



Biomimicry: Innovation Inspired by Nature

By Janine M. Benyus

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This profound and accessible book details how science is studying nature's best ideas to solve our toughest 21st-century problems.

If chaos theory transformed our view of the universe, biomimicry is transforming our life on Earth. Biomimicry is innovation inspired by nature – taking advantage of evolution's 3.8 billion years of R&D since the first bacteria. Biomimics study nature's best ideas: photosynthesis, brain power, and shells – and adapt them for human use. They are revolutionising how we invent, compute, heal ourselves, harness energy, repair the environment, and feed the world.

Science writer and lecturer Janine Benyus names and explains this phenomenon. She takes us into the lab and out in the field with cutting-edge researchers as they stir vats of proteins to unleash their computing power; analyse how electrons zipping around a leaf cell convert sunlight into fuel in trillionths of a second; discover miracle drugs by watching what chimps eat when they're sick; study the hardy prairie as a model for low-maintenance agriculture; and more.

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Editorial Review

From Library Journal

Innovations, whether in farming, composite science, or computing, are a product of human creativity. Science writer Benyus (*Beastly Behaviors*, LJ 9/1/92) uses these subjects and others to demonstrate how nature's solutions to situations have been the creative jumping-off points for individuals seeking solutions, developing, or simply revitalizing processes or products. The first seven chapters are a prelude to the final chapter, which tackles industrial ecology. Here, Benyus proposes "ten lessons" that an ecologically astute company, culture, or economy could practice to promote a healthier existence for us all. There is no grandstanding, just readable language and a simple awe at human creativity and the uses to which it can be put. For popular science collections. Michael D. Cramer, North Carolina Dept. of Environmental Health and Natural Resources Lib., Raleigh

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From Booklist

Forget the notion that technology improves upon nature. Benyus introduces us to pioneering engineers making technological breakthroughs by uncovering and copying nature's hidden marvels. These engineers are devising solar fuel cells as efficient as plants, fibers as tough as abalone shell, and computers as sophisticated as the brain. For Benyus, though, a technology that mirrors nature does more than enlarge human powers and gratify human ambitions. Such a technology teaches us how to live in harmony with nature, rather than how to dominate it. Unless we learn this urgent lesson, Benyus warns, our highly unnatural and exploitative technologies will soon render the earth unfit for life. Sobering yet hopeful, this book will bring help bridge the dangerous chasm between technophiles and environmentalists. *Bryce Christensen*

From Kirkus Reviews

The natural world, says Benyus (*Beastly Behaviors*), has an enormous amount to teach us, if only we would "tune in"--as some scientists are beginning to do--before it's too late. Touring the laboratories of a wide array of researchers, she reports on the emerging race to mimic natural processes (hence "biomimicry") in the business-driven quest for better products, environmentally sound technologies and miracle drugs. The scientists speak with palpable excitement, explaining the principles behind a utopian future of unlimited possibilities: energy harnessed by simple, non-toxic molecules modeled on the principles of photosynthesis, so efficient they put our best solar cells to shame; an organic computer, thousands of times faster and more powerful than that most advanced Pentium, that emulates the principles embodied in DNA; farms with abundant yields requiring virtually no pesticides, fertilizers, or "energy inputs," mimicking a natural ecosystem--and more. Benyus's shotgun approach can be disorienting, but the possible breakthroughs, the technologies behind them and the scientists themselves are invariably fascinating. And Benyus's observations are engaging as well, bringing to her tech-oriented subject a non-didactic moral framework and an invigorating sense of wonder: "By deliberately looking for creatures that awe us, we may just stumble upon a whole new chemistry--the spoils of survival." (*June*)

Users Review

From reader reviews:

Lana Alvis:

As people who live in the particular modest era should be upgrade about what going on or details even knowledge to make these people keep up with the era which is always change and advance. Some of you maybe will certainly update themselves by reading books. It is a good choice in your case but the problems coming to a person is you don't know which one you should start with. This Biomimicry: Innovation Inspired by Nature is our recommendation to help you keep up with the world. Why, as this book serves what you want and want in this era.

Lynn Lambert:

Playing with family in the park, coming to see the water world or hanging out with buddies is thing that usually you will have done when you have spare time, and then why you don't try factor that really opposite from that. One activity that make you not feeling tired but still relaxing, trilling like on roller coaster you have been ride on and with addition of information. Even you love Biomimicry: Innovation Inspired by Nature, you can enjoy both. It is excellent combination right, you still desire to miss it? What kind of hangout type is it? Oh can happen its mind hangout fellas. What? Still don't have it, oh come on its known as reading friends.

Karen Nash:

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