

## “X” is for Xenakis

Iannis Xenakis (1922-2001) was many things: composer, architect, engineer, mathematician, political dissident, and self-proclaimed ancient Greek exiled to the 20th century. To this impressive list add one more item — progenitor of modern percussion music. Of course Iannis Xenakis did not create percussion music, not even its most recent guise as notated pieces of contemporary music. Xenakis’s first major contribution to the percussion repertory came with *Persephassa* in 1969, more than three decades after the American percussion revolution of Edgard Varèse, John Cage and Henry Cowell. But as Jorge Luis Borges said of Kafka, he was so important that he influenced even those who came before him. Indeed, our early 21st century ear for percussion music has been so tuned by the music of Xenakis that we cannot fail to understand the first cacophonous noise constructions of Varèse’s *Ionisation* (1931) and Cage’s *First Construction* (1939) through the retro-lens of the raw and terrifying noises of *Komboï* (1981) or *Pléïades* (1978). And the stick by which we measure the expressive intensity of virtuosic chamber and solo percussion music — even those pieces composed as early as the mid-1950’s — has become the scalding prophecies of *Kassandra* (1987) or the implacability of *Psappha* (1975).

However, if the percussion music of Iannis Xenakis defines percussionists as the Bach Cello Suites defined and codified the repertoire of cellists or as the music of late Beethoven reified the mature language of the string quartet, Xenakis himself can seem maddeningly un-definable. In contrasting views, the

folklore of Xenakis paints him as either a logician or a magician. As logician there is the portrait of Xenakis as “pure mind,” an ultimate rationalist, hewing to the cool constants of mathematics and to the ideology of the device. This is the Xenakis who applied Le Corbusier’s concept of “Modulor” to music (whereby architectural proportion was linked to human shape and tied firmly to the ratios of the golden mean). This is Xenakis as master of the unwieldy grammar of FORTRAN and the creator of the graphic computer interface of UPIC. It is this logical and unsentimental Xenakis that the Czech novelist, Milan Kundera praised for his “world of soothing objectivity where the aggressivity of a soul seeking to express itself has no place.” But there is also Xenakis the mythological, the terrible, in whose music a landscape of incantation and ritual is pockmarked by sudden and often inexplicable cruelty. How else can one understand the shattering silences of *Psappha* or the wailing sirens, sea stones and affolants at the end of *Persephassa*? Likewise, the sixteen swarms in *Métaux* and the spinning cross-patterns of *Dmaathen* do not come from a music of the mind alone. These musical structures, as Olivier Messiaen wrote of the teeming string writing in *Pithoprakta*, “are not simply the ancillary side-effects of a thought; they are not radically new but radically other.”

Indeed Xenakis was other, the product of terrible incongruities that pulled him well off the center of the mid-century grid. From the outset his music was rooted in contradictions that seemed always to stop him short of adherence to a single, unambiguous ide-

ology. He preached the power of numbers, yet he never used the nearly ubiquitous numerical mechanics of serialism. Perhaps 12 tone technique was simply too explicit for Xenakis, since the systems he favored were livelier and produced lots of unforeseeable results. Indeed, when looked at in just the right light, the music of Xenakis embraced its own brand of indeterminacy. And like the music of his American counterpart, John Cage, the austerity of his compositional systems determined that musical expression was to be located as external to his own desires and tastes — the result of objective processes and not personal choices. Yet Xenakis wielded his numbers with an almost virtuosic intuition that mated the intellectual and calculated with the visceral and explosive in a music that was ultimately among the most personal and individual statements of the 20th century.

The many contradictions of Xenakis — as simultaneously logical and mythological, mechanical and intuitive — define his conundrum. They are the “X” of Xenakis: the crosshairs of divergences so deep and constant that no unambiguous point-of-view can illuminate him.

Xenakis’s own entanglements — his “X” — found a suitable mirror in the embedded dualities of percussion music. The foundational grammar of percussion music is inherently contradictory, based in part on the specificity of attack (tending to amplify modernist values of rhythmic complexity and intellectual precision), but it is also rooted in the deeply physical language of ritual (a signature of more ancient traditions). Following suit, the Xenakis percussion oeuvre itself seems to split into two parts. An

early group of pieces — including *Persephassa* for six antiphonal percussionists, *Psappha* for percussion solo, and *Dmaathen* for single percussionist and oboe — are marked by vividly colored and strongly differentiated groups of instruments. Each of these pieces consists of a “multiple percussion” arrangement of drums, wooden and metallic instruments. Dynamic tension, and therefore the forward momentum of a composition, results from charged interactions between highly characterized groups of diverse sonorities. Think of the clashes between potent drums sounds and the pure high pinging of metal *simantras* mid-way through *Persephassa*, for example. (*Simantras* in *Persephassa* are resonant pieces of wood and metal, based on liturgical instruments found in Greek monasteries.) Later pieces utilize a more homogenous sound world, where tension results largely from a dynamic array of the forces within groups.

In the early percussion works, clashes of sonority often produce a turbulent sonic surface where moments of frenetic activity are interrupted by sudden and shattering silences. Here musical processes incline strongly towards either end of a scale of densities. That is to say that this music almost always navigates between extremes of saturation or silence. As different as these two states may seem to be, they represent formal equivalencies in the early percussion music of Xenakis. Either can serve as a natural end state of active progressions in a piece. This equivalency is best demonstrated by two similar trajectories at the opening of *Persephassa*, his first great piece of percussion music, written for and premiered by Les Percussions de Strasbourg. *Persephassa* (the name refers to Persephone, the goddess of springtime)

opens with a brief chaotic rise and fall of drum tremolos and follows quickly with all six percussionists performing interlocking rhythms to create a unified rhythmic field. As players break away one by one from the opening ensemble rhythm to play polyrhythmic variations, a sense of temporal dissonance grows and eventually culminates in a chaotic six-part rhythmic “cloud” (called *nuage* in the score). Here each player plays maximally dense and non-periodic rhythms to form a tempest of non-aligned notes. An almost identical trajectory follows immediately beginning again with slow unison playing. Then, again, independent temporal pathways break away until each of the six players is following his or her tempo. However, this time when maximum density is achieved, the texture is suddenly broken by a lengthy silence. In each instance a unison arrival at saturation or silence means that stability has been reached. However different the chaotic *nuage* may seem from the ominous silence, they have a critical quality in common: unity. Since all six players engage in shared behavior, the friction of “poly-structure” is absent. These behaviorally unified structures are therefore, in their essence, moments of repose.

A later generation of pieces, starting with *Pléiades* (1978), the second of two sextets Xenakis wrote for Les Percussions de Strasbourg, features, as we have noted, far greater homogeneity of sound. *Pléiades* includes movements of a single color each: *Peaux* for drums alone, *Métaux* for “sixxen,” and *Claviers* for keyboard percussion instruments. Even *Mélanges*, a movement that mixes these colors, does so without provocation. The goal is peaceful coexistence among timbres rather than open warfare. Unlike the overt

clashes between sonic groups in *Persephassa*, friction in *Pléiades* is to be found as the result of problematized rhythmic and textural interactions within a given sound world. Note, for example, that the sounds of the *sixxen* (“six” for the six members of the ensemble and “xen” for Xenakis), an instrument that Xenakis conceived and built with the help of instrument maker Robert Hébrard, blend easily to form a uniform field of color but are consistently distinguished in the composition by variations of rhythm and texture. The *sixxen* used in this recording were designed and constructed by red fish blue fish member Brett Reed according to the composer’s indications: each *sixxen* consists of 19 metal plates tuned micro-tonally relative to each other *sixxen* so that a unison passage produces a resonant, shimmering sound.

Homogenous fields of instrumental color also mark *Okho* (1989), for a trio of djembes (West African hand drums) as well as *Rebonds* (1989) for a highly collated set of drums and wood blocks. The combative groups of instruments of *Psappha* and *Persephassa* are gone in these later works. Gone also are the sudden silences, but the polarity between unity and complexity is not. As in earlier pieces, moments of mobility are marked by “poly-structures,” that is to say by the presence of a multiplicity of pitch, rhythmic or textural events at any given moment. On the other hand, repose is the result not of peacefulness but of unity. Nodal points of formal articulation in these pieces function as they did earlier via commonality of purpose. You have reached stasis when everyone is (or in the case of the solo piece *Rebonds*, when all of one’s limbs are) engaged in the same task.

These entwined dualities—of unity and complexity, of poly- and monochromatic groups of instruments—become further tangled in the four duos that Xenakis composed for single percussionist and another instrument. The Xenakis duos—all of which are present on this recording—prompt Janus-like compositional strategies that seek both to ameliorate the inherent differences of rhetoric between two very dissimilar instruments even as they rely heavily on precisely those differences for sonic vitality and formal articulation. In *Dmaathen* (1977) for oboe and percussion, a relatively rare usage by Xenakis of pitched percussion sounds in the form of a double-keyboard of vibraphone and xylorimba reaches across the gap between noise and tone to connect to the melodic potential of the oboe. And as a counterbalancing gesture the raucous, multi-phonic oboe writing meshes easily with the sonic volatility of percussion world. In *Komboï* (1981) and *Oophaa* (1989), two works for harpsichord and percussion written for Elisabeth Chojnacka and Sylvio Gualda, a single percussionist negotiates among flanking set-ups of instruments that present discrete sonic arrays not unlike a harpsichordist’s choice of manuals and stops. The harpsichordist returns the volleys of dense percussion sonorities with hands-full of thickly scored chords. In *Kassandra* (1987) for baritone voice and percussion, Xenakis draws on passages from “Agamemnon,” in which *Kassandra* foresees her own death. However, *Kassandra*’s prophecies are cursed: Apollo wooed *Kassandra* with the gift of prophecy, but when she failed to return his affections he punished her by rendering her true prophecies unbelievable to all who heard them. As a result, a chorus of the citizens of

Argos cannot interpret her warnings. Xenakis amplifies the disparity between being heard and being understood by announcing each successively impassioned vocal foretelling with an ever more vigorous tattoo of drumming. However, no amount of sound is sufficient to convey the message. The identification between voice and percussion is complete as *Kassandra*, the most famous seer of the ancient world, and her contemporary doppelgänger a percussionist with a thunderous arsenal of drums and woodblocks, remain unheeded, effectively (if deafeningly) mute.

It is not an exaggeration to say that for many contemporary percussionists learning how to play has meant learning how to play the music of Iannis Xenakis. In fact if there is a nascent performance practice in the realm of new percussion music it is deeply indebted to the music of Xenakis. Does a new piece pose problems of multiple layers of rhythmic and sonic material? Look to the overlaid instrumental and rhythmic groupings of *Psappha* for a directory of solutions. Or in my recent experience, when John Luther Adams’s *The Mathematics of Resonant Bodies* highlighted the relationship between local volatility of rhythm and large-scale formal stability in a multi-movement work, I found that the indispensable model at hand was *Pléiades*.

The works are powerful archetypes, but even the stories surrounding these works have become legendary. Some of the stories are informative: there is Xenakis with Sylvio Gualda scouring the construction site of the Centre Pompidou for the junk metal Gualda would need for *Psappha*. Some are heroic: there are Les Percussions de Strasbourg rehearsing by moon-

light through the night before the outdoor premiere of *Persephassa* at the Festival of Chiraz-Persepolis in Iran because the sweltering September heat made their scheduled daytime rehearsals impossible. Other stories are whimsical: there is Morton Feldman winking at Xenakis over a plate of chicken wings after a performance in Buffalo, and suggesting that Xenakis's conversation partners at that moment, the oboist Nora Post and the percussionist Jan Williams, could use a new duo piece.

These are the legends. However, the stories that percussionists talk about with each other do not deal with anecdotes, but rather with the nuts and bolts of the practical performance problems. Some of the biggest of those problems—and to me the moments that most outline the “Xenakis-ness” of these pieces—involve the many impossible passages in this music. (Although one is tempted to muse along with Aki Takahashi who once wondered, if Xenakis's music were truly “impossible,” why so many of us are playing it.) But the impossibilities are really there: they can be found at the end of *Psappha* with Xenakis's indication that each of the many simultaneously sounding notes is to receive three strokes. The resulting music at its most dense would have a single percussionist playing as many as 25 strokes per second on a group of instruments dispersed widely in space. Try it in a spare moment, but have a good breakfast first. Or in *Rebonds B* imagine the problems involved in executing a two-part line on woodblocks: one part is a 16th note passage with grace notes and the other a continuous tremolo. These are not simply passages of extreme difficulty—there are plenty of those also. No, in almost every piece there is a small patch that

is truly physically impossible...or nearly so. And importantly, each of the impossible passages (think also about the acceleration at the end of *Persephassa* or some of the double-keyboard writing of *Dmaathen*) coincides with a moment of maximum impact in the composition. The impossible music defines the space where the two tangents of Xenakis meet—the center point of his “X”—where a sophisticated rational process in the form of a poly-structural compositional moment meets the maximum of unified physical and emotional energy in performance. These instances call for extreme inventiveness on the part of the performer. Since *Psappha* allows the percussionist to choose an individualized set of instruments, some players have constructed special “sandwiched” instrument pairings that allow the stick to strike a surface on both the upstroke and downstroke in order to double the density of a tremolo. Other players simply play at their maximum speed and seek to lend a rhetorical emphasis to the passage. In another kind of decision, we at red fish blue fish decided to exercise the full potential of the recording studio by creating four separate layers of overdubbed materials to construct the end of our recording of *Persephassa*, creating perhaps the first chance ever to hear exactly what Xenakis actually wrote.

Whatever the solution, the attempt to play a truly impossible passage will, by definition, fail. A reasonable question follows: why did Xenakis compose music where failure is assured in the performance of passages of music with great emotional impact and compositional importance? Part of the answer lies in what you mean by failure. Each impossible passage forces a player to deal with the unknown—to leave

the secure boundaries of a score behind and find an inventive and personal solution to an intractable problem. By doing so a performer necessarily combines the real with the imagined, the feasible with the fantastical. In every performance that I know, these are the moments of transcendence: they are fleeting glimpses of expressive fragility in the midst of the irrefutable Xenakis plan. And, while no solution corresponds exactly to indications in the score, each approaches the pulsating membrane of exchange between the living, momentary, idiosyncratic forces of performance and the solid, calculated, permanent qualities of composition. In this light these are not moments of failure, but of grace. These are undefinable moments, suspended between flatfooted and unambiguous options on either side—neither the wild effusions of straightforward virtuosity nor the self-conscious constructions of modern music. They are in fact transcendental in the way of all great music, perched unsteadily—as Xenakis was himself—at the very edge of the unknown.

—Steven Schick

## **BIOGRAPHIES**

### **John Mark Harris**

John Mark Harris plays an eclectic range of keyboard music from the Renaissance to the present day. He holds degrees in performance from the University of California at San Diego, the New England Conservatory, and the University of South Florida; his teachers included Robert Helps, Aleck Karis, and Stephen Drury. He has appeared as soloist at the Salzburg and Donaueschingen Festivals (with the

Southwest German Radio Symphony), the L.A. Philharmonic's Green Umbrella Series, Summerfest La Jolla, the Summer Institute for Contemporary Piano Performance in Boston, and the Festival Internacional de Historia de la Música in Mexico, and has given solo recitals in Poland, Scotland, the Netherlands, and Germany. He has received sponsorship from Fondazione Giorgio Cini, the City of Poznan, the Abby Whiteside Foundation, the Yvar Mikhashoff Trust for New Music, and the Hillsborough County Arts Council. The Boston Globe referred to his playing as “forceful...finely shaded”; the Edinburgh Scotsman called his recital, featuring Ives' *Concord Sonata*, a “stunning performance”; andante.com cited his “exquisite touch and sensitivity”; and his performance Xenakis' *Evryali* was hailed as “astonishing” by the *20th Century Music Journal*.

### **Aiyun Huang**

Aiyun Huang was winner of the First Prize as well as the Audience Award (Prix du Public) at the 2002 Geneva International Music Competition; the first prize in percussion has been awarded only three times in the competition's history. She has appeared at the Weill Recital Hall of the Carnegie Hall, Los Angeles Philharmonic Orchestra's Green Umbrella Series, LACMA Concert Series, Holland Festival, Victoria Hall in Geneva, Agora Festival in Paris, rESound Festival, Banff Arts Festival, 7<sup>ème</sup> Biennale d'Art Contemporaine de Lyon, Vancouver New Music Festival, CBC Radio, La Jolla Summerfest, Musik 3, The Old Globe Theater, Scotia Festival, Centro Nacional Des Las Artes in Mexico City, and National

Concert Hall and Theater in Taipei. She performs regularly with Toca Loca, a group dedicated to expanding the possibilities of contemporary music. A European solo tour in the fall of 2004 included cities of Geneva, Lyon, Paris, Katowice, Budapest, Bratislava, and Milan.

Ms. Huang has commissioned new works from numerous composers including: British composer Michael Finnisey, Canadian composers Rose Bolton, Inouk Demers, Chris Paul Harman, Alice Ho, David Jaeger, Gary Kulesha and Heather Schmidt; American composers Rick Burkhardt, Sean Griffin, Derek Keller, Chris Mercer and Erik Ulman; Taiwanese composers Kuei-Ju Lin and Chia-Lin Pan.

Born in Taiwan, Ms. Huang immigrated to Canada when she was seventeen where she pursued her studies in percussion with members of Nexus. She holds a Bachelor of Arts degree with honors from the University of Toronto, a Premier Prix from Conservatoire Nationale de Région de Rueil-Malmaison in France, a MA and a DMA degree from the University of California, San Diego. Between 2004 and 2006, she was a Faculty Fellow at the University of California, San Diego. Currently, she is the Chair of the Percussion Area at the McGill University in Montreal, Canada.

#### **Philip Larson**

Basso-baritone vocalist Philip Larson has performed avant garde music at concert halls in New York, Chicago, Los Angeles, Paris, London, Tokyo, Munich, Lisbon, and Warsaw. He has been a featured soloist with the Ensemble Intercontemporain in Paris, the Cleveland Chamber Symphony, and SONOR-the

resident new music ensemble at U.C. San Diego, where Larson is a professor of music.

You can hear Larson on CDs featuring compositions by Robert Erickson, Kenneth Gaburo, Will Ogdon, Roger Reynolds, and Iannis Xenakis, as well as other contemporary "new music."

Larson is one-half of [THE], a performance/composition duo formed in 1977 with fellow U.C. San Diego faculty member Ed Harkins (trumpet). At UCSD, Larson frequently performs with percussionist Steven Schick in the university's new music ensemble SONOR, as well as in the resident percussion ensemble red fish blue fish.

#### **Jacqueline Leclair**

Oboist Jacqueline Leclair, one of the United States' foremost interpreters of new music, resides in New York City and is a member of Alarm Will Sound and Sequitur. She has presented solo and chamber music concerts throughout the United States and Europe, and can frequently be heard performing with New York City ensembles such as Sospeso, Ensemble 21 and Carnegie Hall's Zankel Band.

Ms. Leclair specializes in the study and performance of new music. She has premiered many works and regularly presents classes in contemporary music and its techniques at schools such as UCLA, the Eastman School of Music, Brigham Young University, the North Carolina School for the Arts and the University of California San Diego. She is faculty at Montclair State University, Hofstra University and Mannes College.

Ms. Leclair has recorded extensively, receiving critical acclaim in particular for her premiere record-

ing of Roger Reynolds' *Summer Island*. Luciano Berio's "Sequenza VIIa Supplementary Edition by Jacqueline Leclair" is published by Universal Edition Vienna, and her recording of the work is on Mode #161/3, *Berio: The Complete Sequenzas* (2006).

The *New York Times* has reviewed Ms. Leclair's performances as "astounding" and as having "electrifying agility," and the *New Yorker* has referred to Ms. Leclair as "lively" and "wonderful."

Ms. Leclair studied at the Eastman School of Music and SUNY Stony Brook where she earned a Bachelor of Music, Performer's Certificate, Master of Music and Doctorate of Musical Arts. Her teachers included Richard Killmer and Ronald Roseman.

#### **red fish blue fish**

red fish blue fish is the resident percussion ensemble of the University of California, San Diego. The group functions as a laboratory for the development of new percussion techniques and music, and has toured widely. Its concerts have included Lincoln Center and the Henry Street Settlement in New York City as a part of two Bang on a Can marathon concerts, the Agora Festival (Paris), the Los Angeles Philharmonic's Green Umbrella Series, the Centredes Bellas Artes in Mexico City, and the Percussive Arts Society International Convention. In addition the group offers a regular series at the University of California, San Diego. red fish blue fish has recorded for John Zorn's Tzadik label.

#### **Steven Schick**

Steven Schick was born in Iowa and raised in a farming family. For the past thirty years he has cham-

pioned contemporary percussion music as a performer and teacher. He studied at the University of Iowa and received the Soloists Diploma from the Staatliche Hochschule für Musik in Freiburg, Germany. Steven Schick has commissioned and premiered more than one hundred new works for percussion and has performed these pieces on major concert series such as Lincoln Center's Great Performers and the Los Angeles Philharmonic's Green Umbrella concerts as well as in international festivals including Warsaw Autumn, the BBC Proms, the Jerusalem Festival, the Holland Festival, the Stockholm International Percussion Event and the Budapest Spring Festival among many others. He has recorded many of those works for SONY Classical, Wergo, Point, CRI, Neuma, Cantaloupe and Mode Records. He has been regular guest lecturer at the Rotterdam Conservatory, and the Royal College of Music in London. Schick is Professor of Music at the University of California, San Diego and Lecturer in Percussion at the Manhattan School of Music. Schick was the percussionist of the Bang on a Can All-Stars of New York City from 1992-2002. From 2000 to 2004, he served as Artistic Director of the Centre International de Percussion de Genève in Geneva, Switzerland. Steven Schick is the founder and Artistic Director of the percussion group, red fish blue fish.

In 2006 Schick released two important publications. His book on solo percussion music, *The Percussionist's Art: Same Bed, Different Dreams*, was published by the University of Rochester Press. His recording of *The Mathematics of Resonant Bodies* by John Luther Adams was released by Cantaloupe.

**Greg Stuart**

Born in Berkeley, California (1978) and hailing from Minnesota's Twin Cities, Greg Stuart is dedicated to expanding new music for percussion through commissions, improvisation and mixed-media projects. He has performed with Joscha Oetz, Anders Åstrand, Steven Schick, Frank Gratkowski, Andreas Wagner and Hans W. Koch. He has appeared in numerous festivals including the L.A. Philharmonic's Green Umbrella Series, the Darmstadt Ferienkurse für Neue Musik, Line Space Line, Muzik3, SEAMUS, La Jolla Summerfest, Pro Musica Ensenda and the Whitney Museum of American Art Biennial. Greg performs regularly with the percussion ensemble red fish blue fish, is a founding member of the experimental percussion quartet quadrivium and has worked with San Diego's Lower Left Performance Collective and Chicago's Trapdoor Theater. He has collaborated with a wide range of composers including Sean Griffin, Michael Pisaro, Chou Wen-chung, Rick Burkhardt and Roger Reynolds. Greg can be heard on Accretions, Tzadik, Insides, and Mode Records.

**Shannon Wettstein**

Shannon Wettstein, pianist, has performed countless new works throughout the United States and internationally. She has collaborated with composers such as Brian Ferneyhough, Chinari Ung, Martin Bresnick, Gunther Schuller, Lee Hyla, and Jeffrey

Mumford. She has given performances in New York's Lincoln Center for the Performing Arts and the New School for Social Research, Boston's Isabella Stewart Gardner Museum and Jordan Hall, the New Zealand Embassy in Washington D.C., the Japan America Theater in Los Angeles and festivals at Aspen, Yellow Barn, VT and Sandpoint, ID.

Wettstein is the pianist of the St. Paul, MN contemporary ensemble Zeitgeist. She has been and artist-faculty member of New England Conservatory's Summer Institute for Contemporary Piano Performance since 1996. She has been as Artist-in-Residence at the Walden School, a summer program for young composers in New Hampshire.

Wettstein holds a DMA from the University of California, San Diego, a BM (highest distinction) from the University of Kansas, and a MM (honors) from New England Conservatory. Her teachers have included Aleck Karis, Stephen Drury, Sequeira Costa, Richard Angeletti and Claude Frank.

Recent awards include grants from the Minnesota Arts Council, an American Composers Forum Composer Commissioning Grant, and the Merle Montgomery Grant of Mu Phi Epsilon. Her recordings are available on the Centaur, Tzadik, Innova, and Koch International Classics labels.

She is member of the music faculty of Augsburg College in Minneapolis and has formerly served on the faculty of Bemidji State University.