PUBLICITY PARAGRAPHS ABOUT PROGRAMS WE HAVE HAD IN 2002-9 IN THE ENTERTAINING SCIENCE CABARET AT CORNELIA STREET CAFÉ

THE WORLDS WE MAKE UP SEPT. 6, 2009

People make up worlds out of bricks, molecules, words, thoughts. There's probably no better example than Entertaining Science itself--created 7 years ago when K.C. and Roald and Oliver and the Minister of Culture of this temple, Robin, concocted a program on the art and science of nothingness. (That in turn inspired the creation of yet another made-up world--KC's *Categorically Not!* series in Santa Monica--another story.) This is our reunion!

The constraints of the so-called "real world" seem limiting to people. But as the late physicist Frank Oppenheimer pointed out: There is no "real world" except as we make it up. Largely in response to his horror at the bombing of civilians in Hiroshima and Nagasaki, Frank created a "museum of human awareness" – the Exploratorium in San Francisco —a place where art and science allow people to discover that they *can* understand the complex world around them. Author and USC professor K.C. Cole will tell the story of the "other Oppenheimer" and the world he created, drawing on her new book: *Something Incredibly Wonderful Happens: Frank Oppenheimer and the World He Made Up.*

Neurologist and author Oliver Sacks will speak about how the brain, like nature, abhors a vacuum--and how, for instance, if there is no visual perception, as in the blind spot which all of us have, or in those who have lost their sight, the brain will create its own virtual reality by images or hallucinations. And Roald will ponder why we think up new molecules.

****

ACQUA! THE SOUNDS AND SCIENCE OF WATER June 7, 2009

What do a downtown duo exploring unusual acoustic instruments of wind, water, earth and metal, intricate textures, loops and grooves and a chemical engineer have in common? Well, let's find out! Pablo Debenedetti of Princeton, an expert on fluids and amorphous solids of all sorts, will co-examine familiar and strange water, in all its life-enhancing properties -- chemical, physical, sociological and...musical with the musicians of Lyrebyrd - Katie Down and Matt Darriau. Down, a downtown theatrical sound designer and composer also known for her musical antics in the Ukuladies, plays flute, glass harp and glass objects, steel cello, lithophone, and other assorted sounds. Darriau, of Klezmatics and Paradox Trio fame, is known for his expertise on Bulgarian kaval and gaida, Irish flute, alto sax and clarinets.

****

EL BAILE BACTERIANO! MAY 1 2009

Over millions of years, bacterial pathogens have co-evolved with their hosts, i.e. us! The biochemical interactions between microbes and the proteins in our cells are remarkable, intricate, a dance of sorts. Cindy Quezada, of the Stebbins Laboratory at Rockefeller University, will tell us about a newly discovered class of tools (NEL domains) used by some pathogens to take over ubiquitination, a key biological process. Ubiquitin can tell a protein where to go, what to do, and who to mingle with in the cell.

NELida Tirado, hailed as "magnificent" by the New York Times and featured as one of Dance Magazine's "25 to Watch" leading dancers in 2007, will culminate the evening by illustrating (accompanied by Cristian Puig on guitar/vocals and Peter Basil on cajon) intricate interactions of a different kind - those evolving between a dancer, singer, and guitarist in flamenco. Just like ubiquitin, a flamenco dancer signals - the spontaneous communication that arises between the dancer and musicians

results in an emotional, passionate and improvised performance. Join us for a night of dancing…in the gut and from the gut. ¡Olé!
****

ANNIHILATION! April 5 2009

There seems to be no shortage of ways to end things. Yet endings may be beginnings as well. Astrophysicist Nidhal Guessoum, also a writer and thinker on issues of science and religion in the world of Islam, will show the many ways of annihilation – from his work on matter and antimatter in the universe, to PET, a remarkable medical diagnosis tool based on the tell-tale signs of annihilation, through mysticism to video games bent on destroying worlds, and new ideas on rocket propulsion. Did you know that 10 billion tons of antimatter are produced and annihilated each second in our galaxy -- and astrophysicists can't figure out where that comes from?!

Fred Buchholz is a special effects man, with a very interesting career. That he has an ATF Permit to use High Explosives and is a licensed New York City Pyrotechnic hint at one side of what he does; his remarkable effects for the Muppets, TV and Film show other ways of inducing people to suspend disbelief. Fred will show some clips from his work with the Muppets, The Sopranos, as well as several feature films and talk about his work. And magician extraordinaire Mark Mitton will annihilate things for sure. Watch out, it may be you!
****

NANOARCHITECTURES: WHY MORE OF LESS IS MORE! March 1, 2009

Does theory guide experimental science or does metaphor? By using the very small--nanometric bits of matter and void--and an architectural metaphor as guide, materials chemist and nanoarchitect Debra Rolison describes how to adapt ethereal aerogels into materials that exhibit more: more opportunities to design functional materials with higher performance. Aerogels are the lightest solids known: composities of being and nothingness in which a thread-like network of solid (oxide, carbon, ceramic) winds through a sea of void. Just as the open space in buildings is critical to their usefulness--and aesthetics--so, too, the interconnected nothing in nanoarchitectures is critical to painting the walls, laying electrical wiring, and bestrewing about functional objets d'art. More of less truly is more!
****

JEDUTHUN'S HEIRS: JEWISH GENES, JEWISH GROOVES Feb. 1, 2009

From Old Testament priests to southern Africa, geneticist David Goldstein expands scientific orthodoxy to describe how patterns of genetic variation can be used to study Jewish history. Along the way we learn not only how different Jewish populations may have formed and how they relate to one another, but also about what kinds of genetic variation human populations carry, and what that variation means, in both health and disease. Variation of another kind will be will be provided by Reuben Radding (bass), Ben Holmes (trumpet) and Joey Weisenberg (guitar/mandolin). This trio of frequent collaborators will present some of their favorite Jewish music, including tunes from the repertoire of Dave Tarras, Naftule Brandwein, and others

****

FLEAS ON STEROIDS Jan 2009

Miriam Rothschild, the distinguished British entomologist, is brought to life by musician, playwright and actor Claudia Stevens in her short solo play, *Flea.* Dame Miriam despairs over being unable to save the world. At last she solicits advice from a flea, which encourages her to recreate an early experiment. San Francisco Bay Area composer Allen Shearer provides the music, both pre-recorded and performed live by Claudia. And especially for tonight's presentation at the Cornelia Street Café, Allen has added a short piece for solo flute, played by chemist and musician Jerry Meinwald. Who, using Rothschild's brilliant experiments on the

control of flea reproduction by the steroidal hormone level in a host-rabbit's blood as a jumping off point (!), will then tell us why steroids have intrigued chemists and biologists for over 200 years, what they actually are, where they come from, why we can't live without them, and how they are exploited by such diverse life forms as fireflies, toads, and Asian snakes.
****

A FUNNY THING HAPPENED ON THE WAY TO THE LAB Dec 2008
In conversation with Lavoisier, the Comte de Buffon once noted that, despite the King's claims for France, he only did science for the jokes. Some time later this got Bohr laughing, since Buffon was actually famous for not getting Linnaeus's double entendres, all of which, when told by Bohr, put Heisenberg in stitches, explaining how Barbara McClintock came to tell that famous joke about the gene, the cell, and the hatless Bolivian.

So you tell us, was there ever science without humor? Vince LiCata, David Ng, and Benjamin Cohen will take time off from their university day jobs to ponder the query, reading and performing. Mezzo Soprano Stephanie McGuire leavens this mix with science-related arias. New material is possible. Accidents will happen. Asymptotes included. Azeotropes not.
****

SCIENCE MEETS FILM Nov. 2008
Einstein said "Imagination is more important than knowledge". Tonight, a collection of short films curated by Alexis Gambis and Imagine Science Films (http://www.imaginesciencefilms.com) shows how science can be effectively incorporated in credible yet compelling fashion into fictional narrative filmmaking. In comedy, drama, intrigue, mystery, animation, these films take a shot at bringing science to the public through visual storytelling. We follow the late evening romance of a scientist with a Petri Dish girl, delve into the complexities of relationships as a beautiful woman falls for an architect who suffers from face blindness, cry with a girl who fights cancer with the help of her intergalactic superheroine alter ego, and chuckle at the comedy improv of a global warming scientist matching wits with some witless senators at a madcap hearing on coral bleaching.
****

Kluge: The Haphazard Construction of the Human Mind Oct. 2008
.... ventures a dramatic and entertaining answer to the question, *If evolution is so great, how come the human mind is so clumsy?* Four months before the two-hundredth anniversary of Charles Darwin's birth, NYU Professor Gary Marcus will tell you everything you need to know about evolution, and why it did such a half-baked job with the human mind.

Aaron Kheifets, downtown performance artist and cognitive-scientist-in-training, will lend a helping hand, in the key of comedy
****

WAVE/PARTICLE June 2008
What is light? Is its nature that of a wave or a particle? This question occupied Newton and Einstein, and remains an important dichotomy (or is it?) until this day. In a jam session on the nature of light, the "Illuminate Me" collective of light artists Kenny Greenberg and Clare Brew, choreographer Rachel Cohen and her dancers, composer Chris Becker and chemist Roald Hoffmann, will play with light, sound, dance and physics

****

WHY DO WHALES SING? May 2008
Clarinetist David Rothenberg, author of THOUSAND MILE SONG: Whale Music in a Sea of Sound, addresses this difficult question with the help of Princeton whale historian D. Graham Burnett, author of TRYING LEVIATHAN, and illustrious ECM violinist Michelle Makarski and drummer extraordinaire Lukas Ligeti. Are male humpback whales just singing to get the girls, like birds are supposed to be doing? How come no one has ever seen a female whale show

any interest in the song at all? Why do the male whales need to constantly change their songs even though no females are listening? And why was there such an important court case in early nineteenth century New York to determine whether the whale was in fact a fish? The music will blend whale and human melodies and rhythms together in the manner of Rothenberg's new CD, WHALE MUSIC.

****

IT'S THE WAY IT SHATTERS THAT MATTERS March 2008
So what are the biggest threats to our day to day safety? The facts may well come as a big surprise. Where are our real weaknesses? How come hips break? How do ballistic vests work? And what is crashworthiness? The drive to survive! Learn the answers to these questions from Nadine Levick, Emergency Physician and Injury Researcher - best known for her John Hopkins ambulance crash tests, awarded the International Society for Automotive Engineers Women's Leadership Award! And… conduct your own special and edible crashtest experiments and be entertained to the fabulous sounds of Dan Furman (Piano) and Michael Vitali (Drums) from the Primordial Jazz Funktets and the Dan Furman Trio who will transport you into some exhilarating musical inspiration to soothe your soul.

****

FIVE FEET HIGH AND RISING Feb. 3, 2008
From the Ilulissat Ice Fjord in Greenland, to the Pine Island Ice Shelf In Antarctica, New York University's David Holland invites us along on a journey from the extreme North to the extreme South. An expert in polar environmental science, Professor Holland discusses two of his recent field trips to investigate the possibilities of future global sea level change from melting ice sheets. Rolling icebergs, hidden crevasses, unstoppable mosquitoes, plane crashes, sun burn, frost bite, and snow blindness - it's all part of the quest to understand sea level change! Julia Meinwald, a talented emerging songwriter and recent graduate of Tisch's Graduate Musical Theatre Writing Program at NYU, will showcase (with the help of some friends) her original songs of water in all its emotional states.

****

SEACHANGE:REVERSING THE TIDE (Jan. 6, 2008) is a dramatic lecture devised, written and presented by scientist, Roger Payne and his wife, actress Lisa Harrow. Roger Payne, who discovered that humpback whales sing songs, has been working for the conservation of whales for decades. *SeaChange* weaves the knowledge of science and the wisdom of poetry into a compelling presentation arguing that the human species is not the overseer of life but an integral part of life's complex web, and that our survival requires that we attend not just to our own well-being, but also, to the well-being of that entire web of life.

SeaChange: Reversing the Tide blends the poetry of Shakespeare, Shelley, Robert Frost, Wendell Berry, Gary Snyder, Mary Oliver and others with a clear exposition of the consequences of our current indifference to Natural Laws and the benefits that can be achieved by living in accordance with those laws.

****

T**HINKING, FEELING** Dec. 2, 2007
Hiram Pines' one-man show, *The Day the Universe Came Closer*, travels gently and with wit through science, epistemology and religion tries to make a darn good case for the brilliance of the human instrument. Hiram, who recently moved to New York, will perform about half of the 45-minute stage play, focusing on a funny little thing that messed with our heads for hundreds of thousands of years. Neuroscientist Joseph LeDoux, from the Center for Neural Science at

NYU, author of "The Synaptic Self" and "The Emotional Brain," will talk about the separation of cognition and emotion in the brain and the consequences that has for our interpersonal (and international) relations. He will emphasize fear as the main example. LeDoux is also one of the founding members of the stellar downtown rock group, the Amygdaloids.

****

ALL IS PATTERN Nov. 4, 2007

What do galaxies, grapes, soil food webs, Zen ensos and dance troupes have in common? They are all patterns made of interacting parts. Tonight environmental scientist (and patternologist) Tyler Volk of NYU explores the nature of patterns in nature, culture, and the rest of the universe, and asks if there could be a science of everything based on patterns. His thoughts spin on the complementarity between patterns and their functions, for remarkable convergences are born when the forms that are woven by diverse scales of nature and culture (and even our minds) share common roles.

And what more quintessential patterns of culture are there than dance and music? When Claude Debussy chastised Erik Satie, remarking that the eccentric composer ought to "soigner sa forme"--pay better attention to form--Satie replied, not in words, but in music. His riposte is the "Three Pieces in the Form of a Pear," a short suite for piano four-hands whose witty irony (not without a touch of sarcasm) is already signaled by the fact that the music consists not of three pieces, but seven. Choreographer Christopher Caines, together with members of his dance company, presents excerpts from a new work in progress (specially arranged for the Cornelia Street Café) exploring this pivotal score in Satie'soeuvre. Caines, a 2006 Guggenheim Fellow, should prove the ideal choreographer to illuminate questions of structure, form, and pattern in the relation of dance to music.

****

HARMONIOUS TRIADS Oct. 7, 2007

The nineteenth century witnessed an incredible spurt of musical creation. And, in the same period, physicists and musical instrument makers, working together with composers and performers, tried to understand the nature of musical genius and virtuosity, the underlying physics of acoustics, and the instruments themselves. Myles W. Jackson, the new Dibner Professor of the History of Science and Technology at Polytechnic University, tells us of this exciting period. And talented young musicians, Pico Alt Violin; Christina Courtin Viola, and Jeremy Turner Cello, play a Beethoven string trio for us.

****

SCENTS AND SENSIBILITY: HOW YOUR NOSE KNOWS Aug. 30, 2007

The vertebrate nose is arguably the best chemical detector on the face of the planet. Even humans have quite a good sense of smell, as can be seen from the sophisticated aromas of gourmet food and wines (Cornelia!) and the fact that many products we use or eat contain an added flavor or fragrance – not to mention the several billion dollars we spend annually on products intended to alter our personal odors or make our bathrooms smell like pine forests. How do our noses accomplish these feats and provide us with some of the more ethereal sensual pleasures? How do perfumers blend art and science to create fragrances that give rise to these intangible sensations? Stuart Firestein, Professor of Neurobiology at Columbia University, and Christophe Laudamiel, Senior Perfumer at International Flavors and Fragrances, will discuss recent findings in the science of olfaction and then reveal the art of fragrance

creation by mixing – right before your noses – a few sketches and olfactory treats, including the enigmatic fragrance *Nuit Napolitaine*. And there will be a reading from a recent classic of olfactory literature.

****

CHANNELLING THE SOUND OF THE COSMOS July 1, 2007

Ever since the discovery of the 'quantum fluctuations' in the Cosmic Microwave Background Radiation in the early nineties, people have tried to figure out how the primordial structures in the universe emerged from 'nothing'. Stephon Alexander, a cosmologist at Penn State as well as a superb sax player and composer, will explore with us the origin and persistence of large scale structure formation in the universe. And, with his group, reinterpret this process through jazz improvisation, resonance and rhythm. He will be paired with composer and NYU music theorist Robert Rowe, whose work has two main strands: the programming of music composition and improvisation, and interactive music systems, in which composition is influenced by a machine analysis of human musical expression during live performance. If you will, a search for large- and small-scale structure formation in improvised and composed music over time.

****

THE FACE IN THE MIRROR: REFLECTIONS OF THE ANIMAL MIND JUNE 3, 2007

Do other animals share with us a sense of self? How big and complex a brain does it take to recognize that the one staring back at you in a mirror - is you! Diana Reiss, cognitive psychologist at Hunter College and senior research scientist at Wildlife Conservation Society presents her compelling work showing that dolphins and elephants, along with great apes and humans are members of an exclusive club whose members recognize themselves.

And can elephants make art and music? We'll explore this question with a brand-new video of musician Dave Soldier teaching and conducting the Thai Elephant Orchestra, and a presentation of elephant art by David Ferris, director of the Asian Elephant Art & Conservation Project.

****

HE SAYS, SHE SAYS, EITHER WAY IT'S ALL *PHALLACY* May. 6, 2007

She's a top art historian in a world famous museum. He's a distinguished professor of chemistry. She searches for artistic truth through connoisseurship; he finds scientific fact through cold material analysis. Between them stands the object of her affection: a revered classical statue long thought to be a roman original…and he just proved it to be a 16th century cast. But is it now worth less? Is it now less beautiful? As personal rivalries and professional reputations clash, how far will each go to prove the other wrong?

Renowned chemist and playwright Carl Djerassi will engage his biting wit to illuminate the background behind his new play *PHALLACY*, which is based on real events in a major European museum. Actors Lisa Harrow and Simon Jones will then preview a scene from *PHALLACY*, which will run at the Cherry Lane Theatre from May 15 – June 10.

****

ART, SONG, AND SCIENCE IN TIBET April 28, 2007

Richard R. Ernst, a scientist who later won the Chemistry Nobel Prize, discovered by accident in 1968 the beauty of Tibetan painting. He will share his personal fascination with Tibetan art through slides that reveal another cultural world; its philosophical and religious background will be touched. The attraction of Tibetan art comes from a highly perfected pictorial language that allows the painter to express eternal truths in vivid, easily understood images. This is an art of

nearly limitless creativity. And it is difficult to escape its colorful attraction. The speaker cannot, will not fully hide his own professional interests when he speaks also about pigment analysis and conservation of the delicate paintings.

The evening will feature a performance by Yungchen Lhamo, a compelling performer of Tibetan song, who explores with talent and deep feeling the country's traditional themes of spiritual pilgrimage and delight in nature. Yungchen has been called "a voice from the skies."

****

A RIFF ON THE WAY TO STRUCTURE April 1, 2007

Construction crosses the natural/synthetic divide, for we are destined to build – temples and music and molecules – just as nature assembles its generous complexity. There be building blocks, propensities, but most assuredly the process is dynamic, a coming on and coming off, a riff on the way to rich structure. Self-assembly is the subject of our evening. Molecular architect Shuguang Zhang, from MIT's Center of Biomolecular Engineering, shows us how nature and we build on the molecular scale, from the bottom up. And Lisa Karrer and David Simons perform music that assembles and re-assembles itself in real time, triggering sounds in unpredictable ways, asking the listener to create their own connective tissues of meaning.

****

ATYPICAL ANTIPSYCHOTICS: BENCH TO BEDSIDE TO BAND March 4, 2007

No, not the denizens of the Cornelia Street Café, but life-saving and controversial drugs. Herb Meltzer will describe his own journey from the chemistry lab to treating and studying schizophrenia, ground-breaking studies which revolutionized the treatment of this disorder. He'll give us his views of the current critique of antipsychotic drugs, where schizophrenia research is headed, and also what listening to music and schizophrenia have in common, at least with regard to brain chemistry.

Which brings us to the other component of this evening, the Amygdaloids. The rock band that really gets into your head is made up of four NYU scientists: the son of a Louisiana butcher (neurobiologist Joseph LeDoux), a former Israeli army soldier (cognitive neuroscientist Daniela Schiller), a dome builder (environmental scientist Tyler Volk), and a philosophy major (cognitive neuroscience researcher Nina Galbraith Curley). As Newsday says, "Heavy Mental."

****

MIRROR, MIRROR ON THE WALL Feb 4, 2007

Life exists only as one mirror image! Playing macro (our heart on the left, our liver on the right), or micro (all proteins and nucleic acids), nature chooses just one. In Denmark vs the Superbowl, a great organic chemist from Aarhus, Karl Anker Jørgensen, tell us how we, emulating and contending with nature, may control the making of one of the mirror-image forms of a molecule. And trumpeter and composer Poul Weis gives us his take on the mirror-image world in and around us.

****

COSI SIMILI, COSI DIVERSE Jan. 7, 2007

The tension of things being the same and not the same is in the soul of science and art. Roald Hoffmann will tell four chemical short stories of molecular identity: presumed, feigned, healing, lethal. In what seems – only that -- to be another world,

soprano saxophonist Joe Giardullo and percussionist Todd Capp explore the creative core of independence and unity.

****

I FORGOT TO LEARN TO FORGET Dec. 2006

How do you learn a habit and how can you unlearn it? Why do you not forget how to ride a bike, but it's hard, ain't it hard, to unlearn smoking? In tonight's exploration of recall and habit, painter and conceptual artist **Vitaly Komar** will present **Three-Day Weekend**, interwoven Christian, Jewish, and Muslim symbols that first appeared in his childhood dreams and resurfaced when he discovered the only photo of his intact family in Russia. Brilliant young violinist **Rebecca Cherry,** formerly principal violin in the London Symphony, will present selections from **The Compleat Victrola Sessions**, a collaboration with composer **Dave Soldier –** an evocation of the allure and danger of addiction in the 1920's, using black and white silent film with nostalgic, surreal virtuoso music. Neuroscientist **Dave Sulzer** will explain how the brain integrates wild stabs at success with feedback from the environment, how that underlies habit learning, and why a decision contrary to habit requires so much effort.

****

NAMING NATURE, Oct. 5, 2006

What's in a name? Robbin Moran, a taxonomist from the New York Botanical Garden, will tell us about the quirky Swedish botanist Carolus Linnaeus (1707-78), founder of modern taxonomy, and his influence on the scientific practice of naming the living world.

Does Linnaeus's creationist method of classification work in a Darwinian world? And will it survive molecular biology? David Wolfe, an ecologist at Cornell, takes up that side of the story -- how Carl Woese established that in a tree of life based on genetic information (as opposed to what things look like), the entire animal and plant "kingdoms" are just tiny twigs, and that most of our planet's genetic diversity and evolutionary history lie within the microbial domains. So is it Woese vs. Linnaeus, molecular vs. classical biology?

Anders Nilsson, an exciting Swedish jazz guitarist, will let us experience evolution in another way on his 11-string instrument – we'll hear how a Swedish folk melody changes over a few hundred years.

****

Chateau Jiahu, Vintage 7000 BC, Oct. 2006

This evening, you will have the chance to taste Chateau Jiahu, the most ancient, chemically-attested alcoholic beverage in the world, dating back to about 7000 B.C. It is a mixed fermented beverage of malted rice, wild-flower honey, and white grapes, fermented on a sake yeast with hawthorn berries. Patrick McGovern of the University of Pennsylvania Museum's Biomolecular Archaeology laboratory will discuss how his lab and colleagues resurrected ancient Chinese and Near Eastern beverages.

Darrin Siegfried, wine expert and restaurateur, former Sommelier Society of America President, will comment on the qualities of the new old wines, and lead the tasting. Music will be provided by Katie Down, playing water – whoops, wine – glasses. And choreographer and dancer Rachel Cohen will invest the peaceful glade of the Cornelia Street Café with her troupe of possessed women. Any bulls nearby may be sacrificed, for this night Dionysus rules!

****

BLUE CHOICES, Sept. 3, 2006

From blue pigments to the Blues, artists select what they need: this is a program about their choices. Marco Leona, a scientist at the Metropolitan Museum of Art, will talk to us about

pigments and color, from indigo to the remarkable Maya blue, and from the arrival in Japan of Prussian blue to the aniline invasion. Guitarist Kenta Nagai and percussion player Satoshi Takeishi, both composers as well, will take us down the road traveled by other blues, perhaps from the Mississippi delta to Chicago. Choosing instruments, choosing styles, creating harmonies.

****

SMALL TALK AMONG THE BACTERIA June 4 2006

Microscopic single celled organisms (a.k.a. bacteria) were, until recently, thought to live asocial lives. New research shows that bacteria are quite conversational, and that they talk with a chemical vocabulary. This chemical chit-chat is dubbed "quorum sensing" and it enables bacteria to act in unison to reap benefits and wreck havoc that cells acting as loners could never achieve.

Bonnie Bassler of Princeton University and the Howard Hughes Medical Institute will translate this bacterial language and discuss her group's efforts to develop anti-quorum sensing molecules for use as novel antibiotic therapies. Shadow puppeteers Todd Reichart and Jennie Lee Mitchell will explore the interesting things that happen when one becomes many and the many transform.

****

BIOMINERALIZATION: THE BEAUTY OF FUNCTION May 7, 2006

A mouthful, that word. Yet you feel the implicit paradox in it, of the soft and the hard. For soft as we are, we have bone and teeth (and wish they wouldn't fail us!). And there is nothing more beautiful in Nature than the shelters and solid inner structures that small and big critters alike have evolved. Lia Addadi of the Weizmann Institute and Joanna Aizenberg of Bell Labs will introduce us to this exquisite world of structure and function between the organic and inorganic. Agata Olek (an artist who will crochet anything from a Venice vaporetto to prostate cancer), working with actor Carol Haunton, will crochet balloons and a fairy tale to illuminate a Venus Flower Basket, a glass sponge which "traps" two shrimp in its interior. Maybe she'll crochet around you; watch out!

****

AFTERNOON OF THE CHIMERAS April 2 2006

Daniel Conrad, an award-winning filmmaker from Vancouver, will show us his two most recent films -- one bearing the title of this program, the other, "7 Universal Solvents." Both feature contemporary New York and Canadian dancers, and forces of nature. René Hen, who studies genetic models of anxiety and depression, will tell us of mutant mice and chimeras in modern biology. And Katarzyna Kaim and Roald Hoffmann will read some apposite poems by Wis_awa Szymborska.

****

IN YOUR EAR March 5, 2006

In one of our less plausible eighth grade lessons, we learned that hammers, plucked taut strings, and reeds stir up the air, and that clutter, passing through our ears... somehow emerges in the brain as music! This evening, composer/violist Karen Waltuch and her quartet (with Loren Dempster, Mary Wooten, and Leanne Darling) will most pleasantly fill our ears with air molecules vibrating in response to her original compositions. And eclectic Rockefeller University neurobiologist Jim Hudspeth will try to explain what *really* goes on in there.

****

DARWIN'S BIRTHDAY BASH Feb. 5 2006

So it's a week early…. But Darwin and evolution are in the air. And in the courts. Jonathan Weiner, the author of "The Beak of the Finch," tells some war stories from the people who actually watch evolution happen, anthropologist and entertainer Richard Milner will try out

some brash new songs on evolution, and master magician Mark Mitton will treat us to an "Evolution in Action" show. Now you can find out where those rabbits really come from!
****

NEON! Dec. 4, 2005
Something about intense, clear, colored light delights the eye and mind. Light artists Kenny Greenberg and Clare Brew, teaming up with dancer and choreographer Rachel Cohen, will create synaesthestic light fantasies for us. Roald Hoffmann will lapse into his professorial mode, and do a show-and-tell on emission, absorption, and line spectra, while Oliver Sacks recounts the remarkable history of the noble gases.
****

IMPROVISING ON CHAOS Nov. 2005
Our lives, careers, failures, loves and successes are as much directed by chance meetings as by our internal compasses. But surely science can make reliable predictions? Not so fast! Outcomes can still appear random, even if all the rules are known. Mathematician and poet Phil Holmes will expand on chaos theory and how it does and doesn't help one find one's way in the world. Poet Susan Case will tell how mathematicians hung out in the Scottish Cafe in Lvov before being swept into the vortex of World War II. A quartet, led by Ben Holmes (trumpet) and featuring Brian Drye (trombone), Take Toriyama (drums) and Reuben Radding (bass) will take the theme to music, with original compositions and free improvisations on traditional melodies of East Europe.
****

GM FOODS; MONSTERS OR MIRACLES? Oct. 2005
Europeans march in opposition. Africans leaders refuse American genetically modified corn while their people starve. And yet today our processed food almost all contains FDA-approved GM ingredients. Small-scale farmers in China and India are adopting GM crops as eagerly as large-scale American farmers. Who's right? Why the controversy? Nina Fedoroff, a leading biologist, author of "Mendel in the Kitchen: A Scientist's View of Genetically Modified Foods," answers these questions.....and any others you wish to ask. She is then joined by the exciting Murat Erdemsel talking about and performing Argentine tango.
****

FERNS Sept. 4, 2005
Companions to dinosaurs and Victorians, edible and poisonous, resurrecting, close to the earth and arboreal, unfurling, sexy, and mysterious --- ferns are very special, very ancient plants. Robbin Moran of the New York Botanical Garden, a world expert and author of "The Natural History of Ferns" will tell us of these plants. Oliver Sacks will read from his "Oaxaca Journal" about a recent fern society expedition; poet Liz Socolow will read some poems about ferns. And Reuben Radding on contrabass and Karen Waltuch on viola will play! It may be that the plants themselves will make a rare cafe appearance.
****

FROM SAMARKAND TO CORDOBA Aug. 7, 2005
There was a time when science, music, and art in Islamic lands represented high culture to Europe. These cultural strands continue to influence the world today. Elaheh Kheirandish of Harvard University will tell us about mathematics and science in the medieval Islamic world. Dave Soldier, a leading improvisational musician and composer on the New York scene, will play with his new group, The Spinozas (including Na'Ti Lachmy, Richard Khuzami, and Nelida Tirado), who mix contemporary gypsy/flamenco style with Middle Eastern traditions and the lyrics of Al Andalus. Islamic art historian Carol Bier will bring two contemporary carpets from Turkey, woven using traditional methods with natural dyes. Comparing patterns and the uses of color, she will explore symmetry and symmetry-breaking in what we call Oriental carpets.

SCIENCE AND THE MORAL LIFE – A MISMATCH? June 5, 2005
Science, done by human beings, has ethical and moral dimensions. A play by Vince LiCata, a biologist at Louisiana State University, explores this, with some dance and a little gun-play. The staged reading of "Mexican Hat Dance" will be directed by Barbara Bosch, with actors from the Hunter College Department of Theater. K.C. Cole, one of the founders of our program, and a great writer, will talk about the uneasy dance of science and government — past, present (and future?). And anthropologist and singer-songwriter Richard Milner will perform songs about Darwinian morality, angst, and politics from his acclaimed musical about the great evolutionist.
****

WHY DO BIRDS SING? May 1, 2005
Musician, writer, and philosopher David Rothenberg hosts an evening devoted to the topic of his new book with the title of this program (Basic Books, 2005) which shows how we need science, music, and poetry to make the most human sense out of what birds are up to. He's joined by Cold Spring Harbor Laboratory neuroscientist Partha Mitra, who has worked on zebra finch brains and cell phone communications, and is now trying to tackle the underlying structure of mockingbird songs. He will also sing some songs of the eminent Indian poet Rabindranath Tagore! Both are joined by Leon Gruenbaum on an instrument of his own invention, the Samchillian TipTipTipCheeepeeeee.
****

EIN STEIN FÜR EINSTEIN April 3, 2005
So, 100 years ago, Albert E. published some papers that shook the world of physics. It's the time and space to celebrate four dimensions of the man. In our own way: Humorist Steve Mirsky reports a deep conversation with Einstein's parrot; writer and journalist Fred Jerome will read some excerpts form his book "The Einstein File," detailing J. Edgar's Hoover's obsession with showing that Einstein was a dangerous subversive, storyteller Sharon Glassman updates Princeton's waltz toward an Einstein memorial. And the photoelectric, nonrelativistic Deni Bonet plays for Albert, on her blue electric violin.

****

SHUFFLE OFF THIS MORTAL COIL March 6, 2005
Indeed, we must, in time. And there's something to learn about life through death. In "Dreadful Sorry, Guys," performance artist Claudia Stevens's eerie vocalizations, interlocking monologues and fierce piano playing combine in a haunting, bittersweet and sardonic one-act inspired by the murder of a childhood friend by hate criminals. And the audience gets to sing and recite as well! Shai Shaham is a brilliant young biologist at Rockefeller University, who will tell us of his work on programmed cell death, apoptosis. From undead cells in the nervous system of an unusual research organism, the worm *C. elegans* (another coil), we learn how apoptosis might be controlled.
****

ECO-OPERA-EVO Feb. 6, 2005
Does anyone need convincing that life is an opera? We mean real life, not yours. Phoebe Legere ("...a name to conjure with ... She is an American original, she's fun, she's funny, she's smart. She's a beauty, almost like a Carole Lombard. But the main thing about her is SHE'S GOOD"-Studs Terkel, NPR) will use her latest invention, the Sneakers of Samothrace, to perform excerpts of her opera on the evolution of life, *The Common Root of All Organisms*. She is paired with Mark Moffett, an ecologist trained under E. O. Wilson. Mark, as close to Indiana Jones as they come, is one of the great nature photographers of our time. He will use his colorful images to discuss the common structural features of ecosystems.
****

RIGHT BRAIN, LEFT BRAIN? Dec. 2004
Ursula von Rydingsvard, a wonderful sculptor of mystery and memory in wood, will show images of her work. And Paul Greengard, a Nobel laureate neurobiologist from Rockfeller University will tell us of his studies of the mechanism of action of neurotransmitters, of therapeutic agents and drug abuse. They just happen to be a couple. And they do art and science, building structures large and small, their work calmly and intensely speaking to others, always trying to understand. Do art and science, have anything in common? What goes on in our mind when we discover and create? Avis Berman, a writer and art historian, will comment.
****

HOW MANY PEOPLE, PAST AND FUTURE? Nov. 7, 2004
On the day of the New York City Marathon, population biologist and applied mathematician, storyteller and musician Joel Cohen will remind us that there are more people in New York City today than there were in the entire world when agriculture was being invented at the end of the last ice age. Manhattan was then covered by thousands of feet of ice. The connection between warmer climate and more people is not accidental, and causation goes in both directions. What will the next 50 years bring for the human population? Tune in! For comic relief, Cohen will premiere some satirical songs and read from his book of scientific and mathematical jokes. He may even play a serious piano piece or two.
****

HOW VULGAR CAN YOU GET? Oct. 3, 2004
In French, “vulgarisation” means popularization, as of science. In English, the lovely populist sense of the word got buried in the shade of an elitist construction of 'vulgar' ("what we surely ain't..."). One of the great writers of science, K.C. Cole, will introduce us to the special landscape between vulgar and popular. Roald Hoffmann will show slides of a remarkable (some said weird) interaction of science and popular culture at the 2004 Carnaval of carnivals, in Rio. And Shawn Hansen and his band "The Brothers Zoto," including an FM radio transmitter and an imaginary banjo player, will expand that landscape further.
****

WINGED PSALTERIES, WINGED OYSTERS Sept. 5, 2004
What could they have in common? Yes, mollusks please our eye with their luster of pearls and the perfection of their shell form, while music moves our hearts. But it is not just aesthetics that unites musical instruments and seashells. Both man-made artifacts and living creatures change as time goes by. Musician and biologist Ilya Tëmkin will explore a biological metaphor in his work on the evolution of winged oysters and the reconstruction of the past of the Baltic psaltery, an ancient musical instrument of north-eastern Europe. He'll also play the psaltery and for the musical part will be joined by Michael Andrec, a bandura player, composer, and computational biologist
****

BORDERS Aug. 1, 2004
They are there, naturally -- in every living cell. Upscale, we build them (as did God in Genesis). To transgress them, of course, to transport things cross them.
Michael Klein, a molecular biophysicist with an artist's sensibility, will show us some of his wonderful modeling of the structures of the cell, and how they self-assemble. And Shoko Nagai (piano) and Satoshi Takeishi (audio processing, percussion) will assemble music(s) that cross borders.
%%%%%%%%%%%%%%%%%%%%%%

VOX HUMANA June 2004
Nothing touches us more directly, is more full of wonders and expressive power than the human voice. Nor more mysterious. Mezzo-soprano Stephanie McGuire will show us the magic, with arias from Bach oratorios through the operatic repertoire. And Johan Sundberg (from the

Royal Institute of Technology in Stockholm), a world expert on the acoustics of the human voice, will take us through the way the voice works, demonstrating along the way the tools that can take apart and reconstruct the art of a man or woman singing.
&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&
THE ENGINEER AND THE ARTIST May 2, 2004
Raffaello D'Andrea holds the distinction of being the only engineer to have a work of art in the National Gallery of Canada. The piece, known simply as 'The Table,' is a collaboration of D'Andrea, a control systems engineer at Cornell, with Canadian artist Max Dean. Their artwork responds to the presence of the viewer by trying to establish a relationship with the human observer.
D'Andrea and Dean will discuss this work and their collaborative process -- the meeting of art and technology, their differences in approach and the striking similarities in their working methods, goals and motivations. They will also describe past independent work -- D'Andrea is the coach/trainer of the champion (Cornell of course!) World Cup Robotic Soccer team -- and offer a glimpse into future possibilities.
.&&&&&&&&&&&&&&&&&&&&&&&&
SEEING, BELIEVING April 4 2004
The image, still or moving, remains the most direct way for the real to enter our consciousness -- to inform, misguide, entertain. Rosie Pedlow, a young UK filmmaker, has brought over from London a fresh, eclectic mix of original short art/science films. And Rutgers chemist and biophysicist Wilma Olson will show us how computer-generated imagery helps us understand the fine workings of DNA.
&&&&&&&&&&&&&&&&&&&&&&&&&&
A PLANET IN OUR HANDS March 2004

So we've perturbed the great cycles of our world (Rob Socolow from Princeton, one of the participants, thinks about that). Soon, we will begin to believe that we can control them. Shall we, can we manage this blue planet in a rational and ethical way?

The issues, just a bit controversial, will be brought out by Socolow and writer Evan Eisenberg (author of the evocative "The Ecology of Eden"). In exploring the fault lines between wildness and control, they'll be joined by the inventive duo of percussionist Todd Capp and wind player Daniel Carter.

%%%%%%%%%%%%%%%%%%%%%%%%%%
TRANSFORMATIONS Feb. 1, 2004
What choice but to create, to take one thing into another? By way of example, Shoko Nagai (piano) and Satoshi Takeishi (audio processing, percussion) make haunting, compelling music out of essential transformations. And Roald Hoffmann shows how there is no better emblem for true change than chemical reaction.
%%%%%%%%%%%%%%
Nov. 30, 2003 COLTRANE, EINSTEIN, AND COSMOLOGY
In an interview near the end of his life Trane was asked to identify the
person he respected most. He replied "Albert Einstein". Coltrane's spiritual quest through music balanced improvisational allusions to Eastern and African symbolic forms with the theory of general relativity and cosmology.
Stephon Alexander, a cosmologist and musician at Stanford, will talk of the relationship between Coltrane's approach to jazz improvisation and the theory of general relativity and quantum gravity. And he will play a few pieces on sax, some of Trane, as well as Stephon's own compositions, which explore this connection. He'll be accompanied by Papa Smurf, a freestyle rapper, and a percussionist.

Storyteller Sharon Glassman was recently asked to investigate the current culture of Einstein in Princeton for Seed Magazine. She'll debut her upcoming essay -- including questions about Einstein's second violin, extremist fans, and a long-debated Einstein statue-in-progress to be erected in 2005 on E=MC Square.

&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&

Nov. 2, 2003 **HIDDEN WATER**

Without it there would be no life, no rainbows, no blue planet. After our first nine months in water heaven, we emerge to find this resource in jeopardy. David Wolfe, Cornell professor of ecology and author of "Tales From the Underground: A Natural History of Subterranean Life," begins our story with a poetic twist, including a remarkable contribution from James Joyce. Seattle-based photographer Alexis Wolfe continues with a visual perspective. Then Uri Shani from the Hebrew University of Jerusalem tells of the "miracle" of water flowing upward from roots to leaves in tall trees, no pump in sight. And wonders why nature requires such a huge expenditure of precious water by the plant kingdom.

Judy Joice and Murray Weinstock, who perform regularly at the Café with Stu Woods on bass, will bring us songs of the gentleness of water rolling in and tickling your toes, of the neglect and abuse of water as well as its healing powers, through Blues, Gospel and Jazz compositions.

&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&

FOREVER AMBER Oct. 2003

Several years ago David Grimaldi of the American Museum of Natural History, curated a wonderful exhibition on this unique organic material that survives millennia. And gives us a clear window on the invertebrate past. He will show spectacular images of insects in amber, in conversation with Alex Shedrinsky, a New York chemical detective, who will reveal amber forgeries (don't bring in your necklaces, please, unless you are strong). Alex will also show some of the first pictures of the restored Amber Room of Catherine's Palace near St. Petersburg.

An insect, trapped -- a two word description of a 20th century literary masterpiece. Can you guess what it is? We'll hear a piece of it. Unless we are diverted on the low road to another kind of masterpiece...

&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&

OPEN HEART & THE ORGAN DONORS. A father-son literary-musical exploration of the heart and allied precious organs. Sept. 7, 2003

Award winning novelist and medical writer Jay Neugeboren, talks about the before, during, and after of his emergency quintuple bypass heart surgery, of how, after two doctors missed the diagnosis, his life was saved by several doctor friends, one of whom, from 3000 miles away, got the diagnosis right, and of what Jay learned about the nature of disease and diagnosis, the state of contemporary health care, and the doctor-patient relationship. Appearing with Jay will be at least one of these friends--Gerald Friedland, Director of AIDS programs, clinical and research, at Yale-New Haven Hospital and Medical School. Moving north and south, from the heart to other vital organs, Jay's son Eli will appear as lead singer for *The Organ Donors*, a rock group that features several sexy nurses (*The Percadettes*), funky beats, psychedelic guitar riffs, singalong choruses, litanies of symptoms, and slapstick, porno science rap.

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

HARD/SOFT WARY Aug. 3, 2003

The Internet and the ubiquity of personal computers have changed the way human beings

relate, and changed the way we think about machines. Choreographer/singer Christopher Caines will perform dream.screen, a solo work in progress for voice, electronics, and percussion that examines the effects of Web-mediated communication on language and emotion. And Hod Lipson, a computer scientist and engineer at Cornell will
talk (and show some video clips) on his new work on evolutionary robotics.

&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&

CONNECT THE DOTS, JUNE 1, 2003

What do a glass bubble, a math problem, Global Positioning Systems, and a novel made into song have in common? Taking off from the Surrealist “Exquisite Corpse” drawing game, the participants -- Jill Reynolds, a glass artist and sculptor who references science, Robert Berkman, mathematician and teacher, Jonathan Levi, writer and musician, and Greg Lock, a sculptor who uses GPS data to invent virtual objects, will make the connections. Nancy Manter, daughter of an artist and medical scientist, will begin the evening by sharing her own set of dots, while introducing the individual presentations.

&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&

WHY NOT? May 4, 2003

The Shavian serpent's "You see things and you say 'Why?'", but I dream things that never were and say, 'Why Not,"" might just be a reflection on the difference between science and engineering. Or an argument for transgressing, in the service of creation, the natural/unnatural boundary.

Nadrian Seeman of NYU, who builds nanoscopic stick figures, devices and patterned arrays out of DNA, and choreographer Rachel Cohen and artist Agata Oleksiak, who play with potential and actuality of the human body through movement, clown and mask, costume, and film, explore this theme in Roald Hoffmann's May 4 Entertaining Science at the Cornelia Street Café.

&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&

MUSIC ON THE BRAIN April 6, 2003

By what seeming magic is music invented and played? How, exactly (or not), is it perceived and experienced? Swedish neurophysiologist and concert pianist Fredrik Ullén will play, and discuss his studies of how the brain controls music performance. In this evening of action and reflection on music, he will be joined by Carol Krumhansl, a cognitive scientist from Cornell, who will tell us of her fascinating work on tension and emotion in music, testing the psychological reality of proposals from music theory. They will ask (but not answer) the question of why music plays such an important role in the human experience.

&&&&&&&&&&&&&&&&&&&

March 2, 2003 **HEAVY METAL**

Malleable, reflective, conducting, magnetic or not – metals have fascinated humanity. And led to music and art, in several ways. On this metallic evening, see sculptor Daniel Brush’s images of his gold and steel works, and listen to Oliver Sacks, whose recent book is “Uncle Tungsten”, as he speaks of and demonstrates some real heavy metals. Composer and musician Elliott Sharp will play some apposite music on a steel guitar, and Roald Hoffmann may broach the gamma brass problem.

&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&

February 2003

Dancing Hypercycles, Songs of Leprosy

This evening of biological song and dance features a mother and son act -- microbiologist Helen Davies, an award-winning professor at the University of Pennsylvania Medical School, and her son, Vancouver filmmaker Daniel Conrad. Conrad left a career in molecular immunology to make experimental dance films (full of biological metaphor) for the Canadian Broadcasting Corporation, and documentaries on connections between art and science for PBS and Bravo. He will show two short dance films and explain how films are structured like organisms (an idea first proposed by Sergei Eisenstein). Davies will talk and sing (gasp!) about leprosy, gonorrhea, herpes, dengue fever, and other infectious diseases. Song sheets (properly autoclaved) will be handed out, so the audience can sing with her.

&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&

January 2003

GOOD VIBRATIONS

Rapport, linkage, consonance -- that's exactly what musician/engineering professor Ken Jolls will bring to the Cornelia Street Cafe on January 5. With musicians-turned-health-care-professionals Linsy Farris, Hal Winfield, and David Levine on bass, guitar, and drums, Ken will demonstrate just how "good vibe-rations" can be. A long-time devotee of the instrument made popular by Lionel Hampton, Ken and his healthy quartet will play tunes from the great years of jazz.

But what would an engineer be without a little science? Don't be surprised if you hear something also about vibrating bars and sine waves and organ pipes and dampers and fistfulls of mallets (with even a little body english thrown in to make it all work). Leave your worries at home -- there'll surely be a doctor in the house!

&&&&&&&&&&&&&&&&&&&&&

December 2002

NOW YOU SEE IT, NOW YOU DON'T at the Cornelia Street Café

Science will never seem more magical than on this evening. Koji Nakanishi and Ged Parkin are Columbia University chemists who will let the audience into at least two of their lives. While Nakanishi studies the intimate details of the chemistry of vision, Parkin figures out how inorganic catalysts do their wonders. And they are magicians. They'll show a far from gullible audience how we see, or maybe don't see, what is plainly in sight. And, extending the theme of mastery of mystery to sound, the one and only Pamelia Kurstin will play the Theremin.

&&&&&&&&&&&&&&&&&&&&&&&&&&&&&

November

LIVING SPACE at the Cornelia Street Café

No, not that perfect cheap apartment in the Village, but a quantum leap into the world of dance and science. For the stage of the Cornelia Street Café, only about a thousand times smaller than the Met's, choreographer and dancer Diann Sichel has created a dance for Melanie Velo-Simpson and Josiah Pearsall, accompanied by singers Wendy Baker and Erik Kroncke. All are Tigers, of the Princeton species. There will be music by percussionist Chacho Ramirez and flutist and composer Carolyn Steinberg, and poetry of dance by Ellen Goellner. And motion under constraint turns out to be a hot theme in chemistry and biology as well, as Roald Hoffmann, the host of the Entertaining Science series, will describe. The audience may be moved, and not only to ask questions.

&&&&&&&&&&&&&&&&&&&&&&&&&&

GET LOST IN TRANSLATION at the Cornelia Street Cafe
So much more than changing “me” into “*moi*” or H2O into water, the act of translation is central to both art and science, and especially the busy borderlands between the two—a lively chit chat in which metaphor, emotion, number, image, argument are all part of the equation, all have something to add to the conversation. Come and hear masterly translators Dava Sobel (“Longitude,” “Galileo’s Daughter”), K.C. Cole (“The Hole in the Universe,” “The Universe and the Teacup,”), cosmologist Marcelo Gleiser (“The Prophet and the Astronomer,” “The Dancing Universe,”) and chemist, poet and playwright Roald Hoffmann talk about the tricky (and treasonous?) art of transference through which thoughts turn into words, observations into theories—sometimes, even water into *vin*.

&&&&&&&&&&&&&&&&&&&&&&&&&&

THE SMOOTH AND THE WILDLY ROUGH
Human beings struggle to understand and represent the world's deep structure through mathematics, science, art, music and poetry. On Sept. 1, yes, the evening before Labor Day, mathematician Benoit Mandelbrot, largely responsible for fractal geometry, will show and discuss a few of his mathematical pictures. Some mimic mountains or clouds, while others are very complex and first shock but soon look oddly familiar, especially to the artist. He will wonder why, and ponder the everlasting struggle in our minds between the word and the picture. He will tell old and new stories of: iconoclasts and other humans, stories of reason and unreason, bold hope or despair, in the search for smoothness in a world that is in every way wildly rough. Emily Grosholz, a poet and philosopher, will read some of her poems on mathematical themes. And Elliott Sharp, a composer and experimental musician inspired by fractals and mathematics, will show us what an electric guitar can do in an autoreferential mode. Join us for an exciting evening in Roald Hoffmann's "Entertaining Science" series!

****
NOT JUST SO STORIES
Telling stories is quintessentially human, a deep source of satisfaction in science as well as in music and life. As Roald Hoffmann's Aug. 4 "Entertaining Science" program at the Cornelia Street Cafe will show. The evening will begin with chemist Mark Green telling us what George Washington, Adolph Hitler and an Egyptian pharaoh have to do with how helices tell left from right. Singer, songwriter, and musician Eve Moon will entertain us with some story-telling songs. And writer/performer Sharon Glassman, who creates sparkling, witty, and sad monologues from almost-true stories, will explore the science of love from Cupid's point of view. And Roald Hoffmann will reflect, briefly, on why stories are important to scientists, even as they don’t fess up to telling them.

****
METAMORPHOSES II
Not only on Broadway, and not only by Ovid -- musical and molecular metamorphoses are the themes of Roald Hoffmann’s July 7 “Entertaining Science” show at the Cornelia Street Café. Insects are the best chemists…. but have you ever wondered how they transform plant poisons into pheromones? How metamorphoses can be blocked to guarantee perpetual youth (well, actually perpetual immaturity)? In another realm, how did J.S. Bach’s alchemy transmute elementary themes into musical masterpieces? Chemist Jerrold Meinwald, musicologist

Charlotte Greenspan, and molecular biologist Joseph Arron team up to illuminate these and other metamorphic mysteries with a unique combination of words and live musical performance.

****

THE TWO-FISTED SINGING UNIVERSE

Can the Big Bang tell us about life? Come Sunday, June 2, to the Cornelia Street Café and find out. Roald Hoffmann's "Entertaining Science" series will a host a triple response: Leading cosmologist, Joel R. Primack (University of California, Santa Cruz), will talk about "Gravity, the Ultimate Capitalist Principle." Nancy Abrams, Cosmic Troubadour, will perform several songs from her new CD, "Alien Wisdom." And NYU physicist, Richard Brandt, 3-time international Tae Kwon Do champion, ten times on the David Letterman show, will show us the tie between the physics of sports and the universe.

****

THE ART OF THE BRAIN

Strewing the world with all the wonders of its creation, the human brain remains the most splendid mystery. Come on April 7 to the Cornelia Street Café, where Roald Hoffmann will host three perspectives on the brain's richesse in the "Entertaining Science" series. Neuroscientist Joseph LeDoux will talk about his work and ideas on the Synaptic Self. British theatre artist Jack Klaff will interweave reflections on improvisational comedy and screen acting with insights from his other profession: science communicator. Central to the evening will be writer extraordinaire Diane Ackerman's poetic fantasias on what's so magical about what the brain does, and why/how Shakespeare's brain was different.

****

BLIND WILL AND SELFISH DNA

What do Schopenhauer, DNA and electronic drum music have in common? Come and find out in the March 3 "Entertaining Science" program curated by Roald Hoffmann at the Cornelia Street Café (March 3, 6PM). Schopenhauer's striking thesis that the world is driven by a "blind will" is related to the drive of "selfish genes" to propagate themselves in a remarkable, poetic exposition by Swedish-Hungarian writer and tumor biologist George Klein. Lukas Ligeti, a talented young Austrian composer and musician (with Hungarian roots, recently moved to New York) will play some apposite electronic music of his own (joined by a friend in part), influenced by African musical traditions. And the participants will then enter with Roald Hoffmann in a discussion, with some Hungarian and American poetry read. It may even be that Edgar Allen Poe will put in an appearance.

WHAT'S SO FUNNY ABOUT SCIENCE?

When one considers that human beings still regularly slam their thumbs with hammers, it should come as no surprise that our attempts to unravel nature's profoundest truths might include comedy. In fact, some science and more than a few scientists are funny. Or at least do funny things. As part of the "Entertaining Science" series, Feb. 3, at 6 PM, at the Cornelia Street Café, Roald Hoffmann hosts four takes on humor in science, featuring Marc Abrahams, editor of the science humor journal Annals of Improbable Research and Impresario of the Ig Nobel prizes; Jim Lyttle, a management professor at Long Island University, who studies the science of humor itself, including the brain's processing of funny stuff, Lynda Williams, the Physics Chanteuse, and Steve Mirsky, Scientific American magazine's humor columnist (which he likens to making the best sloppy joes at the culinary institute) The evening will be funny. Seriously.

Roald Hoffmann, who last appeared at the Cornelia Street Café in May in the company of Oliver Sacks and K.C. Cole, starts a brand new monthly Science at the Cornelia St. Cafe series on Sunday January 6, 2002 at 6pm. Featured in the inaugural event will be biologist Lynn

Margulis, her son and writer extraordinaire, Dorion Sagan, and musician, writer and philosopher David Rothenberg. Their subject is… “Thermodynamics and the Purpose of Life.”

Have you ever wondered why we are here? Expect the poetic, the unexpected and, last but not least, a new scientific reason for the purpose of life. With music. Just as the difference between high and low pressure masses explains why a tornado swirls into existence, so the difference between hot sun and cold Earth may explain why life behaves as it does.

What on earth these people can do to address this tantalizing subject, remains a mystery. But, we anticipate on January 6th all will be revealed.