Design Revolution: 100 Products That Empower People

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A Good Long Tradition

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From Victor Papanek's Design for the Real World to John Thackara's In the Bubble, from Buckminster Fuller's World Game to Bruce Mau's Massive Change, there has been a perennial desire to drive home the imperative of design for social good. This appeal can, and has, taken many forms: the well-argued essay, the pissed-off manifesto, the quick-and-dirty practical guide, the sober accounting of best practices. Cameron Sinclair and Kate Stohr's Design Like You Give a Damn and Alex Steffen's Worldchangers (notice the different tones of their respective titles—not that Alex isn't plenty outraged!) are recent sourcebooks filled with remarkable examples of design for social good (the former with a concentration on architecture, the latter with an emphasis on, well, everything), chronicling projects that attempt to solve critical problems and gesturing toward design solutions that leverage passion and technological foresight.

With its focus on product design, Design Revolution enters this group with a couple of tricks up its sleeve. First, people love stuff. We love objects, artifacts, tools, and gadgets, and we surround ourselves with products—both functional and totemic—as ways to express our identity, structure our days, and prop out our built environments. The power that product design has over us is both astounding and insidious, and our draw to the "new and novel" through media, commerce, and popular culture makes us complicit in the consumerism that plagues our psyches and planet alike. It's not all bad, of course, but it's not all good either.

And as much as people love products, they love systems even more. Wearing a Nike + iPod Sport Kit fitness monitor, for example, might increase the effectiveness of your workout, but the brand experience tethers you to a system of advertising, lifestyle, and tribe-making. (People like that part, by the way.) Joining the Zipcar car-sharing network provides you with on-the-fly access to an automobile, certainly, but it also brings you membership into a system of like-minded people who together leverage economies of scale, save fossil fuels, and decrease energy and material flows. In fact, when you look at most products in our world, it is difficult to evaluate them in the abstract without accounting for their roles in larger systems of interaction, behavior, and culture. This makes the playing field richer, and the dialogue, too; it makes it easier to see hollow wastes of embodied energy (and shelf space) for what they really are, and to admire products that understand and work effectively within their larger contexts.

The second point to make about Design Revolution is that it is positively spilling at the gurs with displays of ingenuity and resourcefulness. And though many of the devices, products, and services presented in this book are mass-produced, virtually all of them resonate with a kind of hacker's ethos: of doing a lot with a little; challenging the status quo; tinkering with something until it works a little better, or so much better that it's
transformed into something entirely new. Recently there has been a surge of interest in making—evidenced by an explosion of crafting, hobby, and modding communities, websites, and magazines—and there is something irresistible about using one's hands, coming up with a new idea, and busting it out in three dimensions. Everyone loves to invent something—whether it's a new twist on a cookie recipe or a novel way of attaching a book bag to your bicycle—and when we look at a collection of particularly ingenious inventions like the ones in this book, I believe we feel a unique kind of delight. We are awed, charmed, intrigued...and jealous all at the same time. ("Why didn't I think of that?" is often the highest compliment we can bestow.)

**Good Design**

There's another appeal to *Design Revolution*: it presents itself as a kind of twist on catalogues of good design. And goodness knows, people (and coffee tables) sure do love a nice catalogue of "good design."

In the art and design section of any bookstore you might find such compilations as *1000 Chairs* (self-explanatory), *Transmaterial* (a collection of new and innovative building materials), even the wacky nonsense gathering in *101 Useless Japanese Inventions: The Art of Chindogu* (a book that tickles our minds on the one hand and shines a spotlight on the madness of our consumer culture on the other).

There are grand collections, too—*Phaidon Design Classics*, a three-volume encyclopedia of 1,000 iconic designs, is the current record-holder at 24 pounds (10.9 kg) and 3,300 pages—but there are more modest efforts that are just as pure in intent. *Humble Masterpieces*, the companion catalogue to Paola Antonelli's 1994 MoMA show of the same name, is a collection of everyday objects, a set of the beloved and the quotidian that we often take for granted precisely because of their ubiquity and unfailing functionality. The creators of these (humble) design icons are sometimes anonymous or go unrecognized, but they've earned their spots in that collection (and in the permanent collection of MoMA!) by grabbing the brass ring of design: they're deemed Good Design. More than the simple marriage of form and function, Good Design manifests an economy of materials, a clarity of purpose, and a delight in use.

And though Good Design has moved from describing Swingline staplers and Braun coffee makers to Apple iPhones and Jawbone NoiseAssassin Bluetooth headsets, the quest for Good Design isn't the only game in town. (You wouldn't use the term to describe the wit-centric design gestures of Droog, for instance, or the critical design explorations of Royal College of Art design students.) There's something of a sober, sensible-shoe taint to the term, perhaps, and a removed, abstracted judgment in its application. Nevertheless, if we can accept Good Design as a paragon for the artifacts of design, what can (and should) we expect from the enterprise of design?

Is there a distinction between "good design" and "design for good"?

**Design for Good**

At the start of any worthy design project is a strategic phase—an examination of "exactly what are we trying to do here?" Some practitioners call this needs assessment, some call it problem definition, some call it discovery. But since the best designs always embody their intentions in the final products, what if that intention, from the get-go, is overtly aimed toward some social good? Does that change the kind of product we end up with? (Change the ingredients, change the results; there's that cookie recipe.)

Well, when you are designing something expressly for social good, I'd submit, you've changed the bargain between producer and consumer; you've added elements of social currency that weren't there before. Let's say you set out to design a high-end toaster or an ad campaign for a sitcom, for example. The ingredients are fairly predictable (as are often the results). But if you're trying to get potable water to a community that doesn't have enough to drink, or to design a prosthetic limb for land mine victims, or to make a dent in the epidemic of childhood obesity, the entire equation has changed. Product success or failure can no longer be driven and measured by market forces alone—though many socially progressive designs have floundered by ignoring those rules; there are exogenous criteria that come into play. Here the design con-
conversation moves from form, function, beauty, and ergonomics to accessibility, affordability, sustainability, and social worth. Throw in green materials, renewable energy, cultural appropriateness, responsible labor practices, and a big dollop of respect for the user, and yes, you’ve got a wholesome recipe for design for social change. One might wish that all designers, all the time, would use this broader set of criteria as they go about designing everything from billboards to buildings, but I believe that designing for good necessitates it.

And this sentence has no doubt been written countless times, but there now seems an urgent mandate to design for good—to understand the practice of design as an unequivocally interconnected, global, and consequence-creating endeavor. I use the word consequence here because designers—be they graphic, product, communication, transportation, or architectural—get up in the morning believing that they are in the artifact business, that they create annual reports or clock radios, exhibition spaces or branding campaigns, and that these artifacts get repeated through print runs of 10,000 or plastic injection molding machines by the millions. But designers would do well to remember that they are not in the artifact business. They are in the consequence business. And for design to truly be a force for positive change, we must always ask what consequences a design creates—from materials and energy use to toxicity, pollution, and social inequality.

So why aren’t we seeing a greater rush to design for good? This gets a bit mucky, actually. It is easy to criticize the design profession right now, with its headlong imperative to create supply and demand for all manner of manufactured goods and services. I’ve previously written that “designers are feeding and feeding this cycle, helping to turn everyone and everything into either a consumer or a consumable,” and that when you think about it, this is kind of grotesque. But the enterprise of design—design as a verb—seems to hold in its definition a positive intention. John Thackara, design impresario, founder of Doors of Perception, and global force for good, doesn’t believe in the “blame-and-shame” game, in holding designers’ feet to the fire. “I’ve never met a designer who didn’t, fundamentally, want to make things better,” he argues, and the point is persuasive in the abstract. But it’s in the consequences of the actions of all those good-meaning designers that the truth of the design enterprise becomes more visible. Perhaps the wholesale poisonings of every natural system through industrialization are “unintended” consequences, but there’s a cruel irony in designers running around, busily creating more and more garbage for our great-grandchildren to dig up, breathe, and ingest, all the while calling themselves “problem solvers.” The stakes for design are huge (it’s right there in the term “mass production”); so must be its mandates and responsibilities.

And there’s another wrinkle here: Some of the best “design solutions” rise forth from people who aren’t “credentialed” designers at all. Indeed, many of the designs in this collection are the results of grassroots initiatives, competitions, school assignments, crisis rescue, or ad hoc group efforts. On the broad spectrum, designers can be volunteers, handypersons, tinkerers, and poets. And on the narrow spectrum, the specialization in the maturing field of design right now is extraordinary, rendering the disciplines and jargon between ethnographers, materials technologists, human factors experts, and branding consultants almost exclusionary. The whole notion of what designers are, exactly, seems to become blurrier every year. Alice Rawsthorn, writing recently in the International Herald Tribune, ponders: “Then there are all of the areas where design is deployed. Architecture. Engineering. Products. Transport. Fashion. Graphics. Multimedia. Information technology. Social services. Disaster relief, and so on. How can [design] be expected to have a coherent meaning across all of them?”

**Good to Go: Solving Problems and Celebrating Life**

Well, for me, the enterprise of design distills to at least a couple of things. Sure, design is here to solve problems, but it’s also here to celebrate life. And when it comes right down to it, all of those “other” criteria of design for good—the social vectors, the labor vectors, the accessibility, affordabil-
ity, and empathy vectors—those are precisely the elements that actually do celebrate life; they are the components that have social currency and weight, that respect individuals, communities, and ecosystems appropriately, and contribute to the ennobling potential of design and creative work.

Design Revolution, then, can become a compelling tome for all of us to embrace. Its exuberance, its variety, the varied authorship of its contents—all spilled across these pages—points toward something emergent, dynamic, exciting, and, not least, hopeful. If design is enjoying a renaissance in the business press and in the public eye right now, then it is up to designers not only to welcome that new interest but also to leverage it into works of great, positive social change. During the 2008 Summer Olympics in Beijing, a newscaster said of an Olympian that he did one of the hardest things in sports: “winning, when everyone thought you would.” I feel that way about design. If a lot of people are expecting design to get us out of some of the messes we’re in right now, then it’s up to designers to live up to those expectations and deliver the goods.

In his book Blessed Unrest, Paul Hawken argues that we are in the midst of an immense, worldwide movement—for which there is no name, and for which there is no central organization. It’s made up of individuals and collectives, decentralized yet unified in mission, who together are creating meaningful change at every level. He likens this movement to a planetary “immune response”—a rising action against the ceaseless assault on the natural and social environment. From people in arts activism and sustainable forestry, to ecotourism, industrial ecology, pollution remediation, and green banking, Hawken reckons that the movement is over one million strong, spanning fields so diverse that he is attempting to collect them through a website called wiserearth.com (World Index of Social and Environmental Responsibility). This is a hopeful, optimistic worldview at a time that appears to offer precious few of them, and I cling to this idea, if not as a beacon, then as some kind of affirmation that many, many people—including designers credentialed and not—are out there carrying a torch, making, fighting, and creating design solutions that add value, social worth, and dignity to our world.

I’ll carry around Design Revolution, then, for within its covers lies a stunningly optimistic set of design initiatives—from far and wide—all aimed directly at the two objectives I hold most dear: solving problems and celebrating life.

designer: Eddie Chiu
other partners/clients/producers: Parsons the New School for Design, Helen Keller Services for the Blind, United Cerebral Palsy of New York City, Inc.
status: Concept

For children with cerebral palsy and visual impairments, the ability to develop fine motor skills through movement and tactility is a key component in their young development. Mobee, a conceptual teaching tool developed by Parsons design student Eddie Chiu, is a training toy for such children who are two to five years old.

By playing with Mobee, children exercise the hand muscles crucial to motor development as they slide a knob though a concave path in connected blocks. The simple action, enhanced by color differentiation, increases hand-eye coordination and the ability to grasp and direct. As the knob slides through the groove, Mobee produces different sounds based on the texture of the path at different points. The textures may include raised dots, ribbings, or larger “speed bumps.” The corresponding sounds engage aural sensations to further enhance the motion and feeling as users move along the course. Magnets are embedded within the sides of each block to allow for easy rearrangement, disassembly, and varied configurations that continually change the learning experience. Additionally, blocks feature dry-erase surfaces, allowing parents and children to draw and create personalized narratives.
Numerous educational theories recognize tactile play as a powerful learning tool. Through its design, Oblo, a spherical didactic puzzle, manifests those theories and blurs the line between play and learning. The ball has a sphere at its core and is made up of three concentric layers or shells, each of which is comprised of multiple pieces. Each of the 10 total pieces is a different size and shape, its color corresponding to its layer. The shells must be twisted against the sphere's central axis in order to successfully remove individual pieces from the center of the ball, until all pieces have been removed and the Oblo has been entirely disassembled. The ball may then be reassembled in a similar fashion.

Though the task it presents is a seemingly simple one, Oblo can be modified for different age groups and skill levels by enlarging or shrinking the open space in the outer layer or using a larger variety of shapes. The diameter of the outer layer shell can also be expanded, increasing the thickness of each internal layer.

For all ages the object teaches spatial geometry and fine motor skills exercising and training the three muscle groups necessary for hand-eye coordination: fingers and hand for grasping, index finger and thumb for pinching, and wrist for rotation. Oblo was designed by a first-year student from the School of Design at the University of Zagreb and was honored with a 2008 IDEA Award from the Industrial Designers Society of America. The toy is an example of a didactic product that engages color and shape elements for both children and adults, bridging markets through design.

designer: Marko Pavlovic
geographical implementation/ market/availability: Global
status: In development
website: www.marko-pavlovic.com
The Math Kit from Treeblocks includes a set of 66 precisely measured wood pieces designed to teach relational math principles to children and adults. The set's blocks, which range in length from .4 to 4.7 inches (1 to 12 cm), teach spatial reasoning, problem solving, proportions, and motor skills. The kit includes a 96-card activity deck that suggests physical and visual math exercises on three difficulty levels for use with the blocks.

Treeblocks can be used as normal play blocks or stacked to perform mathematical equations, a technique historically used by the Greeks and Egyptians as a means of measurement. For example, to represent a simple addition equation, the user would place a number of the smaller pieces in a vertical line adjacent to one of the larger pieces, visually discovering what combination of smaller numbers must be added together to equal a larger one. Pieces are made from discarded wood from managed paper forests or from abandoned or end-of-cycle apple, cherry, or hazelnut trees purchased directly from farmers.
Foldschool

Everyday materials, free open-source design, and direct engagement with the user make Foldschool an accessible model for toy and furniture design. Developed by Swiss architect and designer Nicola Enrico Stäubli, Foldschool is a collection of plans for cardboard furniture for kids. Plans are downloaded from Stäubli’s website and handcrafted by the user. The patterns for a stool, chair, and rocker are intended to be assembled by both parent and child, and can be printed on letter-sized paper using any standard printer. Additional tools required include a pair of scissors, ruler, spray-fix adhesive, craft glue, and tape.

Each fragment of the pattern is printed on its own sheet of paper and cut out. The individual fragments are assembled into the full-sized master pattern, which is spray-fixed to a large piece of cardboard. The user then cuts the cardboard along the pattern’s edges and folds it along the dotted lines. A step-by-step construction manual on the designer’s website has additional instructions for gluing the
folded pieces together to fully form the corners and joints of each piece of furniture.

"Mass culture is run by superficiality and ecological absurdity," states Stäubli. "Foldschool supports craftsmanship as a face-to-face approach to design and brings together product and user [as closely as] possible."

The patterns represent open-source design at its best, making the user a co-designer and relying on human craft and interaction with the materials for construction.

designer:
Nicola Enrico Stäubli

geographical implementation/
market/availability:
Global, via website

status:
DIY

price:
Cost of materials

website:
www.foldschool.com