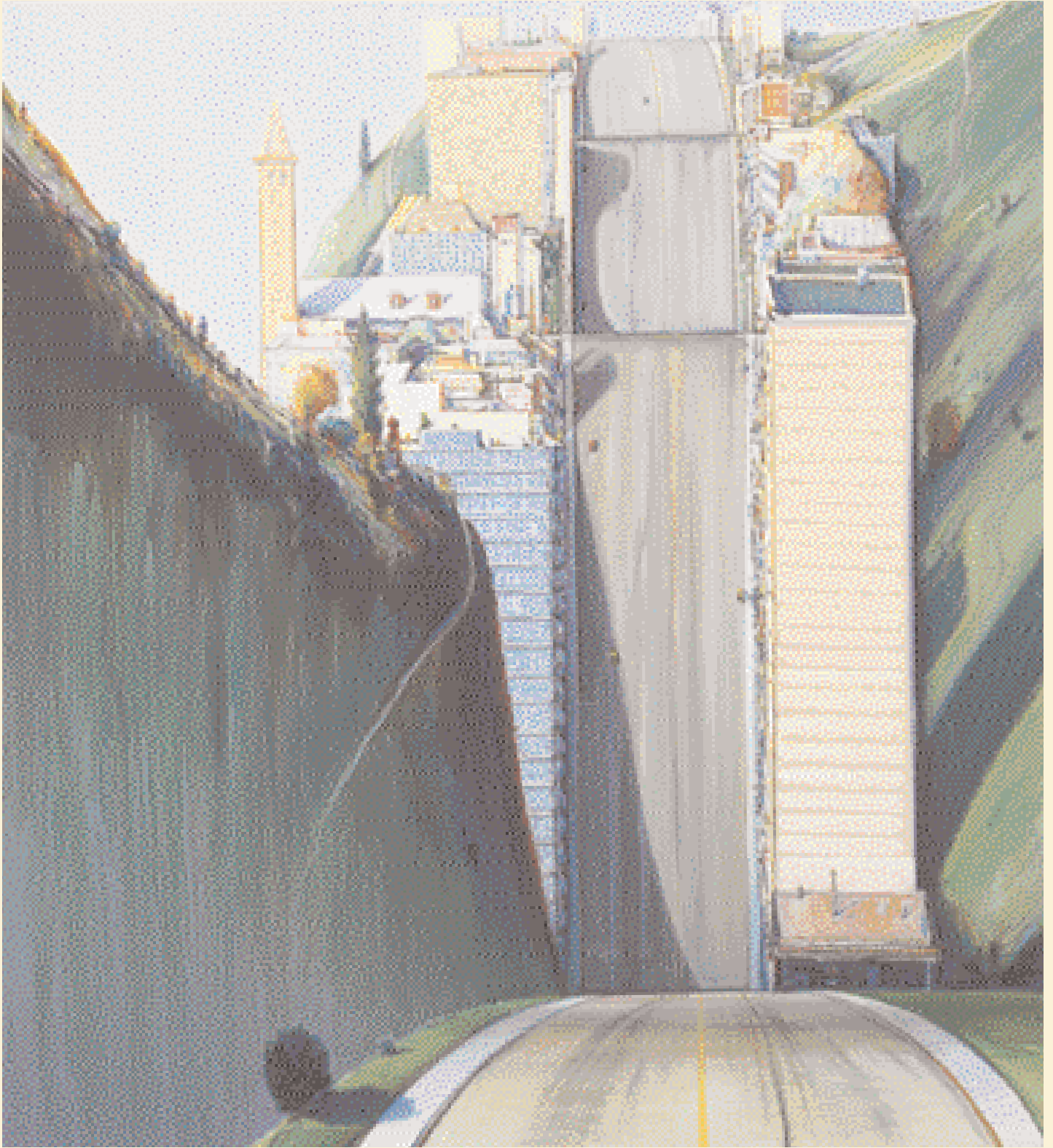


PARK PLACE, (1992, PASTEL ON PAPER, 30 X 22 IN), ©WAYNE THIEBAUD/LICENSED BY VAGA, NEW YORK, NY



BEYOND SUSTAINABILITY

GAIL BERNICE HOLLAND

DESIGNING
A WORLD
THAT WORKS
FOR ALL

William McDonough makes things happen. Described as a visionary, a utopian, even a revolutionary, he pays close attention to the relationship between intention and manifestation. He knows, and exemplifies, that moving from personal transformation to societal transformation involves not just new ways of thinking and being, but new ways of acting, too. An ability to manifest ideals and values that will benefit humanity and the planet is one way we can contribute to the emergence of a global wisdom society.

Trained as an architect, McDonough is introducing innovative concepts for buildings and products specifically to protect humans from toxic materials, and protect the

environment from being polluted and destroyed. In 1996, he received the Presidential Award for Sustainable Development, the nation's highest environmental honor, presented by President Clinton in a White House ceremony. In 1999, *Time* ran a cover story on McDonough, labeling him a "hero for the planet," and noting: "His utopianism is grounded in a unified philosophy that—in demonstrable and practical ways—is changing the design of the world."

McDonough's ultimate goal is to help create a world where there is no waste, and where all buildings and all products have a positive effect on the environment. If we want to stop global warming, and other harmful environmental problems caused by many of the products humans have developed, it is time for what McDonough and his colleagues call the "Next Industrial Revolution." The industrial revolution, he says, encouraged the domination of nature by human beings. Today, we know that all life is interdependent and interconnected, and this knowledge, he says, leads us to the next stage. "The concept of a revolution to us is essentially a re-evolution," he explains. "We want people to evolve."

McDonough deliberately doesn't say we *should* evolve, or *must* evolve. Whether he's making a speech or writing a book, he avoids dogmatism. "I'm not telling anyone to do anything. I'm simply trying to show people ➤



NOBODY ASKED FOR AN INDUSTRIAL SYSTEM THAT WOULD DESTROY THE WORLD.

there is an opportunity to do things differently.”

The critical problems now threatening our environment, McDonough says, provide the main motivation to live more consciously and creatively. In particular, he invites us to look at the powerful role of intention in how we live our lives. Why, he ponders, are we still designing and manufacturing products with toxic substances that are harming humans and the environment? “These problems are occurring because we have no other plan,” he says. “Nobody asked for these toxins. Nobody asked for an industrial system that would destroy the world.”

What would happen, he asks, if we focused our intention on exploring new ideas and products that could serve and benefit not only humans, but also the rest of the planet? What if we used human creativity to its fullest to make the world a better place? What if we stopped rushing around mindlessly, paying little attention to environmental and societal problems, and became more mindful that there are ways to solve such dilemmas? These types of questions occupy McDonough’s thoughts, and his time is spent seeking answers.

Ideals by Design

Although regulations exist to protect us from poisonous materials, he views regulations as signals of design failure. “It is the state stepping into commerce saying, ‘The public never gave you the right to kill. We’ll tell you at what rate you can dispense death.’ Think about the language we use. When somebody is beating a regulation we say, ‘They are getting away with murder.’”

Sometimes, he admits, creativity is stifled when we passively put up with less-than-ideal situations, and don’t consider alternative possibilities. After all, he reflects, it took us five thousand years to put wheels on luggage, and we haven’t yet learned the lesson from Titanic-type steam ship catastrophes. “The question is, who is the leader on the ship crossing the ocean? Is it the captain or the navigator? Perhaps it is the designer of the ship because you can be the best captain in the world, but if the ship isn’t seaworthy you’re going down.”

If saving our planet means redesigning what we manufacture and what we build, then McDonough is willing to help lead the way to change the way we design the world. He doesn’t work alone. In addition to founding his own architecture firm in Charlottesville, Virginia, he co-founded McDonough Braungart Design Chemistry, a product and process design firm. With the assistance of his partner Michael Braungart, a world-renowned German chemist, plus a team of multidisciplinary individuals in such fields as botany and hydrology, McDonough has designed not only homes and multimillion-dollar corporate headquarters, but also has introduced new ways of creating ecologically safe products—from cars to carpets.

One of his major architectural achievements was to redesign Ford Motor Company’s aging and allegedly contaminated industrial site located on Michigan’s River Rouge. McDonough always tries to create a safe, healthy environment that embraces natural systems, and so his design for Ford included North America’s largest green natural roof, made from a plant that can both insulate the building and absorb storm water. The new facility also filters emissions, and reduces polluted storm-water runoff; when water enters the river it is pure.

These innovative concepts saved the company \$35 million in construction and wastewater treatment expenses. Evidently, McDonough's ecological approach works for the corporate world. *Business Week* wrote: "Bill McDonough has the wild idea he can eliminate waste. Surprise! Business is listening."

The Path of Learning

To appreciate McDonough's accomplishments, it helps to understand his childhood and what led him to the transformative path he pursues. A son of an American business executive, McDonough was born in Japan and grew up in Hong Kong. He was influenced at an early age by seeing first-hand the scarcity of resources, and what happens when millions of people occupy a small space. During the dry season, he remembers, each household received a small amount of water every fourth day. "We saw people die of cholera on our doorstep. We thought this was ordinary life."

Every summer, as a youngster, he visited his grandparents' log cabin in Washington State, where space, trees, and water were abundant, and yet his family was frugal and careful. Later, as a teenager in suburban Connecticut, he experienced his first real taste of the American consumer-oriented society. Classmates drove expensive cars, and the contrast of this materialistic life style with his childhood was huge; it had a major effect on him. In Asia, he learned that everything mattered, everything was valuable. In the United States, he began to see how much is wasted, how much is taken for granted.

His own personal transformation, which eventually led him to consider how he could contribute to the transformation of society, didn't occur overnight. His ways of thinking about the relationship between mind, spirit, and action gradually changed over the years. In particular, his values were shaped as he grew to love and respect nature, and saw firsthand how easily the natural environment could be destroyed.

McDonough completed his undergraduate studies at Dartmouth, and then studied architecture and art at Yale. But the important lessons of life, he says, were fueled by his experiences as he traveled around the world. After graduating from Dartmouth, he worked on a one-hundred-

year planning project for the Jordan Valley. Living in the Jordanian desert with the Bedouin people, he contemplated the different ways one could preserve nature and restore soils in an area with few resources, little water, and an impoverished population.

In Poland, he visited a former Nazi concentration camp, and heard a vivid description of how gas chambers were carefully designed to kill humans quickly and efficiently. This experience was deeply significant for McDonough, and compelled him to re-examine the role of intention and values behind what we design and make. During this period of his life, he realized that a design is one of the first signals of human intention—its purpose can be either to support life or to destroy life.

After he returned to the United States and began studying architecture at Yale, he also began to question the intent of what he calls "artificial architecture"—steel and concrete file-cabinet-type buildings, powered by expensive heating systems and air-conditioning machines. These virtually airtight structures with windows that never open, he says, tend to trap toxic materials inside the walls, causing what is known as the "sick-building syndrome." Why, he wondered, couldn't designs focus more on natural processes, and take full advantage of fresh air and natural sunlight?

He gained recognition for his environmentally sensitive ideas when he designed the first solar-heated house in Ireland in 1976, and later designed the first "green office" in New York in 1984. But not until he met Michael Braungart in 1991 did his visionary views of the world take a major turn, leading both men to reinvent products and systems. As a chemist, Braungart had examined the effects of industrial chemicals and toxins; his scientific skills complemented McDonough's design skills. "We were yin and yang," says McDonough. "It was a good fit."

Kinship With Nature

One of their first joint ventures was to develop the "The Hannover Principles"—sustainable design guidelines commissioned by the organizers of the Hannover 2000 World's Fair in Germany. They included the principle: "Eliminate the concept of waste." That idea alone rattled cages, says McDonough, because most people propose "reducing, avoiding, or minimizing waste."

IF YOU THROW THINGS AWAY, WHERE IS 'AWAY'?

Yet, McDonough and Braungart challenged. “If you throw things away, where is ‘away’?” Their principle deliberately went beyond the reduce-and-avoid request to set a higher standard. “We said eliminate waste entirely.”

The Hannover Principles, written in the order of importance, emphasized the rights of humanity and the rest of nature to coexist in a healthy, diverse, and sustainable way. Their list of nine principles included: “Respect relationships between spirit and matter.”

McDonough recalls, “The Germans wanted this one removed. They said it was too ‘fuzzy.’” He explained that if you ask indigenous people from around the world about the relationship between spirit and matter, they feel it is the primary principle. “So let’s move it up,” he said. “Let’s make it number five.”

The Germans responded, “You don’t understand. Let’s get rid of it.”

McDonough’s reaction indicates how he stands firmly by his own personal principles. “Then, let’s make it number three.” McDonough prevailed.

Today, when he talks to audiences about the relationship between spirit and matter he asks them to compare how we’re engaged in human culture to how we’re engaged with our environment and all of nature. McDonough’s own spiritual connection to nature is influenced to a large extent by his knowledge of the way indigenous people respond to the environment. “What we call ‘natural resources’, indigenous people call ‘their relatives’. The real question is when do we find ourselves in kinship with the environment and our natural world? Instead of the Western notion of domination or stewardship of the natural world, what does it mean to be native in place, and what is that native condition? Again, the answer is kinship.”

When you acknowledge that kinship and possess a spiritual connection to nature, says McDonough, you view every living thing as sacred. “If I look at a polymer, I don’t say there’s a piece of cheap plastic that I can throw away. I say there is a nutrient that could be safe, delightful, and valuable over centuries. And I look at a tree as sacred. I don’t view it as stumpage, which is how a forester in a logging company sees it. If the tree does give up its life to become part of a human-made object, it can be blessed and thanked.”

From Vision to Reality

How do you turn such idealistic talk into practical applications? First, says McDonough, paper and packaging can be reinvented. “Why are we cutting down forests and still writing on ancient spruces? It’s idiotic. We haven’t sufficiently explored other options.”

His own “treeless” book, co-authored with Braungart, called *Cradle to Cradle: Remaking the Way We Make Things*, is made from plastic resins and inorganic fillers designed to look like paper. It can easily be recycled—pointing the way to a waste-free society and ecologically intelligent options for products to be used, recycled, and utilized many times, in many different forms.

McDonough and Braungart have also created other ecologically sound products: a toxin-free upholstery fabric so safe it can serve as garden mulch; a recyclable nylon for carpets that can eventually be returned to the manufacturer to be remade, not just discarded; and sneakers with soles that return nutrients to the soil when they disintegrate.

And they have contributed to a new vision for the auto industry, too. McDonough and Braungart worked with a team of Ford researchers and designers to produce a futuristic recyclable car. Ford presented this “Model U” vision-for-the-future vehicle at the 2003 international auto show in Detroit. The U model concept featured the world’s first supercharged hydrogen internal-combustion engine, equipped with a hybrid electric transmission. Its emission of pollutants, including carbon dioxide, is nearly zero. The plan is for this car to be made from materials that can be recycled over and over again.

The new design paradigm, says McDonough, is to develop materials that are so safe they can either be

returned to the soil or returned to the manufacturer to be reused, rather than end up as dead, useless, and often hazardous matter. Instead of the cradle-to-grave system of the industrial revolution, he adds, it is a “cradle-to-cradle” paradigm that takes into account the effect on at least seven generations. One of his favorite sayings is, “How can we love all the children, of all species, for all time?”

Ultimate Goals

Companies often use their annual reports, says McDonough, to reveal how they have *reduced* toxic emissions. “They’ll report that as far as the environment is concerned, they are being ‘less bad’. I want to introduce a new strategy. Let’s imagine what one-hundred-percent ‘good’ looks like, and start to measure our progress towards that goal.”

Businesses also talk about the bottom line—the baseline of economic profit. McDonough suggests it might be more appropriate to consider the triple top line. “How about raising the bar to include real and positive contributions to three areas: the ecology, equity, and economy of a society?”

A corporate annual report, McDonough explains, could include not only how many dollars a company makes, but also social and economic gains such as how the company benefited the environment and society. “For instance, our redesign of Ford’s River Rouge plant produced a green roof, wetland revenue, and a design that made oxygen and purified water. It also provided a beautiful building and landscape, instead of a concrete and steel box belching out smoke and noise. Plus, we saved Ford millions in the process. That’s the triple top line.”

He jokes about the time he won an environmental award and the press nicknamed him “Mr Sustainable.” “I told a reporter that my colleagues and I are not that interested in sustainability, *per se*.” He then asked the reporter if his relationship to his wife was sustainable. When the reporter replied, “Yes,” McDonough said, “I’m sorry.”

His point is that if sustainability is just maintenance, that’s not enough. McDonough and Braungart coined the term “eco-effectiveness” to show the difference between being efficient and being effective. The current model of efficiency, contends McDonough, falls into the same

trap of being “less bad.” The goal isn’t high enough. “You can be efficient by producing fewer chemicals, but what if you’re still doing the wrong thing?”

If you do the wrong thing more efficiently, says McDonough, it can be pernicious because it makes people think something positive is being done, and thus perpetuates the wrong system. His plea is to do the right thing, leading to effective solutions. He invites each of us to manifest our own creativity, and to be more aware that we can make the choice to pursue new ways of thinking, living, and working in the world. We don’t have to continue producing harmful products and buildings because we don’t know any better. “We are trying to render the options more visible and therefore more possible. I think inherently people would prefer to do something healthy, safe, delightful, and abundant, instead of something dangerous, unhealthy, ugly, and limited.”

Close friends say he is a devoted family man. He pursues the philosophy of kindness—kindness to nature and to humans, and according to his colleagues and friends, his actions reflect his love for not only his own children, but also all the world’s children.

When McDonough is asked about his contributions to improving society, he replies, “I’m just trying to do my work. I work in the material world. If there is a spiritual dimension to it, so be it. I have my sleeves rolled up. I have dirt under my fingernails.”

In 1981, when he was travelling in India, McDonough met a spiritual master who predicted, “You will change the material world.” In 2003, people are now telling him: “You *are* changing the world.”

For more information, go to: www.mcdonough.com or www.mcdonoughpartners.com

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