

*...but not simpler...* by Tod Machover

Liner notes for Bridge Records CD #9346

By Richard Dyer



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Tod Machover has devoted much of his distinguished career to exploring ways to take advantage of what rapidly-evolving technology has to offer an adventurous composer while retaining the irreplaceable human dimension of live performance, the chemistry of musicians and audience creating a communal experience.

Machover was 13 on June 1, 1967, when the Beatles released *Sgt. Pepper's Lonely Hearts Club Band*, and the impact that album made on the the young musician was decisive - and lasting.

What fascinated Machover in addition to the engaging melodies, unexpected harmonies and elusive lyrics, and the radical juxtapositions and assimilations of different styles and timbres, were the studio manipulations of live sounds, and the layering of those sounds to create music and sonorities different from anything anyone had ever heard before, although it had roots in many genres and periods of classical, popular, and world music. Also it was music that could not be performed live, a fact Machover found both provocative and unsatisfying.

Machover has spoken of how at that time he was equally fascinated by the decision the pianist Glenn Gould made in that same year to stop playing in public and to create his performances in the recording studio where he could control every variable.

Of course Glenn Gould's Bach and the work of the Beatles are not the only streams that swell into the river of Machover's imagination. His mother was a piano teacher, and his father a pioneer of computer graphics. His mother supervised his early musical education which was not limited to the piano. Instead, he recalls, she would lead him on planned excursions around the house, where they would investigate the unusual sounds they could produce with ordinary objects and how they could combine those sounds to create a mood or tell a story; then they found a way to make a drawing or a picture of what they had done so that they could recreate what they had created if they wanted to. Machover has written that from the age of 2, he experienced music as a sequence of sound – structure – score.

He found his musical soulmate not in the piano but in the cello, which he discovered at the age of 8; he loved the way the instrument made his whole body vibrate, and to this day the cello remains his vehicle for meditation and the voice of his private thoughts. The cello lays down the bass line for all of Machover's musical thinking, and there is always a bass line in Machover's music so that we know where we are. It is not an accident that much of Machover's music makes the body of the *listener* vibrate, and that is not simply a matter of electronic amplification.

Machover's formal studies were at the University of California, Santa Cruz and the Juilliard School; at Juilliard he worked with two American Old Masters of modernist complexity, Roger Sessions and Elliott Carter, although he was equally interested in the radically different approach of John Cage which he finds magical and mysterious, and to whom he dedicated his multilayered, audience interactive installation *Brain Opera* (1996/7).

Technology was rapidly evolving towards a point at which Machover could shape it to create what his imagination was asking him for. In 1978, a year after he'd started his doctorate at Juilliard, he became a composer-in-residence at the new center for musical research that Pierre Boulez had created in Paris, the Institut de Recherche et Coordination Acoustique/Musique (IRCAM); fourteen months later he became the director of musical research there. In 1985 he returned to America to become a founding professor and director of the Experimental Media Facility at the newly launched MIT Media Lab. He has remained there ever since, and is currently the Muriel R. Cooper Professor of

Music & Media, and Director of the Opera of the Future and Hyperinstruments Groups.

Over the years he has created a substantial and diverse catalogue of works; his operas have probably brought him the most attention. *Valis*, commissioned for the 10<sup>th</sup> anniversary of the Pompidou Center and premiered there in 1987, is based on a science-fiction novel by Philip K. Dick and closes with a thumping rock passacaglia. Next came Machover's operatic adaptation of Tolstoy's novel *Resurrection*, commissioned and premiered by Houston Grand Opera in 1999. Philip K. Dick and Tolstoy present a paradoxical pair of interests, but an entirely Machoverian one. Machover based his next opera, *Skellig*, on the award-winning children's book by David Almond; the premiere was at the Sage Gateshead in Newcastle, England, in 2008. The most recent opera is *Death and the Powers*, with an original libretto by former U.S. Poet Laureate Robert Pinsky. The cast includes robots, and the premiere took place at the Salle Garnier in Monte Carlo in 2010.

Some of these works used electronics, leading one publication to dub Machover America's "most wired composer." But some did not, a pattern that recurs in Machover's non-operatic works, which include pieces for instruments he and his colleagues at MIT invented – Hyperviolin, Hyperviola, Hypercello, Hyperpiano, and even Hyperorchestra (of which more below) – as well as such "wireless" pieces as two string quartets and works for orchestra, chamber orchestra, and various chamber ensembles, solo instruments and voices.

This CD features works Machover composed between 2001 and 2005, with one new electronic "Interlude" created especially for this occasion. It balances pieces for large orchestra including technological elements with two acoustic works written for the Ying Quartet, one of them produced using Hyperscore, a software composing tool developed at the Media Lab. The disc was painstakingly produced so that it reflects Machover's exact intentions, as Glenn Gould's records quite precisely represented what he wanted to accomplish. And listened to as a whole, it represents not only many facets of Machover's interests, concerns, and accomplishments, but it becomes something more than the sum of its parts, an *album* – in the Sgt. Pepper sense of the word.

Machover composed the 12-minute *Sparkler: For Orchestra and Live Computer Electronics* in 2001 in response to a commission from the American Composers Orchestra in New York City. He conceived and wrote it both as an independent work and as the Overture for a project-in-progress, the *Toy Symphony*.

The premiere of *Sparkler* as an independent concert piece took place on October 14, 2001 when the ACO performed it under the direction of Paul Lustig Dunkel in Carnegie Hall as part of an “Orchestra Tech” Festival that Machover curated for the ensemble.

The first performance of the complete *Toy Symphony* with “Sparkler” as its overture took place in Berlin with the Deutsche Symphonie-Orchester under the direction of Kent Nagano on February 24, 2002. Subsequent *Toy Symphony* concerts took place in Dublin, Ireland; Glasgow, Scotland; and Porto, Portugal before the American premiere in MIT’s Kresge Auditorium on April 26, 2003, which was performed Gil Rose and the Boston Modern Orchestra Project.

Machover scored *Sparkler* for a large orchestra with standard complement of strings and brass, augmented winds (flutes and alto flute; oboes; clarinets in B-flat and E-flat and bass clarinet; oboes; English horn; bassoons and contrabassoon) and large percussion battery of pitched and unpitched instruments – vibraphone, celeste, xylophone, glockenspiel, marimba, maracas, thunder sheet, glass wind chimes, temple bells, tamtams, tomtoms, suspended cymbals, low gong, timbales, temple blocks, roto-toms, bass drum, snare drum, and tympani.

There are three keyboard synthesizers, two of which play precisely notated, richly colorful electronic parts, while the third triggers intricate timbres and also sends instructions to the computer system. At times, the live sound of the ensemble is analyzed and turned into a “controller”, so that every variation in performance instigates a different response from the electronics, turning it into what Machover has called a “hyperorchestra.” He developed this system with his MIT colleagues Tristan Jehan and Mike Fabio.

Like many of Machover’s works, *Sparkler* looks back to explorations he has made before and extends them. Although it is a short piece, entertaining, pensive and exciting in turn, it reflects many of the composer’s ambitions and preoccupations as he sought to synthesize traditional high arts with popular culture, and to create electronic extensions of traditional instruments to expand their sonic and expressive range in the hands of gifted performers.

Beginning in the late 1980s, Machover devoted much energy and creative ingenuity to the development of what he called Hyperinstruments – first the “2-person orchestra” for *VALIS* in 1987, then the cello (working with Yo-Yo Ma, who first performed on the hypercello in 1991), the viola (1992, Kim Kashkashian), and finally the violin (Ani Kavafian in 1993; Joshua Bell in 2002), resulting in the evening-length *Hyperstring Trilogy*. With the interest and

support of the Yamaha Corporation, he also developed the hyperpiano, which is heard on the last work on this CD, *Jeux Deux* (2005).

Going from the *Hyperstring Trilogy* to *Sparkler* and a hyperorchestra was the next logical step, but a giant one. The technology that made the *Hyperstring Trilogy* so specific to each instrument and so powerfully expressive cannot address the complex acoustical phenomenon of the full orchestra with comparable specificity because a sufficient technology does not yet exist. Nevertheless *Sparkler* does vault into previously unknown territory while delivering musical values that are both basic and highly sophisticated.

It is necessary at this point to say a few things about Machover's *Toy Symphony*, because that project determined the chameleon character of *Sparkler* and explains many aspects of it.

Based on his belief that children are naturally and intrinsically musical, but that most have no chance to develop their abilities – including the capacity to listen intelligently and creatively – Machover and his colleagues at the Media Lab developed a series of Music Toys. These include the rhythmic Beatbug and the textural Music Shaper, which enable children (or anyone else who tries them) to achieve many quite sophisticated musical results without going through the painstaking process of technical training. In addition, the Music Toys – like sports – introduce children to the challenges and joys of collective effort, teamwork, ensemble.

Along with these toys, his team also created Hyperscore, a computer program that makes it possible to compose without knowing how to read music or write it down. Instead someone working with Hyperscore manipulates user-friendly visual imagery to create melodies, choose harmonies, build counterpoint, orchestrate colors, and control tempo and dynamics by drawing lines of various colors and shapes across the computer screen. The computer can then "perform" the piece – or print it out in conventional notation so that musicians trained on conventional instruments can recreate it.

The *Toy Symphony* project brings all of these resources together, with workshops lasting several weeks that culminate in concerts that incorporate a symphony orchestra, a children's chorus, children playing Beatbugs and Music Shapers, as well as works composed by the children using Hyperscore and played by the orchestra. *Sparkler* starts off each *Toy Symphony* event, and so sets the stage for all that is to come.

And so, appropriately, *Sparkler* is an evocation of the many moods of childhood – joy, awakening curiosity, even terror – as remembered by Machover

as an adult, and as re-experienced by the composer with his own children, and through the many lucky children involved in the *Toy Symphony* project.

The overture falls into 10 sections that flow into each other without interruption and that the ear can easily grasp because each episode has such a specific character. The entire piece is built on an “endless” melody that assembles itself, note by note, timbre by timbre, in the first section, which is marked “Free and Dreamy.” By section 2, “flowing,” the melody is ready to move purposefully. The following self-explanatory sections are “Spreading,” “Contrasted,” “Swirling,” “Bold,” “Shimmering,” “Brilliant, Bouncing,” and “Texture Blobs.” The final section “Coda (Calm)” restores the mood with which the piece began.

The electronic element is most obvious in the “Texture Blobs,” three minutes of music in which the players and conductor are given a great deal of leeway within a strictly controlled environment – for example, in the first blob, players are assigned pitches which they can play in any order, rhythm or tempo, within parameters provided by the composer and indicated by the conductor’s gestures; the sound should be “delicate and chimeric.” Over the course of the blobs, the flurries of activity become more systematically organized until they become “fused and furious.” It is in these quasi-improvised passages that the electronics most audibly extend the dynamic and sonic range of the orchestra, and it is clear that the conductor and the orchestra are generating and controlling what the electronics do. In Machover’s words, the sounds of the live orchestra “push, pull, twist and morph” the electronic extensions.

At other moments, the relationship between the orchestra and the electronics develop along other lines – sometimes the emphasis is on contrast; at other points the emphasis is on how live and electronic sounds can complement and reinforce each other; at the climax there is a kind of synthesis. Even though Machover is dealing with a very large ensemble, his orchestration is precise, clear and varied rather than lush. Each of the sections of the piece has its own characteristic sound which generates and interweaves with the electronic element. Sometimes the electronics simply cast an aura around the acoustic sound, but as the piece progress it more often creates additional layers of timbre and teeming activity. The interpenetration of live and electronic sounds creates a rich tapestry, both dense and three-dimensional.

The range of styles is as exuberant and expressive as the range of tempos and moods. The work not only contains but bridges the worlds of classical and popular music – the “Ode to Joy” from Beethoven’s Ninth Symphony makes an appearance, and so do some characteristic tropes of the

Beatles; concert music, jazz and rock music are facets of the prism that rotates, catches the light, and sparkles in *Sparkler*.

Machover dedicated *Sparkler* to “the victims of the September 11<sup>th</sup> atrocities; and to children worldwide who – through their generosity, open-mindedness, sense of humor, and unbridled imagination – can help the rest of us heal, regain our courage, and move forward with renewed energy, enthusiasm, and compassion.”

Between 2001 and 2008 the Ying Quartet spent part of each season as Blodgett Artists in Residence at Harvard University. In 2003 the quartet – then still in its original configuration of four siblings from Winetka, Illinois (Timothy and Janet Ying, violins, Philip Ying, viola, and David Ying, cello) – contacted Machover and asked him to write a string quartet as part of LifeMusic, a series they created that has grown to embrace more than a dozen commissions for new works that reflect life in America today.

Machover ultimately responded in 2005 when he created a major string quartet which he entitled “... *but not simpler.*” But before Machover embarked on that piece, he involved the Ying Quartet in a project with the La Jolla Music Society in California which sponsored a composition competition in the San Diego area using Hyperscore. As part of the mentoring process for all the amateur composers, Machover created three short pieces for string quartet using Hyperscore himself, *Hyper-Dim-Sums*.

Machover admits with a laugh that Beethoven himself could not have created his string quartets using Hyperscore; the computer program makes it easier to explore and experiment than to realize pre-imagined sounds and structures, but it is certainly possible to create music of sufficient quality and density to interest performers and an audience.

The titles of these tasty little appetizers are descriptive and self-explanatory – “Glade,” “Winding Line,” and “Punchy.” In fact, on the Hyperscore screen for “Winding Line” you can see the sinuous twists and turns of a line that looks like a country highway on a map– the meter in “Winding Line,” for example, is constantly changing, and the harmonies are often surprisingly pungent. (One of the many interesting aspects of the Hyperscore workshops with children is that they are completely unfazed by dissonance – in fact they seem to *prefer* it.)

“...*but not simpler...*” followed a year later. This is a 15-minute string quartet designed to be played without electronics – the Yings requested a piece

they could tour easily – but some performances have used electronics to help “spatialize” the music, that is, to create more separation between and among the instruments and highlighting the independence and interdependence of their individual voices.

Machover chose his title from a famous observation by Albert Einstein, “One should always make things as simple as possible, but not simpler.” It was Machover’s goal, he has written, to “represent the struggle to come to terms with the increasing complexity, fragmentation, and speed of today’s world, and of my life in particular.” So the piece, in his words, “dramatizes the search for calm and coherence in the midst of present-day complexity and diversity, and uses the togetherness or divergence of the four quartet players as a main source of tension and movement.”

The quartet opens and closes with high indistinct sonorities. The opening marking is “swiftly mysterious”; by the end of the quartet the sonorities have become “gentle noise only, very pure and stable” that very slowly fades to nothing. “Calm of mind, all passion spent,” one might say, borrowing the words of Milton.

The main part of the quartet falls into three sections. The first is “diverse but not discrete”; Machover marks the pensive second section “lyrical but cool,” and it grows into a section marked “swift and swelling.” After a moment of repose, the music arrives at the frantic finale, marked “as fast as possible” – a favorite demand of Schumann’s.

Several strategies, or rather several ideas, take different forms in the different movements. The four players are almost never doing the same thing at the time – instead, each of them is going his own way (“diverse”) although there are shifting patterns of alliances, and each individual way is somehow connected to the others, if only through opposition (“not discrete”). If someone is playing legato, someone else is simultaneously playing pizzicato; if someone’s bow is one position on the strings, the others take contrasting positions. A rocking gesture, and, even more, a frequent series of repeated notes, suggest some kind of treadmill to which there are various musical and human responses (anger, panic, resignation). But these same gestures also generate melody; something beautiful arises amid violence, but too often we are too frantically involved in our own concerns to hear what is really there; order is always threatened by chaos.

When it came time to take Machover’s quartet on tour, the players asked the composer for ideas about what to program alongside it.



When it came time to take Machover's quartet on tour, the players asked the composer for ideas about what to program alongside it. What Machover proposed and developed was an interesting mixture of works and transcriptions of – and "homages" to – composers who had most deeply influenced him, including Carter, Bach, Beethoven, Byrd and The Beatles, influences strongly felt on this CD as well.

To bind all of these things together, Machover created a series of electronic interludes which were inspired by the music on the program and bridged the individual works – rather like the improvisatory “preluding” pianists of a century ago used to create connections, and establish the key of the next piece. There was also a visual aspect, projected program notes and colored textures behind the Ying Quartet, as well as special and varied lighting for the Quartet itself.

He developed the idea for this CD, revising one of those interludes he had prepared for the Ying's touring concert, and creating an entirely new one. Machover based Interlude 1 (“After Bach”) on his Bach transcriptions for the Yings. “From my transcription, I extracted individual chords, mostly with leading tones dangling, and wrote these out as separate phrases. . . Then I had the Ying Quartet record each of the separate chords I had notated, with silence before and after. I used each of these recorded chords as ‘notes’ to recombine, overlap, and string together via software, to create the Interlude. My goal was to create something unexpected and with new meaning, out of something that feels – perhaps only vaguely – familiar.” Every sound has a kind of afterimage that colors and destabilizes the next sound.

The Interlude also serves a practical purpose; Machover transposed the recording of the Ying Quartet playing the chords down a step so as to transpose the ear of the listener from the end of *Sparkler* into the tonality of “Glade”; also the final harmony is suspended, not resolved. “Glade” will have to do that. After all of Machover's manipulations, the Ying Quartet sounds a little like an Elizabethan consort of viols, playing something at once stable and slightly out of phase – it is as if the unheard words of the chorale were about how firm the foundation is, while at the same time we can feel the earth move beneath our feet.

Machover assembled and composed Interlude 2 (“After Byrd”) for this CD. “Interlude 2 on the new CD is very different from any of the Interludes I did for the Ying evening,” Machover says, “even though it incorporates certain elements from three of those Interludes. To them I added some material from the electronic part of *Sparkler*, and produced some new music as well. It also

incorporates material from the Byrd *Agnus Dei* – a kind of *cantus firmus* here – but I structured something completely new, where fragments heard earlier in the CD are brought together in a kind of ether, to be incorporated, juxtaposed, and ‘worked out’ in “...*but not simpler*...”

We hear the Ying Quartet in a constant throbbing, over which there are high sparks of electronic music; finally the throbbing fades away and the Interlude ends with an electronic version of the high birdlike twitters with which the acoustic “...*but not simpler*...” begins.

“...*but not simpler*...,” Machover writes, “sounds like modern life, with glimpses of equilibrium that feel straightforward and well-earned, but hopefully not simplistic.” It is a soundtrack for the way we live now, at once a source of hope and of warning.

Only after completing the work did Machover realize that he had created an homage to the pathbreaking work of Elliott Carter, “a testament to how Elliott’s music, ideas, and convictions have influenced me deeply in ways that continue to surprise.”

The CD closes with a work that Machover composed on a commission from conductor Keith Lockhart and the Boston Pops; *Jeux Deux* was premiered in Boston’s Symphony Hall on June 22, 2005, with the pianist Michael Chertock as the piano soloist. Machover scored the work for the standard Boston Pops formation, with a corps of three percussionists playing about two dozen instruments; the solo pianist plays the Yamaha Disklavier Grand, a kind of high-end player piano that is augmented through special Hyperinstrument software designed by Mike Fabio at the MIT Media Lab. The premiere performances were enhanced by an optional interactive video component created by Marc Downie.

The title pays playful homage to Debussy’s final orchestral score, *Jeux*, a “dance poem,” in Debussy’s words. As it was initially staged, *Jeux* was a ballet about two young women and a man whose game of tennis has been interrupted – they are searching for a tennis ball that has gone missing, and the search turns into a different set of games, romantic or psycho-sexual, and these new games have ambiguous rules. At the end, an unseen hand bounces a tennis ball onto the stage. *Jeux* is a work of great harmonic, metrical, and psychological complexity, and Machover thinks of it as a “spiritual antecedent” of his own piece.

In this instance, the two games are first the traditional one between the soloist and the orchestra, and second, the interplay between the human soloist and the “hyperpiano,” the Yamaha Disklavier Grand, which “augments, transforms, and splinters” the music that the soloist plays live, sometimes operating at speeds and a level of dexterity well beyond the possibilities of even an exceptionally well-trained pair of human hands – a mere 10 fingers could not possibly encompass this music. The resulting sonority transcends anything we might expect from an acoustic instrument.

The score indicates that a live note from the piano sometimes “triggers” a volley of pre-composed notes which the Disklavier plays; sometimes the computer *processes* the live piano notes, transforms them, and sends them back to the Disklavier, which plays them, physically but phantomly moving keys and pedals; and sometimes the live piano notes and articulations shape and modify music that is generated by the computer, and then played back on the Disklavier. The effect is brilliant and explosive, an aural 4<sup>th</sup> of July fireworks display.

There are three principal sections in the piece which is played without interruption, and three cadenzas for hyperpiano punctuate the work.

The first section, marked “swift and stealthy,” begins like Ravel’s *La Valse* with a pulsing rhythm in the bass rather than a melody or even an introduction. The composer describes the first movement as “like a rapidly flowing mountain stream, quiet and slightly mysterious.” True enough, although the rhythms sound 20<sup>th</sup> century and urban. At the climax the Disklavier goes crazy – memories of all of those famous and delicate water pieces by Liszt and Ravel are obliterated by a torrential cascade, and one thinks of Robert Southey’s famous poem from 1829, “The Cataract of Lodore”:

*Rising and leaping,  
Sinking and creeping,  
Swelling and sweeping,  
Showering and springing,  
Flying and flinging,  
Writhing and ringing,  
Eddying and whisking,  
Spouting and frisking,  
Turning and twisting,  
Around and around  
With endless rebound!*

*Smiting and fighting,  
A sight to delight in,  
Confounding, astounding,  
Dizzying and deafening the ear with its sound.*

The second section, “Freely lyrical,” sounds vaguely Baroque in the cut of the melodic ideas and the ornamentation of those ideas, if not in the harmony; birds seem to listen and supply their own ornaments.

The transition to the finale is interesting – a “solid, steady” section is anchored by a series of 24 successive low Cs from the piano and the bottom instruments of the orchestra; these gradually grow faster and accumulate thunderous volume and dense texture, melding full orchestra and fully extended hyperpiano. An aleatoric section – in which zigzagging cascades of flowing piano notes are literally *dialed* to the Disklavier from a mini-keyboard played by the soloist – gives way to the bumptious thoroughly C-major melody of the finale which bubbles along cheerfully over and through many rhythmic displacements. There is a last quick game of hide-and-go-seek between the Disklavier and the orchestra before the music slips over the horizon – you don’t hear pitches any more, only rhythm and a final pianissimo thump, like the mysterious bounce of a tennis ball tossed by an unseen hand.

*Richard Dyer wrote about music in the Boston Globe for 33 years and twice won the Deems Taylor/ASCAP Award for distinguished music criticism; he has also received two honorary doctorates. Since retiring from the newspaper, he has kept busy writing, lecturing, teaching and podcasting. He has served on the juries of several international piano competitions and is the dramaturg for Opera Boston.*

For more information on Tod Machover and his work:

<http://www.todmachover.com>

<http://opera.media.mit.edu/projects/jeuxdeux/>

<http://powers.media.mit.edu>

<http://opera.media.mit.edu>

[http://opera.media.mit.edu/papers/ICMC02\\_Sparkler.pdf](http://opera.media.mit.edu/papers/ICMC02_Sparkler.pdf)

<http://www.toysymphony.net>

<http://www.hyperscore.com>

<http://opera.media.mit.edu/projects/jeuxdeux/>

<http://operaofthefuture.wordpress.com/>

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TOD MACHOVER



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- 1) **Sparkler** (2001) [12:16]  
for orchestra and live electronics  
*Odense Symphony Orchestra*  
*Paul Mann, conductor*
- 2) **Interlude 1** — "After Bach" [1:55]  
(2006; rev. 2011)
- 3–5) **Three Hyper-Dim-Sums** [5:05]  
(2004) for string quartet  
*iO Quartet*
- 6) **Interlude 2** (2011) — "After Byrd" [2:37]
- 7) **...but not simpler...** [14:33]  
(2005) for string quartet  
*iO Quartet*
- 8–10) **Jeux Deux** (2005) [17:04]  
for Hyperpiano and orchestra  
*Michael Chertock, Hyperpiano*  
*Odense Symphony Orchestra*  
*Paul Mann, conductor*

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**...but not simpler...**  
Music of Tod Machover

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*Odense Symphony Orchestra*  
*Paul Mann, conductor*

2) **Interlude I** (2006; rev. 2011)—“After Bach” [1:55]

**Three Hyper-Dim-Sums** (2004) for string quartet [5:05]

- 3) “Glade” [1:44]
- 4) “Winding Line” [2:02]
- 5) “Punchy” [1:13]

*iO Quartet*

*Alexander Woods, 1st violin | Sarah Crocker, 2nd violin*  
*Elizabeth Weisser, viola | Chris Gross, cello*

6) **Interlude 2** (2011)—“After Byrd” [2:37]

7) **...but not simpler...** (2005) for string quartet [14:33]

*iO Quartet*

**Jeux Deux** (2005) for Hyperpiano and orchestra [17:04]

- 8) “Swift and Stealthy” [5:55]
- 9) “Freely Lyrical” [7:01]
- 10) “Buoyant and Precise” [4:07]

*Michael Chertock, Hyperpiano*  
*Odense Symphony Orchestra*  
*Paul Mann, conductor*

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*Sparkler, Three Hyper-Dim-Sums, ...but not simpler..., Jeux Deux*  
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Joanne Ciccarello / © 2011 The Christian Science Monitor

**TOD MACHOVER**—recently called “a Renaissance man for the 22nd century” (*The Guardian*)—is known for his innovative compositions as well as for designing new technologies for music. He is the Muriel R. Cooper Professor of Music & Media at the MIT Media Lab, where he directs the Opera of the Future Group. He studied with Elliott Carter and Roger Sessions at Juilliard and was the first Director of Musical Research at Pierre Boulez’s IRCAM in Paris. Machover has received numerous prizes and awards, including the “Chevalier des Arts et des Lettres” from the French government, and the 2010 Arts Prize from the World Technology Network (CNN/Time Inc.). He is renowned for his pioneering work with Hyperinstruments, which use technology to extend the expressive range of traditional instruments and to make active music-making accessible to all. Machover is especially recognized for his unusual operas, including the science fiction *VALIS*, the audience-interactive *Brain Opera*, and the robotic *Death and the Powers*. His music is published by Boosey & Hawkes, and recorded on the BRIDGE, Oxingale, Erato, Albany and New World labels.



**THE NEW YORK CITY-BASED iO STRING QUARTET** strives to find a common aesthetic vision between the works of the past and the works of today. The group was the 2006–2008 Billy Joel Graduate String Quartet-in-Residence at SUNY Purchase and the 2008–2009 Fellowship Ensemble at Monadnock Music as well as prizewinners of the 2008 Chamber Music Yellow Springs Competition. They were awarded the 2008 Chamber Music America Commissioning Grant for a new multimedia work by composer Du Yun. The group has performed at the Juilliard Quartet Seminar, Symphony Space, Kneisel Hall Chamber Music Festival, Greenwich House, Barge Music and in residencies and festivals throughout Europe and the United States. The iO has also recorded music of Poul Ruders for Bridge Records.





Photo: Heidi Lundsgaard

**PAUL MANN** has made a name as one of the most talented of the younger generation of British conductors. Mr. Mann trained in England as a pianist and conductor, and in 1998 won the Donatella Flick Conducting Competition, which enabled him to conduct many of the lead-

ing orchestras in England, the USA, Europe, Japan, Australia, and South America. In 2005 he was appointed as the Odense Symphony Orchestra's Chief Conductor. Maestro Mann has had extensive engagements conducting the London Symphony Orchestra, the Halle Orchestra, the Royal Philharmonic, Orchestra Internazionale d'Italia, the New Japan Philharmonic, the Norwegian Opera, the Norwegian Radio Symphony Orchestra, the Fresno Philharmonic, the City of Birmingham Symphony Orchestra and others. He also appears frequently with as a guest conductor with the New York City Ballet. He has recorded with the English Chamber Orchestra and the London Symphony Orchestra for Decca and Warner Classics. His recordings for Bridge Records include music of Poul Ruders (BRIDGE 9237), Stephen Jaffe (BRIDGE 9255), and "American Orchestral Song" (BRIDGE 9254).

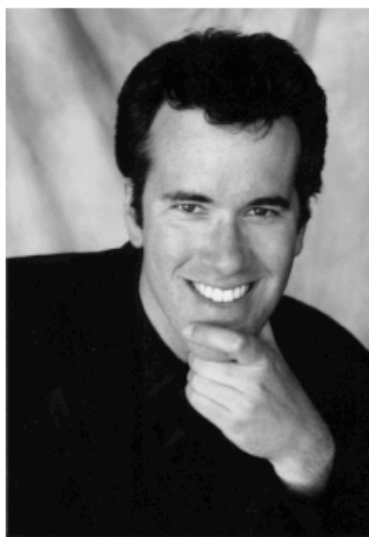


Photo: Gerald Bauer

**PIANIST MICHAEL CHERTOCK** has fashioned a successful career as an orchestral soloist, collaborating with conductors including James Conlon, John Morris Russell, Keith Lockhart, Andrew Litton, and the late Erich Kunzel. His

many orchestral appearances include solo performances with the Philadelphia Orchestra, l'Orchestre Symphonique du Montreal, the Toronto Symphony, the Baltimore Symphony, the Sofia Philharmonic, the Detroit Symphony, the Aspen Festival Orchestra, the Utah Symphony, the Oregon Symphony, the Indianapolis Symphony and the Boston Pops. He has conducted the Columbus, Ohio and Cincinnati Symphony Orchestras. Michael Chertock is Chair of the Piano Department at the Cincinnati College-Conservatory of Music and conductor of the Blue Ash-Montgomery Symphony Orchestra. He is a featured performer on over 30 recordings and has performed throughout North America, Europe and Asia.



The Odense Symphony Orchestra  
Alexander Verdernikov, Chief Conductor & Artistic Advisor  
Bjarne Hansen, Concertmaster

**T**HE ODENSE SYMPHONY ORCHESTRA was formally established in 1946, but its roots go back to 1800. The orchestra gives approximately 100 concerts per season, most of them in the acoustically superb Carl Nielsen Hall—the hall where the present recording was made. The Odense Symphony frequently tours abroad, including tours to the USA, China, Austria, Belgium, Germany, Greece, Holland, the Baltic countries, Russia, Spain and Sweden. The Odense Symphony's ongoing recording series for Bridge Records includes music by: Carl Nielsen (BRIDGE 9100); Poul Ruders (BRIDGE

9122 & 9237); Heitor Villa-Lobos (BRIDGE 9129); Alberto Ginastera (BRIDGE 9130); Stephen Jaffe (BRIDGE 9141 & 9255); Elliott Carter (BRIDGE 9177); George Crumb (BRIDGE 9253); "American Orchestral Song" (BRIDGE 9254); Paul Chihara (BRIDGE 9267); Fred Lerdahl (BRIDGE 9269) Chopin Piano Concertos (BRIDGE 9278); Yehudi Wyner (BRIDGE 9282); Ursula Mamlok (BRIDGE 9291); Dvořák Piano Concerto (BRIDGE 9309); and the Grammy-nominated "Best Classical Recording of 2006", and winner of the "Gramophone/WQXR American Music Award"; Music of Peter Lieberon (BRIDGE 9178).