



# PHI BETA KAPPA

THE KEY REPORTER

FALL 2010



JACK BOGLE AND ELON MUSK  
JOIN ΦBK LECTURE SERIES



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## NO SENSIBLE PERSON THINKS THAT HAVING SOMETHING WRITTEN DOWN IS BETTER THAN KNOWING IT.

— SOCRATES, IN PLATO'S "PHAEDRUS" (PARAPHRASE)

Since the 1830s, there has been no secret about the fact that "Phi Beta Kappa" stands for a Greek phrase that means "Love of learning is the guide of life." The metaphor of guiding is rooted in the Greek word for a helmsman, who steers a vessel on a voyage. So when we look at our key, and see the odd little hand pointing up through the Greek letters to a cluster of stars, it is not far-fetched to see this as the helmsman's hand, indicating the stars to steer by. In this age of GPS we steer by information from newer stars, perhaps, but success in finding our way still requires learning, and access to the media that provide it.

As media change, the hand — still pointing to the stars — reaches for different devices, with new capacities and new hazards. Plato's Socrates, in "Phaedrus," expresses concern about the intellectually deleterious effects of the shift from conversation to the written word. Now we worry about the shift from words on paper we can hold in our hands to the evanescence of the lighted screen. From speech to writing to printing to electronics, the modalities of learning's conveyance evolve.

And Phi Beta Kappa's use of them evolves. This year we have taken major strides in the digital world. The Society's Web site, over a decade old, grows daily in sophistication and utility. Visit us, as they say, at [www.pbk.org](http://www.pbk.org), and we hope that much of what you need and expect from the Society will be available there, including *The Key Reporter* (and its archives) via interactive reader or in PDF format. (You can also update your contact information there.) *The American Scholar* has its own Web site, [www.theamericanscholar.org](http://www.theamericanscholar.org), where you can browse its riches in electronic form and also subscribe to the print edition. The *Scholar* also has certain "Web-only" goodies available online.

But beyond presenting traditional content in digital form, we are also engaging social networking opportunities. There is a Phi Beta Kappa presence on LinkedIn, the professionally-oriented social network. In a very short time, a measurable percentage of our overall membership have availed themselves of this mode of connecting with other members. Recent discussions there have compared favorite podcasts; featured hopes, confessions and testimonials concerning *Moby-Dick*; and discussed maintaining the life of the mind post-academe. On Facebook, members (and others) can become "fans," gaining access to other member fans' entries and activities of interest, such as Visiting Scholars and Phi Beta Kappa Association events. There is also a vibrant book discussion thread. Following the tweets on Phi Beta Kappa's Twitter page will provide information about Society activities and offer links our staff believes might be of interest to people who care about education in the liberal arts and sciences and the values they imply.

Those Socratic observations about the limitations of the written word are, by the way, still worth our continued attention. Plato considered them (perhaps created them); he went ahead and wrote anyway. As for the opportunities and risks of the new communication tools, we are all still learning. But we'll go ahead, mindful that Socrates would offer some useful cautions.

John Churchill  
Secretary

*The Secretary's review of David Potts' Liberal Education for a Land of Colleges (Palgrave Macmillan 2010), a critical re-presentation of a historic manifesto on the liberal arts and sciences, is accessible on the ΦBK homepage at [www.pbk.org](http://www.pbk.org).*

# SPOTLIGHT



Austin Kiplinger became a member of Phi Beta Kappa at Cornell University in 1939.

*In the turmoil of today's intellectual world and the speed of change in technology, I think the liberal arts are more important than ever before. The rate of change itself calls for an understanding of fundamentals which is, after all, the central purpose of the liberal arts.*

— Austin Kiplinger

Austin H. Kiplinger, editor emeritus of *The Kiplinger Letter*, has had a journalism career spanning more than five decades as a reporter, broadcast commentator and editor, specializing in business and political affairs. During his college years at Cornell, where he became a member of ΦBK in 1939, he was a part-time reporter for *The Ithaca Journal* and The Associated Press. His full-time reporting career began in 1940 with the *San Francisco Chronicle*.

After World War II, in which he served as a Navy aviator in the South Pacific, he helped launch *Changing Times*, the nation's first magazine of personal money management, now titled *Kiplinger's Personal Finance Magazine*.

In 1948, Kiplinger became the front-page daily columnist of the *Chicago Journal of Commerce*. During the 1950s, he was a Chicago newscaster for the

*Continued on page 10*

## CONTENTS

### FROM THE SECRETARY

- No Sensible Person Thinks That Having Something Written Down Is Better Than Knowing It 2

### ΦBK NEWS

- The Phi Beta Kappa Lecture Series Brings the ΦBK Experience to You 4

- Senate Nominations for 2012 Elections 5

- Nominations for Hook & Humanities Awards 5

- The Examined Life: A Poet Talks About the Power of the Liberal Arts 6

*by Jennifer Richter*

- The Manifold Problems of Technology Forecasting 7

*by Andrew Odlyzko*

- Terrible-Lizard-Happy-Dream Kingdom: The Origins of *Dinotopia* 8

*by James Gurney*

### FROM OUR BOOK CRITICS

- Reviews 12

### ON THE COVER

Students gather for conversation in the shadow of Sinclair Memorial Auditorium, one of the iconic landmarks on the Coe College campus. Coe College is hosting the Phi Beta Kappa Traveling Exhibit from August 2-October 30. For more information about the exhibit at Coe, see the "Online Calendar" on the ΦBK Web site at [www.pbk.org](http://www.pbk.org).

# The Phi Beta Kappa Lecture Series Brings the ΦBK Experience to You

Launched in January 2009, the Phi Beta Kappa Lecture Series is one of the Society's most exciting new initiatives. Providing an occasion for intellectual fellowship and opportunities for members to participate in a larger, national discussion about the important issues of our time, this program marks an inspired return to the Society's first principles. In collaboration with our associations and chapters, the Phi Beta Kappa Lecture Series is bringing some of our country's most interesting and important public intellectuals to speak to members in cities throughout the U.S. Reserve your seat for the next lecture, and reconnect with the love for learning and dialogue that inspired the founding of Phi Beta Kappa.

## JOHN C. BOGLE

Nov. 3, 2010 ♦ Philadelphia



John C. "Jack" Bogle, the creator of the first index mutual fund, is founder of The Vanguard Group (one of the two largest mutual fund organizations in the world) and president of Bogle Financial Markets Research Center.

Widely acclaimed for his role as the conscience of the mutual fund industry and an advocate for individual investors, Bogle has led a tireless campaign to restore common sense to the investment world.

In 2004, *Time* magazine named Bogle one of the world's 100 most powerful and influential people. In 1999, *Fortune* designated him as one of the investment industry's four "Giants of the 20th Century."

On November 3, Bogle will discuss his most recent book *Don't Count on It!: Reflections on Investment Illusions, Capitalism, Mutual Funds, Indexing, Entrepreneurship, Idealism, and Heroes* (forthcoming from Wiley in November 2010). The lecture will be held in Philadelphia.

Bogle has served as Chairman of

the Board of the National Constitution Center since September 1999. He is a member of The Conference Board's Commission on Public Trust and Private Enterprise, the American Philosophical Society, and the American Academy of Arts and Sciences. He also served for many years on the ΦBK Investment Committee.

He earned his bachelor's degree in economics at Princeton University, graduating *magna cum laude* in 1951.

## ELON MUSK

Jan. 8, 2011 ♦ Los Angeles



On January 8, engineer, entrepreneur and philanthropist Elon Musk will speak on the subject of sustainability in energy production and transportation. The lecture will be held in Los Angeles.

Perhaps best known as a co-founder of PayPal, Space Exploration Technologies (SpaceX), and Tesla Motors, Musk has been fascinated by electric cars for two decades.

After earning bachelor's degrees in physics and business from the University of Pennsylvania, he worked briefly on ultracapacitors at Pinnacle

Research in Silicon Valley to understand their potential as an energy storage mechanism for electric vehicles.

He planned to do graduate studies at Stanford in materials science and applied physics but put school on hold to start Internet companies Zip2 and PayPal, now the world's leading online payment service.

Musk currently serves as the chairman, product architect and CEO of Tesla Motors, as CEO and CTO of SpaceX, and as chairman of SolarCity, the nation's first and largest full-service solar provider.

He is chairman of the Musk Foundation and a trustee of the X Prize Foundation which share an interest in renewable, environmentally friendly energy technologies.

The inspiration for the character of genius billionaire Tony Stark in the *Iron Man* films, Elon Musk was named by *Time* magazine as one of the 100 people who most affect our world. ■

## TICKETS & INFORMATION

The next event in the series, a panel discussion on corporate environmental best practices, will be held in Los Angeles on October 18 at the Fowler Museum on the UCLA campus.

These and other lectures in the series are open to Phi Beta Kappa members and their guests. Tickets must be purchased prior to the event through the ΦBK Web site at [www.pbk.org/lecture](http://www.pbk.org/lecture). (You will need to log in using your member ID.)

Want to make sure you are on the mailing list for lectures in your area? Write to [lecture@pbk.org](mailto:lecture@pbk.org).

For additional information, visit the ΦBK Web site, follow us on Twitter or call the national office at (202) 265-3808.

## Senate Nominations for 2012 Elections

The 43rd Triennial Council of the Phi Beta Kappa Society will meet Aug. 2-4, 2012, at The Breakers in Palm Beach, Fla.

New members of the ΦBK Senate will be elected at the council, and the Nominating Committee invites Society members to propose candidates.

The deadline for nominations is April 1, 2011.

ΦBK Secretary John Churchill has asked for broad participation in the nominating process. "This invitation represents the committee's need for the support of a broad cross-section of the Society in the electoral process," he said. "The committee hopes that members can assist in making the Senate's membership reflect the diversity of the Society itself in every dimension, including professions and callings, especially those outside academe."

Churchill noted that the committee has been guided for some years by the

report of an ad hoc committee chaired by former ΦBK Senator Alonzo Hamby, recommending that measures be taken to increase the proportion of Senate nominations from outside higher education.

"Members who are considering offering names for the committee's consideration are encouraged to support the aim," Churchill said.

The Council Nominating Committee includes Joan Ferrante, Werner Gundersheimer, Ralph Hexter, Karen Kupperman, Michael Lubin, Niall Slater, William Reinhardt and Pauline Yu.

Nominations must be made on a form that is available on the ΦBK Web site at [www.pbk.org](http://www.pbk.org). If you do not have internet access, please call the national office at (202) 745-3235. ■

## Nominations for Hook & Humanities Awards

Phi Beta Kappa is pleased to open nominations for the Award for Distinguished Service to the Humanities and the Sidney Hook Memorial Award.

These awards are given once every three years in conjunction with the Society's triennial council meetings.

The Award for Distinguished Service to the Humanities, a cash prize of \$2,500 and a medal, is given to recognize individuals who have made significant contributions in the humanities. The award is underwritten by a gift from Mr. and Mrs. William B. Jaffe; Mr. Jaffe was a Phi Beta Kappa graduate of Union College. The 2009 recipient was Douglas Greenberg of Rutgers University.

Established in 1991 in memory of the distinguished American philosopher Sidney Hook (1902-1989), who was elected to Phi Beta Kappa at City College of New York, the Sidney Hook Memorial Award recognizes national distinction by a single scholar in each of three endeavors — scholarship, undergraduate teaching and leadership in the

cause of liberal arts education. The award of \$7,500 has been presented six times in conjunction with meetings of the Council of the Phi Beta Kappa Society. The 2009 recipient was John Seery of Pomona College.

Submissions should include a letter of nomination written by someone familiar with the nominee's scholarly work and the nominee's curriculum vitae and contact information. For more information, go to [www.pbk.org/awards](http://www.pbk.org/awards).

Mail all materials to:

Director of Society Affairs  
The Phi Beta Kappa Society  
1606 New Hampshire Ave. NW  
Washington, DC 20009

Submission deadline: April 1, 2011

Direct questions to Lucinda Morales, director of Society affairs, at [awards@pbk.org](mailto:awards@pbk.org) or (202) 745-3235. ■

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# The Examined Life: A Poet Talks About the Power of the Liberal Arts

By Jennifer Richter

Charlie's bicep is a warped tombstone. Below his sleeve: two dates and a name tattooed in dripping blood. My brother, he says when I catch his eye. Drive-by.

For four years, I led a poetry workshop for recovering substance abusers at the Delancey Street Foundation in San Francisco. Charlie and the others know that I'm a volunteer, that I travel an hour north to be with them each week. They also know — because of their criminal records, past drug use, restraining orders — not to expect the world to be generous with them. When I pass out copies of Elizabeth Bishop's poem "The Fish," each man in the circle opens his palms, receives it like a gift.

Charlie begins, "I caught a tremendous fish," and we follow along with Bishop's "battered" and "homely" fish whose "brown skin hung in strips/like ancient wallpaper." Some in the circle nod; some shift in their seats. They know what it means to be battered, and what it means to be caught — maybe as many times as this fish, whose lip was studded with "five old pieces of fish-line... with all their five big hooks / grown firmly in his mouth." A few lines later, with the description — "Like medals with their ribbons / frayed and wavering, / a five-haired beard of wisdom / trailing from his aching jaw" — the class starts smiling. After the last line — "And I let the fish go" — they're so amazed by this act of generosity that they're cheering.

My Delancey Street students recognized themselves in that fish — they fidgeted and fingered their scars and through the poem reconsidered their past choices. Some of them were 18 months from graduating, others had 8 more weeks, but this one poem enabled

them to envision themselves launched back into life, worthy of being set free.

After each class, I'd head down Highway 101 back to the life I led the rest of the week teaching undergraduate poetry workshops at Stanford University. Though my students in Palo Alto and San Francisco didn't seem to have much in common, what I asked of them was the same: to consider how a

it was easy to remember the importance of such introspection; at Delancey Street, I was reminded by an ancient fish and a dozen ex-cons.

Like poetry, a liberal arts education sparks the examined life. Both reveal our challenges and flaws, both illuminate our strengths and virtues. For me, the act of writing poetry has been similarly revealing. I often write about the subjects of parenting and illness, and in the process I'm able to observe myself as a mother, a wife, a patient — how am I doing?

For our last class at Delancey Street, I bring in one of my own poems. While I'm reading it aloud, Charlie's writing. Rough day, I assume — I encourage them to "write it out" whenever they feel frustrated, weak or alone. One of the students says I must be a good mom since my poem mentions tucking in my kids. Many of them have children on the outside they've never seen and didn't name. When class is over, Charlie hands me my poem where he's written in the margin, "I will hold 5 pm Mondays always. Because of poetry the telling will come." Then he looks at me, opens his hands, asks if he can please have it back. ■



Jennifer Richter (ΦBK, Indiana University, 1991) works with a young poet, one of many she inspires through her teaching.

poem like "The Fish" challenged their beliefs about themselves and the world. Surprisingly, their reactions to the Bishop poem were similar. I asked an injured Stanford football player with his leg propped up in the back row to read the poem aloud; when he was finished, he paused, then raised his fist in the air and declared, "He's a survivor!" Teaching in the liberal arts at Stanford,

*Jennifer Richter's first poetry collection, Threshold, was chosen by Pulitzer Prize-winning poet Natasha Trethewey as winner of the 2009 Crab Orchard Series in Poetry Open Competition; the book was published in April 2010. Richter was awarded a Wallace Stegner Fellowship and Jones Lectureship in Poetry by Stanford University. She lives in Oregon with her children and her husband, the novelist Keith Scribner, and teaches for the Stanford University Online Writer's Studio. For more information, please visit [jenniferichterpoet.com](http://jenniferichterpoet.com).*

# The Manifold Problems of Technology Forecasting

By Andrew Odlyzko

Yogi Berra and others are reported to have said that “prediction is very hard, especially about the future.” That is true of politics, and it is also true of technology.

While the general impression that technology forecasts are far too optimistic is true, it is not universally true. Yes, we don’t live in underwater cities, nor do we commute in helicopters. However, there are many technologies that have surprised not only the general public, but sometimes even their inventors and promoters, with their success.

Such has been the case with wireless telephony. Before that, computers were also underestimated (with Ken Olsen of Digital Equipment Corporation, one of the great figures in the development of mini-computers, famously expressing his doubts about the need for computers in homes). And before that, cars, and before them railroads, also surprised with their wide spread. In many, even most, cases, what people do with a technology differs widely from what inventors had in mind.

The main difficulty in technology prediction is the human factor.

What will people want to do with the wonderful gizmo you have just invented? Perhaps they will just turn up their noses and not do anything with it. Thus it should not be surprising that forecasting in this area is difficult. However, there are some general principles that do apply much of the time. One of them, quite well known, is that the penetration of new technologies tends to follow the logistic curve, the S-shaped curve that appears in many areas.

Another general principle, not as quantitative, nor as well known, contradicts the general expectation that new technologies will replace old ones. Instead, new technologies frequently serve to strengthen their predecessors. (Thus, in the popular language of the last few decades, they are “sustaining” and not “disruptive.”) An excellent example is that of railroads and horses. The rail was expected to kill the horse. This was a common expectation on the

and promises that better communications, such as faster Internet access, will stimulate telecommuting and decrease road congestion?

Such predictions are almost certainly wrong. At least they have been consistently wrong for about two centuries. Many, often very knowledgeable observers, thought that transportation and communication were substitutes for each other. But the uniform experience to this age has been that they are complements, and grow in parallel. Yes, you may work from home, but chances are that you will make more trips to meet clients, or for family and other reasons, and in the end will travel more than before (barring major upsets, such as an astronomical rise in the price of fuels).

So what can we conclude? Most of all, that the future is hard to predict, so we have to prepare for the unexpected. Second, though, we should keep in mind that among the most common unexpected

phenomena is the resilience of old technologies, services, and business methods, and their propensity to adopt some of the innovations that we work on. ■



Andrew Odlyzko of the University of Minnesota,  $\Phi$ BK Visiting Scholar, 2009-2010.

part of both proponents and opponents of the new offspring of the emerging metal and steam technologies. Instead, the number of horses grew. In Britain, their numbers did not peak until 1905.

The issue was that while transport on rails was fast and inexpensive, the “first mile” problem of getting to the rails required horses. With the general growth of the economy that was facilitated by railroads, there was more and more to carry to the rails. And even railroads used horses extensively, for switching cars in their yards, for example.

Similar phenomena occur commonly in other settings and often lead to serious mistakes in planning. How many times have you seen predictions

*Andrew Odlyzko is a professor in the School of Mathematics and was the founding director of the interdisciplinary Digital Technology Center at the University of Minnesota. Before moving to Minneapolis in 2001, he devoted 26 years to research and research management at AT&T. Odlyzko has served as a  $\Phi$ BK Visiting Scholar for the 2009-2010 academic year. For more information about Odlyzko, including papers touching on the topic of this article, visit his Web page at <http://www.dtc.umn.edu/~odlyzko>.*

# Terrible-Lizard-Happy-Dream Kingdom: The Origins of *Dinotopia*

By James Gurney

I was lucky to grow up in suburbia, the ideal breeding ground for utopian dreamers. The doorway to my world of the imagination was as close as my backyard.

Out behind our back fence was a narrow vacant lot owned by the phone company. It was about 80 feet long and 10 feet wide with a 6-foot fence all around it, cutting it off from the rest of the neighborhood. Over the years I enlarged a passageway through a tunnel of ivy that clung to a break in the fence.

The phone company never exercised its rights to this plot of ground, except to store a few old cable spools and shipping pallets. Way off in a weedy corner there was a curious piece of junk that was lying flat on the ground. It was made of heavy black timbers, bolted together with iron straps, with massive rusty hinges on the side. At

first I thought it was a hatch cover from a pirate ship. Then I imagined it was the lid from a giant's footlocker. Or maybe, I mused, it was the door from a castle that had been torn loose by a Tyrannosaurus and then blown here in a tornado.

I couldn't lift or budge it. The more I looked at it, the more I became convinced that it was a door, a door facing down into the ground. My mind began working on the idea that it was an entryway into another world. I called that world "Yonderland."

Whoever succeeded in opening it would discover an old stone stairway leading down into dark parlors.

Each night as I lay in bed, I let my mind drift away to Yonderland. As I dozed off I imagined holding a sputtering torch, exploring farther and farther underground, where luminous gardens clung beside waterfalls in the misty half-darkness.

In the twilight of a summer

reclining lounge chairs, lit by the flickering blue glow of the television. I went into the kitchen to eat leftover macaroni while the T.V. laugh track echoed dully from the other room.

Yonderland was no less real to me because I traveled there only in my dreams. By age 12, my yearnings for lost worlds had taken root as a result of reading back issues of *National Geographic*. I was fascinated with the

idea of a civilization untouched by our own, speaking a language unknown to us, and moved by mysterious rituals that no explorer had ever seen.

Soon the dream began to manifest itself in little ways.

By the time I got to college at the University of California at Berkeley, I sought out the professors who loved archaeology and paleontology. They were kind enough to let me explore the bowels of the Kroeber Museum col-



James Gurney became a member of ΦBK in 1979 at the University of California at Berkeley where he earned a bachelor's degree in archaeology. He is the author and illustrator of the *New York Times* bestseller *Dinotopia: A Land Apart from Time*. Artwork from *Dinotopia* has been exhibited at the Smithsonian, The Norman Rockwell Museum, the Delaware Art Museum and the Norton Museum of Art in West Palm Beach, Fla.

lection, where dusty metal cabinets held mummies and grass skirts and ceremonial masks, labeled like so many butterflies. The air reverberated with their mysterious energy. One of my first jobs was making careful drawings of Egyptian scarab carvings for a scientist's publication.

After leaving school, I began working as a freelance illustrator for *National Geographic*, specializing in ancient world subjects and dinosaurs. My job was to travel to the ruins of long-dead cities and to bring them back

After leaving school, I began working as a freelance illustrator for *National Geographic*, specializing in ancient world subjects and dinosaurs. My job was to travel to the ruins of long-dead cities and to bring them back



to life as oil paintings. Reconstructing tombs, market scenes, and festivals required the help of archaeologists, who have the uncanny ability to resurrect these scenes, often based on mere scraps of information. They can, for example, hold a piece of roof tile in their hands and visualize an entire Etruscan temple. Likewise, dinosaur experts can look at a chunk of a thigh-bone and imagine the ground shaking under them as an *Apatosaurus* walks by.

Each evening at the dig site, while sitting around the campfire with these archaeologists, I discovered that they grew up with the same secret yearnings for lost worlds. Each of them dreamed of being the first to discover the next Troy or Petra or Machu Picchu. Such places were considered fantastic or legendary before they were actually found.

The chance that a modern archaeologist might actually find such a lost civilization was infinitely small, but it occurred to me that I could paint pictures of my imaginary kingdoms and invent the evidence later. In my spare time I developed a large easel painting called *Waterfall City*, which united two loves of mine: Niagara Falls and Venice. That painting led to another image of a palace resting high above the clouds on a snow-covered mountain.

Then I became obsessed with an idea for a large painting called *Dinosaur Parade*, which portrayed a group of flower girls and musicians marching through the streets of a Roman-style city, accompanied by peaceful herbivorous dinosaurs. To paint the picture I recruited my wife and kids and neighbors, who dressed up in funny hats and Renaissance-fair costumes, posing for me in my backyard while they imagined 30-ton dinosaurs lumbering beside them.

To make the dinosaurs as realistic as possible in the paintings, I threw myself into the research, making pilgrimages to dinosaur museums to look again at the strange skeletons that had bewitched me in grade school. In the time since I had grown up, the science of paleontology had transformed our knowledge of dinosaurs. Gone was the

image of the awkward, dull-witted, cold-blooded beast of my childhood. No longer did tyrannosaurs drag their tails on the ground, nor did giant brontososaurs stay mired in the swamps. Scientists had reimagined dinosaurs as successful, dynamic, intelligent, warm-blooded creatures who shared more in common with birds than with reptiles.

These new ideas opened the doors for the storyteller in me. I began to ask questions: What if dinosaurs were not a lower form of life? What would happen if we ceased to underestimate them? What if we humans were the ones in need of domestication? What if dinosaurs were warm-hearted as well as warm-blooded? I began to entertain the idea of dinosaurs as majestic, complex creatures. I realized that other animals of our own world, such as gorillas and killer whales, had recently undergone the same transformation in our awareness. Elephants, for example, are now known to have nurturing family groups, sophisticated long-range communication, and an amazing capacity for forgiveness and forbearance.

It occurred to me that dinosaurs could possess these ideal qualities and share them with a society of humans living as their equals. If dinosaurs and people could form an interdependent society, they might benefit from each other's strengths. We humans, I reasoned, could inherit the wisdom and patience of a group of animals that lived successfully for over 150 million years. In turn, dinosaurs would welcome the cleverness and dexterity of their human compatriots.

At this point there was no thought of an illustrated book; these were just idle musings as I painted my canvases, which were loosely tied together in a "Lost Empire" theme. But one morning I struck on the idea that all of my separate paintings might be snapshots from a single island.

I pushed aside my bowl of cereal and scribbled a random shape for the island (which some say looks like Australia upside down). It needed a name, so I filled a page with possibilities that sounded appropriately ancient and continental: Archaeotolia, Paleomundia, Volcanaterra—nothing sounded quite right. Finally I came up

with Dinotopia, which is a portmanteau word for a "utopia of dinosaurs." (Incidentally, when the translators created an edition for China, they rendered the name in Chinese characters as "terrible lizard happy dream kingdom.")

My chief inspirations were J. R. R. Tolkien and Robert Louis Stevenson. Though not utopian writers, they created worlds that had the power to eclipse my surroundings even when I didn't have their books open. I was also enchanted with *Gnomes* by Rien Poortvliet and Wil Huygen and *Faeries* by Brian Froud and Alan Lee, two illustrated fantasy books that took great pains to bring scope to a fantasy subject and present it to adults as well as young people. I began working with Ian Ballantine, who as a publisher had championed fantasy books. He proved to be such an important influence on Dinotopia that I used his portrait as the basis for Nallab, the chief librarian.

If I was going to create an illustrated book about a utopia of humans and dinosaurs, I wanted to make sure it was practical and down-to-earth, rather than moralistic and preachy. I was more interested in how people eat, drink, sleep, learn, and travel than in how they set up their government, religion, or economy. Any single system of social organization would not suffice for the simple reason that it left out all the others. I wanted to accommodate the full gamut of individual personalities and tastes, and to incorporate all the world's cultures on a single island, for, as we have come to learn in this century, there is great strength in diversity.

By creating a world visually, it would be possible to apply this "kitchen sink" approach to a utopia, because I could show the range of architecture and costume without the burden of trying to describe it all. I chose to tell the story in the form of an explorer's journal, which would permit the realism that comes from an eyewitness account.

To achieve the realism I was looking for in the artwork, my studio came to resemble a cross between Santa's workshop and a movie studio. Old velvet capes and silk gowns purchased



*Waterfall City: Afternoon Light* by James Gurney. Illustration for *Dinotopia: A Land Apart from Time*. Oil on board. Collection of the artist. 24" x 42".

from costume rental companies festooned the steam pipes in the basement. Cardboard palaces and sculpted dinosaurs appeared on all of the countertops. I often posed in the costume of the figure I was painting, checking the action of the pose in a full-length mirror. Sometimes the doorbell would ring while I was working, and I would answer the door in a cape and doublet, much to the astonishment of the FedEx guy.

Page by page, the pictures and the story took shape. By 1992, *Dinotopia: A Land Apart From Time* was released as a 160-page picture book. As I created it, I wasn't sure who would be the intended audience, and I had no great expectation that it would be a big success. I was completely surprised by the response. Librarians told me that it filled a gap in the world of children's literature for picture books intended for older readers. Letters have come to me from people of all ages, from toddlers to grandparents.

If there is one age or time of life that embraces the book most heartily, it is the moment after the horizons open from childhood into youth, and before the limits are set by adulthood. From the letters I've received, I've come to realize that this audience is the best

audience that an author can have, for they are more logical, intelligent and vocal than their adult counterparts. Utopian literature gives them a chance to inhabit the dreams that fuel their growth into independent life. They read not exactly to escape their world, but rather to engage more fully with it, for only through fantasy can they try on an identity and live as actors in their own dreams. ■

*A native of Palo Alto, Calif., James Gurney is the author and illustrator of the New York Times bestseller Dinotopia: A Land Apart from Time. Gurney is also known for his science illustrations, including The World of Dinosaurs postage stamps for the U.S. Postal Service. His most recent books are Imaginative Realism: How to Paint What Doesn't Exist (2009) and Color and Light: A Guide for the Realist Painter (2010), both based on gurneyjourney.blogspot.com. This article was adapted from an essay for Utopian and Dystopian Writing for Children and Young Adults, Carrie Hintz and Elaine Ostry, eds. (2002).*

## Austin Kiplinger

Continued from 3

ABC and NBC television networks. He was part of the ABC team during the 1952 political conventions in Chicago. He covered the 1956 conventions with NBC.

After rejoining the Kiplinger Washington Editors, he succeeded his father, W. M. Kiplinger, as editor-in-chief in 1961. Austin Kiplinger is joined in the business by his son, Knight, editor-in-chief and publisher of Kiplinger's *Personal Finance Magazine* and the *Kiplinger Letters*.

Austin Kiplinger is co-author of *Kiplinger's Looking Ahead* (1993), *America in the Global '90s* (1989), *The Exciting '80s* (1979), *Washington Now* (1975) and *Boom and Inflation Ahead* (1958).

Kiplinger is chairman emeritus of the Board of Trustees of Cornell University, former president of Tudor Place Foundation, former chairman of the Federal City Council and co-chairman of the Leadership Committee for the City Museum of Washington. He serves on the board of the National Symphony Orchestra and as a trustee of the National Press Foundation. He is a 58-year member of the National Press Club. ■

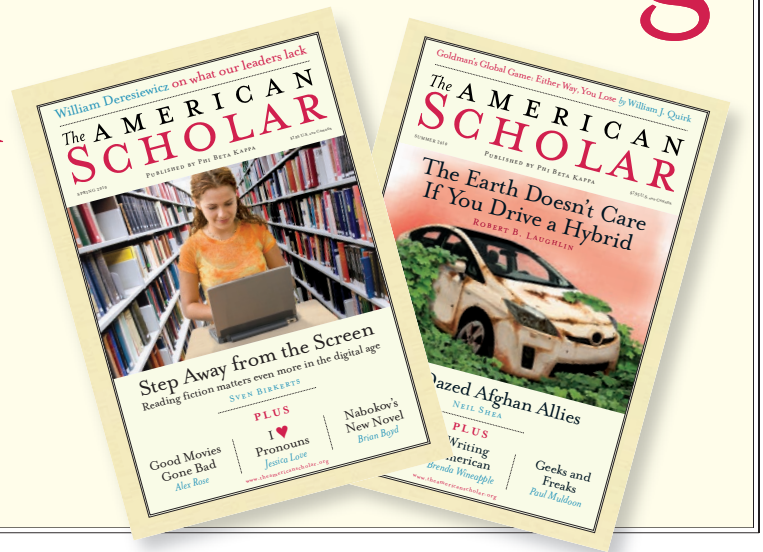
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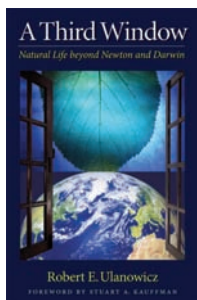
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## From Our Book Critics

By G. Cornelissen-Guillaume



### **A Third Window: Natural Life beyond Newton and Darwin.**

Robert E.  
Ulanowicz.  
Templeton Press,  
2009. 224 pages.  
\$24.95

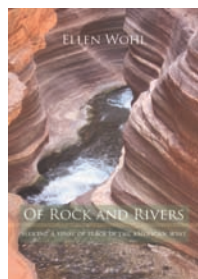
With a background in chemical engineering and an interest in philosophy, Robert Ulanowicz's journey in the field of ecology led him to realize the importance of considering the dual nature of reality. In complex situations, like in ecological systems, the elucidation of the rules that give rise to order and coherence cannot be dissociated from the related dynamics of chance and arbitrary phenomena. Drawing from the discipline of information theory and from two key papers he read in close succession, the author developed methods to quantify the degree of organization inherent in a network of interacting processes, parsing out what is ordered and coherent about the system from all that is disordered. The third window stems from his observation of the paradoxical role chance and disarray play in the persistence of complex systems, because, without them, a system lacks the flexibility needed to adapt and becomes defenseless against novel perturbations. It offers a radical new view of the biotic world.

*A Third Window* seeks to go beyond Newton's reductionism, the first window, with its time reversible laws, and beyond Darwin's second window that brings history into biological dynamics (the particularly evolutionary pathway followed by the predecessors of a given organism strongly constrains what is possible in the next generation). With Darwin came a shift from the "laws" of physics to the "process" of evolution, and thus an element of indeterminism was added to the determinate outcome of Newton's laws. Ulanowicz illustrates this impor-

tant difference using George Pólya's urn in a very effective way. He also argues that a reductionism view centered on the transfer of genomic information via the DNA molecule ignores the role played by a network of enzymatic/catalytic reactions instrumental in reading the genomic sequence just one step up from DNA.

*A Third Window* is an attempt to answer ambitious questions of how life originated, how species came into existence, how things can truly change and how they can persist. An essential part of the answer to the last two questions offered by the author relates to the existence of complex chance events. Causality is replaced with propensity, recognizing the rampant stochasticity of the second law of thermodynamics. Another critical part of the answer stems from cybernetic tendencies. Autocatalysis is presented as a positive feedback system capable of generating a non-random response to a random event, thereby assuring system stability and resistance to most disturbances. The concepts of ascendancy and overhead are introduced, or in other terms, performance and reliability. The author makes the point that in ecology, those species best able to outgrow their competition invest little energy in avoiding predation, whereas those that develop more sophisticated defenses or behaviors rarely have the resources to propagate rapidly.

Irrespective of whether or not one agrees with the author's philosophical and metaphysical interpretations that weave through the entire narrative, the originality of Ulanowicz's postulate is undeniable. His vision of a third window of the world is sure to enrich us all.



**Of Rock and  
Rivers: Seeking a  
Sense of Place in  
the American  
West.** Ellen Wohl.  
University of  
California Press,  
2009. \$24.95

For those who marvel at the stunning landscapes

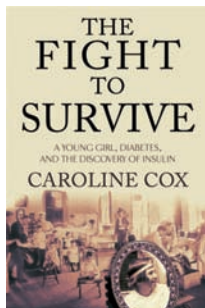
of the American West, this book has all the qualities to make us appreciate even more the riches nature has to offer, while making us aware of the dangers of unwise exploitation of water resources. Ellen Wohl's lyric descriptions of the natural history of the enormous water tank that the Rocky Mountains represent are intertwined with lessons in her field of expertise, geomorphology, the study of landforms and the processes that shape them.

From accounts of field trips in the Grand Canyon to research projects with her many students, the reader is constantly reminded that landscapes are not static, and that rivers are the prime shapers of many of Earth's landscapes. Changes occur, not only on the scale of geological time, but also as a result of more immediate weather conditions and human alterations, exemplified by the Big Thompson flood in 1976 and the extreme snowmelt of 1983 that endangered Glen Canyon's dam due to the rising water level in Lake Powell. Revisiting lessons learned from 20 years of research, the reader comes to appreciate how landscapes and ecosystems are not discrete entities but ongoing processes of change, and how crucial the connectedness of humans and landscapes is.

Recognizing that knowledge alone is not enough, Wohl moved further toward political activism. She eloquently and passionately addresses all major issues relevant to develop a more sustainable society, from the extinction of natural species and the introduction of non-native fish in Colorado's streams to problems of deforestation by the lumber industry, increased forest fires, agriculture, mining, grazing, and the building of roads and towns, and snow making.

In the last chapter, "Poisoning the Well," the author traces the journey of a snowflake falling in the Rockies and descending to the eastern plains. The water supply and water quality it represents is progressively exposed to increasing levels of contamination and depletion. Despite some resilience of rivers and landscapes documented in

her work, Wohl ends with the admonition that change in land management is needed to maintain sustainable stream ecosystems in Colorado.



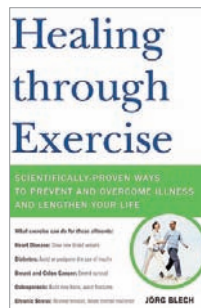
**The Fight to Survive: A Young Girl, Diabetes, and the Discovery of Insulin.** *Caroline Cox Kaplan*. Kaplan Publishing, 2009. 288 pages. \$26.95

Written from a historical perspective, this book relates the story of an amazing young girl diagnosed with diabetes at a time when scientists were close to understanding the disease but not close to any long-term treatment. It is also the story of the discovery of insulin as four researchers worked tirelessly in a Toronto laboratory to identify the substance secreted by the pancreas needed for metabolizing carbohydrates, and find a treatment for diabetes. But above all, Caroline Cox succeeds in taking us to the post World War I era when these events unfolded. The 11-year-old Elizabeth, daughter of Charles Evans Hughes who would become Secretary of State and Chief Justice of the Supreme Court, first showed signs of the disease in the fall of 1918. The diagnosis was later confirmed by Frederick Allen whose “starvation therapy” was then the only hope for prolonging her life. While few people could endure it, Elizabeth was different and she adhered strictly to her diet with the help of her parents and Blanche Burgess, her devoted nurse.

Elizabeth’s fortitude throughout her ordeal; her aspirations, optimism and interest in nature, music and art; her love of learning and writing; and her commitment to her family and community transpire from her many letters, often written from her bed. Meanwhile, progress was made in Toronto, and in 1922, Jim Havens became the first patient to receive a shot of insulin, a breakthrough that earned Frederick Banting and John Macleod the Nobel Prize in 1923. Elizabeth too became one of the first

patients to receive insulin, a blessing that allowed her to live a full life until her death in 1981.

*The Fight to Survive* is not only an inspiring story, it is thoroughly researched and beautifully written.



**Healing Through Exercise: Scientifically Proven Ways to Prevent and Overcome Illness and Lengthen Your Life.** *Jörg Blech*. Da Capo, 2009. 256 pages. \$26.00

Sure, exercise is good to remain lean and fit. We all know that. Actually, there is quite a lot more to it and it was a delight to learn from the well-documented and scientifically researched book of Jörg Blech. Exercise is good not just to remain healthy and prevent disease, but it also helps to heal in the presence of disease.

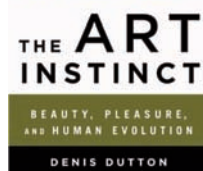
The information gathered in this book attempts to achieve a paradigm shift by pointing out the dangers of bed rest, an outdated prescription still widely recommended for patients suffering from a variety of ailments. Systematically, Blech reviews the benefits of exercise for keeping connective tissue and joints flexible, for keeping an integral bone structure, for reducing inflammation and assuring adequate blood flow, for keeping muscles strong, for keeping infections at bay and preventing water retention, for keeping lungs clear and the cardiovascular system healthy, for avoiding digestive problems, for keeping a healthy mind and for escaping from chronic pain.

The importance of exercise is stressed in relation to today’s major civilization diseases, such as heart disease, diabetes, obesity, psychiatric disorders and cancer. As such, it has the potential to bring novel solutions to the increasing health care costs of modern societies. ■

*Germaine Cornelissen-Guillaume is a professor of integrative biology and physiology and co-director of the*

*Halberg Chronobiology Center at the University of Minnesota, Twin Cities.*

By Rick Eden



**The Art Instinct: Beauty, Pleasure, and Human Evolution.** *Denis Dutton*. Bloomsbury, 2010. 282 pages. \$15.00

What is the behavior we call art, and why are humans inclined to engage in it? This erudite and highly entertaining book addresses both questions.

Denis Dutton proffers a dozen characteristics that define an instance of human behavior as art. (Each work of art need not have each characteristic.) Art provides pleasure, intellectual challenge and imaginative experience. It demonstrates skill and creativity. It expresses personality and emotion.

It is produced in styles and within traditions. It represents experiences of the world, yet is “bracketed off” from ordinary life. It is described by a language of evaluation and criticism. Using the list as a symptomatology, Dutton shows how one can conduct a differential diagnosis of an object or activity in any culture in order to determine whether it should be considered art.

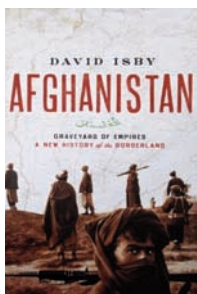
The instinct for art, according to Dutton, “is not a single genetically driven impulse similar to the liking for sweetness but a complicated ensemble of impulses that involve responses to the natural environment, to life’s likely threats and opportunities, the sheer appeal of color or sounds, social status, intellectual puzzles, extreme technical difficulty, erotic interests and even costliness.”

Dutton traces these impulses to their roots in “tastes, interests, preferences and capacities” that evolved throughout the two million years of Paleolithic prehistory. The art instinct reflects both natural and sexual selection, that is, the selection of traits

favoring survival and those favoring reproductive success through the attraction of a mate.

For instance, Dutton examines evidence that our tastes for landscape illustration reflect skills we evolved for habitat selection. Studies have shown that preferences for landscape illustration are fairly stable across cultures. People everywhere find it satisfying to view vistas that seem to afford safety, companionship, comfort, shelter, food, water and interest.

This common response points to sources of appeal that are innate.



**Afghanistan: Graveyard of Empires: A New History of the Borderlands.**  
*David Isby.*  
Pegasus Books,  
2010. 440 pages.  
\$28.95

This is an excellent book for anyone who wants to develop a detailed understanding of the war in Afghanistan and gain a nuanced appreciation of the difficulty the U.S. faces in bringing it to a satisfactory conclusion. David Isby focuses his analysis on “the borderlands,” meaning the Pushtun homelands that straddle Afghanistan’s disputed border with Pakistan.

Part one, “Lands in the Vortex,” provides basic background regarding history, ethnolinguistic groups, faiths, institutions, and culture, beginning with Afghanistan as a whole and then focusing on Pushtuns. Isby refutes the common claim Afghanistan was never a real nation: Rather, “it used to be a relatively peaceful country with a centralized but weak government.” Nevertheless, Afghanistan’s national boundaries remain unclear because Afghanistan has never accepted the boundary with Pakistan that was demarcated by the British. The disputed border — called the Durand Line after the foreign secretary of British India who established it — divided the Pushtuns between two countries, leaving the world’s largest tribal group (over 40 million strong) without a

politically unified homeland.

Having set the stage, in part two Isby turns to the current war, which he decomposes into five conflicts. He devotes a chapter each to transnational terrorism; the Pushtun insurgency in Afghanistan; the narcotics trade; the internal conflicts among Afghanistan’s diverse groups (normal to any country, but exacerbated in Afghanistan); and Pakistan’s several insurgencies. He notes that military force has an important role in resolving only some of these conflicts, primarily those against the insurgents.

Part three addresses the conditions under which the war in Afghanistan might be winnable. In Isby’s view, the problem really lies with the future of one ethnolinguistic group: the Pushtuns. Isby notes approvingly that the Obama administration’s focus on AfPak seems to reflect an understanding of the transnational roots of the insurgency in the Pushtun borderlands.



**On the Origin of Stories: Evolution, Cognition, and Fiction.**  
*Brian Boyd.*  
Belknap Press of Harvard,  
2009. 540 pages.  
\$35.00

Fiction is a human universal, both in its production and consumption, a fact that suggests that storytelling is an evolved adaptation. Yet, like altruism and sex, fiction presents a challenge to evolutionary explanations: For what advantage could accrue to devoting energy and attention to false information? Why don’t we attend only to what we believe to be true?

*On the Origin of Stories* is Brian Boyd’s ambitious, wide-ranging and illuminating attempt to address these questions. It is really two books in one, a popularization of evolutionary science and a work of practical literary criticism.

Book one is entitled “Evolution, Art, and Fiction.” Noting that fiction is a special case of art and art a special case of culture, Boyd begins by argu-

ing for culture generally as an adaptation. He defines an evolutionary adaptation as “a feature of body, mind, or behavior that ... shows evidence of good design for a specific function or functions that will ultimately make a difference to the species’ survival and reproductive success.” Meeting this definition, culture evolved so that groups could respond rapidly to changes in their environments: “genetic change normally takes many generations to pervade a population; culture can enable advantageous options to spread rapidly in a single generation.” Art, a kind of “cognitive play,” evolved to enable “humans to extend and refine key cognitive competencies.” Fiction evolved to “aid our rapid understanding of real-life social situations.”

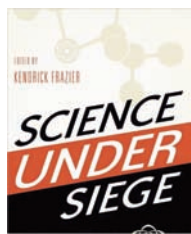
In book two, “From Zeus to Seuss,” Boyd illustrates how an evolutionary perspective can inform the literary criticism of fiction. He devotes 10 chapters to analyzing two very different texts, Homer’s *Odyssey* and *Horton Hears a Who!* by Theodore Geisel (Dr. Seuss). His analysis of the *Odyssey* focuses on how Homer directs attention, represents intelligence and dramatizes cooperation. His analysis of *Horton Hears a Who!* demonstrates four levels of literary explanation that he calls “universal,” “local,” “individual” and “particular.” ■

*Rick Eden is a senior analyst and the associate director of research quality assurance at RAND, a nonprofit, non-partisan research institution headquartered in Santa Monica, Calif.*

By Jay Pasachoff



**When You Were a Tadpole and I Was a Fish: And Other Speculations About This and That.**  
*Martin Gardner.*  
Hill and Wang, 2009. 246 pages.  
\$26.00



**Science Under Siege: Defending Science, Exposing Pseudoscience.**

Kendrick Frazier, ed. Prometheus Books, 2009. 370 pages. \$21.98

This homage to the late Martin Gardner, who died in May, takes the form of a review of his most recent published collection, which contains miscellaneous pieces published over many years. This amateur scientist who became a beloved debunker of pseudoscience was a prolific author. His *Fads and Fallacies in the Name of Science*, as his 1957 edition was entitled, can be credited with inspiring many current practitioners of scientific skepticism, myself included.

Gardner's many years of recreational mathematics provided delights for generations of readers of *Scientific American* and other outlets. Reporting on this year's biannual "Gathering for Gardner," Alex Below in *New Scientist* describes Gary Foshee's puzzle, "I have two children. One is a boy born on a Tuesday. What is the probability I have two boys?" Fortunately, the end of the article explains why the answer isn't 50 percent.

Gardner's "Tadpole" collection includes a section on "Bogus Science," explaining "Why I am not a paranormalist." Later, he explains "Why I am not an atheist." It is fun to dip into the variety of topics covered in this book.

For a more extensive view of the fight against pseudoscience, see the collection edited by Kendrick Frazier, the editor of the *Skeptical Inquirer* quarterly. You can find interesting articles about denialism of evolution, AIDS and global climate change. In separate articles, you can learn about vaccine safety and if the anti-vaccination movement is killing young children. You can read about several pseudoscientific investigations, such as magnet therapy, "A Billion-Dollar Boondoggle." The article by Gardner himself deals with false memories and gives examples of the unfortunate consequences for those accused of such pseudoscience.

Many of the articles in Frazier's collection are not only worthy but also interesting enough for the general reader. As a new fellow of the Center for Skeptical Inquiry, I am particularly interested in many of the topics covered, and I am glad to recommend this book. I shall be assigning it in my Williams College course on "Science and Pseudoscience." ■

*Astronomer and author Jay Pasachoff is the director of Hopkins Observatory and Field Memorial Professor of Astronomy at Williams College.*

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The Phi Beta Kappa Award in Science is given to outstanding contributions by scientists to the literature of science. The intent of the award is to encourage literate and scholarly interpretations of the physical and biological sciences and mathematics.

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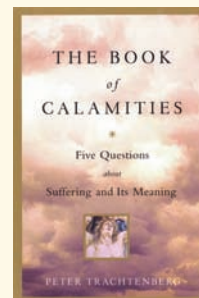
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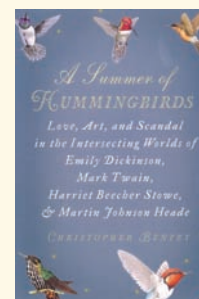


**CHRISTIAN GAUSS AWARD**

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