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**COVER STORY: CLIMATE CRISIS!**

# The Next Green Revolution

**How technology is leading environmentalism out of the anti-business, anti-consumer wilderness.**

By Alex Nikolai Steffen



**For decades**, environmentalists have warned of a coming climate crisis. Their alarms went unheeded, and last year we reaped an early harvest: a singularly ferocious hurricane season, record snowfall in New England, the worst-ever wildfires in Alaska, arctic glaciers at their lowest ebb in millennia, catastrophic drought in Brazil, devastating floods in India - portents of global warming's destructive potential.

Green-minded activists failed to move the broader public not because they were wrong about the problems, but because the solutions they offered were unappealing to most people. They called for tightening belts and curbing appetites, turning down the thermostat and living lower on the food chain. They rejected technology, business, and prosperity in favor of returning to a simpler way of life. No wonder the movement got so little traction. Asking people in the world's wealthiest, most advanced societies to turn their backs on the very forces that drove such abundance is naive at best.

With climate change hard upon us, a new green movement is taking shape, one that embraces environmentalism's concerns but rejects its worn-out answers. Technology can be a font of endlessly creative solutions. Business can be a vehicle for change. Prosperity can help us build the kind of world we want. Scientific exploration, innovative design, and cultural evolution are the most powerful tools we have. Entrepreneurial zeal and market forces, guided by sustainable policies, can propel the world into a bright green future.

Americans trash the planet not because we're evil, but because the industrial systems we've devised leave no other choice. Our ranch houses and high-rises, factories and farms, freeways and power plants were conceived before we had a clue how the planet works. They're primitive inventions designed by people who didn't fully grasp the consequences of their actions.

Consider the unmitigated ecological disaster that is the automobile. Every time you turn on the ignition, you're enmeshed in a system whose known outcomes include a polluted atmosphere, oil-slicked seas, and desert wars. As comprehension of the stakes has grown, though, a market has emerged for a more sensible alternative. Today you can drive a Toyota Prius that burns far less gasoline than a conventional car. Tomorrow we might see vehicles that consume no fossil fuels and emit no greenhouse gases. Combine cars like that with smarter urban growth and we're well on our way to sustainable transportation.

You don't change the world by hiding in the woods, wearing a hair shirt, or buying indulgences in the form of save the earth bumper stickers. You do it by articulating a vision for the future and pursuing it with all the ingenuity humanity can muster. Indeed, being green at the start of the 21st century requires a wholehearted commitment to upgrading civilization. Four key principles can guide the way:

**Renewable energy is plentiful energy.** Burning fossil fuels is a filthy habit, and the supply won't last forever. Fortunately, a growing number of renewable alternatives promise clean, inexhaustible power: wind turbines, solar arrays, wave-power flotillas, small hydroelectric generators, geothermal systems, even bioengineered algae that turn waste into hydrogen. The challenge is to scale up these technologies to deliver power in industrial quantities - exactly the kind of challenge brilliant businesspeople love.

**Efficiency creates value.** The number one US industrial product is waste. Waste is worse than stupid; it's costly, which is why we're seeing businesspeople in every sector getting a jump on the competition by consuming less water, power, and materials. What's true for industry is true at home, too: Think well-insulated houses full of natural light, cars

that sip instead of guzzle, appliances that pay for themselves in energy savings.

**Cities beat suburbs.** Manhattanites use less energy than most people in North America. Sprawl eats land and snarls traffic. Building homes close together is a more efficient use of space and infrastructure. It also encourages walking, promotes public transit, and fosters community.

**Quality is wealth.** More is not better. Better is better. You don't need a bigger house; you need a different floor plan. You don't need more stuff; you need stuff you'll actually use. Ecofriendly designs and nontoxic materials already exist, and there's plenty of room for innovation. You may pay more for things like long-lasting, energy-efficient LED lightbulbs, but they'll save real money over the long term.

Redesigning civilization along these lines would bring a quality of life few of us can imagine. That's because a fully functioning ecology is tantamount to tangible wealth. Clean air and water, a diversity of animal and plant species, soil and mineral resources, and predictable weather are annuities that will pay dividends for as long as the human race survives - and may even extend our stay on Earth.

It may seem impossibly far away, but on days when the smog blows off, you can already see it: a society built on radically green design, sustainable energy, and closed-loop cities; a civilization afloat on a cloud of efficient, nontoxic, recyclable technology. That's a future we can live with.

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# 8 People & Trends To Watch

## People to watch

### **The Gadflies**

Michael Shellenberger and Ted Nordhaus pissed off a lot of their green friends when they skewered the enviro movement for its failed 15-year crusade against global warming in their 2004 paper "The Death of Environmentalism." After lambasting enviros for becoming self-absorbed and irrelevant, the researchers are now pushing a Health Care for Hybrids bill that requires automakers that get financial bailouts to produce cleaner cars. Plus, they've taken on Robert F. Kennedy Jr., a high-profile environmentalist, in his fight against building a wind farm on Cape Cod - a battle that could sour investor interest in wind energy. "Developing wind power is more important than saving the Alaskan wilderness," Shellenberger says, "which is all going to end up underwater from global warming anyway." - *Kevin Kelleher*

### **The Evangelizer**

Frustrated by the inability of scientists to sound the alarm on global warming, Laurie David, a talent booker-turned-activist married to comedian Larry David, sought out the moral authorities of our time - funnymen Jack Black, Tom Hanks, and Steve Martin. It worked. Dolled up, dumbed down, and democratized, climate change has been rebranded from a fringe issue for wonky worrywarts to an A-list fret. In 2005, David began a campaign to embed the topic into everything from *Alias* and *The Bold and the Beautiful* to the National Council of Churches. Her latest win: conceiving and producing the documentary *An Inconvenient Truth*, starring Al Gore. "It's the march of the penguins!" David says of her push to give the eco movement mass-market appeal. "I want everyone marching!" - *Lisa Margonelli*

### **The Diesel Governor**

Montana's coal fields hold the equivalent of 240 billion barrels of clean diesel, which almost makes the state another Saudi Arabia. Governor Brian Schweitzer has been hustling GE, Shell, South African Sasol, and the US military to invest in converting that coal into diesel; with oil at more than \$40 a barrel (the price at which coal-to-diesel conversion becomes cost-efficient), they're interested. Schweitzer also wants to jump-start a US biofuels industry by adding farm subsidies to alt-

energy-producing crops like soybean, safflower, camelina, and canola. Schweitzer, a Democrat, picked up his agricultural self-reliance in Saudi Arabia, where he helped design the irrigation system that turned the kingdom from a wheat importer into a net exporter of wheat in the '80s. The US, he says, can do the same for fuel. - *L.M.*

### **The Builder**

"People who aren't building green buildings are building obsolete buildings," says Douglas Durst, whose reign as copresident of the Durst Organization, his family's 90-year-old Manhattan real estate firm, has been as successful as it is idealistic. He's turned high-rises into eco-towers ventilated by outside air, insulated with high-performance glass that cuts energy bills, and made of recycled materials (like steel and carpeting). Even the US Green Building Council, a standards body, is impressed: It certified Durst's 4 Times Square (home to Condé Nast, *Wired's* owner) the nation's first green office. His latest project? The Helena, a tower with on-premises black-water treatment and a solar-paneled rooftop garden. With another apartment and a BofA tower in the works, Durst is turning New York green. - *Annalee Newitz*

# Trends to watch

## **Pollution Trading**

In 2003, after the US bailed on the Kyoto Protocol, the Chicago Climate Exchange began trading permission to pollute. Companies like Bayer, DuPont, Ford, IBM, and Motorola signed on, eager to position themselves ahead of any government carbon regs to come. Under the program, they agree to reduce their carbon emissions 4 percent by 2007 (or, for newer members, 6 percent by 2010). Hit their target early and they can sell their credits for roughly \$2 each (one credit equals 1 metric ton of CO<sub>2</sub>). CCX, which has 140 members, includes cities like Chicago and Portland, Oregon, and multinationals facing mandatory reductions in Europe. Founder Richard Sandor, who pioneered the financial futures market on the Chicago Board of Trade, says carbon emissions could outpace oil to become the most heavily traded commodity. - *K.K.*

## **Nuclear Power**

Solar. Wind. Hydro. As replacements for fossil fuels, they're not enough. So countries are increasingly turning to nuclear energy for the clean power that the global economy demands, and now, 20 years after Chernobyl, there's a resurgence of nuclear plants. More than 400 reactors in 31 countries (104 in the US alone) provide 16 percent of the world's electricity. China expects to add 32 more facilities by 2020. Nuclear is cheaper than other energies, it doesn't need to be imported, and it doesn't come with emission taxes. Nonetheless, it remains controversial for all the obvious reasons: disposal of spent fuel rods, vulnerability to meltdown or arms proliferation - but even the US, which hasn't seen a new nuclear plant in a decade, is getting ready to build reactors in Mississippi and Alabama. - *K.K.*

## **Green Machines**

The Prius is just the beginning. This year, Toyota will roll out a hybrid version of the Camry, the top-selling car in the US. The next phase of green car tech follows fast: The Mercedes F 600 Hygenius pairs a lithium-ion battery with fuel cells to run nearly 250 miles on a tank of hydrogen. Meantime, about 40 percent of cars in Europe are now biodiesel-ready. Adoption of the fuel in the US, where it lags, may soon get a boost thanks to new additives and blends that reduce the nitrogen oxide emissions and keep biodiesel from jelling in cold weather. Other innovations in the works include BMW's Turbosteamer motor, which harnesses heat from its exhaust and cooling system to power the engine,

and Mitsubishi's plant-based plastics used throughout its autos. - *K.K.*

### **Power Plants**

Coming soon to US cornfields: ethanol plants. There are now 95 facilities in operation, 34 under construction, and more on the way. The goal: to more than double production of the corn-based fuel to nearly 10 billion gallons by 2015. (Still, that's just a fraction of the 140 billion gallons of gasoline Americans guzzle each year.) Among those turning maize into gold is Jefferson Grain Processors, led by Paul Olsen, a third-generation Wisconsin farmer. His operation will produce 140 million gallons of ethanol, plus biodiesel, electricity, CO<sub>2</sub>, animal feed, and 8 million pounds of fish - farmed, processed, and fried - all using the excess energy from ethanol production. "It's a Wal-Mart society - you've got to be efficient," Olsen says. If prices fall? "It's ethanol. We can always make hooch." - *L.M.*

# The Resurrection of Al Gore

**He invented the Internet (sort of). He became President (almost). Now Al Gore has found his true calling: using the power of technology to save the world.**

By Karen Breslau



**One evening last December**, in front of nearly 2,000 people at Stanford's Memorial Auditorium, Al Gore spoke in uncharacteristically personal and passionate terms about the failed quest that has dominated much of his adult life. Save for his standard warm-up line - "Hi, I'm Al Gore, and I used to be the next president of the United States" - there was hardly a mention of the White House. Instead, during the next 90 minutes, Gore had plenty to say about thinning polar ice caps, shrinking glaciers, rising carbon dioxide concentrations, spiking temperatures, and

hundreds of other data points he has woven into an overpowering slide show detailing the catastrophic changes affecting the earth's climate. The audience was filled with Silicon Valley luminaries: Apple's Steve Jobs; Google's Larry Page and Eric Schmidt; Internet godfather Vint Cerf; Yahoo!'s Jerry Yang; venture capitalists John Doerr, Bill Draper, and Vinod Khosla; former Clinton administration defense secretary William Perry; and a cross section of CEOs, startup artists, techies, tinkerers, philanthropists, and investors of every political and ethnic stripe.

After the souped-up climatology lecture, a smaller crowd dined at the Schwab Center on campus. There, at tables topped with earth-shaped ice sculptures melting symbolically in the warmth of surrounding votive candles, guests mingled with Gore and his wife, Tipper, along with experts from Stanford's Woods Center for the Environment and the business-friendly Environmental Entrepreneurs. The goal: to enlist the assembled leaders in finding market-driven, technological solutions to global warming and then, in quintessential Silicon Valley style, to rapidly disseminate their ideas and change the world. "I need your help here," an emotional Gore pleaded at the end of the evening. "Working together, we can find the technologies and the political will to solve this problem." The crowd fell hard. "People were surprised," says Wendy Schmidt, who helped organize the event and, with her husband, Google CEO Eric Schmidt, supported Gore's 2000 presidential campaign. "They think of a slide show about science, they think of Al Gore. But they come out later and say, 'He's funny, he's passionate, he's real.'" Al Gore? Five and a half years after leaving the political stage, only the fourth man in US history to win the popular vote for president without being inaugurated, Gore has deftly remade himself from an object of pity into a fearless environmental crusader. The new Gore is bent on fixing what he calls the "climate crisis" through a combination of public awareness, federal action, and good old-fashioned capitalism. He's traveling the globe, delivering a slide show that, by his own estimate, he's given more than a thousand times over the years. His one-man campaign is chronicled in a new documentary, *An Inconvenient Truth*, which made Gore the unlikely darling of the Sundance Film Festival earlier this year and will be released on May 26 by Paramount Classics. He has also written a forthcoming companion volume of the same name, his first book on the subject since the 1992 campaign tome *Earth in the Balance: Ecology and the Human Spirit*.

Along the way, Gore has become a neo-green entrepreneur, taking his messianic faith in the power of technology to stop global warming and applying it to an ecofriendly investment firm. The company, Generation Investment Management, which he cofounded nearly two years ago,

puts money into businesses that are positioned to capitalize on the carbon-constrained economy Gore and his partners see coming in the near future. All the while, he has been busy polishing his reputation as the ultimate wired citizen: Not far from the Stanford campus, Gore sits on the board of directors at Apple and serves as a senior adviser to Google. Farther up Highway 101 are the San Francisco headquarters of Current TV, the youth-oriented cable network he cofounded with legal entrepreneur Joel Hyatt.

For Gore, the private-sector ventures are all pieces of the same puzzle. He's challenging the power of the investment and media industries to decide what information matters most and how it ought to be distributed. "I find a lot of joy in the fact that these parts of my life post-politics have connected into what feels like a coherent whole, in ways that I didn't consciously plan," Gore told me at the Technology Entertainment Design conference in Monterey, California, where - again - he was the star attraction. "I think I'm very lucky."

This is not, of course, the image of Al Gore stored in the nation's memory. He's been filed away as a tragic character who saw his victory hijacked by the Supreme Court. (In the film, he addresses the experience in a poignant passage: "That was a hard blow, but what do you do? You make the best of it.") How Gore has reengineered himself as a hero of the new green movement is a story known so far by only the relative few who have seen him in action lately. "You have a sense that this is the moment in his life, as though all the work he's been doing is now coming to a head," says film director Davis Guggenheim, who spent months traveling with Gore while shooting *An Inconvenient Truth*. "City by city, as he gives this presentation, he is redeeming himself in a classically heroic way - someone who's been defeated and is lifting himself out of the ashes."

**Al Gore's redemption** begins aboard a sailboat in the Ionian Sea. There, in waters once traveled by Odysseus during his long journey home after the Trojan War, Al and Tipper retreated during the summer of 2001 to recover from their ordeal. In the months immediately following his searing loss, Gore had kept himself busy, teaching at several universities and working with Tipper on a book about the American family. The couple abandoned Washington and moved back to Nashville, Tennessee, where they had lived as newlyweds and where their older daughter, Karenna, was born. There they reconnected with old friends who had nothing to do with politics. "It was very healing," Tipper says. "We renewed ourselves." Though he still hadn't decided whether he would run for president in 2004, Gore felt it was "time to recede" from the public stage, she says, to spare himself - and the polarized public - an endless rehashing of the country's civic trauma.

That July and August, Al and Tipper vacationed at a seaside estate in Spain and then sailed along the Greek coast, trying to figure out what to do next. For the first time in his high-achieving life, the man who ran for president in 1988, at age 39, and who was a candidate in every national election since, had few demands on his time. Alone but for the boat's crew, he and Tipper spent their secluded days reading, exploring, and enjoying more than a few good meals. As usual when he was on vacation, Gore didn't bother to shave. On the morning they were due to return to the US, Tipper says, she walked into the bathroom and found Gore preparing for his end-of-vacation ritual, just as he had done countless times during his days as a US congressman, senator, and vice president. "I said, 'Al, you don't have a job to go back to. The beard is fun. Leave it.' He said, 'Oh yeah,' and put down his razor. And then we came back and everyone saw the beard and it was 'yada yada yada.'"

When Gore hit US shores looking like a well-fed Grizzly Adams, the late-night comics lampooned him without mercy. The political talking heads puzzled endlessly about Gore's latest "makeover" and what signal he was trying to send. "It's not as if we were talking about Allen Ginsberg," Tipper told me, clearly amused by the image of her husband as a closet counterculturist. "It was just his way of saying he was free." As Gore started traveling the country again, tentatively feeling out campaign donors and testing his political viability before select audiences, it soon became clear that his heart was no longer in the hunt. In late September 2001, Gore was scheduled to address an influential gathering of Democrats in Iowa. He had planned to signal his interest in the 2004 race. But after the September 11 attacks, he tore up the speech and instead called for national unity, offering a salute to President Bush as "my commander in chief." Gore rejects the notion that he had somehow lost his Democratic backbone in a spasm of post-9/11 patriotism. "I genuinely think he did a good job in the immediate aftermath of September 11 and up until Tora Bora," Gore told me, referring to the battle in Afghanistan in December 2001, when Osama bin Laden eluded US forces. "And especially up until the invasion of Iraq, I think, he did a good job. But then he blew it, in my opinion." Over the next few months, Gore turned away from politics, Tipper says, and shouldered as his "ministry" the campaign against global warming. He went back to work on the climate-change slide show he had been giving since he was a junior congressman in the late '70s. After earning little more than a government paycheck and book royalties for most of his career, he also started to make some serious money. Indulging his lifetime fascination with "information ecology," Gore took up an advisory post at Google in early 2001, three years before its blockbuster

IPO. Later that year, he signed on with Metropolitan West Financial, a Los Angeles-based securities firm, as a rainmaker. In March 2003, he joined Apple's board of directors. The next year, Gore and a consortium of investors purchased a cable TV news network for a reported \$70 million. Then he teamed up with David Blood, the former CEO of Goldman Sachs Asset Management, to form an investment fund based on the principles of sustainability. (The event was covered in the *Financial Times* under the irresistible headline "BLOOD AND GORE LAUNCH FIRM WITH A DIFFERENCE.")

While the political press remained obsessed with Gore the loser (underlined by his ill-timed endorsement of Howard Dean right before the candidate tanked), by 2004 Gore the neophyte businessman had built an impressive second act around his twin passions: technology and the environment. "His new work leverages what he's really good at, which is thinking deeply about the drivers of change and having a perspective on where companies need to go in a global business environment," says Peter Knight, a longtime friend and adviser who is one of Gore's partners at Generation. "This turns out to be a wonderful convergence of his abilities and interests." Along with his bank account, the transition from public to private sector has also buoyed Gore's wounded spirit. "This is the Al that I've known since we were teenagers," Tipper says. "How does that Joni Mitchell song go? 'I was a free man in Paris, I felt unfettered and alive.' That's him."

**When Gore and I meet**, it is, alas, not in Paris but at the St. Regis Hotel in San Francisco, where he and Tipper recently purchased a pied-à-terre. Gore is dressed in his new uniform, looking very *GQ* in well-tailored trousers and a charcoal silk shirt, open at the collar. He's chucked the Brylcreem; his hair is modishly parted and flops on his forehead. At 58, he looks younger (though considerably heavier) than he did a few years ago. Earlier in the week, Gore had returned from a grueling lecture tour of Tokyo, Manila, Mumbai, and Jiddah, where he gave a speech accusing the Bush administration of "terrible abuses" against Arabs after the September 11 attacks. Gore knew he would be pilloried for criticizing Bush on foreign soil, though he never could have predicted that a trigger-happy Dick Cheney would have blasted him, as it were, out of the headlines that week with even worse vice presidential news. As he pops a beer and sprawls on a sleek leather lounge, Gore chortles at Cheney's predicament.

I ask him how his ventures in cable television and sustainable investing are supposed to fit together. Gore responds with a typically long and sometimes philosophical filibuster that eventually circles back to the question. Central to Gore's philosophy are two inextricable beliefs: first,

that "the world is facing a planetary emergency, a climate crisis that is without precedent in all of human history." Second, that "the conversation of democracy is broken." Fix the latter, Gore argues, and the chances of remedying the former improve dramatically.

One reason Gore remains enthusiastic about his cable venture, Current TV, despite its startup pains and anemic reviews, is that he sees his fledgling network as busting the access monopoly that broadcast and cable outlets have held since television began. "If you want to be Thomas Paine in the information age," says Gore, "what do you do? You go to a studio, and then you can play a bit part in making a show about people who eat bugs. The barriers to entry are impossibly high."

Current TV, which already seems hopelessly overtaken by the proliferation of video-sharing Web sites like Google Video and YouTube (see "[The Wired Guide to the Online Video Explosion](#)"), was conceived to give the audience the power to decide what should be carried on the network. Programming consists largely of short videos submitted by its young viewers, giving the channel the disjointed flavor of home-movie night in the dorm: A report on rebuilding with green materials in the wake of Hurricane Katrina might be followed by a clip on cockfighting in Puerto Rico and another featuring bikini-clad meter maids in Australia. Make what you will of viewers' tastes; Gore says Current TV is the answer to a crucial social challenge: How do you open up the public dialog to individuals who are shut out of television? For all the early hype surrounding Current TV, the commercial venture that excites Gore most these days is Generation Investment Management, his global fund. As governments begin imposing carbon caps on businesses, Gore says, free markets will reward companies that practice environmental sustainability. The result: reductions in emissions of carbon dioxide and other greenhouse gases responsible for global warming. "As soon as business leaders get global warming or the environment at large," he says, "they start seeing profit opportunities all over the place. There is so much low-hanging fruit right now, it's just ridiculous." So much, in fact, that early this year venture capitalist Doerr announced that his firm, Kleiner Perkins Caufield & Byers, would launch a \$100 million green-technology fund. "Greentech could be the largest economic opportunity of the 21st century," he said. Though Generation invests in a wide range of companies, Gore and his team are especially bullish on the energy sector. We're on the verge of "a real gold rush" in renewables, conservation, and software for identifying and eliminating waste, he says. "The whole economy is going to shift into a much more granular analysis of which matter is

used for what, which streams of energy are used for what. Where does it come from? Where does it go? Why are we now wasting more than 90 percent of it?" Gore shakes his head. "The investments in doing it right are not costs - they're profits."

Make no mistake: Generation's strategy is to beat the market, not just to feel good about socially responsible investing. Gore's partner at the firm, David Blood, is a legend in the London investment scene. He retired as CEO of Goldman Sachs Asset Management in 2003, at age 44, after helping grow its assets from \$50 billion to \$325 billion in just seven years. He, too, was casting about for a way to incorporate environmental and social values into traditional investment analysis. The concept wasn't an easy sell on Wall Street. "As soon as you say 'sustainability,' some people will roll their eyes and say, 'These guys are tree huggers and they run around in sandals and they aren't serious investors,'" says Blood. "But once they listen, there is no one who says this doesn't make sense."

Gore is fond of citing a maxim from psychologist Abraham Maslow: "If the only tool you have is a hammer, you tend to see every problem as a nail." The same principle, he says, applies to investing. "If the only tool you have for measuring value is a quarterly financial report or a price tag, then everything that is excluded from that report or that comes without a price tag begins to look like it has no value." Solving the climate crisis, Gore says, will require a new set of market signals for investors. "The precision with which labor and capital are measured and accounted for is in one category. The precision with which nature is tracked and depreciated and cared for is something else again."

Gore compares the voluminous but incomplete information that investors get to the intelligence briefings he used to receive each morning at the White House. "These satellites are just parked out there, grabbing signals from all across the electromagnetic spectrum." But without bringing to bear his own human intelligence, incorporating information from elsewhere on the "spectrum of value," the top secret satellite data would have made little sense. "Now, in the same way, if you rely on financial reports that are constructed without regard to environmental factors, you're excluding a lot," he says. "When you look at other parts of the spectrum of value, you get important information that's directly relevant to the sustainable value of the company."

As an example, Gore cites a Generation report on the auto industry. Researchers analyzed traditional metrics, including sales and labor costs, but they also looked at the degree to which profits depended on high carbon output. Two years before it became clear how badly General Motors and Ford were performing, the Generation team calculated that Toyota, a more carbon-conscious company with better labor relations,

would gain a \$1,500 advantage per vehicle as government-mandated fuel efficiency and carbon emission standards come into effect. GM's reliance on gas-guzzling SUVs made money in the short term. But the company's inability (or refusal) to position itself ahead of the coming carbon-regulation regime economy was a barometer of poor strategic thinking.

Generation likes to use this sort of nontraditional analysis. When considering an investment in an energy company with operations in the Rocky Mountain area, for instance, fund analysts looked to community blogs, where they found considerable local opposition to the company's strategy. "That business plan had a huge vulnerability that was outside the scope of its financial reports," Gore says. "I often say, 'It's really just common sense.' But common sense is not as common as it should be. Our whole mission is to make it mainstream."

Gore and his Generation partners base their investments on long-term research, looking ahead up to five years, and they have agreed not to take any profits themselves until three years into any investment. The firm began investing client money in April 2005 (it now manages around \$200 million in assets), and Gore, while declining to give specific figures, says the returns thus far have been "really gratifying, I mean really exciting." Initial investments include companies involved in photovoltaics, wind turbines, wave energy, and solar power. The firm put money into BP, betting on its new power plant in Scotland that injects carbon emissions back into the ground. It's the kind of technology Generation sees as having a competitive advantage in a carbon-constrained economy.

Generation's overriding goal, of course, is to make money for its investors. But Gore and his partners also believe the firm can help innovative businesses attract even more funding. The idea is to draw capital away from the fossil-fueled economy and direct it toward new and profitable centers of the sustainable economy. "We're trying to get Wall Street to wake up," says Colin le Duc, who heads Generation's London-based research team. "I want to be able to sit there with the hardest-nosed, most skeptical investment fund manager in New York and say, 'We beat the market by 20 percent, and you can, too.'" The Gores and all the employees of Generation lead a "carbon-neutral" lifestyle, reducing their energy consumption when possible and purchasing so-called offsets available on newly emerging carbon markets. Gore says he and Tipper regularly calculate their home and business energy use - including the carbon cost of his prodigious global travel. Then he purchases offsets equal to the amount of carbon

emissions they generate. Last year, for example, Gore and Tipper atoned for their estimated 1 million miles in global air travel by giving money to an Indian solar electric company and a Bulgarian hydroelectric project. Carbon offsets are still an imperfect tool, favored only by a few early adopters. (*An Inconvenient Truth* directs viewers to a personal [carbon calculator](#) posted at [www.climatecrisis.net](http://www.climatecrisis.net).) Gore acknowledges that the average US consumer isn't likely to join what is, for now, essentially a voluntary taxation system. "The real answer is going to come in the marketplace," he says. "When the capitalist market system starts working for us instead of at cross-purposes, then the economy will start pushing inexorably toward lower and lower levels of pollution and higher and higher levels of efficiency. The main thing that's needed is to get the information flows right, removing the distortions and paying attention to the incentives."

It is Friday afternoon at the TED conference in Monterey, California, the annual four-day, four-star schmooze-fest of the tech and design elite. Motivational speaker Tony Robbins is onstage, asking the TEDsters for reasons people commonly give when they fail. The answers are mostly predictable: bad management, not enough money, lack of time. Then Gore, who's sitting just a few feet from the stage, shouts, "The Supreme Court." Everyone roars with laughter. Robbins wheels on Gore. If he'd shown more passion, Robbins chides, "you'd have kicked his ass and won!" Everyone, Gore included, roars again - but the point is taken. These days, Gore speaks with a verve and conviction that were often sorely absent during his political days. From time to time, he fires broadsides at the Bush administration - for its warrantless domestic wiretapping program, for the interrogation methods used against al Qaeda suspects rounded up in Iraq and Afghanistan - usually, he says, "when I get to the point where I can't stand not making a speech and unburdening myself." But most of Gore's public energies are directed toward his campaign against global warming, which he, like Tipper, describes in evangelical terms as "my mission."

As vice president, and then as a candidate for president, Gore enjoyed a retinue of advisers, Secret Service agents, schedulers, and speechwriters. Save for one harried, full-time assistant, that's all gone now, a change that Gore seems to relish. On New Year's Eve 2005, he was home in Nashville with Tipper, hunched behind two 30-inch hi-def Apple displays, trying to finish his book on climate change. As he completed a page, Tipper would grab it from the printer and cram it into a three-ring binder. Finally, at 10:30 pm, the manuscript was finished, and Tipper raced down the driveway to hand it to a waiting courier. "I told Al, 'This is just the way it was when we started,'" she says, recounting the story for me without a shred of pathos. "Just the two of us."

These glimpses into what, for years, has been zealously guarded privacy are Gore's way of letting the world know that he has adapted quite comfortably to his life after politics. The inevitable queries about whether he plans to run again are batted aside with another one-liner: "I like to think of myself as a recovering politician. I'm on about step nine."

During the question-and-answer session following his climate lecture at TED, Gore confesses, "I wasn't a very good politician."

"Well, you won!" someone shouts from the audience.

"Oh, well," Gore deadpans in a *Saturday Night Live* imitation of himself. "There is that."

Since his defeat in 2000, Gore has developed an impressive arsenal of self-deprecating ripostes to protect himself against misplaced pity. "The elephant in the room is always, How does he feel about the election?" film director Davis Guggenheim says. "You kind of suspect this guy is pissed off and dug in. And what he's saying right off is 'I've moved on, and I want you to move on with me. I need you to laugh about it, too.' And then he gets them to listen to what they need to hear."

At TED, before offering his remedies for global warming, Gore acknowledges the elephant with a wicked stand-up routine - punctuated by faux crying jags - about the indignities of leaving public office. His shtick includes having to explain to Bill Clinton an erroneous Nigerian wire service report that he and Tipper had decided to open a chain of Shoney's eateries (prompting a letter of congratulations from the former president) and the "phantom limb" pain he feels when he looks in the rearview mirror and doesn't see his motorcade.

Reality is just as funny. Last year, while traveling on business, Gore stopped at a restaurant. A woman kept walking slowly past his booth to stare. Finally she stopped. "You know, if you dyed your hair black, you'd look just like Al Gore," she said.

"Why, thank you, ma'am," Gore, ever the straight man, responded.

"And your imitation of him is pretty good, too," she said.

This spring marks a coming-out of sorts for Gore, no longer a candidate for anything, but campaigning nonetheless to change American attitudes about global warming. Gore says he will channel earnings from his upcoming book and movie into a "mass persuasion" offensive. Together with *An Inconvenient Truth* producer Laurie David and a coalition of major environmental, business, labor, and religious groups, Gore wants to make *climate crisis* a household phrase. They plan a three-pronged Internet, television, and print advertising campaign to provoke wide-reaching changes in consumer and business behavior and to force shifts in government policy. He'll bring an army of surrogate speakers to Nashville, where he and Tipper will equip them with the slide show and

train them to deliver the lecture.

During the opening sequence of the documentary, Gore confesses ruefully: "I've been trying to tell this story for a long time, and I feel as if I have failed to get the message across." For Al Gore, it's the race of his life.

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# Rise of The Neo-Greens

**Solar panels on the roof. Hybrid car in the garage. Organic-cotton clothes in the closet. Today's eco-radicals are voting with their dollars.**

By Daniel H. Pink



**Think of Howard Brown** as a Forrest Gump for the Gen X set. Wherever the zeitgeist has galloped in the last two decades, Brown has been a few strides ahead, waiting when it arrived. Back in the '80s, while living in Seattle, he followed a cool local band that he thought had promise. Its name: Nirvana. A few years later, in Philadelphia, he published a popular zine at the dawn of that now-forgotten pre-blog explosion of self-expression. Then he latched onto the extreme-sports craze and took a job working for Burton Snowboards, moments before the X Games went big time. In the late '90s - of course - he became a dotcom dreamer and headed to California, only to awaken with a drawerful of worthless stock options.

So where is this one-man cultural GPS now? Sitting in a third-floor Manhattan showroom, surrounded by racks of fall fashion, making the case that he's onto the newest new thing once again: clothing and accessories that combine high style with environmental awareness. "It's a revolution," he announces.

Brown, 38, is half of the fashion house Stewart + Brown. His partner in business and life is Karen Stewart, a 36-year-old former painting student who started out designing clothes for Urban Outfitters and J.Crew. Now the two of them are making T-shirts, sweaters, and other sportswear from organic cotton - and selling them not at the local food co-op but at ritzy boutiques in the US and Japan. The couple and the company embody a new approach to commerce, one that refuses to sacrifice style for sustainability. Call it the green aesthetic. Tearing a page from the playbook of centrist politicians like Bill Clinton and Tony Blair, the green aesthetes are charting a third way, triangulating between the hippies and the hip. They've detected the first stirrings of a new constituency in the marketplace: Prius-driving, solar panel-installing, Sierra Club-donating, look-at-me environmentalists.

**Who are these emerging** tribes of neo-green consumers, and what makes them tick? Experts in consumer behavior have peered through the windows of hybrid cars for clues.

The first wave of hybrid buyers share two notable demographic features: "affluence and suburbia," says market researcher Tom Spencer. People who drive hybrids tend to be fifty- to sixtysomething suburbanites with grown children, says Spencer, a VP at Claritas. Wealthy suburb-dwellers, who comprise about 5 percent of US households, bought 11.5 percent of all new cars in 2004. But they bought 17.5 percent of all new Priuses, according to Spencer, who crunched the numbers for Toyota and Honda. J.D. Power and Associates found in 2003 that while the average household income of all new car buyers was \$85,000, the average household income of hybrid purchasers was \$110,000.

Of course, people of all stripes drive hybrids. But regardless of age or income, consumers buy cars with gas-electric engines primarily because of what the vehicles say about them - to themselves and to everyone else. That's what Ken Kurani and his colleagues at UC Davis learned when they studied Prius, Civic, and Insight drivers in 2004 and 2005. "We had a hard time explaining why people bought hybrids," Kurani says. If consumers calculated the cost of the car and how much gas money a newfangled engine would save, the numbers wouldn't add up. But few actually did the math - and those who did didn't care. "We have yet to find anyone for whom saving money was the most important

factor."

Instead, as Kurani (an engineer) and his partners (an anthropologist and a PhD student) interviewed hybrid owners, they discovered that the cars were "symbols of identity." Buying a Prius or Honda Civic hybrid was less about careful economic reasoning than about self-expression and self-understanding. "People construct their identities as a narrative. The project of our lives is to tell a more interesting story about ourselves," says Kurani. "In large part that's what we see happening with hybrids."

For most buyers, the goal wasn't fuel economy. It was to produce fewer emissions, to minimize external harm - and to let everyone else know that they've made a deliberate choice to do so. "Lower resource consumption is part of an identity people are constructing. They want to be seen as someone who's concerned about the world around them," Kurani says. At the same time, "they want others to see that they've done this, so that others might see themselves doing this."

Researchers have found similar motivations for the early adopters of that other staple of the neo-green movement, solar power. Until recently, installing solar panels didn't make financial sense. The cost of photovoltaics often exceeded the savings they'd bring to an electric bill. But some consumers, especially affluent households in the West, went solar anyway, motivated by an interest in sustainability and the desire to make a statement from their rooftops. Then economies of scale kicked in, changing the cost-benefit dynamic. Now, according to a March survey by Environment California, solar power "enthusiasts" are four times as likely to be motivated by saving money as by protecting the environment. "As the price of solar has come down, the economics of making that statement match up to the price point of more people," says Arno Harris of the solar provider EI Solutions.

Hybrids will likely follow the same development curve. But until the technology becomes cost-effective, consumers are content to use the Prius as a way of peacocking individual virtue and persuading fellow citizens to change their ways. "Cars are mobile billboards for all of us," Kurani says.

In fact, there's only one consumer item that's more self-expressive, more mobile, and more on display than the car in your driveway - the clothes on your back. Which is why green apparel - the logical extension of the hybrid movement - is on the rise. A \$300 bamboo blouse seems expensive compared with what you'll find at the Gap, but neo-green

consumers don't see it that way. See-me-environmentalists aren't looking for any old clothes; they want outfits to match (and reflect) their lifestyles the same way their cars do. As for would-be eco-radicals who can't afford to make a \$25,000 statement - well, a cashmere sweater produced by a herders' co-op in northwestern Mongolia is a cheap way in, a sort of greenie gateway drug.

**In February 2005**, during the hoopla of Fashion Week in New York, a phalanx of models strolled down a catwalk wearing hemp/silk gowns, organic-wool dresses, and bustiers made from recycled polyester. FutureFashion, as the show was called, was something of a coming-out party for the green aesthetic movement.

Eco-chic is now sprawling across the cultural terrain. Bono and his wife, Ali Hewson, recently teamed with of-the-moment denim designer Rogan Gregory to create a clothing line called Edun (that's *nude* spelled backward). Edun produces fair-trade T-shirts, jeans, and organic-cotton sweatshirts sold at high-end department stores like Nordstrom and Saks. Gregory's been busy; he also colaunched Loomstate, which makes organic-cotton jeans that sell at Barney's for about \$165. Meantime, clothing and accessories made out of obviously recycled materials - everything from newspapers and phone books to old inner tubes - are showing up on the runway and on the street. Upscale greentailers from Brooklyn's 3R Living to Green Loop outside Portland, Oregon, have sprouted like organic mushrooms after a sun shower to sell fashion and furniture to people with thick wallets and guilty consciences.

The surging popularity of organic material - fibers grown without pesticides or herbicides - demonstrates that the neo-greens want to know the source of what they buy. They associate organics with not just healthy eating but low-impact, earth-friendly, sustainable farming. For a generation of shoppers, the certified-organic label has become a Garanimals tag for grown-ups. According to the Organic Trade Association, sales of organic clothing were projected to reach \$88 million in 2004 - up 30 percent in two years.

Web sites have begun popping up to help consumers appear fashionable and still be environmentally defensible. Every month, more than 430,000 people visit Treehugger.com, which caters to "design-obsessed undercover bleeding hearts." Launched in July 2004, this site is produced by a far-flung group of bloggers on four continents who earn \$10 to \$15 per post. Now the tastemaker of the green aesthetic, Treehugger postings help readers price-check sorghum ottomans or find

that perfect pair of recycled tire-valve earrings. "We're trying to make it easy by aggregating the sexy green stuff," says Graham Hill, the affable 35-year-old Canadian who founded the site. Ventures like these, as well as self-described "organic pioneers" like Stewart + Brown, are finding opportunity by pushing back against both the high-style chic crowd and the high-doom environmentalists.

To the fashionistas, the neo-greens say: Fashion is a dirty business; wake up and see the consequences of what you're doing. Stewart's awakening occurred when she was working for Patagonia, one of the first clothiers to move to organic cotton. For a decade, she had been designing countless cotton garments without thinking about the source of the fiber. Then she toured a conventional cotton farm in central California. "It was so toxic we had to shower afterward to wash away the chemicals," she recalls with a wince. To grow the cotton needed to make one T-shirt, she learned, farmers use one-third of a pound of pesticide. The bug killer can contain cyanide, dicofol, naled, propargite, trifluralin, and other carcinogens, traces of which can seep into the soil, infiltrate the cotton seeds, and cascade into the food supply. "Cotton is marketed as this pure white American commodity," says Scott Hahn, a cofounder of Loomstate. "That's deceiving."

But green aesthetes aren't just about blaming the runway set. They're also taking aim at what Brown calls "hippie conservatism," the hand-wringing gloom and doom that equates virtue with a conspicuous lack of style. Brown and his peers are willing to utter the unspeakable truth: Hemp ponchos and vegan sandals are butt-ugly, and most people who wear them look ridiculous. For a twentysomething on Friday night, a nubby brown sackcloth just doesn't cut it. "The hippies have been the backbone of the alt-environmental movement," Hill says. "But aesthetics matter. We're trying to show that you can be cool and hip and still give a fuck about the environment." The green aesthetes take their ideology bright, not dark. "We try to be super-optimistic," Hill says. "We're pro-business, pro-solution. The space we're trying to fill is motivation by hope, not fear."

But one groovy mom-and-pop business does not a revolution make. Stewart + Brown's sales are on pace to more than double to \$2 million this year, but that's hardly a fortune in the low-margin rag trade. Organic-jeans maker Loomstate is growing, but it sells less in a year than Levi Strauss sells in a day. And while Treehugger is popular, it gets a sliver of the traffic of Amazon.com or even Boing Boing. The green aesthetic may be a movement, Hill says, but many advertisers still don't see the green aesthetes as a market. What's needed to nudge them fully into the mainstream is not just clever triangulation but an entire infrastructure - efficient supply chains, improved technology, and power

retailers.

**It's Wednesday night** at the edge of West Hollywood. While the ultrachic are preparing for post-Grammy Awards party-hopping, the semi-chic are here at an annex to a grocery store, fingering organic towels.

Back in October, Whole Foods Market opened its first Lifestyle shop a few doors from the bustling supermarket it operates on Santa Monica Boulevard. The business logic was simple: Consumers who are concerned about what they put *in* their bodies are also concerned about what they put *on* their bodies. So the retailer set up shop to sell organic-cotton underwear and recycled-plastic pants, mostly among its groceries, but also in annexes like this one. If anyone can take the green aesthetic to the masses, it's the country's fastest-growing grocery chain.

I walk along the bamboo flooring past the pots of sustainable grasses and a mannequin sitting in a Sukhasana yoga pose atop a bed made of sustainably farmed maple, and head toward the Stewart + Brown section. They're offering a \$160 shirt jacket, a \$60 bay leaf-colored T-shirt with an artichoke print, and a \$160 wrap hoodie - all made from organic cotton. Loomstate is here, too - selling a \$55 ecru T-shirt emblazoned with EXTINCTION IS FOREVER. There's a line of Green Babies clothing, which helps planet-conscious yoga moms stuff their offspring into organic onesies. What's more, like any nice clothing shop, even one whose walls are coated with low-VOC paint, Lifestyle features all manner of accessories - seat belts repurposed as men's belts, bicycle chains turned into \$9 bracelets - as well as housewares and furniture.

It's easy to scoff at the venture. Would someone shopping for organic rutabagas also, on impulse, toss an eco-thermal henley into the cart? Would she really walk the aisles of a grocery store searching for hemp bedsheets? During my two visits to the West Hollywood outpost this winter, the cash register scarcely rang. The company won't release sales figures for its Lifestyle arm, but Whole Foods isn't generally a company to bet against. It entered about the most brutal, competitive, thankless business around - where the margins are thinner than the shaved ham in the deli case - and proceeded to reinvent retail grocery and attain a market cap of more than \$8 billion. All this on the back of a simple idea: People will pay more for free-range chicken and organic strawberries. Apparel is the next step. As company official Marci Frumkin says, "One day, you will find Lifestyle stores everywhere."

That may be corporate bravado, but there's plenty of it to go around in

this fast-growing business. Loomstate's Hahn says, "Eventually you're going to see Target and Wal-Mart all over this." Because while it remains to be seen whether the green aesthetic will become as mainstream as, say, a double soy latte or even a Toyota Prius, it does have two powerful forces working in its favor: supply and demand. Start with supply. Early adopters like Stewart + Brown and Loomstate, as well as more established players like Patagonia, Nike, and Timberland, are locking in long-term contracts with organic growers and bringing new farmers into the fold. That ensures a steadier stream of production, which will make prices more predictable and will kick-start some economies of scale. Over time, increased demand and decreased production costs will lure additional players, which helps create still greater efficiencies, boosting output and lowering costs. But the neo-greens also recognize that the supply chain is not only a partner of demand - it's a part of demand. The people who buy heirloom tomatoes at Whole Foods, like the consumers who wear Stewart + Brown sweaters, aren't just buying a product. They're buying a story - the tale of where the product came from, how it was made, and who had a hand in producing it. Those stories become part of a personal narrative, a way to signal individual virtue and spark collective action - like a Prius. In a world awash in choice yet wary of race-to-the-bottom-line capitalism, more shoppers will pay a premium to know the source of ingredients and the practices in the supply chain. Yet a funny thing happens when consumers pay a little more for something: Producers rush in to give it to them. Which shrinks the premium and eventually makes the product widely attainable. After all, even Wal-Mart now sells organic food.

The green aesthetic entrepreneurs have grokked this lesson. They know that there's a force larger than either the World Wildlife Fund or *Women's Wear Daily*: an army of citizen shoppers with some extra cash. As Treehugger's Hill puts it, "Unless you're doing the loincloth thing, you need stuff. So you might as well vote with your dollars and buy the right stuff."

Merchants of the world, to arms. A brigade of stylish, eco-aware customers is massing at the gates. And they're ready to spend. *Contributing editor Daniel H. Pink ([www.danpink.com](http://www.danpink.com)) wrote about New York Times columnist Thomas Friedman in issue 13.05.*

## **My Eco-Chic Lifestyle**

What do you get when you cross disposable income, a sense of style, and eco-guilt? A new breed of checkbook activists who are changing the world one purchase at a time - whether that means slapping down \$25,000 for a Prius, a few grand for a back deck made of recycled Michelins, or a little extra for organic kumquats. Here's a look inside the mind of the archetypical neo-greenie. - D.P.