing section boundaries provides a sudden experience of newness that is, however, contradicted by a continuity of interval content that threads through the piece from beginning to end. This stability of interval content and the fixed tempo of the music — established at the beginning of the piece and never changed, just as in *Poème récursif*, Red Shift Hijinks and both flute solos — establishes a fixedness of perspective that the earliest pieces in the catalog all share: within each of **Lidércfény**’s many sections the phenomenological operation of the detail-laden sorcery of the earlier flute music is clear, animated in movements between sections by a nascent narrativity.

**Mon seul désir** was commissioned by the Harry and Alice Eiler Foundation on the occasion of the first Ježek Prize in composition in 2009. The piece is scored for flute, clarinet, violin and cello and was premiered at New York’s Tenri Cultural Center by Either / Or under the direction of Richard Carrick. The music divides into halves that treat the conceit of the piece — tapestries of the Lady and the Unicorn that hang in the Musée du Moyen Âge in Paris — according to different regimes of perception. The first half proceeds according to slow-moving changes of quartertone harmonies constrained according to a system of voice-leading built especially for the piece, rendering sonically the comings-into-perception and exitings-from-perception of the reds, greens and blues of the tapestries’ dyes: the tempo is fixed while the centroid of each collection of harmonies moves slowly between stations defined in terms of their register. The second half liquidates the pitch content of the first half to effect a vertigo of texture, analogous to peering too closely at the intricacies of the two-dimensionalized foliage and blossoms that ornament the background of the tapestries, woven in the fifteenth-century style of *mille-fleurs*. Between the two
halves is positioned an axis about which the music metaphorically turns: the axis — effected in repeated fortissimo scratch, silence and a protracted crescendo dal niente in the bass the clarinet — emerges from the music of the first half but belongs properly to neither of the piece’s parts. The structure of Mon seul désir in halves set apart by an axis looks forward to Huitzil, the second of the two cello solos in the catalog, written five years later. In common with the later piece, the moments of revelation effected by the axis at the center of the piece do not effect narrative experience of the music so much as a narrativized transition between separate experiences conceived according to a phenomenology of perception.

The ten-minute accordion solo L’imaginaire was written in 2010 for the Italian accordionist Corrado Rojac, who gave the premiere in April of that year in Paine Hall at Harvard University. In common with Poème récursif and Red Shift Hijinks, the form of L’imaginaire can be understood as the experience of pure mathematical expression. The score carries eleven indications of tempo drawn from an inventory of four different tempi, but the formal experience of the music proceeds without articulation: no quickening of experience, no slowing of experience. Changes of tempo are used to reconfigure local details of rhythm that allow for the tablature of shakes, accents and inverse-accents invented for instrument’s bellows to grate against the uninterrupted stability of the instrument’s extreme upper registers, used to render the two-voice polyphony that runs from the beginning of the piece to its end. The phenomenology of mathematical thought — of the imaginary — colors the experience of L’imaginaire, composed as a study in advance of the mixed quartet written the following year.

L’archipel du corps, written in 2011, is the first score included in the chapters that follow this introduction. The piece was written for Carin Levine, Jürgen Ruck, Stefan Hussong and Marta Klimasara, who gave the world premiere at the Würzburg Musikhochschule in November 2011. Returning to the manifest sectionality of Lidércfény, the music divides into three parts, plus a coda, each with a more complex relationship to the many midlevel sections that comprise it. The midlevel sections that constitute part I — everything up to the first grand pause, including the elaborate ‘clockwork’ that immediately precedes it — proceed strictly according to processes of juxtaposition; the midlevel sections of parts II and III — separated by the appearance of caxixi shaken suddenly at the end of reverie — develop instead according to an unbroken series of emergences effected by the interleaved beginnings and ending of each strata of music, with a special role played by the overlap of the ambituses of the different materials. The form of the music effects an increasing continuity of experience in this move from the juxtaposition of sections in the first part of the piece to the emergence of sections in the second and third parts of the piece, an effect that looks forward to the later ensemble pieces included in the portfolio. Additionally, the extensive cadenza played by the guitarist with the metal wrapping of a machinist’s screw against quarte-tone fingered positions of the guitar’s lowest string — a protracted descent in register effected by a technique of ‘unlimited’ intervals of transposition later used to effect protracted ascent in Akasha — equips the formal experience of L’archipel du corps with a narrative climax, an effect reinforced by the stepwise production of a true cadence at cadenza’s end, features that appear for the first time here in music that navigates differences between phenomenological and narrative senses of musical experience.

Traiettorie inargentate was written in 2013 for the French cellist Séverine Ballon, who gave the world premiere in October that year at the Conservatoire Nationale Supérieur in Lyon, France. The piece is the first of two cello solos included in the catalog. Traiettorie inargentate — the Italian title means something like “be-silvered trajectories” — is structured according to fifteen midlevel sections that group together according to a cyclic revisiting of three materials — protracted scratch, parametric bowcolor, melodic line — animated by a quickening of formal experience in the contraction of sections and stepwise ascent of pitch material leading to the widely-spaced four-note chord at the climax of the piece. Like that of L’archipel du corps, the after-effects of the climax in Traiettorie inargentate lead into a coda, played in the cello piece in the lowest register of the instrument, kept in reserve for purposes of the piece’s conclusion. Cyclic experience of the music’s materials is in keeping with the idea of orbit embedded in the conceit of the piece — the inscription at the head of the score invokes the visual appearance of ice complexes locked in orbit about Saturn — while also looking forward to the elaborate recirculation of materials developed in later scores.

Krummzeit, for seven players, was written in 2014. The piece was given its premiere in October of that year by
Ensemble Mosaik conducted by Jonathan Hepfer in Paine Hall at Harvard University. The formal experience of the music is complex. The music’s materials are constructed according to a theory of ‘color composites,’ nascent in Lidércfény and L’archipel du corps, and greatly elaborated in Krummzeit: combinations of timbre and rhythmic profile assembled in the earliest stages of composition. Krummzeit establishes fourteen such composites, thirteen of which are used in the piece, appearing an average of three times each, contextualized differently at each appearance; as an example, the four-voice polyphony shared between the oboe, E♭ clarinet, harpsichord and violin, which first appears in the piece at B, constitutes the twelfth of these composites, later to return at G and H. The notion of color developed according to this theory resonates not just with timbre but with intensive, rather than extensive, perception of nonmetaphorical color. The music is anchored in an experience of the reciprocal transformation of different composites into each other according to a formal structure that simultaneously lengthens and shortens the different appearances of material. This simultaneous dilation and contraction of sections effects both a quickening and slowing of musical experience, seemingly at once, in a mode of restless emergence that looks forward to Akasha, the string quartet written the following year. At Krummzeit’s climax there emerges a repetition vortex of 159 chromatic clusters in the piano — all played fortississimo in duet with forte strikes against the tam-tam — time-scaled to expose the slowest of the repetitions at the center of the passage. The repetition looks back eight years to the climax of Cáry and forward to the string quartet.

Huitzil, the second of the catalog’s two cello solos, was written in 2014 for American cellist Alan Toda-Ambaras, who gave the world premiere in November of the following year on the stage of Cabot House at Harvard University. The title is the Nahuatl word for ‘hummingbird,’ an image made explicit by the conceit of the piece. The form of the music, divided into halves of markedly different material separated by an axis, looks back five years to Mon seul désir, the mixed quartet written for Either / Or. The inscription at the head of the score, available in full online, reads: “She says: ‘Do not look in his eye but whisper instead to his ear. His giant round ear let to droop from the weight of obsidian curves of the lobe. He will ask you to pierce the bend of his tongue with the needle-sharp point of your beak. But pierce you must not. You must carry to him my record of dreams and the future they describe as I sleep. You must speak silently to him the words of our wedding and the wishes of birds that they carry with them as their freight. He will remember our dreaming-together and the heaviness we shared in our sleep. Then he will close his eyes. And when he does you must brush with your wings the bend of his ear and leave there like sand the husks of my words which he in his sleep will know but not hear. Then in the daylight he will carry with him our record of dreams and the future they describe as I sleep.’ Hummingbird carries her words like salt on his wings and takes to the sky in his flight.” The continuous three-voice polyphony of the first half’s ‘dreams’ — voices distinguished by differences of ambitus and note duration — contrasts significantly with the fifteen-minute tremolo of the second half’s ‘flight.’ This flight — constructed according to a continuous interplay of tempo, stricture of tremolo, string contact point and two superimposed layers of dynamics — undergoes only three changes of fundamental. The formal experience of the second half of the piece — an unending play of partials — marshals instrumental color to effect a spatialization of experience not previously encountered in the catalog, the vertigo of flight intensified by an absence of climax and corresponding insistence on unbroken intensities of movement.

Ins Wasser eingeschrieben, for two violas, was written in 2014 for John Pickford Richards and Elizabeth Weisser, who gave the world premiere the following February in Paine Hall at Harvard University. The form, and harmonic structure, of the piece derive from Schubert’s second setting of Goethe’s “Am Flusse,” published twice more during Goethe’s lifetime under the alternative title “An meiner Lieder.” Schubert set the text two times, the first (D.160), dating from 1815, responding squarely to the text’s sense of love lost. But Schubert’s second setting (D.766), from 1822, reveals a remarkably different relationship to the poem. It is in the shadow of this second of Schubert’s settings of Goethe’s words that Ins Wasser eingeschrieben was written. How are we to relate to the changing nature of the world amid the onward rush of time? Who are we in the moments our present selves look backwards to the past? How are we even to begin to understand of our relationship to history? And how are we not to be completely overcome as we try? The materials of the piece make extensive use of interpolations of bowspeed, from extremely slow to extremely fast, and of string contact point, from positions over the fingerboard up to, and onto, the bridge.
The durations of these interpolations outline extended dilations and contractions of time, though with the cases of time dilation that end the first and last sections of the piece unmatched by any corresponding contraction, like open parentheses. The formal experience of the music proceeds according to the tonal harmonies that underly the music, though with the chordal repetition with which the music resumes after modulation to the dominant conditioning the unexpected silence that marks the music’s inverse climax in a way utterly at odds with the rhetoric of the Lied from which the music takes its shape.

*Al-kitab al-khamr* is the book of forbidden drink. The piece was written in 2015 for Ensemble Dal Niente, who gave the world premiere later that year in Paine Hall at Harvard University, under the direction of Michael Lewanski. *Al-kitab al-khamr* proceeds according to an emergence of tableaux: false introduction, excitation, expiration. The linear experience of the music is problematized by memory: the guitar and prepared piano of the duet embedded in the inky blackness of the introduction recur at the end of the piece, only to be wiped clean by an utterly unprepared snare roll — forty-five seconds in duration — contradicted, in its turn, by the appearance of the guitar and piano a final time, rendering uncertain the ways the music begins and ends.

*Myrkr*, for bass clarinet, was written in 2015 for Australian-Swiss clarinetist Richard Haynes, who gave the world premiere in October of that year in Paine Hall at Harvard University. The music is structured according to a type of formal polyphony effected in motion back and forth between five musically independent narrative lines. The music moves slowly between narratives even though the internal activation of the music — frequently in the form color fingering variations specific to the instrument — moves much more quickly. If we were to hear the music sectionally we would hear 140 sections, identifiable almost exactly at changes of dynamic; but the multiplication of sections instead effaces experience of sectionality. Simultaneous descent of register in some of the music’s narratives decenters the perspective from which we hear the music, in line with the slipping-into-sleep implied in the approaching darkness of the piece’s conceit.

*Akasha* was written in 2015 for the JACK Quartet who gave the premiere in February 2016 in Paine Hall at Harvard University. Like the bass clarinet solo written before it, *Akasha* proceeds according to a formal polyphony derived from the juxtaposition, alternation and superimposition of five musically independent narratives precomposed before the determination of the in-time details of the score. The formal experience of the piece underlines the role played by memory: cases of exact recurrence serve to problematize, rather than reinforce, the narrative experience of the music — the unexplained déjà vu of the opening five-note cello melody played half-scratch, for example — while incessant varied recurrence of material drives the music’s development. Sections appear in widely different durations: from the time of a single note to more than three minutes’ rearticulation of a chordal field. A crucial role is played by the distribution of the music’s silences, saturating the piecemeal exposition of the piece and becoming progressively less prevalent in the quickening formal experience produced as the music progresses. Like *Krummzeit*, written the year before, the deployment of material in *Akasha* effects both a dilation and contraction of time seemingly at once, mixing narrative and even fantastical senses of time with the recurrent phenomenological experience of the arrival and departure of musical materials considered in themselves. Three sixfold repetition vortices appear in the music. The first of these, at the end of $[E]$ is rendered in incredibly quick leggierissimo notes played off-string in all four parts at once; the difficulty of the music ensures not only that each of the six passes differs from the others but that we experience each of the six passes as different to the others: the *panta rhei* — the ‘everything flows’ — argued in details of the music’s material. The second and third repetition vortices, in $[K]$, comprise the outsize climaxes of the piece: first in the form of a four-octave chordal field scored in equal temperament and just intonation at the same time and then in the form of the electricity of harmonic trills anchored to the eleventh partial of the cellos down-tuned lowest string. The experience of these moments of repetition — looking back at comparable passages in *Krummzeit*, *Ins Wasser eingeschrieben* and *Čárzy* — summons a magic to transfix perception on the invisible energies that exist at a behind of matter or, perhaps, to look directly at the sun.

*Ikribu*, the last of the pieces included in the present portfolio, was written in 2016 for Distractfold, who gave the world premiere in March of that year in Paine Hall at Harvard University. The music is scored for bass clarinet, violin, viola and cello with a collection of ritualistic auxiliary instruments played variously by the performers during
the piece: small stones run in circles atop slabs of slate, grain thrown to the floor or stirred with the hands in clay pots, sponges whisked across the upturned head of a bass drum shared between the players. Ikribu is ritual — the word is an Assyrian term for the songs sung during nighttime vigils held during ceremonies more than forty centuries ago to read events of the future in marks discovered on the organs of animals slit open at the ceremony’s start — and performance of the music returns to something of the illocutionary intent of the flute music in the catalog written a decade before. The four parametric windows inserted into the score for various configurations of the strings invoke a different type of knowing — a different epistemology — than that obtaining in ritual: the tablature of the notation and, indeed, the exact trajectories of the instruments’ bows are taken from Traiettorie inargentate, the first of the two cello solos written before; the exacting specification of the bows’ motion looks forward to the knowledge deriving of measurement, that is, to future divagations of science. Narrative, phenomenological and epistemological senses of experience mix in a music that discovers in ritual the beauty of inscription and song.
L’archipel du corps (2011)

For flute, guitar, accordion & percussion

World premiere:

Carin Levine
Jürgen Ruck
Stefan Hussong
Marta Klimasara

Würzburg Musikhochschule
7th of November 2011
At the interface of the world and the tangled skein of light, color and heat in which it writes its name we find the body and the flickering collection of sensations that draws around it. Nerves mediate the world in their silent administration of the body’s signals and responses; but, myelinated and cold, the nerves’ channels’ coating now resists the touch of forefinger and thumb and resists, too, the thin translucence of the gloves that endure the hours of our investigation. Hands travel the body’s insides; hands trace the contours of the spine. The colored islands of our experience align to the body and the collection of its parts.

Flute. Three flutes are required. The piccolo sounds an octave higher than written; the alto flute sounds a perfect fourth lower than written; the contrabass flute sounds an octave and a perfect fourth lower than written. Breathe as necessary. Notes marked as pizzicati in the flute may be performed as tongue pizzicati or as lip pizzicati or as a mixture of the two. Short angled lines drawn through note stems indicate flutter tongue. Square note heads on the usual five-line staff indicate notes that are to be played with the lips completely covering the mouth plate of the flute; on the alto flute, such notes sound a major seventh lower than written. When square note heads are accompanied by a wavy trill spanner headed with a capital R then an unvoiced trill of the tongue should be played into the body of the flute with the mouth plate covered by the lips.

Guitar. The music sounds an octave lower than written with the exception of harmonics. The pitches in measures 120 - 126 are marked jeux des harmoniques and indicate only where the lowest string on the guitar is to be fingered; the harmonics in these seven measures are to be played with the side of a hard pic and will sound a different partial of the stopped string at each attack. All other harmonics sound as written. Notes marked with the étouffé sign of a superimposed cross and circle indicate that all vibrating strings of the instrument should be made quiet. Square note heads written on the usual five-line staff and marked RH hiss glissandi are to be played with the thumb and forefinger of the right hand pinching one of smoother upper nylon strings of the guitar and then running quickly up or down the stopped string to produce a characteristic hissing sound. Scraped guitar cadenza. The notes written as crosses at measures 157 to 190 comprise a type of cadenza. These cross-shaped notes are marked with up-bow and down-bow indicators and are all to be played on the lowest string of the instrument in a special way. The left hand is to execute these cross-shaped notes by grasping the string firmly between the thumb and forefinger to lift the string up some distance away from the fingerboard and its frets and stop the string at the pitches indicated. The right hand is to execute these cross-shaped notes by drawing the serrated edge of a metal bolt or metal screw against the string at a distance of only one or two centimeters directly in front of the thumb and forefinger of the left hand; the bristles of a plastic comb or other serrated object may be used in place of the metal bolt or screw at the discretion of the performer; the up-bow and down-bow indications give the direction in which each stroke of the bolt is to be drawn against the string. This passage should be treated as a type of cadenza freely inflected with differing attacks, releases, dynamics and pitch inflections ad libitum by the interpreter; the overall effect of the passage is to be the sinking sensation that accompanies the experience of something alien or unexpected.
Accordion. Cross-shaped note heads appearing on the one-line percussion staff and marked bellows pizz. indicate a type of pizzicato to executed by plucking the forefinger forcefully against the bellows of the instrument to cause as loud and well-articulated a plucking sound as possible; the technique may be executed with either hand and may optionally be done with the felt or rubber pic of a guitar instead of the fleshy part of the finger. Cross-shaped note heads appearing on the one-line percussion staff and accompanied by a wavy spanner headed with bg indicate a bellows guiro to be executed by drawing the backs of the fingers and the fingernails across the bellows. Square-shaped note heads appearing on the one-line percussion staff marked air tone indicate the sound of air forced through the bellows with the air button depressed.

Percussion. Four instruments are required. Marimba. The marimba must be a five-octave marimba extending down to C₂; the music sounds as written. The choice of mallets is very largely left to the interpreter with two exceptions. The first of these are the cross-shaped note heads from measures 46 to 66 that first appear with an instruction to strike forcefully with a pair of paintbrushes that are held one per hand; the forceful dynamics that accompany the music at these locations are to be understood as effort dynamics that indicate the degree of force used to strike the keys of the instrument; the resulting sound of these passages will of course be considerably quieter than indicated by the dynamics. The notes accompanied by a wavy spanner headed by either br or mbr are likewise to be played in a special way. Notes accompanied by a br spanner are a type of ‘bristle trill’ to be played by striking the indicated key with one of the same paintbrushes described above so as to encourage the production of some sense of pitch followed by the rapid rubbing or scrubbing of the bristles of the paintbrush on top of the surface of the wooden key; the intended effect is of a brief sense of resonant pitch followed by the type of white-noise sound of hair whisking rapidly back and forth over wood. Notes accompanied by an mbr spanner are a type of ‘mallet-initiated bristle trill’ to be played by striking the indicated key with a yarn, felt or other ‘usual’ mallet followed by the rapid rubbing or scrubbing of the bristles of the same paintbrush as described before on the surface of the wooden key. There is a relationship between the br ‘bristle trill’ and the mbr ‘mallet-initiated bristle trill’ described here. The br ‘bristle trill’ is designed to begin with only a brush-struck, muffled, pastel sense of pitch whereas the mbr ‘mallet-initiated bristle trill’ is designed to begin with a fully present and fully articulated sense of pitch. Note, too, that a variation is possible in the production of both types of bristle trills: in the case that the sound of the paintbrush bristles rubbing against the surface of the wooden keys does not carry well enough in the hall, it is possible to hold a clean and dry scrap paper between the thumb and first two fingers of one hand in order to rub it against the wooden surface of the keys instead of using the bristles of the paintbrush just described. The goal here is that the attacks of these sounds effect the different degrees of pitch mentioned above remainder of the notated duration of the sounds be filled in by a curious and audible rubbing of hair or paper or other dry material rapidly against the surface of the wood that comprises the many individual resonating blocks of the instrument. As a final note on the interpretation of the bristle trills, note that the speed of the rubbing of the hair or paper against the surface of the wooden keys can and should be varied by the interpreter. Some such bristle trills should be executed by rubbing quickly, some by rubbing even more quickly and perhaps some few other trills by rubbing more slowly. Before moving from the marimba to the other percussion instruments used in the piece, note that passages marked with angled tremolandi indicators are always accompanied by an indication to use bass drum beaters. These passages are to create a profoundly low and attackless sound; no other marimba
tremolandi are used in the piece and all other struck pitches on the instrument are to be interpreted as tiny packets of invisible information flashing from moment to moment with different strengths, presence and hidden meaning. **Bass drum, claves.** Each occurs only once in the piece. The claves should be of a hard wood with a high sound. **Glockenspiel.** Sounds two octaves higher than written. The instrument is used only at the end of the piece. The entrance of the instrument should be completely unexpected and should perhaps be placed towards the back of the set-up where the audience will be less likely to note the presence of the instrument until its entrance for that reason.

Most parts — caxixi. Beginning at measure 136 there is an extended passage of material written on a one-line staff in the flute, guitar and percussion parts and marked ‘caxixi’ at the entrance of each of those parts. Caxixi are small percussion instruments made of a gourd or flat-bottom woven basket filled with shot or small beads or grains of rice and found in some of the musics of west Africa and Brazil; caxixi are shaken to make a sound. Three caxixi are needed for the performance of *L’archipel du corps*; it is recommended that the percussionist pick the instruments and give one to the flutist, one to the guitarist and keep one for himself or herself. If caxixi are not available then homemade shakers should be used instead. In selecting or making the instruments higher pitches are to be preferred over lower pitches; likewise it is preferable (but not absolutely required) that the timbre of the three shakers be relatively close to each other in sound. No caxixi are given to the accordion.

All parts — vocalizations. At different points in the piece all four players are required to vocalize the brightly whispered sounds *s, š, ŋ* or *f*. The sounds are always to begin and end crisply. The terminations of these sounds are notated as staccatissimi over rests. Execute the terminations of these sounds by bringing the tip of the tongue into contact with the back of the teeth or the ridge of the gums to suddenly stop the flow of air out from the body. The sounds are always unvoiced and it is important that the voiced *z, ž, v* counterparts of these sounds not accidentally appear.

*L’archipel du corps* was written for Carin Levine, Jürgen Ruck, Stefan Hussong and Marta Klimasara who gave the world premiere at the Würzburg Musikhochschule on 7 November 2011.
L'ARCHIPEL DU CORPS
for Carin Levine, Jürgen Ruck, Stefan Hussong & Marta Klimasara
Trevor Bača (*1975)

Arcipelagico serenamente ($J = 44$)

Piccolo

Guitar

Accordion

Marimba

4

Pizz.

Gt.

Acc.

Mb.

7

Pizz.

Gt.

Acc.

Mb.
31

32

33
arcipelagico ancora
mai poco più piano

strike forcefully with paintbrush bristles, resulting sound muffled, quiet, pastel.
bristle trill: strike key forcefully with paintbrush bristles and then rub bristles rapidly back and forth on the surface of the key for remaining duration, resulting sound elicits muffled pitch on attack followed by continuous whisiking sound of bristles against wood.
Each note with soft yarn mallet before mallet bristle trill: as before but attack.
jeux des harmoniques: stop string at indicated pitch; tap string quickly with side of plectrum; sound different harmonics on each attack; encourage partials 5 and greater; le sempre

---

mf
dots.dot

---

mp

\( \frac{3}{8} \)

\( \text{Fl.} \)

\( \text{Gt.} \)

\( \text{Acc.} \)

\( \text{Mh.} \)

\( \text{mm.} \)

\( \text{marimba with BD beaters} \)

\( \text{whistle tones} \)
Cambridge, MA - Los Angeles.
Traiettorie inargentate (2013)

For cello

World premiere by Séverine Ballon
Conservatoire Nationale Supérieur
Lyon, France
4th of October 2013
The complexes of ice locked in orbit about Saturn circumscribe the planet both forward and back relative to the direction of planet’s rotation. The aftereffects of the planet’s formation and the dynamics of its still-uncounted moons combine to determine the vagaries of the paths followed by the millions of particles comprising the planet’s rings. What silvery halo must illuminate the passing of even the smallest of these pieces of frozen sky? What sky-bound brilliance must be locked into the equatorial plane of the planet cutting through the otherwise space-dark expanse of its nights?

***

Scordatura. String IV must be tuned from C2 down a minor third to A1. (Strings I, II, III are tuned to A3, D3, G2 as per usual.) All pitches in the score are written as they sound.

Bow position tablature. The score comprises two staves. The top staff is notated in a type of bow position tablature that specifies which part of the bow is to touch the string at which time. Bow position indicators are given as fractions between 0 and 1 with 0 indicating the talon and 1 indicating the point; intermedial values indicate a position somewhere between the two. For example, the fractions \( \frac{0}{4} \rightarrow \frac{1}{4} \rightarrow \frac{2}{4} \) indicate that the bow is to be drawn smoothly from the talon (\( \frac{0}{4} \)) to a spot one quarter of the way from the talon (\( \frac{1}{4} \)) and finally to exactly the midway point of the bow (\( \frac{2}{4} \)); the fractions \( \frac{2}{7} \rightarrow \frac{3}{7} \rightarrow \frac{0}{7} \) indicate that the bow is to be drawn smoothly from a point just before the point (\( \frac{2}{7} \)) up to the point (\( \frac{3}{7} \)) and then all the way down to the talon (\( \frac{0}{7} \)). This type of tablature allows for the specification of any point along the compass of the bow and for the specification of any type of travel of the bow between these points. But the bow positions used in the present piece are all taken from values that divide the bow evenly into four (\( \frac{0}{4}, \frac{1}{4}, \frac{2}{4}, \frac{3}{4} \)) or seven (\( \frac{0}{7}, \frac{1}{7}, \frac{2}{7}, \frac{3}{7}, \frac{4}{7}, \frac{5}{7}, \frac{6}{7}, \frac{7}{7} \)) parts. The values \( \frac{0}{4} \) and \( \frac{0}{7} \) are synonyms for the talon just as the values \( \frac{3}{4} \) and \( \frac{7}{7} \) are synonyms for the point.

Bow color indications. An important feature of the piece is the alternation between sections of music specified using the bow position tablature described above and sections of music specified using textual bow color indications instead. These two systems of specification both result in changes of bow color throughout the piece even though the color changes are conceptualized in two different ways. The usual contact of hair to string is indicated with crine while the tilting the bow to allow both hair and wood to touch the string is indicated with \( \frac{1}{2} \) clt. Degrees of scratch tone (gridato) are indicated in parallel to degrees of flautando. Indications of gridato and flautando refer to bowspeed. Do not substitute sul tasto playing for the different degrees of bowspeed flautando required in the piece.

Dynamics. Sometimes the bow position tablature described above will produce very fast or very slow motions of the bow. When this is the case it may not be possible to effect the accompanying dynamic in the usual way. Dynamics in such passages are to be interpreted as “effort dynamics” that indicate the amount of downward pressure applied to the string independently of bowspeed.

Traiettoria inargentate was written for Séverine Ballon who gave the world premiere on 4 October 2013 at the Conservatoire Nationale Supérieur in Lyon, France.
TRAIELTORIE INARGENTATE

for Séverine Ballon

Trevor Bača (*1975)
Krummzeit (2014)

For seven players

World premiere by Ensemble Mosaik
Directed by Jonathan Hepfer
Paine Hall at Harvard University
Cambridge, Massachusetts
4th of October 2014
Trees mark time in the twists they make over the course of branches’ growth.

Arms rise sinewy in their turnings-to-sky to fall earthward again

in a tracery of parts and of the slow-moving shapes of time.

***

The winds & percussion are transposed. The E♭ clarinet sounds a minor third higher than written and the bass clarinet sounds a major ninth lower than written. The xylophone sounds an octave higher than written. But note that the violin, viola and cello are all written at sounding pitch even for the low notes of their scordatura.

Prioritization of tempo. The proportions between tempi should be as exact as possible (even though the choice of tempi are to some extent a matter of the preferences of the ensemble and the acoustics of the hall). In addition, the tempi of the very fast parts of the piece should be played as closely as possible to the tempi written in the score: it is preferable to play the dense figures in very fast parts of the piece as something of a blur rather than slowing the tempi to attack each of the notes carefully. Speed and forcefulness of tempo must take priority throughout the piece.

Oboe & clarinet. All trills are color trills. Color fingerings are given as circled Arabic numerals with greater numbers indicating greater deviation from normal timbre.

Piano and harpsichord. The pianist is asked to switch between piano and harpsichord throughout the piece. The two instruments should be positioned right next to each other so that the pianist can switch rapidly. Register settings for the harpsichord are encouraged even though none are given in the score. The harpsichord should be amplified considerably. Piano and harpsichord clusters are all chromatic.

Percussion. Seven instruments are required: (1.) a single crotale (pitched in D♮); (2.) a piece of slate scraped by an even smaller piece of slate or another stone; (3.) a snare drum (played with the fingertips and never with sticks); (4.) a large sponge whisked across the surface of a bass drum; (5.) a single suspended cymbal (pitched as low as possible and played with a soft yarn mallet); (6.) a tam-tam (as large as possible); (7.) and a xylophone. A few of the switches between instrument are extremely fast. In cases where it is not possible to effect the switch as quickly as written, the last few notes of the previous material should be sacrificed so that the first few notes of the next material begin on time. The five-line staff always indicates the xylophone.

Strings. The the lowest strings of violin, viola and cello are all detuned: the lowest string of the violin should be taken down one semitone to F♯4; the lowest string of the viola should be taken down two semitones to B♭2; and the lowest string of the cello should be taken down three semitones to A♮1. In addition, the violinist is asked to play on a large piece of slate at one point in the piece; the slate (and small stone used for scraping in a circle) are to resemble those of the percussionist as closely as possible. Tremolo are all fast and uncounted.

Krummzeit was written for Ensemble Mosaik who gave the world premiere under the direction of Jonathan Hepfer on 4 October 2014 in Paine Hall on the campus of Harvard University.
KRUMMZEIT

for Ensemble Mosaik

Trevor Bača (*1975)

\[ J = 135 \]

\[ \frac{3}{4} \] - \[ \frac{3}{8} \]

**Obos**: 

**Bass clarinet**: 

**Piano**: 

**Percussion**: 

**Violin**: 

**Viola**: 

**Cello**: 

\[ J = 45 \]

\[ \frac{3}{4} \] - \[ \frac{3}{8} \]

**Ob.**: 

**Bass cl.**: 

**Perc.**: 

**Violin**: 

**Viola**: 

**Viola**: 

**Vc.**: 

**Vn.**: 

**Va.**: 

**Vc.**: 

\[ \text{molto flautando} \]

\[ \text{ppp molto flautando} \]

\[ \text{molto flautando} \]

\[ \text{molto flautando} \]

\[ \text{molto flautando} \]
\[
\begin{align*}
\text{(accel.)} & \\
\text{(144)} & \\
\text{(108)} & \\
\text{(non flautando)} & \text{(allow bowing to convey accelerando)}
\end{align*}
\]
Period.

C. (Bb)

Pf.

Perc.

Vn.

Va.

Vc.

\( \text{pp} \)

non flautando

allow bowing to convey accelerando

\( J = 45 \)

rapid run with fingertips; keep speed constant during accelerando
Ob.
Bass cl.
Pt.
Perc.
Vn.
Va.
Vc.

\( \text{j = 72} \)

- Roll with fingertips: keep speed constant during accelerando
- Sharp drill
- PP
Ob.
Bass cl.
Hpscl.
Perc.
Vn.
Va.
Vc.

leggierissimo

leggierissimo

leggierissimo (off-string bowing on staccati)

fff

leggierissimo
Cambridge, MA.
May – Aug. 2014.
This page intentionally left blank.
Ins Wasser eingeschrieben (2014)

For two violas

World premiere by John Pickford Richards & Elizabeth Weisser
Paine Hall at Harvard University
Cambridge, Massachusetts
6th of February 2015
Staves. The piece is conceived according to an independent interplay of tempo, pitch, string contact point, bowspeed and dynamics. Each part nonetheless notates on a single staff because these parameters change so slowly with respect to each other.

**String contact points.** Seven string contact points (SCPs) appear in the score:

<table>
<thead>
<tr>
<th>Symbols</th>
<th>Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
<td>tasto</td>
</tr>
<tr>
<td>pT</td>
<td>poco tasto</td>
</tr>
<tr>
<td>PO</td>
<td>pos. ordinario</td>
</tr>
<tr>
<td>pP</td>
<td>poco ponticello</td>
</tr>
<tr>
<td>P</td>
<td>ponticello</td>
</tr>
<tr>
<td>MP</td>
<td>molto ponticello</td>
</tr>
<tr>
<td>XP</td>
<td>ponticello possibile</td>
</tr>
</tbody>
</table>

**Bridge contact points.** Fractional bridge contact points (BCPs) like \( \frac{1}{3} \)OB, \( \frac{1}{2} \)OB and \( \frac{2}{3} \)OB also appear. These are to be interpreted such that the bow comes into increasingly greater contact with the bridge and increasingly less contact with the string. The indications progressively reduce pitch content while whitening timbre: unqualified OB specifies pure white noise. Play these with the bow held diagonally. Note that bow contact points (indicating, for example, the point or talon) are not specified.

**Bowspeed.** The score contrasts widely different speeds of the bow:

<table>
<thead>
<tr>
<th>Symbols</th>
<th>Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>XFB</td>
<td>extremely fast bow (always flautando)</td>
</tr>
<tr>
<td>FB</td>
<td>fast bow (always flautando)</td>
</tr>
<tr>
<td>NBS</td>
<td>normal bowspeed</td>
</tr>
<tr>
<td>SB</td>
<td>slow bow</td>
</tr>
</tbody>
</table>

Note that indications of flautando always refer to bowspeed. And note, too, that a crucial effect of the piece depends on the ways in which very slowly moving changes in pitch are activated by the constant, irregular and quick motions of the right hand required to execute the fast (FB) and extremely fast (XFB) types of bow listed here. Do not substitute tasto for the degrees of bowspeed flautando requested in the score: bowspeeds combine freely with the string and bridge contact points given above. Indications for scratch and individuated clicks of the bow also appear. The first of these results from a very slow bow and the second from an almost impossibly slow bow.

**Tempo & durations.** The piece comprises a first tempo series (quarter equals 18, 36 or 72 MM) and a second tempo series (quarter equals 27, 54 or 108 MM). Values of the second series stand 3:2 in relation to values of the first. Double whole-notes (with vertical bars) and quadruple whole-notes (with vertical bars and stems) appear throughout the piece. Dotted versions of these notes (worth, respectively, three and six whole-notes) also appear. The glissandi between the quadruple whole-notes at the beginning of the piece connect stems rather than note heads but are to be played just like the glissandi between other notes.

*Ins Wasser eingeschrieben* was written for John Pickford Richards and Elizabeth Weisser who gave the world premiere on 7 February 2015 in Paine Hall on the campus of Harvard University.
INS WASSER
EINGESCHRIEBEN

for Elizabeth Weisser & John Pickford Richards

Trevor Bača (*1975)
Al-kitab al-khamr (2015)

For chamber orchestra

World premiere by Ensemble Dal Niente
Directed by Michael Lewanski
Paine Hall at Harvard University
Cambridge, Massachusetts
16th of May 2015
Al-kitab al-khamr is the book of forbidden drink. “Khamr” is the word in the Qur’an that prohibits the faithful from intoxicants: from wine and from stimulants and from bringers-of-visions. What things must those be that between poison and pleasure tack course in the body? What colors and shapes the forbidden inscribes as its left-behind marks on dreams and insoluble mind.

Instrumentation:

- Bass flute (doubling flute)
- English horn (doubling oboe)
- Bass clarinet (doubling B♭ clarinet)
- Baritone saxophone (doubling sopranino saxophone)
- Guitar
- Piano
- Percussion
- Violin
- Viola
- Cello
- Contrabass

Prioritization of tempo. The piece comprises two series of different tempi. Tempo series one sets the quarter note equal to 126, 63 or 31.5 (written as 32). Tempo series two sets the quarter note equal to 84 or 42. The tempi of the first series stand 3:2 in relation to the tempi of the second series. Even though the choice of tempi are to some extent a matter of the preferences of the ensemble and the acoustics of the hall, the subito changes of tempo in the piece should be felt and conducted as exact metric modulations. In addition, the tempi of the very fast parts of the piece should be played as closely as possible to the tempi written in the score: it is preferable to play the dense figures in very fast parts of the piece as something of a blur rather than slowing the tempi to attack the notes carefully.

Stopping time. Fermatas are not (yet) written in the score. But fermatas should be inserted by the conductor in the places that need them. All the measures written as grand pauses are fair game for fermatas. As are individual beats that help clarify the intensity of transitions from one type of material to the next.

Accidentals. Accidentals govern only one note. This is true even for successive noteheads at the same staff position. Because of this no natural signs appear in the score (with the exception of parenthesized noteheads in trills). The sequence of, for example, G♯4 followed by G4 (without accidental) is to be understood as G♯4 followed by G♮4.

Barlines. Three barlines are missing in the score (immediately prior to each of the three rehearsal marks). The missing barlines mean nothing and will be included in a later version of the score.

The winds are transposed. The bass flute sounds an octave lower than written. The English horn sounds a perfect fifth lower than written. The B♭ clarinet sounds a major second lower than written and the bass clarinet sounds a major ninth lower than written. The baritone saxophone sounds a major thirteenth lower than written and the soprano saxophone sounds a minor third higher than written.

Flute. The two bass flute multiphonics in the piece are numbers 17 and 22 in Carin Levine’s book Die Technik der Flötenspiel and the boxed numbers in the score are reminders of this. Any fingerings approximating the off-octave sound of the multiphonics may be used. Trills without secondary noteheads are color trills.
**Saxophone.** The multiphonic dyad in the piece is number 77 in Marcus Weiss’s book *Die Technik der Saxophons*; the boxed number in the score is a reminder of this.

**Guitar.** The guitar is tuned as usual. The sound ideal for all plucked notes is as resonant as possible; interpret rests only as rhythmic placeholders (and not as indications to stop the reverberation of the notes). Cross noteheads indicate half harmonics; play the low E (or other open strings) marked this way with a type of RH plucking that best approximates the color of the other half harmonics. Individualized clicks indicated in the score should be executed by running a pick or fingernail laterally up the outer wire weave of the E string creating a continuous but sparse and irregular sound. Use a metal machinists screw of about 8 or 10 centimeters like a type of corrugated guiro in the part of the score that requests screw-bowing; make up-bow and down-bow changes freely.

**Piano.** The piano should be prepared with a piece of cardboard woven between the strings of twelve notes in the octave from F♯6 to F♯7. The effect is coarsely to mute these pitches; no special indication is given in the score when these pitches are encountered. ‘Tamburo’ hits characterize the first section of the piece. Execute these with heel of the palm struck against the lowest strings inside the piano with the sustain pedal lifted; the sound augments the color of the tam-tam. Use a credit card run very slowly laterally up the weaving of the low C♯1 string in the part of the score that requests individuated clicks.

**Percussion.** Six percussion instruments are required: (1.) one woodblock; (2.) mounted castanets; (3.) snare drum; (4.) bass drum; (5.) very large tam-tam (38” recommended); (6.) marimba. The percussion part is notated primarily on a single-line staff. Where cells of the five-line staff occur they represent a synchronous attack on A♭5 in the marimba together with a single woodblock; these two instruments are always struck together in the piece and should be placed near each other so that each can be hit with a hard mallet at the same time. The tam-tam should be as large as possible and the tam-tam dynamics written into the score may be freely ignored: the goal is as resonant a sound that fills as much of the hall as possible without spilling over from the fundamental of the instrument into the less desirable upper frequencies. Rolls on the bass drum are all to be as close to attackless as possible: the rate of the roll doesn’t matter but the background depth provided by the instrument is important.

**Strings.** The violin, viola and cello are tuned as usual. String IV of the contrabass is tuned down to G♮0 (a major sixth lower than the usual tuning of E♮1) and will probably be a little loose as a result. (Note that that the seemingly large double stops in the contrabass at the interval of a minor seventh are all played with the fingers at the exact same position on strings III and IV.) The contrabass plays a special role in the piece and should be allowed to sound front-and-center above the other strings in many sections of the piece. Natural harmonic glissandi lentissimi in the violin, viola, cello and contrabass are designed to encourage the production of multiphonics and other unstable harmonics: allow the multiphonics and transient harmonics to sound as much as possible and do not adjust them back to recognizable harmonics unnecessarily.

*Al-kitab al-khamr* was written for Ensemble Dal Niente who gave the world premiere on 16 May 2015 in Paine Hall on the campus of Harvard University.
AL-KITAB AL-KHAMR

for Ensemble Dal Niente

Trevor Bača (*1975)

\[ J = 126 \]

\[ \begin{array}{c}
\text{Bass flute} \\
\text{English horn} \\
\text{Bass clarinet} \\
\text{Baritone saxophone} \\
\text{Guitar} \\
\text{Piano} \\
\text{Percussion}
\end{array} \]

- Emphasize multiphonics and unstable harmonics prominently throughout.
- Cross noteheads indicate half-harmonics.
- Air tone without reed: mix inhales and exhales ad lib.
- Tambure: strike lowest strings with palm inside piano and let vibrate (pedal down throughout).
- XL tam-tam

\[ \text{Violin} \\
\text{Viola} \\
\text{Cello} \\
\text{Contrabass} \]
move towards
(and then back away from)
the bridge at the center
of each accelerando

match dynamic levels of guitar
fret
\[ j = 84 \]

(accord 1)

\[ \begin{array}{c}
\text{Bass fl.} \\
\text{Eng. hn.} \\
\text{Bass cl.} \\
\text{Bar. sax.} \\
\text{Gb.} \\
\text{Pf.} \\
\text{Perc.} \\
\text{Vn.} \\
\text{Va.} \\
\text{Vc.} \\
\text{Cb.} \\
\end{array} \]

\( \text{molto sforzando ed estr. sul pont.} \)

\( \text{put reed back in} \)
46

J = 84

49

(accol.)
draw metal screw back and forth slowly across string; continuous loud sound

arco ordinario
air tone with lips covering mouthplate
(sounds major 7th lower)

(Shape trill dynamics beautifully. (Thank you, Stefano.)

air tone without reed: mix inhales and exhales ad lib.
Myrkr (2015)

For bass clarinet

World premiere by Richard Haynes
Paine Hall at Harvard University
Cambridge, Massachusetts
7th of October 2015
MYRKR

for Richard Haynes

Trevor Bača (*1975)
(accol.)

\[ \begin{align*}
\text{cambridge, MA} \\
\text{Aug. – Sep. 2015.}
\end{align*} \]
For string quartet

World premiere by the JACK Quartet
Paine Hall at Harvard University
Cambridge, Massachusetts
6th of February 2016
Akasha is a music of invisibility, electricity and the open expanse of the sky. The title is the Sanskrit word for the æther, a concept once understood as an unseen force present in all things in motion in the world.

Scordatura. The violins are tuned as usual. String IV of the viola is tuned down a minor third to A₂; string IV of the cello is tuned down a minor third to A₁. Accidentals. Accidentals govern only one note. Because of this no natural signs appear in the score: G♯₄ G₄ should be played G♯₄ G♮₄. String contact points. Five string contact points appear in the score:

XT as close to the fingers as possible (without touching the fingers)
tasto very noticeably tasto in color
pos. ord. ordinary playing position
pont. very noticeably ponticello in color
XP as close to the bridge as possible (without touching the bridge)

Bridge contact points. The indication OB stands for “directly on the bridge” and means that the bow should be run diagonally on the bridge to produce white noise with no pitch at all. Fractional bridge contact points also appear. These are played with the bow extremely high on the string such that the hair of the bow runs against both the wrapping of the string and the wood of the bridge at the same time. Taken as a series these bridge contact points do three things: they reduce the fundamental of the string’s fingered pitch; they increase the spectral content of the upper partials; and they replace the overall sensation of pitch with noise. Some examples:

XP as close to the bridge as possible (without touching the bridge)
¼OB one quarter of the hair on bridge (and three quarters of the hair on string)
½OB one half of the hair on bridge (and one half of the hair on string)
¾OB three quarters of the hair on bridge (and one quarter of the hair on string)
OB bow directly on bridge with a diagonal bow (to produce white noise only)

Bow speed colors. The score contrasts widely different speeds of the bow:

XFB extremely fast bow (extreme flautando: bow only very lightly skimming the string)
FB fast bow (very pronounced flautando just slightly less than above)
NBS normal bow speed (neither flautando nor scratch)
¼ scratch timbre with one quarter part scratch (and three quarter parts pitch)
½ scratch timbre with one half part scratch (and one half part pitch)
¾ scratch timbre with three quarter parts scratch (and one quarter part pitch)
scratch moltiss. timbre with as much scratch and as little pitch as possible

Do not substitute tasto for the FB and XFB degrees of bow speed flautando requested in the score: bow speeds combine freely with string and bridge contact points. Indications for individuated clicks of the bow also appear; these result from almost impossibly slow motions of the bow against the string.

All passages marked “leggierissimo” should be played off string. The effect is to be an incredibly fast, and nimble, flurry of notes. Glissandi. Do not rearticulate note-heads in the middle of glissandi.

Akasha was written for the JACK Quartet who gave the world premiere the piece on February 6th 2016 in Paine Hall on the campus of Harvard University.
AKASHA
आकाश
for the JACK Quartet
Trevor Bača (*1975)

\[ J=44 \]
\[ J=44 \] \[ J=55 \]

Viola

violin 1

Cello

\[ \text{leggierissimo: off-string bowing on staccati} \]

\[ \text{tasto} + \frac{1}{2} \text{ scratch} \]

\[ J=44 \]

\[ J=44 \] \[ J=55 \]

\[ \text{leggierissimo: off-string bowing on staccati} \]

\[ \text{tasto} + \frac{1}{2} \text{ scratch} \]

\[ J=55 \]

\[ \text{leggierissimo: off-string bowing on staccati} \]

\[ \text{tasto} + \frac{1}{2} \text{ scratch} \]
terminate each note abruptly

mf

_full bow strokes

<table>
<thead>
<tr>
<th>Vn. 1</th>
<th>Vn. 2</th>
<th>Va.</th>
<th>Vc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>vib. pesc.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vn. 1</th>
<th>Vn. 2</th>
<th>Va.</th>
<th>Vc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>pp</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vn. 1</th>
<th>Vn. 2</th>
<th>Va.</th>
<th>Vc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/3OB</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vn. 1</th>
<th>Vn. 2</th>
<th>Va.</th>
<th>Vc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>pp</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vn. 1</th>
<th>Vn. 2</th>
<th>Va.</th>
<th>Vc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>full bow strokes</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vn. 1</th>
<th>Vn. 2</th>
<th>Va.</th>
<th>Vc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>full bow strokes</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vn. 1</th>
<th>Vn. 2</th>
<th>Va.</th>
<th>Vc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>full bow strokes</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vn. 1</th>
<th>Vn. 2</th>
<th>Va.</th>
<th>Vc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>full bow strokes</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

mf

<table>
<thead>
<tr>
<th>Vn. 1</th>
<th>Vn. 2</th>
<th>Va.</th>
<th>Vc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>full bow strokes</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Ikribu (2016)

For bass clarinet, viola, viola & cello

World premiere by Distractfold
Paine Hall at Harvard University
Cambridge, Massachusetts
6th of March 2016
Ikribu were the songs sung in Assyria during nightlong vigils held as early as the 25th century BCE. During the course of the vigil participants read events of the future in the organs of animals slit open at the ceremony’s start. Marks visible on the surface of the liver — font of the body’s blood — answered questions of importance to the state. Models of sheep’s livers excavated from palace compounds record the exact locations of the animals’ organs to be consulted by magicians. What is surprising is not that record of the liver-readers and their clients have come down to us. Nor is it surprising that intimations of the future read on the insides of animals informed the actions of individuals and decisions of the state. What is unexpected, at a remove of more than forty centuries, is that information in the service of statecraft arose to the nighttime accompaniment of song.

Seating positions. The violinist and violist should sit opposite one another across an upturned bass drum placed on a chair between them. The cellist should sit behind the violinist and violist; if a dais is available, the cellist can be seated atop it to better expose the instrument behind the bass drum. The clarinetist should be seated at a slight remove from the other players.

Scordatura. String II of the violin is tuned down a minor third to F4; string III of the violin is tuned up a major second to E4. String I of the viola is tuned down a major third to F4; string II of the viola is tuned up a minor second to E♭4. String IV of the cello is tuned down a major ninth to B♭0 (an octave below the lowest note on the bass clarinet):

- violin: E5, F♯4, E4, G3
- viola: F4, E♭4, G3, C3
- cello: A3, D3, G2, B♭0

Bow contact point tablature. Some of the strings’ music comprises two staves. The top staff is notated in a type of bow contact point (BCP) tablature that specifies which point along the bow is to touch the string at which time. BCPs are given as fractions between 0 and 1 with 0 indicating the talon and 1 indicating the point; intermediate values indicate a BCP somewhere between the two. For example, the BCPs $\frac{0}{4}$ → $\frac{1}{4}$ → $\frac{2}{4}$ indicate that the bow is to be drawn smoothly from the talon ($\frac{0}{4}$) to a point one quarter of the way from the talon ($\frac{1}{4}$) and finally to exactly the midway point of the bow ($\frac{2}{4}$); the BCPs $\frac{4}{4}$ → $\frac{7}{4}$ → $\frac{0}{4}$ indicate that the bow is to be drawn smoothly from a point $\frac{4}{4}$ of the way up the bow up to the point of the bow ($\frac{7}{4}$) and then all the way back down to the talon ($\frac{0}{4}$). This type of tablature allows for the specification of any point along the compass of the bow and any type of travel of the bow between these points. The BCPs used in the piece are all taken from values that divide the bow evenly into four ($\frac{0}{4}, \frac{1}{4}, \frac{2}{4}, \frac{3}{4}$) or seven ($\frac{0}{7}, \frac{1}{7}, \frac{2}{7}, \frac{3}{7}, \frac{4}{7}, \frac{5}{7}, \frac{6}{7}, \frac{7}{7}$) parts. The BCPs $\frac{0}{4}$ and $\frac{4}{4}$ are synonyms for the talon; the BCPs $\frac{1}{4}$ and $\frac{7}{4}$ are synonyms for the point. The four parametric windows in the piece notated according to this tablature are all played half col legno tratto; the choice of string contact point (tasto, ponticello and their variations) is left to the preference of the players and should be determined once the sound of the entire piece is familiar. The purpose of the notation is to allow for dramatic changes of bow color: transitions and sudden changes from scratch to extreme flautando (and back again) are to be encouraged.

Auxiliary instruments. The players should be supplied with the following auxiliary instruments with the bass drum shared between the violinist and violist:

- clarinet: small stone, slab of slate, large basket filled with lentils
- violin: small stone, slab of slate, eight cups filled with barley, bass drum with brushes
- viola: small stone, slab of slate, bass drum with brushes
- cello: small stone, slab of slate, large basket filled with dried beans

Stonescratch. At the end of the piece the cellist is asked to scratch individuated marks across a piece of slate with a smooth stone. This moment is marked “stonescratch” in the score. Follow the timings and loudnesses given in the score.
**Stonecircle.** At different times in the piece all four players are asked to move a smooth stone in circles across the surface of a piece of slate. (Flagstone or the like can be used if slate is unavailable.) These moments are marked “stonecircle” in the score. Each player should have their own stone and their own piece of slate; the sound quality of the four pieces of slate should differ slightly from each other. Circles drawn during performance should be about as wide in diameter as the length of each player’s hand. Different rates of circling are given as fractions of $\pi$. Do not articulate the start or stop of notes; the sound should be continuous and unaccented throughout: what is important are loudnesses and differing rates of motion.

**Grainfall.** Eight times during the piece the violinist is requested to pour the contents of a cup of barley to the floor. These moments are numbered with Roman numerals and marked “grainfall” in the score. The action should be performed so that the audience can see the motions that cause the resulting sounds. The eight cups should match each other. Fill the cups before the performance starts and line them up in a row. Each grainfall is a harbinger of investigation: pour with mindfulness and return each empty cup to its place to complete the action. The durations given in the score show when each grainfall begins but the duration of each action should vary according to musical context. A receptacle made of wood or clay should be positioned on stage near the violinist’s feet to catch the barley from each cup as it is poured. The receptacle should be filled with a layer of barley about a knuckle deep before the performance starts so that each pour results in the sound of grain falling on grain; the receptacle can be placed on top of slab of styrofoam to amplify the sound. Another grain may be substituted for barley so long as the grains selected for the clarinetist, violinist and cellist all differ; see below for the clarinet and cello.

**Graincircle.** At different times in the piece the cellist and the clarinetist are asked to circle their hands in large baskets filled with grain. These moments are marked “graincircle” in the score. The clarinetist’s basket should be filled with lentils; the cellist’s basket should be filled with dried beans; substitutions may be made so long as the grains selected for the clarinetist, violinist and cellist all differ; see above for the violin. The baskets should be made of fiber and be large enough to hold at least five or ten kilograms of grain; baskets may be placed on top of slabs of styrofoam to amplify the sound. Different rates of circling are given as fractions of $\pi$. Do not articulate the start or stop of notes; the sound should be continuous and unaccented throughout: what is important are loudnesses and differing rates of motion.

**Accidentals.** Accidentals govern only one note. Natural signs are inserted to clarify the spelling of different pitches that follow each other at the same staff position.

**Transposition.** The bass clarinet sounds a major ninth lower than written. The strings sound as written.

---

*Ikribu* was written for Distractfold who gave the world premiere of the piece on April 2nd 2016 in Paine Hall on the campus of Harvard University.
breathe discreetly before any downbeat as needed (but do not circular breathe)
\( \text{\( \text{\( J = 104 \)} \)}}

introduce upper partials gradually; breathe as necessary before downbeats.
The scores included in this dissertation were composed in Abjad, an open source software system for formalized score control developed by Trevor Bača and Josiah Wolf Oberholtzer. Notational output rendered by LilyPond, developed by Han-Wen Nienhuys and Jan Nieuwenhuizen. The chapters of the document were assembled in \LaTeX, developed by Leslie Lamport and based on Donald Knuth’s \TeX. The body text is set in 11 point Egenolff-Berner Garamond, a revival of Claude Garamont’s humanist typeface.