

The Anthropologist

The Experimenter

The Cross-Pollinator

The Hurdler

The Collaborator

The Director

The Experience Architect

The Set Designer

The Storyteller

The Caregiver



THE TEN FACES OF INNOVATION

IDEO'S STRATEGIES FOR BEATING THE DEVIL'S ADVOCATE &
DRIVING CREATIVITY THROUGHOUT YOUR ORGANIZATION

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We've all been there. The pivotal meeting where you push forward a new idea or proposal you're passionate about. A fast-paced discussion leads to an upwelling of support that seems about to reach critical mass. And then, in one disastrous moment, your hopes are dashed when someone weighs in with those fateful words: *"Let me just play Devil's Advocate for a minute..."*

Having invoked the awesome protective power of that seemingly innocuous phrase, the speaker now feels entirely free to take potshots at your idea, and does so with complete impunity. Because they're *not really* your harshest critic. They are essentially saying, "The Devil made me do it." They're removing themselves from the equation and sidestepping individual responsibility for the verbal attack. But before they're done, they've torched your fledgling concept.

The Devil's Advocate gambit is extraordinary but certainly not uncommon, since it strikes so regularly in the project rooms and boardrooms of corporate America. What's truly astonishing is how much punch is packed into that simple phrase. In fact, the Devil's Advocate may be the biggest innovation killer in America today. What makes this negative persona so dangerous is that it is such a subtle threat.

Every day, thousands of great new ideas, concepts, and plans are nipped in the bud by Devil's Advocates.

Why is this persona so damning? Because the Devil's Advocate encourages idea-wreckers to assume the most negative possible perspective, one that sees only the downside, the problems, the disasters-in-waiting. Once those floodgates open, they can drown a new initiative in negativity.

Why should you care? And why do I believe this problem is so important? Because innovation is the lifeblood of all organizations, and the Devil's Advocate is toxic to your cause. This is no trivial matter. There is no longer any serious debate about the primacy of innovation to the health and future strength of a

corporation. Even the staid British publication *The Economist* recently claimed, "Innovation is now recognized as the single most important ingredient in any modern economy."

And what *The Economist* said about nations is equally true about organizations. In the four years since *The Art of Innovation*, my first book about our practices at IDEO, I have worked with clients from Singapore to San Francisco to São Paulo. At the same time, the scope of our work has expanded to include industries as far-flung as health care services, retailing, transportation, financial services, consumer packaged goods, and food and beverage. I have witnessed firsthand how innovation has become recognized as a pivotal management tool across virtually all industries and market segments. And while we at IDEO used to spend the majority of our time in the world of product-based innovation, we have more recently come around to seeing innovation as a tool for transforming the entire culture of organizations. Sure, a great product can be one important element in the formula for business success, but companies that want to succeed in today's competitive environment need much more. They need innovation at every point of the compass, in all aspects of the business and among every team member. Building an environment fully engaged in positive change, and a culture rich in creativity and renewal, means creating a company with 360 degrees of innovation. And companies that want to succeed at innovation will need new insights. New viewpoints. And new roles.

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There is growing recognition that fostering a culture of innovation is critical to success, as important as mapping out competitive strategies or maintaining good margins. A recent Boston Consulting Group survey covering nearly fifty countries and all sorts of businesses reported that nine out of ten senior executives believe generating growth through innovation is

essential for success in their industry. Where business magazines once ranked companies primarily by sales, growth, and profit, publications are now ranking corporations on their innovation track record. And while acquisitions can yield synergy, and reengineering can streamline operations, a culture of innovation may be the ultimate fuel for long-term growth and brand development. Having optimized operations and finances, many companies are now recognizing that growth through innovation is their best strategy to compete in a world marketplace in which some of the players may have lower-cost resources. As my friend Tom Peters would say, you can't shrink your way to greatness. One way to look at the current pressure-cooker of international business is as a fierce competition, where you win through innovation or lose the game. Today, companies are valued less for their current offerings than for their ability to change and adapt and dream up something new. Whether you sell consumer electronics or financial services, the frequency with which you must innovate and replenish your offerings is rapidly increasing.

Serial Innovation Success

As I was completing this book, Google, already the world's leading search engine, was innovating at a breakneck pace, rolling out a new service capability or acquisition practically every month—everything from searching rare books in the world's greatest libraries to viewing aerial photographs of any location or skimming through transcripts of last night's TV shows. Until Google introduced Desktop Search, I had thought of it only as a firm to help me search the Web. Now they've convinced me I'll soon be using a search engine to wade through all my own data as well.

Google, of course, is not alone in such rapid-fire innovation. Plenty of companies in widely divergent industries have distinguished themselves as serial innovators. Here are a few favorites that come to mind:

- W. L. Gore & Associates, most famous for its breathable Gore-Tex fabrics, not only manufactures a tremendous breadth of products—everything from guitar strings to artificial blood

vessels—it also distinguishes itself through its egalitarian, team-based organization. Eschewing bosses and job descriptions, Gore creates idea-friendly environments that work to generate a continual stream of clever innovations. Gore was recently cited as “the most innovative company in America,” and is ranked among the best places to work in Germany, Italy, the United States, and the United Kingdom.

- The Gillette Company grabbed enormous market share over the years with a series of newer-and-better shaving systems like the Sensor and Mach III razors. Far from resting on its laurels, the firm recently poured its considerable resources into an even more ambitious project, the motorized M3 Power razor. Along the way, Gillette has developed a culture of continuous innovation to stay a step ahead of its competitors.
- The unique German retailer Tchibo started in the 1950s as a simple coffee shop, but has transcended its roots to become an international merchandizing sensation. Tchibo is like Starbucks meets Brookstone, combining a stand-up café with an eclectic collection of ever-changing products. Part of its success formula is “A new experience every week,” with a completely new line of inventory (everything from bicycles to lingerie) arriving and selling in huge quantities for just seven days. Tchibo reports, for example, that the week their stores featured telescopes they sold more telescopes in seven days than had been sold the previous *year* in all of Germany. The company continues to introduce a completely new merchandizing theme fifty-two times a year and generates impressive sales throughout Europe.

The Human Touch

The Ten Faces of Innovation is a book about innovation with a human face. It's about the individuals and teams that fuel innovation inside great organizations. Because all great movements are ultimately human-powered. Archimedes said, “Give me a place to stand and a lever long enough and I can move the world.” The innovation personas described in the next ten chapters are not necessarily the most powerful people you will

ever meet. They don't have to be. Because each persona brings its own lever, its own tools, its own skills, its own point of view. And when someone combines energy and intelligence with the right lever, they can generate a remarkably powerful force. Make sure they have a place on your team. Together you can do extraordinary things.

At IDEO, we believe that innovators focus on the verbs. They're proactive. They're energetic. Innovators set out to create, to experiment, to inspire, to build on new ideas. Our techniques may at times seem unusual, but the results can be truly extraordinary.

All good working definitions of innovation pair ideas with action, the spark with the fire. Innovators don't just have their heads in the clouds. They also have their feet on the ground. 3M, one of the first companies to fully embrace innovation as the essence of its corporate brand, defines it as "New ideas—plus action or implementation—which result in an improvement, a gain, or a profit." It is not enough to just have a good idea. Only when you *act*, when you *implement*, do you truly innovate. Ideas. Action. Implementation. Gain. Profit. All good words, of course, but there's still one piece left out. *People*. That's why I prefer the Innovation Network's definition: "*People* creating value through the implementation of new ideas." The classic 3M definition might leave you with the impression that, as a bumper sticker might put it, "Innovation Happens." But unfortunately, there's no spontaneous combustion in the business world. Innovation is definitely not self-starting or self-perpetuating. People make it happen through their imagination, willpower, and perseverance. And whether you are a team member, a group leader, or an executive, your only real path to innovation is through people. You can't really do it alone.

This is a book about people. More specifically, it is about the roles people can play, the hats they can put on, the personas they can adopt. It is not about the luminaries of innovation like Thomas Edison, or even celebrity CEOs like Steve Jobs and Jeffrey Immelt. It is about the unsung heroes who work on the front lines of entrepreneurship in action, the countless people and teams who make innovation happen day in and day out.

The ten core chapters of this book highlight ten people-centric

tools developed at IDEO that you might call talents or roles or personas for innovation. Although the list does not presume to be comprehensive, it does aspire to expand your repertory. We've found that adopting one or more of these roles can help teams express a different point of view and create a broader range of innovative solutions.

By developing some of these innovation personas, you'll have a chance to put the Devil's Advocate in his place. So when someone says, "Let me play Devil's Advocate for a minute" and starts to smother a fragile new idea with negativity, someone else in the room may be emboldened to speak up and say, "Let me be an Anthropologist for a moment, because I personally have watched our customers suffering silently with this issue for months, and this new idea just might help them." And if that one voice gives courage to others, maybe someone else will add, "Let's think like an Experimenter for a moment. We could prototype this idea in a week and get a sense of whether we're onto something good." Or someone else could volunteer to be a Hurdler, and pledge to get the team some seed funding for an exploration of the concept. The Devil's Advocate may never go away, but on a good day, the ten personas can keep him in his place. Or tell him to go to hell.

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One important caveat. My feelings about Devil's Advocates should not be interpreted as some sort of endorsement for a "yes-man culture." IDEO has always believed in constructive criticism and free debate. Actually, strong innovation roles can lead to more critical thinking, as team members develop a broader perspective from which to view projects. But the Devil's Advocate seldom takes a real stand, preferring to tear down an idea with clever criticism, and often exhibiting the mean-spirited negativity associated with that role. Meanwhile, the innovation roles are intended to encourage people to stand up for what they believe in.

So who are these personas? Many already exist inside of large

companies, though they're often underdeveloped or unrecognized. They represent latent organizational ability, a reservoir of energy waiting to be tapped. We all know plenty of bright, capable people who would like to make a bigger contribution, team members whose contributions don't quite fit into traditional categories like "engineer" or "marketer" or "project manager."

In a postdisciplinary world where the old descriptors can be constraining, these new roles can empower a new generation of innovators. They give individuals permission to make their own unique contribution to the social ecology and performance of the team. Here's a brief introduction of the personas:

The Learning Personas

Individuals and organizations need to constantly gather new sources of information in order to expand their knowledge and grow, so the first three personas are *learning roles*. These personas are driven by the idea that no matter how successful a company currently is, no one can afford to be complacent. The world is changing at an accelerated pace, and today's great idea may be tomorrow's anachronism. The learning roles help keep your team from becoming too internally focused and remind the organization not to be so smug about what you "know." People who adopt the learning roles are humble enough to question their own worldview, and in doing so they remain open to new insights every day.

1 The Anthropologist brings new learning and insights into the organization by observing human behavior and developing a deep understanding of how people interact physically and emotionally with products, services, and spaces. When an IDEO human-factors person camps out in a hospital room for forty-eight hours with an elderly patient undergoing surgery—as described in Chapter 1—she is living the life of the Anthropologist and helping to develop new health care services.

2 The Experimenter prototypes new ideas continuously, learning by a process of enlightened trial and error. The Experimenter takes calculated risks to achieve success through

a state of "experimentation as implementation." When BMW bypassed all its traditional advertising channels and created theater-quality short films for bmwfilms.com, no one knew whether the experiment would succeed. Their runaway success, which underscores the rewards that flow to Experimenters, is detailed in Chapter 2.

3 The Cross-Pollinator explores other industries and cultures, then translates those findings and revelations to fit the unique needs of your enterprise. When an open-minded Japanese businesswoman travels 5,000 miles to find inspiration for a new brand, she finds a concept an ocean away that sparks a billion-dollar retail empire, and demonstrates the leverage of a Cross-Pollinator. You'll hear her story in Chapter 3.

The Organizing Personas

The next three personas are *organizing roles*, played by individuals who are savvy about the often counterintuitive process of how organizations move ideas forward. At IDEO, we used to believe that the ideas should speak for themselves. Now we understand what the Hurdler, the Collaborator, and the Director have known all along: that even the best ideas must continuously compete for time, attention, and resources. Those who adopt these organizing roles don't dismiss the process of budget and resource allocation as "politics" or "red tape." They recognize it as a complex game of chess, and they play to win.

4 The Hurdler knows the path to innovation is strewn with obstacles and develops a knack for overcoming or outsmarting those roadblocks. When the 3M worker who invented Scotch tape decades ago had his idea initially rejected, he refused to give up. Staying within his \$100 authorization limit, he signed a series of \$99 purchase orders to pay for critical equipment needed to produce the first batch. His perseverance paid off, and 3M has reaped billions of dollars in cumulative profits because an energetic Hurdler was willing to bend the rules.

5 The Collaborator helps bring eclectic groups together, and

often leads from the middle of the pack to create new combinations and multidisciplinary solutions. When a customer-service manager wins over a skeptical corporate buyer to the idea of brainstorming new forms of cooperation, and the resulting new program doubles their sales, he's playing the role of a very successful Collaborator.

6 The Director not only gathers together a talented cast and crew but also helps to spark their creative talents. When a creative Mattel executive assembles an ad hoc team and dubs them "Platypus," launching a novel process that creates a \$100 million toy platform in three months, she is a role model for Directors everywhere. Her story is told in Chapter 6.

The Building Personas

The four remaining personas are *building roles* that apply insights from the learning roles and channel the empowerment from the organizing roles to make innovation happen. When people adopt the building personas, they stamp their mark on your organization. People in these roles are highly visible, so you'll often find them right at the heart of the action.

7 The Experience Architect designs compelling experiences that go beyond mere functionality to connect at a deeper level with customers' latent or expressed needs. When an ice cream shop turns the preparation of a frozen dessert into a fun, dramatic performance, it is designing a successful new customer experience. The premium prices and marketing buzz that follow are rewards associated with playing the role of the Experience Architect.

8 The Set Designer creates a stage on which innovation team members can do their best work, transforming physical environments into powerful tools to influence behavior and attitude. Companies like Pixar and Industrial Light & Magic recognize that the right office environments can help nourish and sustain a creative culture. When a business team doubles its usable output after reinventing its space and a sports team

discovers a renewed winning ability in a brand-new stadium, they are demonstrating the value of the Set Designer. Organizations that tap into the power of the Set Designer sometimes discover remarkable performance improvements that make all the space changes worthwhile.

9 The Caregiver builds on the metaphor of a health care professional to deliver customer care in a manner that goes beyond mere service. Good Caregivers anticipate customer needs and are ready to look after them. When you see a service that's really in demand, there's usually a Caregiver at the heart of it. A Manhattan wine shop that teaches its customers how to enjoy the pleasures of wine without ever talking down to them is demonstrating the Caregiver role—while earning a solid profit at the same time.

10 The Storyteller builds both internal morale and external awareness through compelling narratives that communicate a fundamental human value or reinforce a specific cultural trait. Companies from Dell to Starbucks have lots of corporate legends that support their brands and build camaraderie within their teams. Medtronic, celebrated for its product innovation and consistently high growth, reinforces its culture with straight-from-the-heart storytelling from patients' firsthand narratives of how the products changed—or even saved—their lives.

The appeal of the personas is that they work. Not in theory or in the classroom but in the unforgiving marketplace. IDEO has battle-tested them thousands of times in a real-world laboratory for innovation. Every year, we work on literally hundreds of innovation projects. And where once the bulk of our clients were start-ups or technology companies, today some of our biggest clients are progressive leaders of the Fortune 100. They seek us out not just for help with a single innovation but for a series of innovations. They come to us to tap into the insights and energy of a talented team, adept at playing roles like Cross-Pollinator, Anthropologist, and Experimenter.

Transforming Innovation

The Ten Faces of Innovation is designed to help you bring the human elements of innovation to the workings of your enterprise. In giving innovation a face, I've also tried to give it a personality. And I've had a lot of help, thanks not only to my brother, David, who founded the firm, but also to the hundreds of talented IDEO designers, engineers, and human factors people who have paved the way over the last twenty-seven years. It's my hope that this book pays them tribute by shining a light on the essential approaches, personas, and roles that nourish innovation.

The Ten Faces of Innovation is about how people and teams put into practice methods and techniques that infuse an enterprise with a continuous spirit of creative evolution. Successful businesses build fresh innovation strategies into the fabric of their operations. They do it year-round and in widely differing parts of their enterprises. When the team's creative engine is running at top speed, the momentum and synergy can keep a company ahead through bad times and good.

In an increasingly competitive global marketplace, this book is about seizing the innovation opportunities in a company, an industry, a region, even a nation. It's about developing the personas of your team to maximize its influence. The right innovation project at the right time can spur a companywide movement, generating an afterglow that permeates the workplace—sparking a culture of innovation that takes on a life of its own.

The proof, as they say, is in the pudding. In the following chapters, you'll find ample evidence of the transforming power of a culture of innovation. You'll find companies where innovation is no longer merely about generating compelling new products and services. Companies where the creative process itself—how they work, inspire, and collaborate—has developed a remarkable energy that keeps the organization moving forward.

As you get to know the ten personas, keep in mind that they're not inherent personality traits or "types" that are permanently attached to one (and only one) individual on the team. A persona

is not about your predetermined "business DNA." These innovation roles are available to nearly anyone on your team, and people can switch roles, reflecting their multifaceted capabilities.

This nimble contextual switching from role to role may sound a bit complicated, but you are already probably very good at it. For example, I play at least half a dozen roles every day, including husband, father, brother, IDEOer, author, speaker, mentor, and Transformation team member. Completely immersed in one of my business roles, I get an urgent phone call from my son, and I switch instantly into father role. In doing so, I change my attitude, my tone of voice, my patience level, and even my thought patterns. Staying in one role when I need to be in the other would be inappropriate and ineffective. Worse yet, it could damage relationships or even my career. But getting the role just right can be very rewarding.

It's the same with innovation roles. We have too many people out there playing Devil's Advocate when they should be in a learning role like the Anthropologist, when they should be invoking an organizing role like the Collaborator, when they should be adopting a building role like the Experience Architect. The innovation roles give you a chance to broaden your creative range, with the flexibility to pick the right role for the right challenge. The innovation roles offer a new vocabulary, sparking a fresh discourse that invites team members to make their own unique contributions to the success of the enterprise.

And like a Method actor immersing himself in a new role, you may find that walking in the shoes of a new persona changes your attitude and outlook, even your behavior. If it opens you up to new thought patterns, the new role may help you achieve personal and professional growth. And thinking of the ten innovation elements as personas rather than tools reminds us that innovation is a full-time endeavor for all modern organizations, not just a task to be checked off periodically. The personas are about "being innovation" rather than merely "doing innovation." Taking on one or more of these roles is a conscious step toward becoming an innovator in your daily life.

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When you begin building your team, remember there is no set formula for using the personas. People can take on multiple roles. You need not have a one-to-one mapping of teams to personas, and you certainly don’t need ten people on every team. It’s unlikely every team will have every persona represented. Conversely, this isn’t Hollywood, and no one wants to be typecast. You might find yourself wearing the hats of two or three personas as you move from one project to the next.

Some of these roles will undoubtedly fit you better than others. You may be a born Cross-Pollinator or a nimble Experimenter. You may also find you’re a better Anthropologist than you thought possible. This isn’t a competition between the individual innovation roles. It’s a team effort to expand the overall potential of your organization. Increasing your skills in just two or three roles can make a critical difference. *The Ten Faces of Innovation* is about inviting you to broaden your color palette. Maybe you’ve always favored blue and green, but if you open these pages and try a few brushstrokes of purple, you might be amazed at the results. So take up your brush and let it fly.

The canvas is waiting.



The real act of discovery consists not in finding new lands, but in seeing with new eyes.

—MARCEL PROUST

If I could choose just one persona, it would be the Anthropologist. I have the fervor of a convert on this one, because back when I joined the tiny firm that became IDEO, there were no Anthropologist roles. Experimenters, yes. Even a few Cross-Pollinators. But no one had yet adopted the persona that has since become the cornerstone of our work. When the notion of applying anthropology first came to IDEO in 1991, I wish I could say I was a visionary, instantly recognizing it as the future of the firm. In fact, the opposite was true. I remember saying to my brother David at the time, “Now here’s a sweet job. All these bright people with Ph.D.s have to do is *watch* people. They take a few pictures while they’re at it, maybe a video clip or two, and then come back and tell us about what they saw. That hardly sounds like work at all.” Meanwhile, our engineers were hunkered down at their CAD machines, trying to create electronic products that could survive a four-foot drop onto concrete without breaking. Now *that* seemed like hard work.

But in the intervening years, I have come around 180 degrees on the role of the Anthropologist in our firm. Far from being some fluffy, esoteric process of questionable value, the Anthropologist role is the single biggest source of innovation at IDEO. Like most of our client companies, we have lots of great problem-solvers. But you have to know what problem to solve. And people filling the Anthropologist role can be extremely good at reframing a problem in a new way—informed by their insights from the field—so that the right solution can spark a breakthrough.

So what makes Anthropologists so valuable? At IDEO, people in this role typically start with a very solid grounding in the social sciences, coming to us with advanced degrees in subjects like

cognitive psychology, linguistics, or anthropology. But what’s apparent when you work with them is not their academic knowledge so much as a sense of informed intuition, akin to what Harvard Business School professor Dorothy Leonard calls “Deep Smarts.” Although no IDEO Anthropologist has ever given me a unified theory of their role, I have noticed half a dozen distinguishing characteristics. Some are strategic and some are quite tactical:

Anthropologists seek out epiphanies through a sense of “Vuja De.”

1 Anthropologists practice the Zen principle of “beginner’s mind.”

Even with extensive educational backgrounds and lots of experience in the field, people in the Anthropologist role seem unusually willing to set aside what they “know,” looking past tradition and even their own preconceived notions. They have the wisdom to observe with a truly open mind.

2 Anthropologists embrace human behavior with all its surprises.

They don’t judge, they observe. They empathize. Lifelong students of human behavior develop a genuine love of watching and talking to people that cannot be faked. The skills and techniques of cultural anthropology can be learned by anyone, but the people drawn to this role usually find it intrinsically rewarding, which is another way of saying that they love their work.

3 Anthropologists draw inferences by listening to their intuition.

Both the business-school curriculum at prominent universities and on-the-job learning in the corporate world focus on exercising our left-brain analytical skills. They sharpen our deductive reasoning powers, what Guy Claxton calls the

“d-brain” in his intriguing book *Hare Brain, Tortoise Mind*, and what Daniel Pink calls “L-Directed Thinking” in his book *A Whole New Mind*. Anthropologists are not afraid to draw on their own instincts when developing hypotheses about the emotional underpinnings of observed human behavior.

4 Anthropologists seek out epiphanies through a sense of “Vuja De.”

Everyone knows that feeling of déjà vu, a strong sense that you have seen or experienced something before, even if you never really have. Vuja De is the opposite—a sense of seeing something for the first time, even if you have actually witnessed it many times before. I first heard the expression from my friend Bob Sutton, a professor at Stanford, though I’ve also been told that it traces its origin to the comic George Carlin. Applying the principle of Vuja De, Anthropologists have the ability to “see” what’s always been there but has gone unnoticed—what others have failed to see or comprehend because they stopped looking too soon.

5 Anthropologists keep “bug lists” or “idea wallets.”

Anthropologists work a little like novelists or stand-up comics. They consider their everyday experiences to be good potential material, and write down bits and pieces that surprise them, especially things that seem broken. A bug list focuses on the negative—the things that bug you—while idea wallets contain both innovative concepts worth emulating and problems that need solving. Whether the idea wallet lives electronically in your PDA or is simply a low-tech index card in your back pocket, it can sharpen your powers of observation and your skill as an Anthropologist.

6 Anthropologists are willing to search for clues in the trash bin.

The Anthropologist looks for insights where they are least expected—before customers arrive, after they leave, even in the garbage, if that’s where learning is to be found. They look beyond the obvious, and seek inspiration in unusual places.

Over the years, IDEO has developed dozens of tools for Anthropologists. We’ve documented fifty-one of them in a set of action-oriented cards called the *Methods Deck*. The interrelated methodologies are organized into the four categories of “Ask,” “Watch,” “Learn,” and “Try.” But our enthusiasm for anthropology began with observations. We do extensive fieldwork to begin a project, to move it along, and to breathe life into a team when a project slows down. The process is remarkably similar to that followed by an inquisitive scientist or ethnographer. We watch human behavior in people’s native habitat. We track customers or would-be customers as they interact with a product or service.

“The way to do fieldwork,” Mead said, “is never to come up for air until it is all over.”

When we go out in the field for inspiration, we try to observe with fresh eyes. Adopting a Zen-like “beginner’s mind” is easier said than done, of course. But doing so makes a world of difference in gathering fresh observations. Margaret Mead is a familiar example of the archetypal anthropologist, studying cultures of the South Pacific in a series of books that challenged stereotypes about the imaginations of children and the limitations of so-called primitive societies. Mead believed you had to be there, you had to observe firsthand. “The way to do fieldwork,” she said, “is never to come up for air until it is all over.” Great minds through the ages have urged this technique. Charles Darwin, for example, was a born observer. He began by studying the faces of his own children and included photos of infants expressing their discomfort through crying in his book *The Expression of Emotion in Man and Animals*. More famously, Darwin joined the crew of the HMS *Beagle* as the ship’s naturalist for two years of remarkable observations that helped inspire his classic *On the Origin of Species*.

Observers talk with people others have ignored and travel to faraway worlds. They subscribe to Albert von Szent-Györgyi’s belief that discovery “consists of seeing what everyone else has

seen and thinking what no one has thought.” The Anthropologist humanizes the scientific method and applies it to the business world. But seeing with fresh eyes may be one of the hardest parts of the innovation process. You have to put aside your experience and preconceived notions. You have to drop your skepticism and tap into a childlike curiosity and open-mindedness. Without that sense of wonder and discovery, you’re likely to be blind to the opportunities right before your eyes.



The Anthropologist can draw on a wide variety of tools and techniques for gaining new insights.

History tells us that routine often blinds us to the truths that have been before us all the time. Until Jane Goodall applied her rare combination of patience and bravery to the study of chimpanzees, no one seemed to notice how much those clever primates share our ability to make tools, kiss, tickle, hold hands, and even, yes, pat one another on the back. The truth was there all along, waiting for us to discover it.

We can't all be Jane Goodall (or Margaret Mead, for that matter). Nor, in the corporate world, do we need to be. But approaching field observations with a spirit of curiosity can make all the difference in the world in identifying new opportunities or solutions to existing problems. So what makes a gifted Anthropologist? Patrice Martin, a bright young IDEOer with a degree in industrial design from the University of Michigan, has found her true calling as a human factors specialist. Patrice has an uncanny knack for getting people to talk about themselves. She

looks even younger than her twenty-seven years and has a bubbling enthusiasm that's contagious. She might have been a star newspaper reporter in another life, because she quickly gets at the essence of a problem.

Why is she such a good observer? She truly enjoys meeting and talking to people. She asks probing questions that encourage people to reveal themselves. She projects a nonthreatening image that says it's safe to talk. She seems to have an intuitive sense of how to mine stories that unearth epiphanies into human behavior. For instance, Patrice recently worked on a project to develop healthy snack foods. Our client arranged for a series of interviews with doctors and patients—a perfectly reasonable approach. But Patrice took a less structured tack. She got permission to hang out in several pharmacies and talk with customers. Patrice made the initial contact, offering people discount coupons to encourage them to chat about healthy snacks. The men and women she talked to in drugstores were all over the dietary map: A middle-aged man looking for an energy boost while his wife was on the South Beach Diet. An elderly woman trying to combine two health drinks to meet all her dietary needs. A college student into natural foods, overwhelmed by the complexity of nutritional labels. A woman recently diagnosed with diabetes, confused about what foods would be best for her.

Armed with discoveries from her fieldwork in the pharmacies, Patrice next journeyed to the homes of a dozen people to learn more about food-preparation and eating habits. Spending time with people on their home turf not only makes them more comfortable, it also gives the Anthropologist a chance to look beneath the surface. For example, one woman in Patrice's field observations seemed to be the perfect homemaker, a virtual Betty Crocker. When Patrice arrived, she smelled the tempting aroma of a chicken baking in the oven. A healthy-looking green salad and steamed vegetables were already on the table. As usual, Patrice had brought a video camera along to preserve her findings, so she was capturing this domestic scene on tape. If Patrice had spent only a short time there, she would have come away with a distinct—though misleading—impression of the family's eating habits. A few minutes later, however, the woman's kids arrived home and expressed stunned amazement on camera—"Mom, you

cooked!?”

Patrice laughed as she told the story. “Her cover was totally blown. Later, we found pizza boxes and frozen-snack containers in the recycling bin.” Patrice wasn’t trying to bust this homemaker’s meal-preparation skills, just get at her family’s true eating habits. She found it easier to get the real story when she spent quality time with them at home.

Patrice asked a busy soccer mom to create a food map of everything eaten during the day. The woman wrote down three square meals and a couple of healthy snacks. Just to double-check, Patrice asked her, “You didn’t eat anything else?” Without further cajoling, she admitted to a chocolate bar or two. Good Anthropologists paint a fuller picture. We’re not looking for perfection, just authenticity.

One thing Patrice taught us about her experiences in cultural anthropology is that “life isn’t typical.” She never asks general questions, like “What’s your typical diet?” In the process of generalizing, human nature causes people to idealize, which defeats the purpose of the observation in the first place. On this project, for example, she asked people what they ate that morning and the morning before. Says Patrice: “It’s amazing how often people will say, ‘Well, today was unusual.’” Today is *always* a little unusual. Life is messier than it is in a marketing brochure.

Patrice was looking for people’s journey. She handed out “emotional stickers” bearing evocative words like *guilty*, *healthy*, *satisfied*, *balanced*, and *stuffed* to stick on their food map for the day. The words were meant to help express how people’s food choices actually made them feel. Above where they described their meals was a separate line to put in what they wished they’d eaten. She also asked them to plot their energy throughout the day. The process created a series of richly textured food journeys that conveyed an individual and emotional sense of what people eat and aspire to in their daily routines.

It’s amazing how often people will say, “Well, today was unusual.” Today is *always* a little unusual. Life is messier than it is in a marketing brochure.

So how can you bake up some fresh inspirations? Enthusiastic Anthropologists are the yeast, skilled and interested individuals who actively seek out authentic experiences to observe. Trying to understand real eating patterns, Patrice wasn’t satisfied just inviting people in for interviews. She sought out consumers where they shopped, and brought her camera and open-minded curiosity to people’s homes. Patrice pushed to make her food maps more than just dry charts and statistics. They included emotional descriptors and a list of the foods people wished they had eaten. Her charts added a deeper human dimension to learning about the role of food in people’s lives.

When you seek out field observations, remember: The more emotional breadth you gather, the better. The more human needs and desires you unearth for your experiential map, the more likely it is that they will lead you to promising new opportunities.

Human Extremes

Anthropologists have a knack for *not* falling into routines. There’s a freshness to how they collect observations and dig up new insights. You’ve probably heard of “human factors,” a technical term for the social science of observing people to gain an edge. But the term can be misleading, as it sounds slightly passive or academic. Human factors enthusiasts are highly proactive. They seek out the touch points of a situation—the key opportunities that have been overlooked or misunderstood.

If you want fresh and insightful observations, you have to be innovative about where and how you collect those observations. For instance, let’s say you want to gain insight into improving a patient’s experience in a busy hospital. Ask the doctors or nurses? Talk to lots of patients? Circulate a thoughtfully prepared survey form? All of these approaches sound reasonable, but IDEOer Roshi Gvechi opted for a more radical technique. She calls it *Extreme HF*—short for “extreme human factors.” Though not as wild as the extreme sports you see on ESPN, it’s not for the faint of heart, either. Roshi, who has a background in film and new

media, decided to bring a video camera right into the hospital room. With the permission of the patient and hospital staff, Roshi and her camera essentially moved in with a woman undergoing hip-replacement surgery. Roshi set up her video camera in the corner to run a few seconds every minute for forty-eight hours straight. To get the full experience firsthand, Roshi stayed in the room herself for two days, occasionally squeezing in a catnap in a reclining chair next to the bed. Following Margaret Mead's admonition, she didn't "come up for air until it was all over."



So what did her forty-eight-hour cinema verité capture?

The time-lapse video caught the ceaseless intrusions into a patient's room. Lights flipping on and off, doors opening, commotion in the hallway outside, nurses on their rounds. More than anything, it caught the astonishingly high number of people who entered the patient's room day or night. Roshi's flick was a bit like watching a vintage episode of *Candid Camera* or MTV's pioneering *Real World*. The images revealed how hospital staff bent various rules—like the number of family members allowed in the room at one time, or the visiting-hour restrictions—in their efforts to make the patient more comfortable. The video also demonstrated the impossibility of rest, let alone sleep, at some times of the day. Roshi edited down her forty-eight-hour time-lapse tape into an easily digestible five minutes—a powerful tool for understanding some of the problems and opportunities in a patient's room.

After seeing the video and talking to Roshi, I'm convinced that

we're just scratching the surface for this novel technique. Digital video technologies have greatly advanced in the last few years, opening up many previously high-end capabilities to people without deep technical expertise. Though Roshi's media training helped her conceive, capture, and edit her time-lapse films, you don't need Steven Spielberg on your team to turn out evocative minivideos.

My advice is to pull out your video camera or find someone with a cinematographer's bent. What if you set up a camera to record the activity in a retail store? A lobby? A factory floor? Your offices? Not to spy on your staff, but to gain a better understanding of the ebbs and flows of your customers and your business. The next time you're looking for new discoveries, instead of holding a focus group, why not focus a lens on real customers, gaining insight into how people interact with your products, your services, your spaces. Body language says a lot. Imagine what you might learn if you could capture in images the circadian rhythms of your organization, the highs and lows of connecting to your customers. Imagine if you could use extreme human factors to gain new insights on what makes your customers tick.

Small Observations Pay

Picking up on the smallest nuances of your customers can offer tremendous opportunities. Recently, after giving a talk at the Food Marketing Institute conference in Chicago, I found myself surrounded by four large Polish guys who clearly had something they wanted to say. I was a little intimidated until one of them cracked a smile. It turned out that they all worked for a soft-drink company in Warsaw. They had cornered me because they wanted to tell me their own innovation success story. A few years back, they'd seen ABC's *Nightline* episode on "The Deep Dive" that illustrated IDEO's technique for learning from customers by doing field observations. After viewing the video together, they decided, "Maybe we could do that ourselves." So they set out for local train stations to look for clues about how they could sell more soft drinks to the captive audience of passengers waiting for the next

train.

As they observed the crowds, they noticed a recurring pattern: In the minutes before trains arrived, people would stand on the platform, look over their shoulder at the drink kiosk, glance at their watch, and then scan the platform for the incoming train. A casual observer might have missed the clue. But these budding Anthropologists realized that passengers were torn between wanting something to drink and not wanting to miss their train.

So what did they do? They created prototype soft-drink displays boasting clocks so large that passengers could simultaneously watch the clock *and* the drink display. The result? Sales shot up in Warsaw train stations. The clocks reassured customers that they had time to buy a cold refreshment. That simple success made believers of these Poles. All inspired by watching a thirty-minute TV show.

We've been advocating field observations and quick prototyping for a long time. Sometimes a breakthrough is one small insight away. A simple telling observation—like the train passengers glancing from their watches to the soda kiosks—can make all the difference. Make patient observation and quick prototyping part of your recipe for innovation. You might be surprised by the results.

Interns & Intergenerational Waffles

At IDEO, the annual crop of summer interns is a continuous source of renewal for the firm. Some people think it's a form of organizational altruism that causes us to bring in more interns than we really need. Insiders know better. Not only does the intern program give us a leg up on recruiting decisions farther down the road, but it helps us stay fresh with a steady flow of ideas and irreverence.

For example, Michelle Lee, one of this year's new interns, recently spent several months watching grandparent-grandchild cooking experiences as part of her master's project for the Product Design program at Stanford. You may have heard of generation-skipping trusts, but this is generation-skipping in the kitchen. In a cultural anthropology program of her own design,

Michelle noticed that the younger and older generations in some ways have more in common than the baby-boom generation in between. They live in the moment, not worrying about what they're doing next. They take time to savor the experience with all their senses, feeling the texture of the ingredients, smelling each new item, and liberally tasting the sweeter parts. Both young and old struggle with awkward or bulky items like heavy bowls and full bags of flour, and both seem extra attentive when their kitchen companion is handling a sharp knife.



There are also times when the kids cover for their grandparents and vice versa. Grandparents have more knowledge, kids have sharper eyesight. Grandma knows what she's looking for, but her granddaughter can see it better. One cooking project Michelle watched while in Anthropologist mode was a grandma making cookies with her four-year-old grandson and eight-year-old granddaughter. When it came time to read the recipe, Grandma had trouble with the fine print and the four-year-old had trouble with the words, so the eight-year-old stepped in to help out.

As her research continued, Michelle focused in on making waffles, a simple, rewarding process that all kids—and their grandparents—seemed to enjoy. The result is a line of product ideas she has for fun waffle-making. For example, all kids seem fascinated with breaking the eggs, but many struggle with the mechanics of getting that step just right. A fun, foolproof egg breaker that doesn't drop shells into the batter seems like a tool that these intergenerational cooking teams would buy in a minute.

And that one idea may be just the tip of the iceberg for grandparent/grandchild products and services. The potential market seems huge, and grandparents seem willing and able to spend freely on such precious moments. So keep your eyes open for small insights in your field that can lead to new market opportunities. And in the meantime, never underestimate the power of an intern.

Kate's Seven Kid Secrets

We believe it's critical to observe and talk to kids. The freshness of their insights can't be found elsewhere. They see things adults skim right over. And there's no way to fudge their perspective. For one thing, you're not a kid anymore yourself. Your sense of childhood—and your view of the world—are filtered through layers of memory and shaped by the lens of adulthood. "I believe that kids have a certain kind of 'sixth sense' you don't find in most adults," claims Kate Burch, a designer who started her IDEO career in our Zero20 group—a team that gets its name from the age range of its favorite customers. And Kate reminds us that every generation's world is unique. "What it was like when I was eight is not even close to what it's like today. Kids today have a whole new set of opportunities—and a whole new set of pressures."

FIXED OPPORTUNITIES

If you take a close look at your world, you'll notice clever people playing the modern-day role of fix-it man. We've all seen the Post-it note with a helpful little instruction on top of the photocopier or the handwritten sign taped to the front of the reception desk. Perhaps you've been served by a resourceful salesperson or customer-service rep who doesn't do things by the book when the rules don't make sense. People can be ingenious and flexible when things don't work as advertised. They adapt technology and systems to fit their needs. At IDEO, we seek out these human touches in the field, these grassroots

efforts by people to soften the sharp corners of the world, to offer a hand to help people along. They're signs that a product or service is incomplete. But they're also opportunities for future innovations.

Some opportunities are more obvious than others. To see how many exist in your world, try this exercise one day. Write down every fix you see at work, at home, or out on the town. Watch for things that have been duct-taped or bolted on. Look for add-on signs that explain what's broken or how a machine really works. You'll be surprised at how many you can spot. For example, enter most any urban taxicab and you're likely to see several little modifications added by drivers who spend their days and nights behind the wheel. And this quest for alterations and "fixes" is no idle exercise. Give it your serious attention and you'll have taken an important first step toward sensing the rough edges of many current offerings. You'll have a better understanding of why some products or services truly sing. And you'll learn to recognize when a product—or even a whole category—is crying out for improvement.

Kate has a natural, easy way of working with children. She makes it look effortless. What are her secrets? "It's all just common sense," she says. But from my experience, her gift is not that common. After reflecting for a bit, she comes up with one of the techniques she uses, and then another, and finally the ideas start to tumble out:

1 Ask them about their shoes.

Almost every kid has an opinion about their shoes. A big height difference is a barrier to communication, and a good Anthropologist wants to learn as much as possible. Get down on their level and talk.

2 Offer something about yourself.

Tell them a little about your day or your interests, especially something that shows your vulnerabilities; it will make you seem more human and help open new lines of communication.

3 Ask them to invite their best friend along to talk.

Even shy kids open up in the presence of a good friend, and they will provoke one another's storytelling. Sometimes, best friends will launch into an absorbing conversation on a subject and ignore you completely, which can be a remarkable thing when you're doing cultural anthropology.

4 Remind them (only if it's true) that the project is "top secret."

Even for kids who can't successfully keep a secret from their mother or their best friend, a little secrecy adds drama to the conversation and underlines the fact that you believe their ideas are important. We believe they're important, too.

5 Ask for a house tour.

Interview kids in their homes to gain fresh insights about the toys and things they like and dislike. Once they understand that Mom and Dad say it's OK, most young kids love to show you around. They'll jump from the macro tour of their home to the micro focus on the stuff in their room in five minutes or less. The house tour quickly becomes a window into the world of childhood.

6 Ask kids what they would buy with ten dollars. Or a hundred.

This question is an indirect but very effective way to find out what's hot and what's not. Ask a teenager about the latest gear and you may just raise their defenses. But ask them what they'd spend a hundred dollars on and you'll get the real answer. What they'd buy is what's current, what's cool, what's top-of-mind for kids of that age.

7 Make them laugh.

Kids having fun have more to say. In a serious interview, they'll be on their best behavior, saying what they think you want to hear. But if you get them laughing, they're more likely to let you in on their real feelings, their real preferences, and give you the inside story on what it's like to be a twenty-first-century kid. They do less self-editing than the average adult, which is part of

why interviewing kids can yield such insights. There's a lot you can learn from them.

Instant Observations

Even the most gifted Anthropologists sometimes lack the time or resources to do intensive observations. What can you accomplish when you're looking for a ready source of new ideas, fresh images, a sense of what's happening beyond your corner of the world?

At IDEO we believe in the quick provocation and information value of magazines and new books. We have an entire wall adjacent to my office filled with popular and edgy magazines for staffers to peruse, from *Business Week* and *Fast Company* to *Dwell*, *Stuff*, and *Zoom*. They're not hidden away in some be-on-your-best-behavior style corporate library. They're placed in a big open room that's near one of the busiest thoroughfares in the firm. We believe that simply flipping through new magazines is a serious and productive practice for any organization interested in innovation. You might even find that it prompts your own publishing efforts. Our Consumer Experience Design group at IDEO (known internally as CxD) periodically produces booklets they call "Thought Bombs" to inspire the team. The Thought Bombs I've seen have been a fascinating collection of trends, concepts, and provocative ideas, mostly inspired by recent material from unusual print media sources.

To anyone who feels immune to the energy field around magazines, let me offer a suggestion. Drop by the Universal News and Café on Eighth Avenue in New York City. Imagine a generously sized bookstore, except that the more than 7,000 different titles reaching high up the walls are not books but glossy magazines. The intensely considered photography and arresting headlines of thousands of magazine covers in one place are so stimulating that they almost force you to deal with the store one section at a time. Even so, each of the store's categories has more titles than the total number of magazines you're likely to find at your local supermarket. I counted seven floor-to-ceiling

rows—well over a hundred titles—just for science. One hundred and sixty auto magazines. More than a hundred and fifty on the subject of art and design. Separate international and foreign-language sections, each with dozens of titles in French, German, Italian, Spanish, as well as an entire row devoted to Africa. Universal News and Café is brimming with information, and the combined imagery of 7,000 titles has a certain magnetic quality that makes the store hard to leave. I'd venture to say that a few hours spent within its walls—there's a café to fuel you with ample food and drink—could tell you an awful lot about the trends and emerging vocabulary of just about any subject you care to research. There's no skimping even on the hours: 5:00 A.M. to midnight gives you nineteen potential hours for intensive information retrieval every day.



What if you don't have a chance to drop by Eighth Avenue? Most major cities have a couple of stores similar in approach if not size to Universal News. Hollywood's World Book and News has 5,000 magazine titles. City Newsstand in Chicago tops out at around 6,000. In Miami's South Beach, there's the News Café. The major bookstores aren't bad, either—the biggest might even carry upward of a thousand magazine titles. Even if you don't spend an hour browsing—most of us have been conditioned *not* to—there's one piece of meta-learning you can pick up in the first five minutes: that there's more going on in the world than you can possibly keep up with. And *way* more magazines than you could possibly imagine. Spend some time looking at covers, flipping the pages, and, yes, even reading. You're likely to find some new ideas, not to mention a few new magazines you should subscribe to

today.

First Look

Executives love to say that their company listens to its customers. In a world where there's always room for improvement, listening is mostly a good thing, but it's better at assessing the present than foreseeing the future. So even though detailed questionnaires can be really useful for assessing customer satisfaction, we don't really believe that the best breakthrough innovations come from asking customers.

Most customers are pretty good at comparing your current offerings with their current needs, and they're all in favor of something a little faster, cheaper, or easier to use. But they're not so good at helping you plan for new-to-the-world services, and they won't give you many clues to creating new business models. Asking them how to reinvent your service offering is a bit like asking someone on the street what NASA should do after it retires the space shuttle. Or even what product not currently on the market will change their lives in the next ten years. Those aren't the kinds of questions customers are well equipped to answer. There are just too many unknowns. Customers usually can't tell you how to create disruptive innovations.

But spend a day with them and watch what happens. Then you may actually start to get somewhere. If you're interested in making something new and better, you've got to watch people struggle and stumble. Take note of the people who pass by a shop because the entrance doesn't invite. Watch how would-be customers use your competitor's offering to see why they seem to prefer it. Some of the strongest clues to new opportunities can be found in the curious quirks and habits of people navigating their ever-changing world: how they respond to their environment, or exploit a novel situation, or adapt objects for their own use—often in ways the creators of those objects never anticipated. Some of these clever human adaptations are quite intentional, while others are almost unconscious. Jane Fulton Suri, IDEO's thought leader for our human factors work, calls these coping and response behaviors "Thoughtless Acts," and she has assembled a collection

of her favorites into a book by the same name. Some of the insights you gain observing such thoughtless acts among your customers may be mere curiosities, but others may indicate a latent need that you could profitably serve. If you've got an open mind, these "acts" can spark your thinking—and maybe, just maybe, push you toward something new and authentic.

Practical Observations

Jane has helped me to see how anthropological fieldwork can be a disarmingly simple source of innovation ideas. Why do so few organizations practice this technique? Perhaps many just fail to act on the insights received. Good observations often *seem* simple in retrospect, but the truth is that it takes a certain discipline to step back from your routine and look at things with a fresh eye. I think organizations would send a lot more teams out into the field if they understood just how many business opportunities or cost savings simple observations can bring.

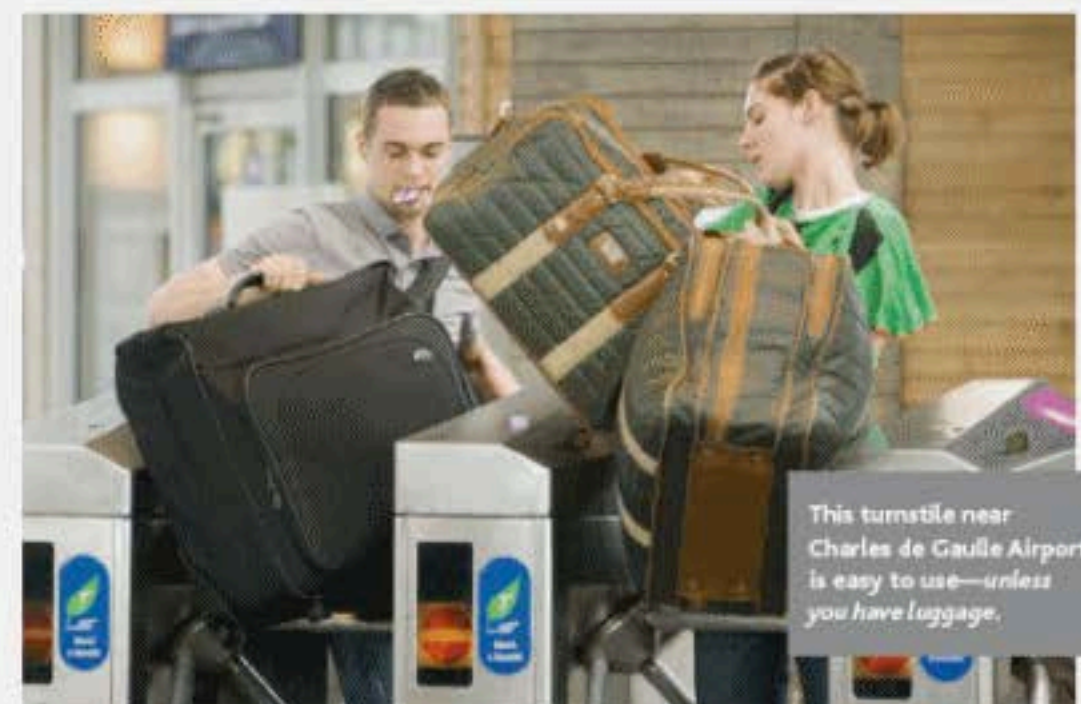
Part of what I've learned from Jane and other dedicated Anthropologists is that this work requires curiosity. How can you get better at it? Find a field that commands your interest. For me, it's travel. I do an awful lot of it, and by focusing on what works and what doesn't, I think I've become better at observations for a broad range of industries.

Not too long ago, for example, I literally stumbled onto an opportunity after a flight across the Atlantic. I was giving a talk outside of Paris, and like most overseas visitors to the City of Light, I flew into Charles de Gaulle Airport. My guidebook suggested heading into town via the urban train that connects the airport to the Paris Métro subway system. The train is superb, but it makes a pretty painful first impression. After buying a ticket for 7.50 euros, your first experience with the train station is to pass through the turnstiles on the way in. And that's where the trouble begins.

What fact did the architects—or, more likely, engineers—overlook? That nearly all passengers arriving on international flights would actually have *luggage*. The entrance did not seem to recognize the possibility of travelers carrying bulky suitcases, and

the scene was so ridiculous that I stuck around for a while just watching people struggle. Not to take satisfaction in the suffering of my fellow travelers—for I had the same problems and sympathized with their plight—but just to observe human behavior and adaptive problem-solving.

As you attempt to enter the station, first you squeeze in toward a narrow turnstile. Once into that funnel-shaped space, you can't even carry *one* piece of luggage at your side, let alone the standard two. Since I travel light, with a twenty-two-inch black rolling carry-on bag and a briefcase piggybacked on top, I managed to squeeze through the first part of the station's unintentional obstacle course. But the classic three-pronged spinning stainless-steel turnstiles were like high hurdles for anyone with luggage. Those carrying two full suitcases were hard-pressed. While holding both of your bags at shoulder height—one in front of your body and one behind—you then have to slip a little purple ticket into a slot at the front of the gate and—worse yet—pick it back out of the forward slot at exactly the same time that you are spinning through the turnstile. Most passengers were dumb-founded at first, but they were motivated by the line backing up behind them and the desire to get to Paris. I saw "teamwork solutions" where husbands passed bags to wives on the other side. I watched individuals toss their bags over the barrier and then follow along. I witnessed balancing acts worthy of The Flying Wallendas. But I did not see a single person with two bags sail through easily on their first try.



Any good architect, engineer, designer, or machinist could come up with a host of simple solutions, but if and only if someone took the time to *notice* the problem in the first place. I only hung around for five minutes of field research and general entertainment, but presumably there are people who've been working near those turnstiles many hours every day for *years*. I'm sure most of these people must have witnessed this calamity hundreds of times. I suspect it's just considered to be "the way things are," something they'll fix in a decade, maybe when they expand the station or put in new electronic turnstiles. If only they'd first done a prototype—or even just considered that international travelers carry suitcases. Take the time to watch people or anticipate their needs, and I daresay they are less likely to get stuck.

Start Young

Anthropologists aren't valuable only for helping you understand today, they can also give you a glimpse of the future. For a look at *tomorrow's* mainstream markets, look at teenagers *today*.

A FASTER HORSE

A few years ago when IDEO was working with the Mayo Clinic on innovation, we had a small office in their Department of Medicine. I happened to visit the space one day and was struck by a Henry Ford quote the team had posted on the wall. "If I had asked my customers what they wanted," said the inventive Mr. Ford, "they'd have said a faster horse." Ford had a point. Don't expect customers to help you envision the future. Make that mistake and you're likely to get lots of suggestions for "faster horses."

Ford achieved many of his best breakthroughs in the early years of the twentieth century, but imagine you worked for a consumer electronics company that manufactured videocassette recorders in the first years of the twenty-first century. If you'd

asked people what they wanted in a VCR, and let the question hang in the air awhile, they might eventually have suggested something like "super-fast rewind." You can imagine a customer saying, "When I am done watching a movie, I want to take it back to Blockbuster as soon as possible, so please give me faster rewinding!" How could you fail by listening to your customer? You might set out to create the fastest-rewinding VCR in the world. But just as you released your fancy new model, you would have been blown away by the arrival of the first DVD players—which, along with sporting superior image quality, sound, capacity, and improved reliability, require *no rewinding at all!* And as the pace of innovation accelerates, I hope everyone associated with the DVD format is preparing for subsequent innovations involving downloadable movies or video on demand, which will inevitably eclipse the same DVD players that had previously disrupted VCRs.

Of course, good companies still make a habit of listening to their customers. Just don't confuse that proven business practice with how you go about hunting up the next big breakthrough. That's not likely to come from asking people what needs improvement or fine-tuning. It's probably going to be something your customers haven't even thought of.

We've talked about extreme human factors. Central to these techniques is the idea that it pays to look at people who are a little different. People who love or hate a new product or service. People with opinions and biases who aren't afraid to express their feelings. Sound like a teenager you might know?

Teens try stuff constantly, check it out, and love it or chuck it. Prototyping at its very best. Kids ride the latest new technologies and fashions like the break at Waimea Bay. And when they do love something, their enthusiasm can help make it a hit.

Think of blogging, gaming, instant messaging, and MP3 file sharing. Teens helped drive all of these trends, and they're driving more as we speak. Pay attention to toys. They often inspire products that later captivate adults.

Kids are no strangers to IDEO. Indeed, our "lookout" space

perched over San Francisco Bay with its racks of fun reading material and ever-shifting group tables sometimes feels a bit like a kindergarten classroom. And the common area of what passes for our management offices has a cluttered array of interesting objects and a full set of video gaming options that some days makes it resemble a teenager's room. It seems like every other week we're inviting kids to play with new toys and educational products to see what connections they make.

Of course, the toy-development portion of IDEO's Zero20 group has tapped into "kid power" for years to test out its countless toy prototypes. And get this: Founder Brendan Boyle discovered almost by accident one day that he could get more kids to show up on time if he charged a minimal hourly fee for playing with the prototypes. Moms were happy to pay (it was cheaper than babysitting), and the fee somehow triggered a psychological response that made them arrive early so as not to miss any of the valuable session.

Why do we watch and try to learn from kids and teens? They just soak up novel ideas, whereas grown-ups often spend a lot of time pushing back, telling you why it won't work. Text messaging, for instance, isn't necessarily the most efficient communication medium. But it spoke to teens' insatiable need to gossip and chat, and it wasn't long before adults lumbered on board too.

The Anthropologist has to start somewhere, and I can't think of a better place to begin than with the young. Whatever you do, in whatever industry you find yourself, make sure you watch and talk to teens and kids. We all know children make us younger in spirit. They can also help you see what's next.

