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Too Clever for Our Own Good? *Very Likely.*

Andrew Ruppel, Feature Editor

The century just past certainly produced its share of startling ideas and raised a plethora of provocative questions. The century now underway promises to be even more surprising—though perhaps many of the surprises will not be happy ones. We should expect severe challenges being placed upon individuals and society. Brainpower of the first order will be needed to address those challenges. Not everyone is convinced, however, that we have sufficient high-caliber brainpower, individually and collectively. Others feel that it is too often misapplied, or worse, destructive. Here are some books showing both sides of the coin.



Inventing the 20th Century by Stephen van Dulken

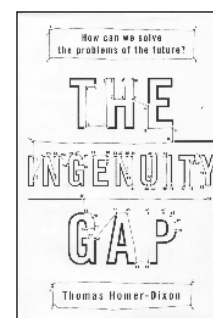
NYU Press, 2000,
246 pp.
www.nyuupress.nyu.edu

COMPILED BY A BRITISH PATENT EXPERT, this is a collection, by decade, of the “100 inventions that shaped the world, from the airplane to the zipper.”

For each decade, Introduction author Andrew Phillips has written a short, overview essay that focuses on the parade of the decade’s technical achievements together with some global developments of consequence. Each of these essays is followed by ten of van Dulken’s one-page invention descriptions, coupled with a page of patent drawings. The patents range from the ordinary (“catseyes”—reflectors) to the exotic (CAT-scanning). The coverage includes mainly U.S. and European patents; for example, a 1906 French patent for catalytic converters. There is a helpful bibliography and an appendix on web-based patent information, but the index is weak.

This is a fun book to read. The author’s effective one-page descriptions give background on the inventor as well as on the invention. And he seems to have picked just the right illustration, with their recognizable 19th century “Patent Office” style, to accompany each example. Some of the

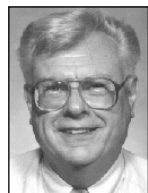
drawings would make great opening illustrations for information technology lectures, e.g., bar codes (1949), the microchip (1959), and the smart card (1974). Despite the author’s claim on the cover that he included inventions that shaped the world, there are some questionable inclusions. For example, “Slinky”—a flexible spring-like toy (1945), the “Widget”—a device for injecting air bubbles into liquids to create a foamy head (1985), and the “Predator”—a special football shoe for quarterbacks (1991). There’s seemingly no end to what we will apply our ingenuity to.



The Ingenuity Gap by Thomas Homer-Dixon

Knopf, 2000, 480 pp.
www.aaknopf.com

WHILE POLITICAL SCIENTIST HOMER-DIXON provides some alarming statistics about population growth and associated resource consumption, his writing is far from alarmist. Neither is he cynical nor does he seem frustrated. Puzzled might be the proper descriptor. His puzzlement concerns society’s collective inability to see the problems ahead that will emerge from things already in place. Why can’t we see ahead more clearly? The answer, according to Homer-Dixon, is more than just in-



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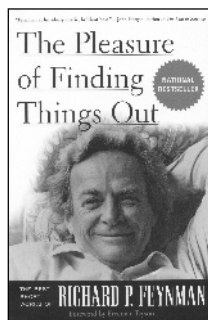
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adequate vision. Even when latent problems are recognized, we no longer seem able to produce enough clever ideas to match them. And the reason that timely solutions are not forthcoming is that we are short on understanding, despite the fact that our brains evolved during times of rapid change. Complexity is getting the better of us, in the environment, in the global economy, and in the running of society. To make matters worse, a decline in the respect for politics and politicians has reduced the flow of social ingenuity, says the author.

While one might shrink from the prospect of reading more “doom & gloom,” “we’re headed down the tubes” scenarios, the author’s personal writing style keeps the reader engaged. At times, it is part travelogue, as when Homer-Dixon recounts a trip to Las Vegas or India as a lead-in into some serious issue like shrinking water supply or sharp class divisions. At other times, it’s the recounting of an interview with an expert on geochemistry and oceans or summarizing a specialist in international finance. Topics range from London architecture to the Sri-Lankan civil war to anthropological findings on brain size. Despite what 60 pages of endnotes might suggest, the book is certainly not an academic tome.

The book’s 13 chapters are divided into four sections. The first section examines how our relationship to the physical world is changing. The second section asks the rather obvious question of whether or not we need more ingenuity. (*Ingenuity* for the author is the set of explicit instructions and steps needed to solve a problem.) The third section asks whether or not we are able to supply it—“no” says the author. OK, then what? More *cooperative* (as opposed to *command*) problem solving will be needed. Less resource consumption will be required. There’s lots to be done in finding out what things will work.



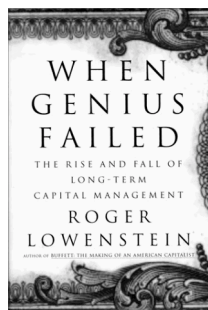
The Pleasure of Finding Things Out

by **Richard P. Feynman**

Perseus Publ., 2000, 270 pp.
www.perseuspublishing.com

IF THE WORLD HAD MORE
 INGENUOUS FELLOWS

like Richard Feynman, then the gap that troubles Homer-Dixon might not exist. Feynman, a Nobel-prize winning scientist, often tried to convey (though not always in the smoothest prose) his intense enthusiasm for clear thinking and hard problem solving to non-specialists. This paperback is a collection of 13 of his articles, speeches, and the like, aimed at such audiences. A builder of physics theory, Feynman’s forte’ was forcing empirical verification of claims—the claims of others and of his own. He brought to that effort astounding reasoning skills and a prodigious, problem-focused memory. He also brought a puckish sense of humor, particularly when dealing with bureaucratic minds, which he loved to frustrate by revealing the idiocies of their own logic.



When Genius Failed

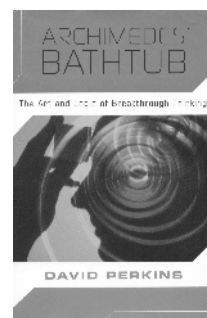
by **Roger Lowenstein**

Random House, 2000, 264 pp.
www.randomhouse.com

FEYNMAN GOT HIS NOBEL PRIZE FOR PHYSICS. Scholes and Merton, two of the personalities in this

account of the Long Term Capital Management debacle, got theirs in economics. LTCM hired these two academic big guns to help model risk and identify hedging strategies using derivatives and other specialized financial devices. Exclusive and secretive, LTCM was extraordinarily successful in its run-up, but global financial-system threatening on its way down. Lowenstein does a more than engaging job

of describing the flow of events over the five years of the drama. Numerous followers of this story have drawn the Greek tragedy parallel to its unfolding. There’s the arrogance and pride by the protagonists and their greedy followers, who are then blind-sided by unanticipated events (the Asian and Russian monetary meltdowns) and so come to suffer the ferocious speed of financial retribution. The conclusion that one comes to is that the NY Fed’s President William McDonough should get the Nobel Prize, not for advancing economics, but rather for maintaining world peace. Was it Archimedes who said, “Give me a place to stand and I [with my lever] will move the earth”? Over-levered LTCM almost did.



Archimedes' Bathtub

by **David Perkins**

Norton, 2000, 292 pp.
www.norton.com

SO YOU WANT TO BE MORE INGENUOUS ALSO? So you hanker to box the ears of people pressing you to “think outside of the

box?” Can’t wait to wipe the smug smiles off the faces of friends trying to trick you with ‘connect the dots, but don’t lift the pencil’ puzzles? Then this is a book for you. David Perkins, MIT grad and Harvard researcher, has assembled insights, evidence, and advice on how to improve one’s problem-solving ability. His main metaphor to help you in the process is geographic. Tough problems are analogous to trying to discover gold in the fabled Klondike region of Alaska. There’s a *be-wilderness* of possibilities; one can get stranded clueless on a *plateau*, or trapped into narrow, *can-yon*-like thinking, or get stuck lounging lazily in a luxurious *oasis* of seemingly promising answers. Perkins says that you don’t really have to work your ‘mental butt off’ in order to find good solutions. By knowing the terrain for what it is, one can home in on the true solution space. Aha! There it is. ■