

King of Odessa
 by Robert A. Rosenstone
 Northwestern University Press, 2003
 240 pages, \$24.95

As the handsome 2004 *Personnel Directory* that recently arrived on our desks reminds us, Caltech is a house divided. Founded, that is, on six academic divisions. The structure stands, nonetheless, very well. When it comes to universities, Lincoln, it would seem, was wrong.

Robert Rosenstone's distinguished career has been one of incorrigible transgression. Not—I hasten to say—of any moral or criminal kind. Rosenstone has consistently overridden the formal subdivisions within his home division (Humanities and Social Sciences). His project, as a scholar, blurs familiar and comfortable lines of intellectual demarcation. For years now he has taught a course at Caltech entitled “History in Film” (NB, not “History and Film”). The two discourses, cinematic and historiographic, interpenetrate. They are indivisible. Is, for example, *Reds* (a movie based on Rosenstone's life of John Reed, the American radical) Hollywood fantasy, biopic, or a history lesson about the emergence of the Soviet Union? All these and more, Rosenstone would maintain. And none cancels out the other.

Rosenstone's *Romantic Revolutionary: A Biography of*

John Reed was, when it first came out in 1975, a much more adventurous book (“revolutionary,” one might say) than it now appears. What Rosenstone did was to plug those vacant parts of his subject's life about which we could know nothing (because no documentary or oral evidence survived) with fictional reconstruction. Put crudely (and his work is anything but crude), Rosenstone hybridized novel and biography into a new narrative synthesis. It is a technique that has subsequently been debased in works like Edmund Morris's *Dutch* (1999; a candidate for the worst Presidential biography ever written) and exploited admirably in Janet Malcolm's brilliant *Reading Chekhov: A Critical Journey* (2003).

I have often wondered why Rosenstone did not continue as a biographer. He must have had tempting invitations from publishers (his biography of Reed remains the standard work). He was, I suspect, temperamentally disinclined to remain in one subject area. A theme that recurs in his autobiographical writing (notably *The Man Who Swam into History*, 2002) is migration. He chronicles his family history as something irresistibly nomadic—

a heritage that has rendered him intellectually restless. There seems to be no obvious mold to his scholarship. The move, for example, to the subject of American interaction with Japanese culture, *Mirror in the Shrine* (1988), was wholly unpredictable. That book, although it contains some of Rosenstone's most carefully composed prose, stands, I would say, as a gallant failure: less a reflection on the author than proof of the impenetrability of Japan. But, whatever else, it witnesses to Rosenstone's constant striving for new lines of approach to his subject. And new subjects.

King of Odessa is described by the publisher as Rosenstone's first novel, which suggests a new departure. It is, in fact, more in the nature of a resumé, or compendium, of themes, techniques, and obsessions (the word is not too strong) that have been long-standing preoccupations.

The plot of *King of Odessa* is easily described. In 1936 the Russian-Jewish author and revolutionary, Isaac Babel, returned to his hometown Odessa for three months. Virtually nothing is known about what he did during this period. His life was increasingly perturbed by his vexed personal relationships with women and family. He was, vaguely, collaborating with his friend the filmmaker Sergei Eisenstein. His health was not good. He is known to have made one visit to the synagogue. He is also known to have been working on a manuscript—believed lost. “But now,” the introduction tells us, “more than sixty years after his death and over a decade after the collapse of the Soviet Union, a manuscript has been found in the archives that, internal evidence suggests, seems to be the work Babel was writing in 1936.”

The “work” follows. Gullible readers are directed to the CIP (Cataloging in Publication) information on the verso of the title page where *King of Odessa* is officially designated “fiction.” Not a bureaucratic category that Rosenstone has much respect for, one might add. This is, as he would put it, “History in Fiction.”

Like other writers, particularly Jewish writers (Pasternak, for example), Babel felt a cold wind in 1936, even in the summer warmth of Odessa. Stalin’s terror was beginning its vile exterminations. Should he stay in the new Communist state which he had helped create? Or should he save himself by emigrating? He remained. It was the wrong choice. As a bleak afterword tells us, three years later Babel was arrested, interrogated “relentlessly” for two months in the Lubyanka, convicted of conspiratorial terrorism, shot, cremated “and his ashes dropped into a common pit.” He was later, by that most cruelly ironic of Soviet cultural perversions, “rehabilitated” as a literary hero of the Revolution.

Much good it did his ashes. The year 1936 is an important date in Rosenstone’s historical calendar.

That year saw the outbreak of the Spanish Civil War with Franco’s uprising and the first military victory for nationalist Fascism in the 20th century. Rosenstone (inevitably) has written one of the standard works on American involvement in that conflict, *Crusade of the Left: The Lincoln Battalion in the Spanish Civil War*. Nineteen-thirty-six was also, with the show trials in Moscow, the historical moment when the Soviet experiment went irrecoverably rotten. Babel was, like Reed, a Romantic Revolutionary. He too saw the future and thought it would work. Nineteen-thirty-six was the year in which he must have realized it wouldn’t.

Babel’s best-known book is the cycle of short stories *Red Cavalry* (1926). It was inspired by his service in the Russo-Polish war of 1920—as an embedded journalist—with a troop of Cossacks. These horsemen were the Revolution’s shock troops; they were indelibly associated with Jewish pogrom and indiscriminate cruelty. They were anything but chevaliers.

Rosenstone’s Babel recalls the atrocities that he witnessed with the Cossacks: specifically a massacre at the Jewish village of Zhitomar where they discover a charnel house of mutilated corpses left by the enemy: “forty-five dismembered bodies, heads, tongues, limbs, fingers, and ears scattered like bloody pieces of meat in the yard of the local slaughterhouse.”

And what does the captain of the Cossacks do when confronted by this horror of war? With the jovial remark “Who needs all these Yids?” he slits the throat of one of the few survivors in a grisly parody of kosher animal slaughter, and—having done this appalling thing—he reaches for the vodka, “shouts *l’chaim*, laughs, drinks deeply,

passes it to the surrounding troops.”

Rosenstone’s Babel realizes that “this is what people need to know about the Civil War.” But . . . “nobody will dare publish such a view of the Cossacks, our new heroes. Some of the incidents can be used. But the overall narrative must have some hint of redemption, something more in keeping with the ideals of the Revolution. Something that says all this horror was only a prelude to a better world. For me to say this is difficult.”

This difficulty is, for Rosenstone, both perennial and infinitely fascinating. How can the “truth” be mediated by words—words, that is, formulated into the distorting categories of “genre,” “discipline,” and traditional “discourse”; not to say the needs of the state and the peremptory demands of the reading public craving entertainment? Poetry, fiction, history, biography, autobiography all engage with truth. And, in its entirety, truth eludes all of them. Rosenstone’s ingenious blends of those ways of knowing and telling are original, imaginative and often—in my judgement—brilliant. □

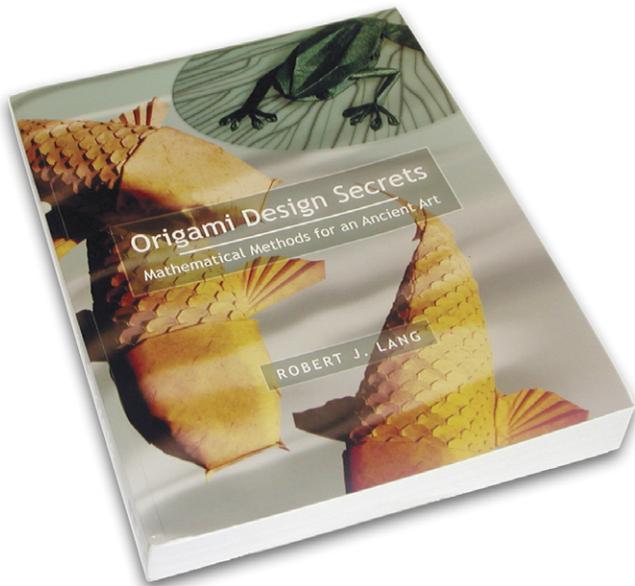
John Sutherland
Visiting Professor of Literature

**Origami Design Secrets:
Mathematical Methods for an
Ancient Art**

by Robert J. Lang
A. K. Peters, 2003
585 pages, \$48

We all remember it. What 20th-century child has not been exposed to it? The inviting squares of brightly colored paper, the excitement of creating that first crane/frog/fish. Yet how many of us in adulthood can boast even a nodding acquaintance with this intriguing art?

Robert Lang can. He began folding paper as a boy of six, and simply never stopped (even while picking up a couple of Caltech degrees: a BS in electrical engineering in 1982 and a PhD in applied physics in 1986). Further, he did what the rest of us did not do; he combined his love of origami’s ordered elegance with his passion for mathematics and science. His new book, *Origami Design Secrets: Mathematical Methods for an Ancient Art*, offers us the chance to renew our acquaintance with the art (and introduce ourselves to the science) of origami—its history and evolution, and its technique, underlying mathematics, and design. For Lang makes it clear that all these aspects of origami are firmly interwoven. The evolution of the art (and the development of the underlying geometry) is, for the aspiring paper folder, the sequential path to technical proficiency; proficiency represents the point at which tech-



Each of the koi on the cover is folded from a single sheet of paper, scales and all. The author writes, "If you work your way through folding the entire model, you can congratulate yourself both on your understanding of the design process and, because there are some 900 individual scales to be shaped, your fortitude."

nique becomes second nature; it is only at this point, when the folder's mind is free to think creatively, that the folder becomes the designer.

If all this sounds a bit ambitious, well, it is. Lang explodes your childhood perception of origami in precisely the same way that your first viewing of olympic table tennis exploded your backyard Ping-Pong game. He gives us a glimpse of amazing possibilities; he also provides the means for realizing them. This is a stunningly comprehensive book, well written and well illustrated.

"Origami is, first and foremost, an art form," writes Lang, who is recognized as one of the world's leading origami artists. "It is the nature of creativity that it cannot be taught directly. However, it can be developed through example and practice. As in other art forms, you can learn techniques that serve as a springboard for creativity." Lang is explicit that this book is neither a cookbook of folding patterns nor a "how-to" for design. Rather, as the title implies, he offers tips from his vast experience, and a wealth of technique.

There have been only a handful of designers in origami's long history. For

nearly 1,500 years, origami (literally translated, "paper folded") was largely a static art form, consisting of two to three hundred accepted figures. In the 1920s Akira Yoshizawa (now recognized as the father of the modern era of origami) developed a diagrammatic scheme of folding instructions that eliminated the need for language and enabled the art to spread worldwide. Then, in the 1970s origami began to attract the attention of mathematicians, scientists, and engineers; only then did the shape of origami begin, quite literally, to change.

The breakthrough came when three Americans and a Japanese, all working independently, discovered a recurring fold pattern, consisting of an isosceles right triangle with two creases in it. The creases represent two scalene right triangles and an isosceles right triangle that is a miniature mirror of the original. Each of these triangles may be dissected into another grouping of the same (as well as being dissectable into two or four smaller copies of themselves). Conversely, the triangles can be reassembled to form larger triangles and rectangles. The new method was dubbed "technical folding"; it yielded an infinite

variety of crease patterns and the potential for greater fluidity of shape. So rapid was the pace of discovery from this point on, that nearly all of the thousands of designs currently in existence were created in the past 50 years.

It is for the aspiring origami *designer* that this book, as a whole, is intended. And yet the book may be sampled quite effectively in parts. There is something for everyone here, whether beginner or expert, left-brained or right, specialist or dilettante. If all you want is to sit down and learn to fold a few simple (well, not exactly *simple*) figures, there are well-written, well-illustrated instructions in the beginning chapters to aid you. If, on the other hand, you require a formal mathematical treatment of applicable tree theory, the entire last chapter is devoted to this. The book can also be enjoyed merely for its history, and Lang's history of origami reads like a whodunnit, a succession of clues and discoveries that builds momentum across 15 centuries.

The sheer beauty and elegance of Lang's designs, illustrated in this handsome book (with step-by-step instructions for 25 of them and blueprints for more) are

enough to make any reader want to take on the more complicated figures, like the Black Forest cuckoo clock or the antlered moose (but admiration may be as far as you get). Experienced origamists will find something challenging (often *very* challenging) here. And aspiring designers will have at hand, for the first time, carefully described methods and techniques, as well as the mathematical principles, that will enable them to populate their paper zoos with creations of their own.

Gail Anderson
Manager, Electronic Media
Publications

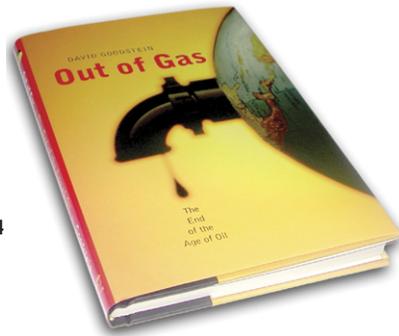
Out of Gas:

The End of the Age of Oil

By David Goodstein

W. W. Norton and Company, 2004

140 pages, \$21.95



Ancient Persians tipped their fire arrows with it, and Native Americans doctored their ails with it. Any way you look at petroleum, the stuff has been around for a long time. Problem is, it's not going to be around much longer—or at least not in the quantities necessary to keep our Hummers humming.

To address the choices society will soon face in the inevitable peaking of worldwide oil production, Professor of Physics David Goodstein has written a new book titled *Out of Gas: The End of the Age of Oil*. Goodstein argues that global production will peak sooner than most people think, possibly in this decade—a view held by a number of geologists—and that the peak itself will be the beginning of serious and widespread social and economic consequences.

“Some say that the world has enough oil to last for another forty years or more, but that view is almost surely mistaken,” writes Goodstein, whose past forays into the world of science communication have included his award-winning PBS series *The Mechanical Universe*, as well as the best-selling book *Feynman's Lost Lecture*.

Goodstein writes that the worldwide peak will almost

surely be highly disruptive, if not catastrophic, considering the difficult American experience of the early 1970s, when U.S. production met its own peak. Since then, U.S. production has been on a downslope that will continue until the tap runs dry.

But even the 1970s' experience would be nothing compared to a worldwide peak, Goodstein explains. Indeed, the country then experienced serious gas shortages and price increases, exacerbated in no small part by the Arab oil embargo. But frustration and exasperation aside, there was oil to buy on the global market if one could locate a willing seller. By contrast, the global peak will mean that prices will thereafter rise steadily and the resource will become increasingly hard to obtain.

Goodstein says that the best- and worst-case scenarios are fairly easy to envision. At worst, after the so-called Hubbert's peak (named after M. King Hubbert, the Texas geophysicist who was nearly laughed out of the industry in the 1950s for even suggesting that a U.S. production peak was possible), all efforts to deal with the problem on an emergency basis will fail. The result will be inflation and depression that will prob-

ably result indirectly in a decrease in the global population. Even the lucky survivors will find the climate a bit much to take, because billions of people will undoubtedly rely on coal for warmth, cooking, and basic industry, thereby spewing a far greater quantity of greenhouse gases into the air than that which is currently released.

“The change in the greenhouse effect that results eventually tips Earth's climate into a new state hostile to life. End of story. In this instance, worst case really means worst case.”

The best-case scenario, Goodstein believes, is that the first warning that Hubbert's peak has occurred will result in a quick and stone-sober global wake-up call. Given sufficient political will, the transportation system will be transformed to rely at least temporarily on an alternative fuel such as methane. Then, more long-term solutions to the crisis will be put in place—presumably nuclear energy and solar energy for stationary power needs, and hydrogen or advanced batteries for transportation.

The preceding is the case that Goodstein makes in the first section of the book. The next section is devoted to a

nontechnical explanation of the facts of energy production. Goodstein, who has taught thermodynamics to a generation of Caltech students, is particularly accomplished in conveying the basic scientific information in an easily understandable way. In fact, he often does so with wit, explaining in a brief footnote on the naming of subatomic particles, for example, that the familiar “-on” ending of particles, such as “electrons,” “mesons,” and “photons,” may also suggest an individual quantum of humanity known as the “person.”

The remainder of the book is devoted to suggested technological fixes. None of the replacement technologies are as simple and cheap as our current luxury of going to the corner gas station and filling up the tank for the equivalent of a half-hour's wages, but Goodstein warns that the situation is grave, and that things will change very soon.

“The crisis will occur, and it will be painful,” he writes in conclusion. “Civilization as we know it will come to an end sometime in this century unless we can find a way to live without fossil fuels.”

Goodstein dedicates the book “to our children and grandchildren, who will not inherit the riches that we inherited.” □—RT