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Change by Design

Tim Brown with Barry Katz

Over the course of a century of professional practice, designers have mastered a set of skills that can be productively applied to a wider range of problems than has commonly been supposed. These include complex social problems, issues of organizational management, and strategic innovation. Conversely, non-designers—those in leadership positions in companies, governmental and non-governmental organizations, professionals in a broad range of services and industries—can benefit from learning how to think like designers. We offer some large-scale and more finely grained ideas about how this might happen.

The Power of Design Thinking

A few years ago, during one of the periodic booms and busts that are part of business-as-usual in Silicon Valley, my colleagues and I were struggling to figure out how to keep IDEO profitable, meaningful, and useful in the world. There was plenty of interest in our design services, but we also noticed that we were increasingly being asked to tackle problems that seemed very far from the commonly held view of design. A healthcare foundation was asking us to help restructure its organization; a century-old manufacturing company was asking us to help them better understand their clients; an elite university was asking us to think about alternative learning environments.

Today, rather than enlist designers to make an already developed idea more attractive, the most progressive organizations are challenging us to create ideas at the outset of the development process. The former role is tactical; it builds on what exists and usually moves it one step further. The latter is strategic; it pulls "design" out of the studio and unleashes its disruptive, game-changing potential. It's no accident that designers can now be found in the boardrooms of some of the world's most progressive companies. As a thought process, design has begun to move upstream. We call this "design thinking."

Moreover, these principles turn out to be applicable to a wide range of organizations, not just to companies in search of a new product offering. A competent designer can always improve upon last year's widget, but an interdisciplinary team of skilled design thinkers is in a position to tackle more complex problems. From pediatric obesity to crime prevention to climate change, design thinking is now being applied to a range of challenges that bear little resemblance to the covetable objects that fill the pages of today's coffee table publications.

The reasons underlying the growing interest in design are clear. As the center of economic activity in the developed world shifts inexorably from industrial manufacturing to knowledge creation and service delivery, innovation has become nothing less than a survival strategy. It is, moreover, no longer limited to the introduction of new physical products, but also new sorts of processes, services, interactions, entertainment forms, and ways of communicating and collaborating. These are exactly the kinds of human-centered tasks that designers work on every day. The natural evolution from *design* to *design thinking* reflects the growing recognition on the part of today's business leaders that design has become too important to be left to designers.

Three Spaces of Innovation

Over the course of their century-long history of creative problem-solving, designers have acquired a set of tools to help them move through what I call the "three spaces of innovation": "inspiration," the problem or opportunity that motivates the search for solutions; "ideation," the process of generating, developing, and testing ideas; and "implementation," the path that leads from the project room to the market. My argument is that these skills now need to be dispersed throughout organizations. In particular, design thinking needs to move "upstream," closer to the executive suites where strategic decisions are made.

It may be perplexing for those with hard-won design degrees to imagine a role for themselves beyond the studio, just as managers may find it strange to be asked to think like designers. But this should be seen as the inevitable result of a field that has come of age. The problems that challenged designers in the 20th

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century—craft a new object, create a new logo, put a scary bit of technology in a pleasing or at least innocuous box—are simply not the problems that will define the 21st. If we are to deal with what Bruce Mau has called the "massive change" that seems to be characteristic of our time, we all need to think like designers.

Putting People First

Insight is one of the key sources of design thinking and it does not usually come from reams of quantitative data that measure what we've already got and tell us what we already know. A better starting point is to go out into the world and observe the actual experiences of commuters, skateboarders, and registered nurses as they improvise their way through their daily lives. Rarely will the everyday people who are the consumers of our products, the customers for our services, the occupants of our buildings, or the users of our digital interfaces, be able to tell us what to do. The only way we can get to know them is to seek them out where they live, work, and play. Accordingly, almost every project we undertake involves an intensive period of observation. We watch what people do (and do not do) and listen to what they say (and do not say). This takes some practice.

There is nothing simple about determining whom to observe, what research techniques to employ, how to draw useful inferences from the information gathered, or when to begin the process of synthesis that begins to point us toward a solution. As any anthropologist will attest, observation relies on the quality of one's data, not the quantity. It makes sense for a company to familiarize itself with the buying habits of people who inhabit the center of its current market, for they are the ones who will verify that an idea is valid on a large scale—a fall outfit for Barbie, for instance, or next year's feature on last year's car. By concentrating solely on the bulge at the center of the bell curve, however, we are unlikely to learn anything new or surprising. For insights at that level we need to head for the edges, the places where we expect to find "extreme" users who live differently, think differently, and consume differently—the collector who owns 1400 Barbies, for instance, or the professional car thief.

It's possible to spend days, weeks, or months conducting research of this sort, but at the end of it all we will have little more than stacks of field notes, videotapes, and photographs unless we can connect with the people we are observing at a fundamental level. We call this "empathy," and it is perhaps the most important distinction between academic thinking and design thinking. In contrast to our academic colleagues, we are not trying to generate new knowledge, test a theory, or validate a scientific hypothesis. The mission of design thinking is to translate observations into insights, and insights into the products and services that will improve lives.

We have all had those kinds of first-person, first-time experiences—buying our first car, stepping out of the airport in a city we have never visited, evaluating assisted-living facilities for an aging parent. In these situations we look at everything with a much higher level of acuity because nothing is familiar and we have not fallen into the routines that make daily life manageable. Moreover, designers have learned that is it possible to apply the principle of empathy not just to individuals, but also to groups and the interactions among them. The inherent scalability of design thinking has led us to invent new and radical forms of collaboration that blur the boundaries between creators and consumers. It's not about "us-versus-them," or even "us-on-behalf-of-them." For the design thinker, it has to be "us-*with*-them."

We are in the midst of a significant change in how we think about the role of consumers in the process of design and development. In the early years, companies would dream up new products and enlist armies of marketing experts and advertising professionals to sell them to people—often by exploiting their hopes, fears, and vanities. Slowly this began to yield to a more nuanced approached that involved reaching out to people, observing their lives and experiences, and using those insights to inspire new ideas. Today, we are beginning to move beyond even this "ethnographic" model to approaches inspired and underpinned by new concepts and technologies.

BIOGRAPHICAL SKETCHES

Tim Brown is the CEO and president of the global consultancy IDEO, ranked independently as one of the ten most innovative companies in the world. Tim advises senior executives and boards of Fortune 100 companies and has led strategic relationships with such corporations as Microsoft, PepsiCo, Procter & Gamble, and Steelcase. He is the author of *Change By Design: How Design Thinking Transforms Organizations and Inspires Innovation*.

Barry Katz is Professor of Design at the California College of the Arts, Consulting Professor at Stanford University, and Fellow at IDEO. He is the author of six books, including *Phase Change: The Dynamic History of Silicon Valley Design*, to be published by the MIT Press.

Inspiring Solutions with Global Potential

A half-century ago Raymond Loewy boasted of his role in boosting the sales of Lucky Strike cigarettes by fiddling with the graphics on the box. Few designers today would even touch this type of project. The rise of design thinking corresponds to a culture change, and what excites the best thinkers today is the challenge of applying their skills to problems that matter. Improving the lives of people in extreme need is near the top of that list.

This is not merely a matter of collective altruism. The greatest design thinkers have always been drawn to the greatest challenges, whether delivering fresh water to Imperial Rome, vaulting the dome of the Florence Cathedral, running a rail line through the British Midlands, or designing the first laptop computer. They searched out the problems that allowed them to work at the edge because this is where they are most likely to achieve something that has not been done before. For the last generation of designers, those problems were driven by new technologies. For the next generation, the most pressing—and the most exciting—challenges may lie in the highlands of southeast Asia, the malarial wetlands of East Africa, the favelas and the rain forests of Brazil, and the melting glaciers of Greenland.

This argument can be misconstrued. While it is praiseworthy to contribute our talents to the eradication of preventable disease, disaster relief, and rural education, too often our instinct has been to think of these interventions as social acts that are different from and superior to the practical concerns of business. They are the domain, supposedly, of foundations, charities, volunteers, and NGOs, not of the "soulless corporation" that attends only to the bottom line. Neither of these is any longer an acceptable model, however. Businesses that focus solely on bumping up their market share by a few tenths of a percent miss significant opportunities to change the rules of the game; by the same token, non-profit organizations that go it alone may be denying themselves access to the human and technical resources that create sustainable, systemic long-term change. The influential business strategist C. K. Prahalad has written about the fortune to be found at the "bottom of the pyramid" by companies that dare to approach the world's poorest citizens not as suppliers of cheap labor or recipients of their charitable largesse, but rather as partners in creative entrepreneurship.

The argument for working with the most extreme users, where the constraints are unforgiving and the cost of failure high, is not just a social one. It may be how we will spot opportunities that have global relevance, and how we will avoid becoming the victims of the new competitors who thrive in environments where more prudent organizations fear to tread. Moreover, there is no shortage of opportunity: In contrast to companies that may be struggling to extend their brand into a new sub-niche of a saturated market, the opportunities for socially engaged design are everywhere.

If we need to set priorities, the UN Millennium Development Goals would be a good place to start, but "eradicating extreme poverty" and "promoting gender equality" are far too broad to serve as effective design briefs. If the Millennium Development Goals are to be met they must first be translated into practical design briefs that recognize constraints and establish metrics for success.

The great thinkers to whom I am so deeply indebted are not as they appear in the coffee table books about the "pioneers," "masters," and "icons" of modern design. They were not minimalist, esoteric members of design's elite priesthood, and they did not wear black turtlenecks. They were creative innovators who could bridge the chasm between thinking and doing because they were passionately committed to the goal of a better life and a better world around them. Today we have an opportunity to take their example and unleash the power of design thinking as a means of exploring new possibilities, creating new choices, and bringing new solutions to the world. In the process we may find that we have made our societies healthier, our businesses more profitable, and our own lives richer, more impactful, and more meaningful.