
THE
MANUAL



THE MANUAL



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Mark Boulton
Karen McGrane
Cennydd Bowles
Trent Walton
Josh Brewer

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In memory of Steve Jobs



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Letter from the Publisher

In the first issue, I took us back to autumn in Brooklyn. Over pints of ale, Simon Collison and I spoke ardently about our feeling that the web design profession was stretching toward a deeper, more mature sense of its work.

I asked Simon that same evening to suggest the best person to help me clarify my thoughts and put the ethos of *The Manual* into words. A tall order indeed, but Simon didn't hesitate for a single beat. "Carolyn Wood," he said. Within days, I was pouring out a flood of ideas via Skype, feeling powerfully validated, and laughing heartily with a woman who would quickly become one of my closest friends.

Meanwhile, I'd seen the finely detailed work of the wildly talented Jez Burrows. I went to him for the identity work I required for Build. Here was a guy whose designs feature in major publications around the world. Yet now he was working with me. Last year Jez and I toyed with producing a sort of book, a gift for the attendees, but we lacked the time—and the idea seemed even bigger than Build itself.

Enter Carolyn: Hours lasting into the night crafting the publication; keeping each other going through the insanely exhausting, infinitely rewarding adventure of creating something new. Sharing with another person what I truly believe in, and knowing that she will contribute with the same amount of passion I do. This is a rare thing.

She became both a collaborator and the editor. Her editing is transparent. "Good design is invisible" comes to mind—and good editing is like good design. Yet her work

is as creative as any of our efforts as she moves beyond simple editing to form relationships with our authors and draw out treasures from these brilliant people. Without Carolyn's omnipresent sensibilities, the journal you are currently reading simply wouldn't be *The Manual*.

The production, art direction, and visual design of *The Manual* can be entirely credited to Jez. His contributions are tangible; you can see and experience the results of his efforts in what you hold in your hand, in the way the words settle comfortably on the page, in the attention to detail that appears to be so effortless and is not. And his design seamlessly reflects the ethos and content of this journal.

The Manual was the result not only of my dreams and work but of my relationship with these two people. They enabled me to bring you the contributions of the extraordinary authors and illustrators that fill our pages, whose thoughts and words and imaginative, explosive images remind us of what we, in this profession, might consider, value, and become.

Thanks to each of you who have purchased a copy of *The Manual* and who help keep this vision alive and strong.

Andy McMillan
Belfast, 24th October, 2011

All links to websites, articles, or books referenced throughout this issue are collected at
<http://alwaysreadthemanual.com/issue2/>

Contributors

AUTHORS



Mark Boulton

Mark Boulton is a graphic designer living in South Wales, UK. He runs a small design studio, Mark Boulton Design, and works with clients such as Al Jazeera, ESPN, CERN, and Drupal. In the past, he worked for the BBC and Agency.com designing experiences for all manner of clients and people across the world.



Cennydd Bowles

Cennydd Bowles is a digital product designer and writer based in Brighton, UK, who has a decade of experience advising clients large and small on the benefits of customer-focused design. He writes for his popular blog at cennydd.co.uk, and his second book, *Designing the Wider Web*, will be published in 2012.



Josh Brewer

Josh Brewer is a husband and father who spends his time thinking about, designing, and building things that live at the intersection of form, function, and aesthetic. Josh is a design lead at Twitter, changing the world 140 characters at a time, and is one of the co-creators of the usability blog 52 Weeks Of UX.

**Alex Charchar**

Alex Charchar is a full-time graphic designer and a letterpress enthusiast who dreams of using his Heidelberg Windmill printing press. Living in Queensland, Australia, he

is editor of the typography section for *Smashing Magazine* and writes at Retinart.

**Karen McGrane**

Karen McGrane plays nicely in the content strategy, information architecture, and interaction design sandboxes. She is Managing Partner at Bond Art + Science, a UX consultancy she founded in 2006, and

formerly VP and National Lead for User Experience at Razorfish. She also teaches Design Management in the Interaction Design MFA program at the School of Visual Arts.

**Trent Walton**

Trent Walton is founder and one-third of Paravel, a custom web design and development shop based out of the Texas Hill Country. He's a web designer, speaker, and writer who likes to experiment with web typography and fluid grids.

ILLUSTRATORS**Always With Honor**

Always With Honor is the collective work of husband and wife team Elsa and Tyler Lang from their Portland-based studio. Inspired by nature, travel, and their longdog Zoe, they aim to create work that reflects their curiosity and pursuit of clarity.

Rose Blake

Rose Blake is an illustrator based in London. She is a part of the This Is It collective and runs the website Studio Music. She graduated with an MA in Communication Art and Design from the Royal College of Art in 2011.

Paul Blow

Paul Blow earned his MA in Narrative Illustration from the University of Brighton. His clients include the *Guardian*, *New Scientist*, *Harvard Business Review*, Carter Wong & Tomlin, and Saatchi & Saatchi. In addition to receiving many other awards, in 2006 the Association of Illustrators presented him with the gold award for editorial illustration.

Mike Lemanski

Mike Lemanski is a British illustrator and designer with an extensive client list—from IBM and Nike to Google and Coca-Cola. He produces concept-driven work from infographics and editorial illustrations to branding and interactive designs. Mike also explores his personal ideas and concepts—particularly those on visual music and modern landscapes—through painting, drawing, and printmaking.

Jon McNaught

Jon McNaught is a printmaker and illustrator living in Bristol. He has produced illustrations and comic strips

for various publications including *Art Review*, the *New York Times*, *Stripburger* and is a regular illustrator for Caught by The River. He has also produced two comic books with Nobrow Press: Birchfield Close and Pebble Island and is a printmaking instructor at the University of the West of England.

Erik Marinovich

Erik Marinovich is a letterer and illustrator and co-creator of Friends of Type.

Dadu Shin

Dadu Shin was born and raised in Massachusetts. After attending the Rhode Island School of Design, he moved to New York City and is now working as a freelance illustrator. He has worked for such clients as the *Boston Globe*, the *New York Times*, *Plansponsor*, and Simon & Schuster.

The Colors of Grief

ALEX CHARCHAR



On the twentieth of January, when she was less than twelve hours old, I lost my daughter.

With her went all the colors of my world.

The world had never been as bright as when I held my daughter. With Samarah in my arms, her head in the crook of my elbow, her knee in my palm, the world was so flushed with color. All the shapes and sounds receded. Everything slipped from the room, and I knew only her. Her chest expanding and contracting as her small lungs tasted oxygen, her face moving slightly, arms bopping softly, feet kicking gently. It was the most thoroughly comfortable I have ever been. For these hours, the sadness was banished to its cold corner. We knew what was to happen—the silent, frozen frenzy of the doctors had dragged a shadow over the delivery room—but in these moments,

all that fell away. All that mattered was that she was in my arms, and I was desperately and completely in love.

I held perfection. Radiant, beautiful perfection.

Oh, how little I knew of beauty before that day. I discovered, too, through the essence of her, what complete inspiration feels like. I learned what being *at one* with your partner is like as you embrace your child.

As I sat in the brightness of it all, in the sheer brilliance of her, I felt a happiness I'd never known. What color was floating through? Yellow seems too dull and orange too empty, pink too soft, even an enveloping white too shallow. The most vivid color falls flat. The colors flowing from her were indescribably rich.

I fell asleep that night a father, proud of my wife for being a mother. Proud of this child for being our daughter, for all the beauty and uniqueness and love that she embodied, for each breath she had taken, for each beat of her heart. Each and every beat. We fell asleep exhausted and emptied.

Samarah was gone.

Ever had it been that love knows not its own depth
until the hour of separation.

—Khalil Gibran

Before she was born, I had been moving, over the last several years, to a deeper place in my work, past the considerations of surface detail. I had found much joy in notions pertaining to the bridging and transference of ideas between two minds through a piece of design and how chemical reactions are evoked, adrenalin is pumped,

and happiness experienced through our arrangements of pigments and pixels. Perceiving that these pigments and pixels are nothing but the *representation* of ideas was most intoxicating.

Our internal responses to creative works and how readily we translate them for use in our language and lives is a subject that I found endlessly fascinating. The most obvious element is color; we use it to describe our moods. Do our eyes flash with red when we're angry? Does a heart contract and turn green with envy? When we're down, does our blood turn cold, washed with a bluish tint? What about when we're being creative? What color pulses from us then?

But now—with so much already taken from me—when these intellectual questions and my creative energy slipped quietly into their own coma, I barely noticed.

I remembered colors and their workings; I understood them intellectually. I understood design. But the cord linking emotion and idea had been severed. The well of inspiration into which I'd routinely flung myself—that place of shapes and textures, ideas and questions—had been emptied. No bottom of mud or dirt, nor even dust or grit or grime. Empty.

I woodenly remembered everything, but knew none of it. I was resigned to the idea that I was no longer a designer by thought, no longer a problem solver or communicator. I hollowly resolved to carry on. I will simply be a designer by practice, I thought. I'll go to work, do what I'm asked without consideration of whether it's right or wrong. I know the software, that's all I need. In the evenings I'll forget of my work and consider it no more. I'll read of it

none, look at it less. It's just a job, it'll do, it'll pay bills. No one will visit my site; it will just expire. Those dreams of mine were silly anyway. Who cares of my ideas? Tasteless and pithless. Bone without marrow.

I was only here to help my wife breathe again. Nothing outside of her mattered anymore.

Shadows of pale gray, icy white, a sallow yellow.

The sadness engulfed me. I sought happiness in old safe havens. They failed to push through the sickening thickness of it all. I avoided Twitter, ignored email. Sleep, an old companion turned foe, was a relentless, heavy drug, and I was listlessly forgetting to eat.

We yearned for distraction, no matter how fleeting, expensive, or superficial. Our mantra was a cheerless *whatever we want*. Want an iPad? Get an iPad. Want a book? Get a book. Want to rent a few movies? Get fourteen.

The television was turned on and stayed as such for weeks. On it, I found a small diversion by witnessing the making of things—any sort of thing. I thought this interest was sparked by my love of process, of seeing how something comes together. Reflection offered another thought: perhaps I needed to see that things were still *being made*.

We sensed no healing. Perhaps, though, distraction provided time for some hidden work to happen.

Flakes of rust. Grays smudged with barren beige.

The *whatever I want* attitude carried over well to the content I digested. I had for years avoided so much while

focusing on design. Now, I wanted to break through any artificial constraints I had shortsightedly constructed during my studies.

I mostly read, eating hundreds of pages at a time, tasting the words, feeling their texture in my teeth, on my tongue, not moving from my seat, fully absorbing language etched into page. I wanted to be walled in by books and find escape. A *safe room* made impenetrable to things I did not want to feel. Yet, line by line, I was slowly revived; like a man waking after a long sleep, I was ravenous, starved for content. Only rarely did I waver in my conviction to finish the current so that the next could be experienced. Words made me savor humanity's ability to find pride of purpose, happiness and energy, insight and thought. Somewhere along the way, I giggled for the first time. I cried and ached too—familiar pursuits of late—but when I did so, it was for the stories of others, not just my own.

I drank in everything I'd ever had a desire to explore, devouring the details that gave form to former inklings. I knew that the strength of stars is immense but not that their gravitational weight could alter the relativity of time. Engulfing myself in ideas about government and the building of nations, astronomy and physics, the struggles of the creatives, the questioning of normality, the lives of the great and the life of the mind, I wanted to know it all.

We spent much time with friends, creative friends, who had become family. One day my wife smiled. It made me drunk.

My own creativity was hidden, distant, still. Yet one day I think I saw

a little blip of blue.



It happened quietly and slowly. First I just wanted to look.

I tentatively stepped back into the comfort of illustration and photography. It was not long before graphic art walked into the room. Then design. Not the Swiss or modernist, minimalist, sparest and barest work I'd normally enjoy. Design with embellishment and a little life on its sleeve—the kind often found in good editorial. I became a design voyeur, still wanting to observe from a distance. I didn't want to dissect and understand. I had no need to question, define or break apart, to talk about or act.

I imagined I was merely continuing my tender yet determinedly carefree search for *whatever I want*. But with an almost terrifyingly uncomfortable sense that, once again, I'd lost control of my *self*, my world, I was struck one day by the realization that a sort of *pattern* was shaping my path. Was it merely coincidence, or was it my subconscious taking the reins because it knew how to repair some of the damage? All of my lists of interests, all those things I decided to investigate after years of neglect, even the order in which I approached them—or they approached me—seemed deliberate. I discovered that I was traveling through—in a matter of months, not years—all the topics I enjoyed while growing up that had led me to design.

I became aware that this interest in a universe of subjects was funneling me toward the same endpoint at which I'd arrived before: design. But nuances born of my loss, small changes in my path, were ushering me to a destination that was, indeed, design, but design that was continually fed by and embracing much more of the mind, the heart, the things learned by cultures and people—galaxies, spices, rushing rivers, rhythms. An endpoint full and limitless, not narrow, that might make me a wholehearted designer

who was better than he had been. But this is saying more than I really knew at that moment. At that moment it was the softest impression, the slightest sensation of light.

Throughout my life, I consider the books that sit untouched on my shelf, bought but not read. Some sit for years before I pull them down and crack the glue. I purchase them sensing the value within. But when they appear at my doorstep, and I leaf through the pages, I see that I'm not yet prepared to glean their secrets or even know where in the rows of text to search.

They keep their place, as I devour books either side, until one day I'm able to read one treatise the way it's meant to be read. A day when I've learned what I must, so I may gain deeper insight than I would have when the parcel of books first arrived. As with good wine or coffee, one must develop a palate before knowing what *hints of blueberries* and *light acidity with tastes of chocolate* actually mean.

So, one by one, and day by day, I slid them from their dwelling places.

And day by day, no longer were my eyes a constant sting, nor was the pain inescapable. I'd look at my wife, the only reason I was able to reach this point, and see a smile, or more rarely, a fleeting laugh.

Soft greens and sepia, the quietest of yellows and gentlest of blues. Warm whites and creams.

I want to understand the world into which my daughter was born.

As I explore other fields, I bring new elements from each

that I then weave through my creative work. As each idea finds its context in what I make, I realize that this marriage of seemingly disparate ideas is often how original and intriguing new ones are born. The language of graphic design is a collage of its own history and concepts pasted together with stolen and borrowed tongues, syllables collected to express ourselves and our ideas with words that we don't have.

On the web, we've passively stood by as the profession and role of graphic design has been splintered into areas of specialization until the life blood has been sapped, and principles have become lifeless facts, limply memorized. It has been pigeonholed and marginalized when, in truth, it is the overarching language of our communication. This new diversity of my studies not only invigorates me, it is a transfusion resuscitating the living thing that is graphic design. I take snippets of language, and they become part of my design's native tongue. Whether from history or art or comedy or film or science, they will help lend contrast and expose me to new ways of solving problems, expressing answers, and thus speaking to the world.

Design is artfully realized communication. Style alone is merely an elegant fool, an eloquent speaker of meaningless words, perfectly pronouncing broken sentences.

Artists, designers, filmmakers, writers, and others have noted throughout the centuries that our work is replete with the homage, the remix, the redesign, the intentional or subconscious appropriation, the impact of all that surrounds us or that we unearth in our days. Then why not cast our intellectual and experiential nets wide—and wider still? If the design process coalesces these influences to provide novel solutions, then it's only logical to look

outside of design as much as possible. The richness of our studies takes our ability to communicate to an entirely new level where we can speak in multileveled ways, reaching the minds, the hearts of those who look and experience.

We are not simply stylists or specialists but expert practitioners who can translate an organization's abstract concept into a meaningful message that evokes the desired response. It's curiosity, then, that makes for the magnificent creative.

So yes, I want to know of many things.

Reds and blacks and whites, so clean, so sharp. Vibrant blues and rich greens. Yellow, what a wonderful color.

My daughter was born and loved, then lost in a measure of hours. Not days or weeks or months or years. Just hours. Sixty minutes multiplied so very few times.

A life measured in hours spotlights how we use the relative abundance of time most of us receive and how well we earn our keep. I'm driven not merely to try, but to honestly earn each tick of the clock, each pulse of my heart that I have been allotted.

And so, more and more, I think of quality: the quality of my life, of what's left of it, of how I choose to spend my time. I want to do the kind of work that somehow matters, that isn't just a trade or a job but is based on that hard-won body of knowledge and principles that is part of who I am.

Not all of us have a choice, all of the time, to avoid that lesser kind of work, that kind that we aren't proud of but that we produce solely, sometimes soullessly, for a paycheck. We must be vigilant lest we be branded by it, and

not only feel our reputation sliding downward but also grow to loathe this part of ourselves that generates work that is quickly forgotten by us, our clients, the audience. In these times, we're fortunate to have any kind of work. But if daylight brings only going through the motions and never diving too deep, relying on superficiality and being just *good enough*, then weekends or nights will be our only chance for work that fulfills us, takes us forward, flexes our creative muscles.

This sense of being a wholehearted, *wholeminded* designer that I discovered in my journey back, is something I now carry from job to job, as *9-to-5s* pay my way through the *5-to-9s*—those projects I stay up so late to labor through, or rise so early to beat the sun. How odd that as I sacrifice myself to do them, they feel like an indulgence or reward.

When we work on a project that is ours, that has its genesis in that internal library curated from what we absorbed every minute, every hour of our lives—then there is potential for the expression of thoughts that can change us and the thoughts and lives of others.

I now know that it is through love and passion and happiness that anything of worth is brought into being. A fulfilled and accomplished life of good relationships and craftsmanship is how I will earn my keep. To do any less with my time, time which my daughter goes without, is a wretched, unthinkable thing.

Creativity has, at its core, thoughts of the future, of something lasting. I live, now, hoping to create so that the world can taste a bit of the beauty plucked from the universe as she faded from our arms.

I'm here to catch the slightest whisper of the colors my daughter showed me—the ones I lost that day.

Time does not heal all wounds. Each sunrise picks away at any scab that starts to form. But through the journey of my days, the path now lit not just by losing Samarah but by knowing her, the anemic grays and jaundiced yellows of dawn are slowly transmuting to the colors of life.

Tendrils of tender green at the horizon, fingers of indigos and violets above, majestic swirls of rose and gold and pulsing crimson, soaring across the cerulean blue. ▶

Lesson

ALEX CHARCHAR

Waking every morning to the perfume of sweet and savory spices and the scent of fresh fish in the salty ocean air, I would try to wipe the glaring brightness from my eyes. I was fifteen years old and on the other side of the world, in an old Mediterranean city filled with family, fishermen, and Roman ruins. I was in Tyre, Lebanon.

Immediately finding the generosity and humility of the Lebanese relatives I grew up with embodied here, in Lebanon itself, in my cousin Mario—a man who only knew kindness—I was treated like an old friend as he introduced me to his culture.

Out for a meal one evening, we found a small café lit by a single soft light. We were to enjoy a dish of slow-boiled fava beans, garlic, and olive oil called *Ful m'Dammas*.

We sat at a wooden table dressed with fresh Lebanese bread, a dish of salt and pepper, sliced onions and lemons, a small bottle of olive oil, and the always present carafe of water. The carafe had a small spout on the side, and everyone in my family—except me—has mastered the art of drinking from it. As they extended their arms and the carafe a foot into the air, the water always flowed from the spout to their mouths, not a drop lost.

Two bowls were brought to our table, and I began to tear at the bread, dunking it into the soft paste of beans before shoveling it toward my taste buds. It was astounding.

This simple meal burst with richness and layers of intense flavor. It may have been *peasant food*, but I was a king. My taste buds had been liberated after fifteen years of oppression! Having found bliss, I ate half the bowl without rest in only moments.

I watched Mario reach for the small bottle of olive oil. “Special, very good, you eat.” He poured out a teaspoon of the yellow-near-orange syrup and looked at me, his voice as serious as I had ever heard it, concern washing his face. “Only little. This very *big*. Little, eh?”

I was feasting like royalty! Only a little? Ha! I grabbed a piece of bread and soaked up all that was offered on the table, quickly chewing it. Mario nervously laughed, his face a mixture of shock and worry.

Suddenly I was in a world of silence, with taste and smell vanishing too. Then I saw *it* in the bottle of olive oil. A small chili, laughing.

A high-pitch pulse burst into a loud guttural thunk that reverberated throughout my skull. A scream began inside my brain, crying out, in this moment of stunned paralysis, “You’re a stranger, a naive child trying too hard to claim his place!” My senses crashed back to life as I simultaneously tried to leave my body.

I had done more than swallow fire. The sun itself had exploded in my mouth. The chef, a man with a toothy smile, had captured the fury of a star and distilled it into this ferocious syrup. My eyes watered as if they could extinguish the heat, my teeth melted, and my muscles seized. My arms flew out in hope of finding salvation.

But, wait! The carafe would save me! That damn carafe that I’d never been able to use! But *this* was *my* moment; this was when all in the universe would align to save me from this birthing star!

My mind screamed “Pour from the spout! No, no, the top! The spout! The top!” I chose neither and begged for grace. The water crashed around me, mostly finding the table, snaking through the wooden slats and onto my jeans, swimming into my bowl, drowning the bread, drenching my face and hair, with little finding my lips.

The laughter came from all sides—they could see I wasn’t from here. All I could do was wheeze and scramble for bread as my cousin poured me a glass of water, handing it to me quickly and patting me on the back, still gently chuckling.

I burned with mid-pubescent embarrassment. I hated him, I hated the chef, I hated the people smiling at me, speaking a language I was lost in. I hated the food and the trip and every moment. He was laughing. I wanted to claw at him. I wanted to hide in the dark hovels of the surrounding streets. I wanted to...I wanted to...I realized—my reddened eyes looking at their wide grins—that I just needed to *laugh*.

My cousin’s eyes weren’t mocking; *no one’s* were mocking. The room held no ego or spite or anger. They weren’t laughing for their own enjoyment but because they were witnessing something so familiar.

Had I listened to him from the first, I would have avoided pain. Had I held onto my pride, I would have suffered embarrassment and a damaged ego. It was my relative’s warmheartedness, not any particular strength of my own,

that enabled me to put ego aside and relish and embrace not only that night of camaraderie but my entire immersion in the culture of my family.

Throwing his burly arm around me, he proudly proclaimed “Lebanese, eh! Lebanese!” He had appreciated my eagerness to join in. I had tried something dangerous and survived. I later found out that everyone started their use of that oil lightly, growing their tolerance over a childhood. I had played catch-up just a little too quickly.

Continuing to chuckle, he reached for the olive oil. “Just little. Very big.” 

Visual Design is Not a Thing

MARK BOULTON



Graphic design will save the world.
Right after rock and roll does.
—David Carson

It was a Thursday, I think. A cold, drizzly day in Cardiff, the capital of Wales. Nestled in amongst aging sycamores and field maples sits the most official looking building in Cardiff: the museum. The building is as you'd expect: slightly dirty white limestone, grandiose architecture, a musty smell of aging wooden furniture and floor polish masking the underlying whiff of decay.

It's an old place full of old things.

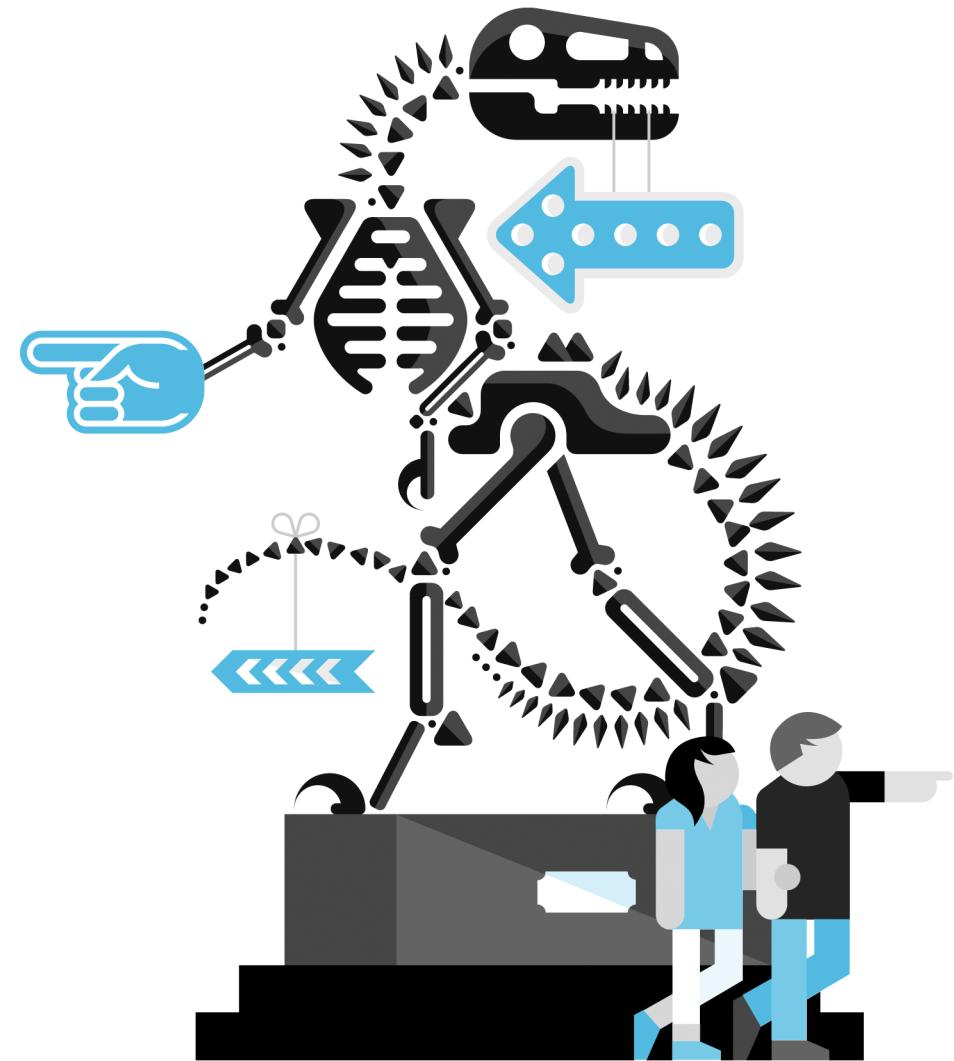
My colleague and I worked for an agency that was designing the new wayfinding system for the museum. And that cold, wet day in February, we were tasked with prototyping

our new signage system in the museum. Armed with several head-height mock signposts, reams of paper covered with illustrations, iconography, and all manner of words in different typefaces, we set about the first responsibility of our day: observing.

Watching people is difficult; your mind wanders. Who are these people? What do they do for a living? Why are they here and what did they eat for dinner last night? Casting those thoughts aside, we watched for pain and confusion, the pain and confusion that arise when you look for but can't find the right way to go. When people are strongly task focused, or in a place of unfamiliarity, they need quick, unambiguous signage—messages that are the least disruptive to their mission. We would intervene in that process and provide a sign, constantly looking for their reactions to it. Good signage is only there when you need it, and in precisely the right place. We intentionally interfered with that flow, and, of course, it had hilarious results.

A ROACH AND AN ARROW

We'd provided signage at the top of some stairs—a key decision point that begs the question: *Which way do I go?* To the left was clearly a dead end, a wall with no doors on a dimly lit landing. To the right was a well-lit, open door leading to an exhibit room. We placed two signs head height, one on top of the other: an illustration of a roach (a small, silver freshwater fish) which was pointing toward the exhibit room; and an arrow icon pointing toward the empty, dimly lit wall. It was cruel, really. We'd created a confusing physical space combined with incorrect signage. But the results after watching people for an hour were that people ignored the arrow and followed the direction in which the roach was looking.



Throughout the project, most of my time was spent prototyping, watching, and recreating. The project lasted more than six months, and I'd spent maybe a total of a few days in front of my computer creating black-and-white signs. Over the course of perhaps only a couple of days, I'd done anything for the project that involved typography, color, illustration, layout, or iconography—that which is now so-called *visual design*. But for six months, I was *designing*. I was a graphic designer doing what graphic designers do.

Graphic designers don't make things pretty. Graphic designers solve problems. They work with research, they analyze and watch, they test and iterate, they tell stories. They're not coloring things in. The *graphic* in graphic designer is not limiting or to be taken literally.

RELEGATION OF THE OLD GUARD

I started being a graphic designer in the early 1990s. I originally intended to be a commercial illustrator, but it was typography that captured my imagination and grew in my heart. During my final year in university, the web forced itself into my sphere of practice. I wanted to design books, but the web appealed to my impatient side. I didn't have to wait for printers; I could just do it myself. I was a master of my own destiny.

Like many other graphic designers, I ended up completely jumping ship. Making the web beautiful was my new goal. It was a brave new world of experimentation as we struggled to get to grips with the new medium. Many designers very quickly jumped back to what was familiar, though. The web was a difficult place back then. Nothing worked as you'd expect, you had to try to understand HTML and CSS, your canvas constantly changed, and there were

these other people involved—information architects, content producers, researchers. While design historically was a solitary affair, design for the web became a multidisciplinary practice.

Graphic design is a deep, rich craft. But it's also a process defined by ideas, markets, audiences, and consumers. Paul Rand defines a graphic designer's role thus:

The designer does not, as a rule, begin with a pre-conceived idea. His idea is the result of subjective and objective thought, and the design a product of the idea.

In order, therefore, to achieve an honest and effective solution he necessarily passes through some sort of mental process...Consciously or not, he analyzes, interprets, translates...He improvises, invents new techniques and combinations.

He intensifies and reinforces his symbol with appropriate accessories to achieve clarity and interest. He draws upon instinct and intuition. He considers the spectator, his feelings and predilections.

—Paul Rand¹

Throughout the 2000s, graphic design became a dirty, embarrassing word in web design. Other design professionals in the web industry thought that graphic designers merely concerned themselves with how things look—that they didn't consider navigation, user goals, business goals, or other vital parts of any design project. In their opinion, graphic designers belonged to another field of practice entirely. Graphic designer equals print designer equals *not quite good enough* to think like a *web* designer. I myself have

been subjected to this snobbery but have dished it out, too. It's true that so much more is involved in web design than in your customary poster or annual report design. But that's not the whole picture.

If Paul Rand or Josef Müller-Brockmann were practicing today, they'd likely be designing websites. Perhaps not exclusively, but they'd be applying the same critical thinking, the same graphic design process to designing websites as they would to designing a poster or an encyclopedia or a museum wayfinding system. And all these, from poster to museum wayfinding, require an extraordinary amount of user research, information structuring, observing, iteration, and, finally, production. Just like web design practice today. *Graphic design is not defined by the medium of delivery.* It's a much broader practice.

GRAPHIC DESIGN AND USER EXPERIENCE

What happened next altered the definition of graphic design forever, at least within the web design community.

I first heard of the field of User Experience Design in the early 2000s, about the same time as when Steve Krug's book *Don't Make Me Think* was published. Then, of course, came Jesse James Garrett's seminal book: *The Elements of User Experience* in 2002.² In this book, Jesse created a diagram of user experience that had five planes of practice, like a big layer cake. I've listed Garrett's planes here, with my own description of each:

“Strategy: User Needs/Site Objectives”

The strategy layer is where it all starts. What do we need this website to do and deliver on? What is the proposition?

“Scope: Functional Specification/Content Requirements”

The strategy transforms into *scope* where the features and content are documented.

“Structure: Interaction Design/Information Architecture”

The structure layer is where the information is shaped. How does the whole site sit together?

“Skeleton: Information Design/Navigation/Interface Design”

The skeleton is the layer at which the interactions between the user and site are documented. What do people do on the site? More importantly, how do they do it?

“Surface: Visual Design”

This is where the color, typefaces, layout all come together to create the *look and feel* of the site.

Quite rightly, Garrett's book was a pivotal publication for the industry. It was a must-have for anyone who makes, writes for, or commissions websites. It clearly explained how good websites are constructed and the various roles and processes that are included. However, in one unwitting move, the industry's response to Garrett's layers relegated the practice of graphic design to the surface plane. This attitude was unfortunately reinforced by the recent rise in the opinion that *user experience design*—not graphic design—was the definition of *good* web design. Here on this surface plane, designers operate to make the product or website look great. They use color, typefaces, and layout. According to the industry's perception of this model, what designers *don't* do on the surface plane is design; they decorate.

Many also mistook this diagram as a *process* diagram. Agencies aligned their processes with Garrett's five planes,

and they assumed that meant that *surface* design came last.

Let's be clear. From the position of graphic design, this model of UX is broken. It's broken because graphic design is more than the look of something. It's more than moving things around until they look right. Graphic design is a profession, a creative process, and a practice that has an established history. Graphic design is not decoration. It's communication design, branding design, information design, packaging, and marketing. All of these things permeate the layer cake. They go way deeper than the surface plane; many go all the way to the bottom.

Studying to be a graphic designer is a journey. We work our way through initially understanding the problem, whatever that may be, thoughtfully considering the client, the business, the market, the goals, the audience and users, and then trying to find ways of telling the right story. To do this well, every graphic designer must be well versed in all aspects of the craft: research, writing, drawing, and of course, production. It's our professional responsibility to completely understand the medium for which we're delivering; be it print, television, radio, or the web. Yes, I did say radio. You see, many graphic designers are not schooled merely in graphic design. What they're schooled in is communication and information design. It's this schooling that ensures that what we do can work transmedia because *it's not about the medium*.

A RAT AND A TOILET

Back to Cardiff on that rainy, cold February afternoon standing beside a makeshift sign in a cold, dark museum building. I'm waiting for my colleague whilst slowly sipping tea that tastes like chemicals from the Styrofoam cup.

On the sign this time, there are four pieces of paper stacked one on top of the other: a marsupial, an upward-pointing arrow, an icon of a man, and an arrow pointing right.

The museum is a quiet place. A place of learning, preserving, protecting, and recording. It's not generally a place you'd expect to see a man standing next to a makeshift sign, drinking tea. Most people ignored me, instead following the arrow to a room full of stuffed animals; occasionally somebody would stop and momentarily stare at me with a quizzical look. One elderly gentleman plucked up the courage to approach me and ask what I was doing.

"Who are you?" he asked, as if not really wanting to know the answer.

"I'm a graphic designer working on new signage for the museum," I said, smiling.

"Oh."

I wasn't really surprised with the response and hoped he'd just carry on so I could get to preparing my next sign.

"What do you think of the sign?" I asked.

"I don't care what your rat looks like. I just don't want to get lost in here. I'm dying for a pee."

And, just like that, off he went to the toilet.

In that moment, my experience of the true value of graphic design swiftly came into crystal clear view.

Graphic design is as much about use as it is about look.

The semantics of the title of the craft—the *graphic* in graphic design—hide the true pursuit of the craft. It's not about graphics. It's not about shapes and moving them in two-dimensional space until someone (usually the designer) deems them to be beautiful. It's not about making things pretty.

Real graphic design is about creating things with stories, for people to use.

But what about the designers? What about the *visual designers* inhabiting the UX industry? What do they do? If they're getting wireframes from people and told to make them pretty, they're not designing. They're decorating. They're applying a surface level sheen to someone else's thinking. Because if you just go by Jesse James Garrett's diagram, the story is already being told on the four layers beneath. The designing is being done there. This fifth layer is hardly more than some swirly frosting with a cherry on top.

Good graphic designers concern themselves with the *what*, the *who*, and the *how*. The message, the audience, and the mechanics. This is exactly how professional web designers work on the web. If, as an industry, we feel we need to call this practice something, can we just call it what it's always been called? Let's call it *graphic design*.¹

¹ Paul Rand, *The Designer's Role*, (1946).

² Jesse James Garrett, *Elements of User Experience: User-centered Design for the Web*, (Peachpit Press, 2002).

Lesson

MARK BOULTON

It was 1975. The year the Vietnam war ended. The year the UK chose its first woman prime minister. It was a time of unrest and depression with interest rates and unemployment skyrocketing around the world. Everything seemed to have a slight tinge of brown and orange.

I was two years old, sitting in a hospital waiting room as I went to see my new baby brother with my dad. Thankfully, I was oblivious to the world's troubles (a trait I sometimes wish I'd continued into adulthood). I wasn't at all concerned. I sat there doing what I loved: drawing.

Throughout my life, drawing has been the one thing that I return to time and again. It's always been there. Familiar strokes of a pencil. The right shade of gray. The smell of fresh pencil shavings. The dulling of my skin from graphite dust. Drawing with pencils is a sensory affair for me.

But, as school entered my life, drawing became—like writing—a tool to convey information. The pleasure I drew from it was still there but slowly diminished, replaced by writing, learning, socializing, and growing—all of which get in the way of that solitary, absorbing endeavor. Drawing was reduced to something simply practical: creating a diagram, or drawing a plan. Whereas once the *act* of drawing had brought happiness or contentment, now the *end result* was all that brought a sort of satisfaction—and a shallow one, at that.

Fast forward to 1991. I was eighteen years old and had

just completed two years pursuing my goal to become a forensic scientist. The prerequisites for a degree in biology in the UK were three science subjects, studied for two years. I needed top marks to get into my university of choice. Results day came, and I knew in my heart what the news would be: I'd failed all three. Not just a respectable "Oh, never mind, you tried your best" failing, but a monumental, embarrassing, public flunking. A complete and utter washout. My parents had sent me to a private summer camp before the exams so I could receive intensive tutoring—all now wasted time and money. My friends all passed with flying colors and ended up going to the universities of their choice, studying medicine and engineering. I stood there amidst the celebrations, tears of joy—and the stifling disappointment of my teachers—wondering what I would do next.

I wasn't surprised. I'd taken more pleasure in drawing cell structures than learning about them. I'd devoted an incredible amount of time and care to intricate drawings of chemical processes, taking immense pride in the smallest of details. Physics, mathematics, and chemistry were completely beyond my comprehension. Instead, I'd drawn the best scientific diagrams the teacher had seen from a pupil in thirty years of teaching. At a time of failing exam after exam, a time of constantly feeling stupid amongst my peers, the act of producing the best diagram in the class was a pure moment of happiness and pride.

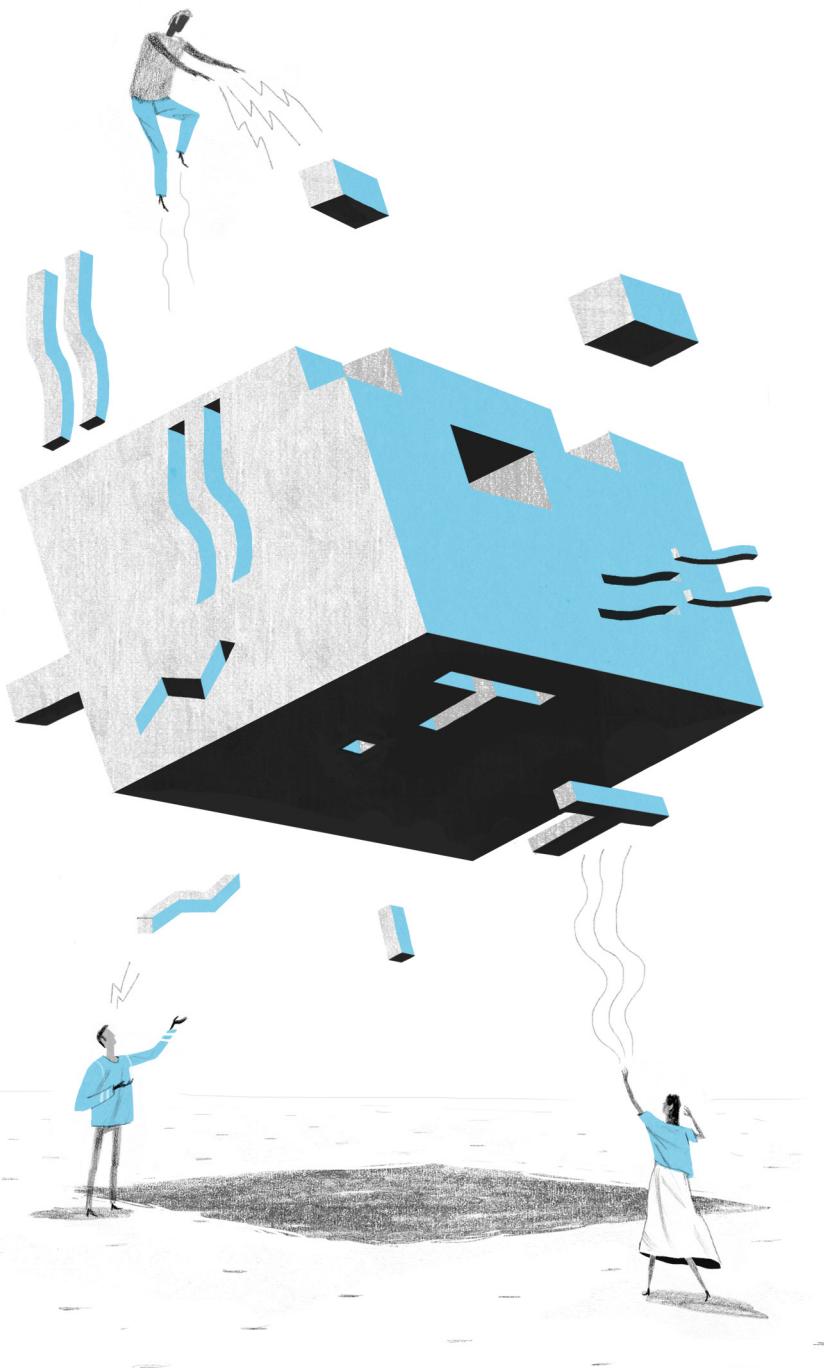
So what do you do when you've completely failed and you don't have any options? Which way do you turn when it becomes all too obvious that what you've been working toward for two years is just not possible? My choice was clear. I returned to what I knew I should have been doing all along: drawing.

I took a two-year course in art and design and completed it in one year. I attended art classes around the clock, had a permanent desk in the art rooms, and very quickly ended up on first-name terms with the teachers. For all the hard work, and with the constant underlying smell of pencil shavings, *this* felt more like home to me. I went on to college and then university, obtaining a first-class honors degree in typographic design. I met my wife. I worked as a designer and ended up running my own studio where I'm in the very fortunate position to work with some of the most talented people in the industry on projects that I feel make a difference. I travel and speak about what I do and am thankful I've made a dent in an industry in which I can do all of that. I do it all because I belong here, and all of this can be traced back to one morning in August in 1991 where the rug was quickly yanked from under my feet. One moment of complete devastating failure.

The bigger the failure, the worse it is and the worse you feel. There are people all around you who will make you feel that failing is bad. I learned that failure is necessary every day. And a big, catastrophic failure can be your best moment. A moment when you feel you have nothing more to lose. A moment that can be life changing.

Catastrophic failure may not be desirable, but without it, the kind of success that feels right in your bones is not possible because your successes—and, at times, your character—are defined by your failures and your responses to them. The bigger the screw-up, the better it feels when you turn it around.

So, go ahead; screw up. It'll be the making of you. ■



Ear Trumpets and Bionic Superpowers

KAREN MCGRANE



“You’re lucky,” said Mr. Pelcek, my elementary school guidance counselor. “At least they’re not *bigger*. When I was a boy, hearing aids were huge boxes people wore around their necks, with cords running up to their ears.”

Was I also to be overcome with joy that I wasn’t lugging around an ear trumpet, like the elderly characters in Saturday morning cartoons? No one ever *wants* to wear hearing aids, especially not a ten-year-old.

Wearing hearing aids and admitting you even *have* hearing loss are two different things. Determined to act just like the other kids, I kicked off a decades-long campaign to deny, ignore, and cover up any evidence that I couldn’t hear. Instructed to sit in the front of the class so I could hear better, I scorned the front-row dwellers, those unfortunates branded as nerdy, and defiantly sat in the back. I

kept my hair long and avoided wearing attention-getting earrings. And I honed my skills in pretending I could follow. Even when I couldn't.

I initially believed in minimizing people's awareness of the challenges I faced—gave *myself* a simpler *front-end interface*. It took years, but I finally accepted the inherent complexity of hearing loss. I learned that people were even willing to work harder to communicate with me if only I'd let them know what they needed to do and why. My goal should not be to hide my use of hearing technology. It should be to find ways to make it *appropriately visible*.

As designers, we obsess over making technology easy to use and intuitive. But now I appreciate interfaces that are *appropriately complex*—technology that makes its challenges visible in the right way, at the right time. What elevates our profession from merely smoothing out the rough edges to making a meaningful—even transformative—difference in people's lives is our ability to wisely decide how and when to communicate complexity.

THE INVISIBILITY CLOAK

Our profession has a mantra: no one wants to use technology. People merely want to achieve their own goals, complete their own tasks. We're judged successful if we remove any unpleasant friction; create a pleasurable, seamless interface to the mysteries that lurk within; and make technology invisible.

Ask an audiologist, and he'll tell you: People want invisible hearing technology, too. People seek out the tiniest, most unobtrusive hearing aids. It's a form of magical thinking: If no one can see it, then I don't really have hearing loss.

In recent years, as I've become more open about my hearing impairment, I frequently hear this response: "Really? I had no idea." I'm ambivalent about this reaction. I'm proud of myself for *passing*, for successfully playing the part. Yet I now know that maintaining my facade came at a price. The cost I paid was pretending to understand even when I didn't.

Conversation has a thread. During an evening out, you lose it and pick it up again in the encompassing din of roaring and clanging and buzzing. It's all just noise until a robust pair of consonants springs forth: a *th* or *ch* or *gr*. Suddenly you have your arms around that thread, grab hold and follow that *digraph* down into the structure of the language beneath. Now you can grasp it—one sharp sound opens the door to an hour of conversation. But it's exhausting. No matter how hard you try, you will eventually tire; your mind wanders for a second, and you've lost track. You struggle to maintain but eventually let go and just let the raw sounds and syllables wash over you. Language devolves into guttural noise, meaningless utterances, like that of the adults mumbling in Peanuts television specials.

How often can you ask someone to repeat herself? I'll tell you. Three times. The first time, you offer a casual, quizzical look and say, "Excuse me?" The second time, you look a bit more serious, and ask, "Say that again?" The third time (and this is when things get real) you sit up straighter, stare the person in the eye and invest in a full sentence like, "I'm sorry, could you repeat that?"

If you're lucky, she repeats herself more clearly. Restates the point using different words. Turns and faces you directly, so you get the full impact of watching her face

move, feeling the air currents hit your ear drums. Praying all the while that someone else picks up the conversation, ideally a braying man with a loud, low voice.

Failing that, you're in trouble. The wheels of conversation grind to a halt, caught in awkwardness and bewilderment.

Better to fake it. Smile and nod. Learn to mirror facial expressions, become a spot-on mimic of someone who *can* hear. Laugh a half beat too late at jokes you don't understand. Be considered a *great listener* because you hang on to a person's every word, lean across the table, focus intently on her face—as if she is the most important person in the room, or the world.

But in a conversation, the point of listening is to communicate. And I wasn't succeeding.

I hid the fact that I had hearing loss because I feared that the interface *to me* was frustrating. Who would want to engage with me if extra effort were required? But instead of helping people become aware of what I needed, I hid my challenges and glossed over the difficult patches. I put a simpler front-end on the experience of talking to me, one that made a difficult task seem easier. But by doing that, I only made it harder.

CHALLENGE = IMPROVEMENT

Working at the Stanford Research Institute in the 1960s, Douglas Engelbart led the team that designed and developed NLS (oN-Line System), a revolutionary computing platform. The project goal was “augmenting human intellect.” NLS is known for being the first to implement many conventions now familiar to us, including the mouse, hy-

pertext links, and multiple window displays. These innovations made their way through Xerox PARC and into the Apple Macintosh graphical user interface, and in many ways are the features we think of when we call a modern computer “easy to use.” But NLS *itself* was not easy to use, nor was it easy to learn. Why? Engelbart’s philosophy was that to truly enhance human intellect and collaborative work, the interface needed to be powerful. Operating this powerful system would require trained users committed to learning a new interaction model, in support of a greater goal.

In the fifty years since NLS was in development, our values have shifted in the opposite direction. Ease of use is paramount, ease of learning reduced to *intuitiveness*. Consumer apps are expected to divulge their mysteries within seconds, lest they be abandoned in favor of something more obvious. A toddler’s ability to operate an iPad (so easy a child can use it!) is held up as the ultimate example of *discoverability*, the interaction paradigm for our new generation.

Designs that make technology completely seamless to the user often deserve admiration. But can we balance our desire for intuitiveness with a wider recognition that some tasks are complex, some interactions must be learned, and sometimes the goal isn’t invisible technology but appropriate *visibility*? I yearn for more respect for Engelbart’s ethos, in which computers are thought of as tools that harness our collective intellectual capacity to solve the important problems facing humanity—powerful tools that merit the investment of time required for mastery.

Communicating with me can be more difficult than talking to people with normal hearing. By treating that as *my* failure, a problem that needed to be hidden, I missed out

on opportunities to connect with people. When we seek obviousness above all else, we're doing the same thing. When interfaces that must be learned are considered failures, we miss out on opportunities to create more powerful, meaningful engagement.

POWERFULLY UNSEXY

In a 2010 SXSW keynote, Evan Williams of Twitter stumbled in response to a question from Umair Haque. After an uncomfortably long pause, he grabbed me with the most meaningful statement of the whole interview: "We want Twitter to reach the weakest signals. We want it to be inclusive, and by using SMS we can reach anyone."

We may set our aim on dazzling the very consumers who already have too many options. But sometimes it's the boring old unsexy technology that can reach people in new ways, make something out of nothing, make a thunderously transformative difference in people's lives.

Back when I worked for a big-name agency, back when I worked on giant teams with resources and time and money at our disposal, I lusted after high-profile projects. I wanted the marquee names for my portfolio. I fought to win the media and fashion and consumer product brands, the clients I could name drop, the projects that would impress my peers.

Then I started my own firm, and my definition of a *great client* changed. No more boardroom presentations at giant corporate headquarters or large-scale redesigns. I wanted more intimate relationships, with clients who didn't need a huge account-services cushion to help manage their internal strife. Instead, I made sure I had clients who hired

me solely for my expertise and respected me for it. They were companies with problems I knew I could solve. I'd be working with nice people. And they would pay their bills on time. *Household name* was meaningless to me now. I wanted to be able to make decisions that would benefit people.

I learned to love the unsexy projects. I grew fond of places where I wasn't trying out something perched on the precipice of the bleeding edge but rather was executing small, incremental, *meaningful* changes. Even if it was routine, it could still be exciting. And almost always more important.

My friend Stephen runs UX for a large financial services institution. I guarantee you they're doing challenging and innovative work. Yet he told me once, "What we do might not seem very sexy. But we make a huge difference in people's lives." Enterprise applications often spill their guts—seemingly at random. Each is a giant database explosion of fields and inputs—screen after screen of layouts and workflows that make no sense. The challenge these designers face is not to sweep all that away but to find out how to communicate it at the right level for the user, improving the quality of a worker's day-to-day life. These applications might not always be immediately intuitive, but they can be powerful and useful.

I love the idea that even if all we do on a project is create simple, nuanced changes, the results can make a significant difference in someone's life. I know digital technology can achieve this because I've felt it myself.

ZEROES AND ONES

I'd say to anyone whose job opportunities were opened wide by the web, whose friendships have been enriched

by Facebook, whose finances have taken on a whole new twist with online banking and bill payment, or whose ability to solve the nightly dinner-table debate is now flavored by Wikipedia: Nothing in your *digital life* has changed even a fraction as much as mine has. Google's power to answer questions or deliver information in an instant has nothing on the power of digital hearing aids to change the way hearing-impaired people communicate.

My friend Joe once told me a story about a mutual acquaintance who needed a wheelchair to get around. "She wants to get one of those new iBot wheelchairs,"—the gyroscopic, stair-climbing, all-terrain wheelchair which innovated many of the technologies inventor Dean Kamen eventually used in the Segway. "But it's really expensive." The iBot supposedly handled better than other wheelchairs and would even raise her up so she could sit at eye level with the person she was talking to. Was that worth \$25,000? I replied, without hesitation, "To feel like I was on equal ground with everyone else, I would pay *any* amount of money."

And then it hit me. Obviously I wouldn't. I'd been scraping by for years with cheap, antiquated, analog hearing aids. I told myself they were *good enough* and *had a few more years in them and would do for now*.

I scheduled an appointment with my audiologist the very next day. I told her, "I want the best hearing aids money can buy." Since I'd last purchased a pair of hearing aids, the digital revolution had swept this space as well.

A couple weeks later, I picked up my new digital hearing aids, had them custom-programmed, and went out into the night. I asked my friend Randy to meet me for din-

ner, and we met up at the bar at a crowded restaurant in a fashionable Manhattan neighborhood, a place I'd always wanted to go but never had. We sat close together on barstools and started talking. At least I did. "It's so LOUD," he said. "You have to SPEAK UP. I CAN'T HEAR YOU."

Hey, that's *my* line!

Years of struggling to participate in social occasions were replaced—through digital technology—with a clear, focused, intimate conversation, one that I didn't have to strain to hear. Analog hearing aids amplify everything equally, so conversation and background noise move in lockstep, and the voice of the person I'm talking to gets drowned out by the roar of the crowd. Digital sound processing algorithms strip out the background noise, focus the microphone on the voice of the person next to me. The droning hum of other people's conversations: Gone. The roar of the airplane engine, the buzz of the crowd at the baseball game: Gone. The endless asking people to repeat themselves: Gone. I could hear. I could hear well. I could hear *superhumanly*.

I felt like Helen Keller suddenly grokking the sign for *water*. Randy and I made the rounds of a few more bars that night, so I could drink it all in and *hear* it. Finally allowing myself to believe it all true, I headed home on the 6 train sporting a wide, irrepressible grin. As I walked through the door of my apartment, I burst into tears. Tears of joy, to be sure, but of gobsmacked amazement too.

My hardware purchase was a life-changing event. Parties, noisy restaurants, conferences, meetings, movies: All open to my participation in a way I'd never before experienced.

No one was jealous when I purchased these prosaic devices. I gained no geek cred from showing them off in a high-powered meeting. Imagine the designers who created this product: No one fetishizes it, their friends aren't wowed, it'll never be a *Trending Topic*. And yet its impact on my life brought me to tears.

DIGITAL SUPERHEROES

If I had a magic wand to wave that would enable me to hear like a normal person, I wouldn't do it. I wouldn't need it. Hey, if you had a volume knob for your life, one that didn't shut the sound off altogether but just turned it down, you might not want to give it up either. Because I've mastered making what's hard for me appropriately visible, I'm able to mitigate the downsides of my dependence on technology. Where I used to see only pain points, I now see the upside of a quiet hush where I can focus, my own private space where I can think clearly. What I used to think of as a disability, I now sometimes think of as a superpower.

Do you have the ability to grant your users superpowers? If you do, it might not be because your designs are simple, intuitive, or make technology invisible. A powerful interface might take time to understand; people might need to stretch a bit to learn it. Rather than striving to erase the parts of the technology that are difficult or challenging, you might seek ways to make them appropriately visible. Sometimes it's only through communicating complexity that you can empower people.

These designs likely won't get you written up in TechCrunch or on the leaderboard at the iTunes Store. But you just might profoundly improve the lives of a few

people. Remove the daily frustrations that grind away at them, offer them meaning or whispers of love or a fresh chance, take pain and make the absence of pain seem like pleasure, or crack open the world and bring them right to the center of this great conversation of life that by all rights belongs to us all.

Superpowers, indeed. 

Lesson

KAREN MCGRANE

Fresh from sleep, in the first few minutes of wakefulness before my brain comes fully back online, I run a few simple scripts to help me start my day. I complete these familiar routines like I'm a robot programmed only for these tasks. Exit bed. Navigate to kitchen. Boil water. Make tea. Only when the tea is brewing and I'm seated in front of the computer am I capable of conscious thought.

On this morning, like every other morning, I grab the tea-kettle and turn the cold water on full blast to fill the pot.

Except this morning, *not* like every other morning, the spout of the faucet breaks off, clattering into the sink. Behind it, a geyser of water explodes, transforming my tiny kitchen into a decorative fountain. The icy water shoots directly at my face, blinding me for a moment and making it difficult to breathe.

Don't panic, I think.

Scenes of past plumbing disasters flash before my eyes. They all seem to feature a stranger's torso inside my cupboard, exploring the mysteries of the pipes below, ass hanging out.

To the shut-off valve!

I fall to my knees and frantically begin removing the items densely packed in storage below the sink, cold water falling on my head and shoulders like rain. The laundry soap.

The garbage bags. The dust pan and rags and furniture polish. The hammers, and even an electric drill. All of these land in the growing puddle of water on the kitchen floor, so I can reach the handle all the way in the back of the cabinet.

It won't turn.

I struggle with this balky knob so stiff and sticky from disuse. Nothing.

I stand up, and the freezing water smacks me in the face again. For an eternity of a few seconds, I'm paralyzed. Paralyzed by shock. Paralyzed with indecision. Gasping for breath and shivering from cold, I stand there, too stupid to move.

Should I go take a hot shower and hope that the problem will fix itself? Would crying help? Maybe I should call someone. But who would come over here so early in the morning?

I reach for the house phone to call the doorman. The water continues to blast me in the face. I try to staunch the flow of water from the broken faucet by holding the tea-kettle over it. With the kettle in one hand and the phone in the other, I try to hold back the water and dial the phone at the same time, a comedy routine I picked up from watching old *I Love Lucy* episodes.

This attempt to solve my problem fails miserably. I can't turn to the doorman for help. I have to rely on myself, my wits, and my adrenaline-fueled strength. *I have got to shut this water off.*

On my knees again in the inch-deep puddle, I engage in a fierce battle of woman versus knob. I wrap the sodden dishtowel around the handle and try to bend the knob to my will. Nothing. I put on the dishwashing gloves, hoping their rubbery surface will help me gain more leverage. Nothing. Finally, with both the gloves on and the dishtowel wrapped around my hand, I turn with all my might, and at last I feel the knob start to give.

The absence of water is like silence. I pause for a moment to catch my breath then call down to the front desk.

When you live in a large Manhattan apartment tower and you call the building staff to tell them there's a flood in your apartment, someone instantly materializes at your door.

Haki, the super, surveyed the scene wearily, a man all too familiar with the titanic power of a plumbing disaster to pull one from the depths of sleep. He stepped into the kitchen while I dashed to my closet to grab a sweater to pull on over my soaking wet T-shirt.

When I returned, he was in the hallway, stooped to pat my dog on the head. He stood up and explained, "Okay, Luis will be up in a few minutes to clean this up. Miguel will be up later to fix the faucet." He paused for a beat. "And I turned the water off."

I'd spent the whole morning spluttering water out my mouth and nose, and now the words spluttered out the same way. "No that's what I did see I turned the water off I found the knob under the sink it wouldn't turn that's why it took so long I turned the water off I did that already that's what I did."

He stared at me, his face blank. "No. You needed to turn the water off *on the faucet*," pantomiming the familiar turn of the wrist.

Right. The faucet handle. Why didn't *I* think of that?

A moment's shock and confusion, and a routine ingrained in my muscle memory disappeared. A task so comfortable, I'd performed it thousands of times, and yet I forgot how to do it just when it mattered most. Instead, I cycled through unfamiliar strategies, desperate gambits, a dozen bad decisions.

Designers dream of solutions to these problems, a magic wand that turns confusion into engagement and delight. But an instruction manual for my sink, even one filled with witticisms and clever turns of phrase, would have evoked hoots of derision, and pop-up boxes offering warnings or advice would have prompted wild-haired screeching.

Who am I designing for? The rational, composed, perfectly-in-control savant? The expert automaton, programmed to complete each task flawlessly? Or the messy, error-prone, distracted human? Remembering my own catastrophes, disasters, and bone-headed moves helps me be more sensitive to the fact that they happen for everyone—even the people who use the products I design. ▾

style

ALONE IS MERELY

an elegant
simplicity

The Things of The Future

CENNYDD BOWLES



Ninety percent of everything is crud.

—Sturgeon’s Law

When the archaeologists unearth the things of today, they may be forced to agree with Theodore Sturgeon. We have produced an awful lot of crap. Razors with ever more ludicrous numbers of blades. Luminous cans boasting of the calorific scarcity of their sugar water. Future generations may conclude that modern commerce was built around posturing and one-upmanship, with genuine innovation confined to a few niche sectors.

It’s tempting to think that we webfolk should be spared from this accusation. But before we break out the high fives, are we really the innovators we think we are? Or are we part of the problem?

Mass-market product design—and yes, web design as well—has seen its value slowly diluted. For every breakthrough web app, a hundred banal Groupon clones are greeted by copy-and-paste clamor from the usual sources. We have become a community overexcited by things that don’t matter. In the words of author and economist Umair Haque, many of our dominant businesses and products have become pedestrian, predictable, and pointless. Leaders who buck the trend are rightly celebrated but lamentably scarce.

Thankfully, this downward slide of pseudo-innovation has no future. Public perception of business is near breaking point. Just 12 percent of the British public holds a high opinion of business executives—a figure that has halved within a decade. In the US, 84 percent of the public blames business leaders for the recession. Public attitudes are shifting away from consumerism and instead demanding change, accountability, and social responsibility from business owners. With growing concern over privacy and intellectual property, the big businesses of the web are no more immune to public distrust and press indignation than the industrial corporations.

On a more personal, immediate level, we’re stalked by the shadow of a second recession and environmental ruin. We have neither money nor energy to waste on trivial things. Those luminous cans with their limited-edition packaging appear even more pathetically wasteful. Another photo-sharing app is meaningless to regular people who are busy worrying about their jobs and finances.

Designers and builders need to scout out different paths than the ones that landed us all in this junkyard. So what principles will guide the future of product design? And

what role will the web and its designers play?

REFINDING HUMANITY

The product landscape is littered with things that are lifeless and drained of personality. In contrast, the things that resonate with us on a human level are the ones we return to and rave about to patient friends.

Messaging—how our applications communicate with people—is a fine starting point in our quest for personality. Good naming helps. It’s hard to love something that answers to *Office Pro 8500A e-All-in-One Printer*. But conveying a likeable verbal persona throughout an application requires a deep focus on all elements of the content puzzle, from strategy to microcopy, from tone of voice to error messages. It’s a complex recipe that’s easily overcooked. The digital scrap heaps are filled with products that tried too hard, irritating us with faux amiability (as seen in our most hated paperclip, Clippy) or descending into *wackaging*, the infantilized copy that plagues rounded typeface *web 2.0* apps and juice cartons alike.

To make deeper connections between products and their users, we should search for ways to humanize the functionality of our applications. For example, take the *A Bit More* button on the Breville Die-Cast Toaster®—a subtle master stroke that frees a weary world from mornings of undercooked toast. Or BankSimple’s *Safe-to-spend* function, which answers the single question on our minds when we check our balances: How much do I have left?

The designers of these humane functions saw an opportunity to wrap technology around the human. In doing so, they reversed the roles found in decades of bad design. A

well-designed product makes tiny, beautiful sacrifices for its users.

But can we go deeper? Could our apps become more appealing if we let them off the leash? We learn about our friends’ personalities by seeing how they behave in different circumstances—what might happen if we allow our devices and applications a little behavioral variance? Digital technology has become two-way. Devices not only display information but can learn about users through sensors and analysis: where they are, what their social ties are, and so on. Combine this power with applications that let users state intent—“I’m off to the movies with Kushal”—and designers have plenty of opportunities to create pseudo-emotional responses. So let’s imagine a Twitter client that knows you’ve been in the pub for six hours and suggests you don’t send that sleazy tweet. A mobile phone that grins as you both stagger off a rollercoaster. An MP3 player that rolls its eyes as you queue up “Living On A Prayer.” If we can escape the constraints of our old mental models, technology could move from being a tool to being a companion. A pet. Even a friend.

DO MAKE ME THINK

Technology can even become a mentor when we most need help. The preeminent apps of the future will help us tackle so-called *wicked* problems: those that have no clear solutions. Apps could help us reduce our energy bills, chastise us for not recycling that carton, or encourage us to lose those pesky love handles. Given the growing global importance of wicked problems like climate change, obesity, and an aging population, designers may soon find that better technology becomes essential to our very survival.

While the usability movement has rightly focused on making technology fade into the background, in certain cases we may want to reverse that strategy deliberately. To tackle the wicked problems of the next few decades, designers may need to build applications that encourage users to question their own attitudes or behaviors.

These *discursive* apps needn't be complex. Weightbot, a simple iPhone weight-logging app, uses careful design to help people manage their weight. The app is structured to suggest daily use—skip a week and those blank days sure stand out—but it also rewards good behavior, tantalizing users with graphs showing how far they've come and when they might hit their goal. In the near future, networked discursive apps might spot patterns of infection and advise feverish sufferers not only how to manage their symptoms but also how to prevent spreading the disease.

PRODUCTS THAT LAST

The design industry dwells, of course, at the heart of a particularly complex wicked problem: sustaining the planet's diminishing resources. That this is a challenge for designers of physical products—cars, bridges, packaging—is clear, but it's a mistake to think sustainable design is irrelevant to the web. Although our raw materials of bits and pixels are essentially infinite, sustainability goes beyond conserving resources. Web designers should adopt the mindset of building things that last.

Surprisingly, our love of the cutting edge makes this more difficult. It's understandable that we all want to design for the latest sparkly devices and shiny technologies. However, the thrill of the new distracts us from our true target: designing apps that work with *tomorrow's* technology.

It's not as far-fetched as it may seem. Bill Buxton¹ famously claims that all technologies have a thirty year ramp-up period. Alert web designers can read the signals: we stand on the brink of an explosion of diversity. We'll have to design for input methods that include touchscreen, voice, and GPS alongside the trusty keyboard and mouse. The web will sprawl onto screens that range from three inches to fifty, from cheap pixelation to super-high definition. Bandwidths will vary between blistering and glacial.

Astute web designers should be considering these issues today since our applications will live in the future, not the present. The Future Friendly campaign² recognizes this:

Disruption will only accelerate. The quantity and diversity of connected devices—many of which we haven't imagined—will explode, as will the quantity and diversity of the people around the world who use them. Our existing standards, workflows, and infrastructure won't hold up.

Future Friendly is, at heart, a manifesto for sustainable web design. It acknowledges that we'll have to find new ways to work, but it also suggests the payoff. Built the right way, web applications will have a longer shelf life, reach users wherever they may be, save our clients, and enhance the reputation of our industry.

IN SEARCH OF VALUE

Future Friendly endorses the idea of building things that matter, not things that clutter. And thus we reach the critical issue of the web's future: differentiation that's genuine, not illusory.

So many of today's products, both physical and digital, try to stand out from the noisy market by brand differentiation. *The whiskey for the discerning man; the mail client for Linux geeks.* Luke Williams of Frog Design argues³ that, far from clarifying the marketplace, this microdifferentiation increases cognitive clutter. Instead of positioning ourselves apart from our competition, we should instead aim to make the competition irrelevant.

Designers can only do this by building differences that users can feel, not just read about. It's simple to rip off another website's brand, tone of voice, or even features, but it's very hard to duplicate the experience another product offers. To make a true mark on the world, web design must focus on the value it offers users. We should strive to create the next Wikipedia, Dropbox, or Instapaper—products that are impossible to relinquish once they're part of everyday life.

Sadly, many businesses still underestimate the importance of delivering meaningful value. We can help to illustrate the problem with the following equation:

$$\text{Total value} = \text{business value} \times \text{customer value}$$

An application must offer something superlative to both the business and the user; if either of the terms in the equation is zero, it's a waste of our time. Yet so much of our industry is focused on the business side alone. Just look at the job descriptions, the entrepreneur porn that so many start-up types are addicted to: exit strategies, pricing, pivots, who's bought whom. Important stuff, sure, but it's only half the story.

We can redress the balance by influencing business to focus

on *our* natural territory: looking at what's in it for the customer. Designers shouldn't be satisfied with clones and *fast follow* strategies that slipstream innovative companies and hope to pick up some of the crumbs. We must ask searching questions about *the things we make* and what they each offer their users. We must be strong in our conviction to put humanity at the heart of what we do.

We must give in to the lure of the path less followed and reject the notion of replicating what's come before. This means testing our designs with real people, not just relying on data. It means questioning every assumption and shortcut, not falling back on pattern libraries. It means risk, bravery, glorious embarrassment, and everything that's good about life. It means harder work and a few arguments. That's fine. What some may label arrogance, we will recognize as simply a need to have pride in what we do.

But this isn't just artistic flightiness. Focusing on making *great things* also gets results. In 2006, consultants Teehan + Lax created the UX Fund, a \$50,000 investment fund split across ten companies who have a reputation for delivering great customer experiences. It outperformed every major index. Data from the UK's Design Council suggests that businesses can see a return of £225 for every £100 they invest in design. Put simply, people will pay for great things.

It's comforting to know that designers can draw on this economic ammunition if we need to, but to see design as a purely commercial pursuit is to overlook its full power. Great web apps spark unmeasurable emotions: loyalty, trust, love. When the time is right, we'll have to convince our clients and bosses to look beyond the metrics and to put faith in their intuition to do the right thing.

While you and I have lips and voices
which are for kissing and to sing with,
who cares if some one-eyed son of a bitch
invents an instrument to measure Spring with?
—e.e. cummings

To do the *right thing* means to recognize that the business-user relationship is joined by a third axis. Great products also meet the needs of society as a whole. So we should design for the good of the web, for the good of design, for the good of the world. Successful web businesses echo the philosophy behind the web, using open standards and APIs to allow people to build great things on top of their products. Designers have a powerful opportunity to bring the open, collaborative mindset of the web into commerce, working together toward a higher goal of profit through shared prosperity.

So the future can be saved. If the web design community can make things that help not only business, not just individual users, but everyone on the web, we can arrest our slide into mediocrity. Create valuable, wonderful things and the economics will follow. In this new environment, we'll see personal success defined through the success we bring to other people's lives. In tough times, the right response is not division, but solidarity. I can't wait for this future, and I hope to meet you there. 

¹ Bill Buxton, *Sketching User Experiences*, (Morgan Kaufmann, 2007).

² see Future Friendly website.

³ Luke Williams, *Disrupt*, (FT Press, 2010).



Lesson

CENNYDD BOWLES

My first day on the job, and I could barely stifle my laughter. My desk. My phone. My PC. I wore a polyester tie and my lone pair of formal shoes. I nodded a lot and forgot everyone's names. The very idea of me as a member of the business world was hilarious. What did I know about it?

I'd stumbled out of university straight into a government job (a government job!) offering businesses advice on start-up programs, employment law, tax codes. An alien world. With so much to learn, I found my pride soon overtook my amusement. I immersed myself in the differences between sole traders, Ltd. companies, PLCs. I studied how money sloshes around within business. I could recite the principles of the Data Protection Act 1998 by heart. Want to know which forms to fill in for your first tax return? Easy. Hell, I'll even send you the PDFs.

Most callers were after free cash, of course. There wasn't any. But occasionally we took inquiries about obscure topics that demanded a bit of research. I loved these challenges. I knew how search engines worked. I could sweet-talk a database into revealing its most intimate secrets. Armed with a keyboard and the witless arrogance only a young graduate can possess, I became the guy with answers. There was nothing I couldn't find an answer to. A *Master of Science* intellect augmented by the power of technology. Just try me.

Shortly after I joined, the country was struck by an epidemic of *foot and mouth*, a highly infectious disease affecting

livestock. An episode in the 1960s had paralyzed the country; now history was eager to repeat itself.

The government, initially slow to react, finally realized the gravity of the situation and announced an enormous cull. Ten million sheep and cattle were killed and then buried in lime. Politicians stood in front of piles of burning carcasses to give interviews, deciding that the need to assure the public that *Something Was Being Done* outweighed the negative image.

Although I lived in the city, our county was largely rural. Hundreds of nearby farmers were forced to sacrifice their herds and quarantine their farms to prevent infection. Yellow warning signs dotted the fields. Wellington boots were considered potential vectors of disease. The countryside was closed for business.

As expected, the government announced a large pot of money to compensate farmers who'd lost income. I found the details online and added them to my database. File > Save.

I took a call early one morning. An elderly voice, meek and sad. For several decades, she and her husband had ground out a decent, albeit hard living on their farm. Now her business was effectively closed, and she was worried about the future. I sprang into action, calling up my database with a single hand as she talked. Technology saves the day. There's this fund, you know...

"Oh yes, we've applied for that. But they say they have such a backlog it will take a few months. It looks like we'll be bankrupt before then, sadly. What do you think we should do?"

A squall of panic. The cursor blinked at me while I hesitated. I'd no idea what they should do. What did I know about business? I squirmed for the first platitude I could find: something about keeping their costs down and using up savings. The caller sighed kindly at my trivial advice.

We began to talk about her life on the farm and how it was changing. She was a hostage in her home, imprisoned behind the quarantine. She couldn't see her friends, attend her societies. She couldn't escape the daily reminder of a livelihood draining away. We discussed the happy past and the worrying future. At times her voice grew faint, but it never rose into anger at the hand she'd been dealt—that remarkable stoicism that only a lifetime can teach you. She paused occasionally to dry a tear and blow her nose. Quiet, resigned, heartbroken.

We talked for two hours. I seethed at my helplessness. I'd told her everything I knew, and it had been useless. A couple's way of life was coming to a wretched end. As our call drew to a close, I wished her luck.

"So sorry I wasn't able to have more answers for you."

"It's okay. I understand. Sometimes just listening is helping, you know."

That night I cried for a while when I got home. My answers, my knowledge, my hubris had been useless because no reply would make any sense. I thought of her attitude and her words to me. She just wanted to make a connection with someone. To feel understood at her lowest point. To be promoted from a statistic to an individual.

Sometimes just listening is helping, you know. ▶

Tongue-Tied

TRENT WALTON



"And what is it that you do?"

I have my answer, but I hesitate. I'm at a wedding reception, a backyard barbecue, an airport terminal. A preface would make me sound timid; further explanation, over-eager; naming clients, self-involved.

"I'm a web designer," I say, and leave it at that. I shuffle my feet, and I feel the beginning of that awkward, apologetic, self-conscious smile. I know what's coming.

"Oh, that's nice," is the flat, polite reply.

Dammit. That didn't go the way I wanted it to. Again.

Once more, I've proven to be a poor representative of the industry I'm so proud to belong to. I know what comes to



mind when I use the term *web designer*—an overenthusiastic adolescent fresh from MySpace with a pirated copy of Photoshop® and a code editor, or maybe a clipart-loving temp worker who knows how to save a Microsoft Word® document as an HTML file. I always want to follow up with, “But I’m one of the good ones. Really! Here, let me pull up this site for you on my iPhone®.” But I’ve already lost their interest.

People in our field are problem solvers, engineers, researchers, and craftspeople responsible for architecting how we all live and interact on the web. Why is it so hard for me to explain that? Why can’t I be *smooth*?

I have one brother-in-law in his last year of law school and another doing cancer research. They don’t have the same problem. When people hear *lawyer* or *scientist*, they generally know what that entails. They think of them as intellectuals, critical thinkers, and invaluable members of a professional community. I feel that what web designers do is just as exciting, challenging, and interesting. Regrettably, few people I encounter *out there* regard web design in the same way we do.

If we ever want to stop sitting at the proverbial kids’ table, we need to do more to gain respect, and one of the most important ways is to be able to clearly express who we are as a profession. How do we articulate the complexities of what we do in a way that everyone will not only understand, but respect?

Web design is just moving out of its infancy. We started with HTML and moved from table-based layouts toward CSS-based layouts and from building websites to building fully functional web applications. User experience, content

strategy, and information architecture have become central to web design and have led the industry into its formative adolescence.

Remember the aforementioned youngster who's representing us in the imaginations of people I encounter? Even though the industry has matured, there's a reason he's still our mascot: the low barrier of entry. The web is chock-full of free resources for anyone looking to learn HTML; this open access is one of my favorite things about the web. However, with so many people operating under the moniker of *web designer* the span of capability becomes incredibly broad.

Case in point: every time I drive into Austin, I pass a plywood sign propped up by two milk crates in someone's front yard. Spray-painted on the sign is "Need a website? Call 555-555-5555 for web design services." This person may be talented, but the absence of a url on his billboard has me thinking we're entering GoDaddy Site Builder® territory. This guy is a *web designer*. He shares a job title with Josh Brewer and Naz Hamid. How can this be?

Anyone, even Mr. Spray Paint, can become a web designer. And, in some ways, that's a good thing. Some of the best designers I know are self-taught. The problem arises, however, when there are more adolescents and spray paint guys representing our field than there are Josh Brewers and Naz Hamids.

THE EVOLUTION OF OUR ROLE

In the early 1990s, the world hadn't yet realized the economic and social potential available to them through the web. People weren't buying things online, updating their

statuses, or checking bank accounts from their smartphones. Websites were not yet a crucial element behind the success of a business or idea. Web designers (in the sense that we know them today) did not exist.

Most of the hired talent were regarded as binary clerical workers, employed by department heads of large organizations, doomed (as I imagine/remember) to windowless, server-filled basements where, as *webmasters*, they sat waiting for their supervisors to storm down and bark out the next site update. Think Austin Millbarge à la Dan Aykroyd in *Spies Like Us*.

Then the internet exploded. Dial-up moved to DSL, and DSL moved to broadband. Everyone wanted to access everything all the time. When organizations realized that customers wanted to be served online, demand for websites and web designers grew. "Millbarge! We're moving you out of the basement."

One could now buy a Fender Telecaster on Amazon, turn around and sell it on eBay, then take the proceeds and re-reserve movie tickets at Fandango. Web designers moved from accessory to necessity by architecting the places where organizations met their users online. Businesses were built around our trade, and we evolved from the keepers of the code department to trusted consultants and decision makers.

Then Steve Jobs pulled an iPhone® out of his pocket. In a few short years, we went from building static sites for desktop browsers to dynamic web applications for any device in existence. The complex implementation of these techniques alongside the emergence of technologies like CSS(3), HTML(5), and web fonts set the stage for us to

exhibit the depth of our expertise, the weight of our experience, and our growth from amateurs to multifaceted professionals. We not only build things people view like brochures, but things that people *use*.

These challenges have forced us to evolve over the years from those binary clerical workers to innovators, and from those challenges emerge a total that is greater than the sum of its parts—*internet mojo*. This intangible sense of how websites materialize to best serve an individual or organization (based on very tangible experience, skills, and knowledge) is where we, as web designers, derive our value.

Have we evolved so quickly that we don't yet grasp the importance of our profession? If we don't respect what we do, how can we expect others to? Like it or not, we are all ambassadors for our field, and it's our duty as such to have a dialogue with clients about the how and why, not just the what. When we quietly deliver code and pixels with no discussion of objective or strategy, we're asking to be treated like we belong back in that server-filled basement. But we're worth more than that.

We know this. Our industry knows this. Most of our clients know this. But not the guy I'm sitting next to in the airport terminal.

LOCKHART: THE UNDISPUTED BBQ CAPITAL OF TEXAS

People drive from every corner of the state to eat barbecue at Kreuz Market (est. 1900) in Lockhart, Texas. I've made the pilgrimage numerous times to enjoy their unique brand of barbecue: "smoked meats straight from the pits on pieces of butcher paper, [served] with no forks, no sauces, and no side dishes."¹

In 1990, the owner, Edgar "Smitty" Schmidt, sold the business to his pit-master sons Rick and Don, but bequeathed the property—building and all—to his daughter, Nina. A family dispute forced Rick and Don to move a half mile down the road to a new location, taking the business and the Kreuz name with them. Nina reopened in the same building under the new name Smitty's. The feud climaxed when, on the night before his grand opening, Rick Schmidt dragged the coals from his father's pit fires (though everyone who tells this story swears that he lit a torch) and paraded them down the street through a crowd of onlookers to the new location.

Why was Schmidt inclined to do this when he had the necessary tools and materials at his new place? He knew that what makes Kreuz Market barbecue worth a hundred-mile drive isn't just a recipe or a smoker, but his own pit-master *mojo*—all the experience and technique gained from years of nursing brisket and sausage. He knew that for Kreuz to retain its value, he had to publicly substantiate this.

I eat barbecue just like people use the internet—mass consumption with no idea how to produce it myself—but the legend now associated with Kreuz Market serves as a testimony to the power of asserting what it is that makes us valuable. As web designers we would do well to follow Rick Schmidt's example.

TALK ABOUT IT

We must articulate what we do through our own successful results. It's as simple as this: Do your best work, then talk about it. Take jobs that provide opportunities to solve unique problems or ones that require technical innovation, and grind it out. Half the jobs I get into start with no

clear way from point A to B. It's a struggle, but it pays off when I get to contribute to the work of my peers and help shape the future of the web.

Similarly, the evolution of the medical profession shows us that this collaborative attitude is the best way forward. People have been practicing medicine since antiquity, and thanks to the efforts of those who shared their experiences, those who followed were able to build on their knowledge and ultimately develop more effectual practices.

The ancient Egyptians recorded medical procedures, such as wound treatment and surgery, on papyrus. The Greek physician, Hippocrates, left posterity a host of recorded medical insight, among which is the Hippocratic Oath, still taken by doctors today. Thanks to the writing of Galen, the Romans were able to improve surgical procedures and create better surgical instruments.

It wasn't until after the first European university, a school of medicine attached to a monastery, was created in the Italian city of Salerno, that the term *doctor*—from the Latin word for teacher—was used to describe medical practitioners. This was a turning point for medicine because establishment of a curriculum meant that professionals within the field had to come to a consensus on best practices. (I see us headed the same way, toward establishing our own informal curriculum when we debate things such as progressive enhancement or how best to build for mobile devices.) The Renaissance saw scientists improve those practices through medical research, and the printing press allowed for more efficient and economical documentation and information sharing. The following centuries built upon these advances, adding to them vaccinations, X-rays, sanitation, better surgical tools, and, God bless them, anesthetics.

Documentation and discussion have helped advance the industry, bringing with them numerous medical breakthroughs as exciting for the doctors as they are for the patients who benefit from them.

Those of us who build for the web know how exciting it is to contribute to advancement. I can easily recall the sense of wonder I felt working with web fonts for the first time or seeing a site I built reshape effortlessly into an iPhone screen. We become impassioned, bursting at the seams with new ideas to share with our peers and clients. Of course, our peers will understand what we are saying; our clients may not. People are unlikely to respect what they don't understand. This is why we need to develop an entirely new craft: explaining the complexities of what we do in ways people can understand.

I'm always tempted to overexplain web design, pulling terms from our quickly evolving lexicon like *information architect*, *content strategist*, or *user experience designer*. These terms may be helpful, but it's usually only a matter of time before they're buried in tech speak. I might as well tell people my job is to go to Toshi Station and pick up some power converters. Detailed description and full comprehension aren't necessary for people to understand our worth. A little bit of clarity goes a long way. Good results go even further. I don't know the best way to smoke brisket or how to stitch an open wound, but I do know what great brisket tastes like, and I really appreciate the retained use of my hand after being attacked by that damn window.

One of the best ways I've found to provide digestible examples for nonindustry folk is how I approach my portfolio. If our strength lies in our comprehensive knowledge of the web and problem-solving skills, but our portfolio is

limited to screenshots, we're selling ourselves short. A web designer's portfolio should be a set of case studies rather than just a gallery of images.

Explaining how people use and interact with my creations goes over much better than only listing the nuts and bolts behind the deliverables. After all, these wonderfully intricate things we build have become part of people's lives, things they *use* every day.

Write about your process, your unique way of addressing each client's needs. If you're like me and spend more time typing than speaking out loud, this can be a valuable exercise. This sort of debriefing helps me when I need to verbalize the intricacies of my work in person to actual human beings.

"And what is it that you do?"

I have my answers locked and loaded. I'm ready to pounce on any question he may have or shred of interest he may exhibit in any particular area. I've got stories to tell and examples from other fields to tie in. Bring it on.

"I'm a web designer. I run a small web shop out of Austin, and we're currently building a site that sells vintage car parts from computers and smartphones."

Perfect! This guy can take the conversation anywhere. We can talk about small business, Texas, or vintage cars.

"Oh, that's nice," he says as he looks back at his Kindle.

Dammit. ▶

¹ Joe Nick Patoski, "Pit Split," (*Texas Monthly*, February 1999).

Lesson

TRENT WALTON

"How am I going to find a job? Where should I live? What if I can't afford car insurance? How does anyone ever find the money to buy a house? What happens if I get married and have kids? And, *oh God*, what about medical insurance? I haven't even begun to think about that! What am I going to do?"

"You'll figure it out."

That's it? *That's* the advice I get after what had to be a ten-minute gabble session from me over the phone with my dad (who was almost certainly flipping channels between the Formula One race highlights and the Barrett-Jackson car auction). Just before my graduation from college, *this* was his simple reply? But I wasn't surprised. Not at all. This was and is his *go-to* response, and I'd heard it hundreds of times before.

I can see myself back in elementary school, out in the garage with my mechanical-engineer, industrial-contractor, grease-monkey father (whom I know I'm *nothing* like). He was spending his Saturday doing what he loves—tinkering, cursing, and bleeding all over his 1969 Shelby GT 500. He's had this car since 1970 when he convinced a used-car lot owner to hold it for him until he got that job at US Steel. His college paper route didn't yield enough for the down payment. He knows that car inside and out, especially after having to rebuild it when my mom accidentally flooded it by driving through a low water crossing after a tropical storm.

I was having a problem with my fourth-grade math teacher and had just finished explaining this (over garbled speech and ratcheting noises) to his feet, the only part of him not under the car. “She’s always singling me out, but it’s not just me. It’s the entire table! They make jokes, and I can’t help but laugh. Now I’m the only one with detention! I’m the victim here. What am I going to do?” The teacher wouldn’t even let me change my seat (not that I really wanted her to).

“You’ll figure it out.”

My ten-year-old brain couldn’t help but think, “This guy doesn’t understand that I have *real* problems. School is hard. Life is hard. I’ve got so much to figure out, but he doesn’t know what it’s like. He’s an adult. He’s got everything under control. Everything is easy for him.” It wasn’t until much later in my life that I realized this wasn’t true.

In 2006 I was contemplating going full time with our design company, Paravel, with two of my friends. My father had recently retired after spending thirty-five-plus years working at an industrial contracting company, which he started with two business partners in the 1970s (okay, so maybe we’re *somewhat* alike), working with companies like Shell and Dow. It was high-stakes work, and operating a small company like his that dealt with mega-corporations took gumption. When I reached out to him for business advice, his reply was the same. “You’ll figure it out.”

Occasionally, I catch him in a rare, contemplative mood and take advantage of that to pry out stories about life at the company. I truly thought things at his office were steady and predictable. I had no idea people got injured out in the field and that taking care of employees was the

biggest part of his job. I hadn’t known that big companies tend to push smaller companies around, delaying payment and chiseling estimates as much as they can. And I certainly had never even dreamt that he once had to put his beloved Shelby up as loan collateral to help pay his employees.

I realize now what my dad is best at: *figuring it out*. He’s resourceful. He’s a connector of dots. You can have all the pearls of wisdom, talent, and potential in the world, but if you can’t string those qualities together they’ll never be put to good use.

It turns out that “You’ll figure it out” was the best advice I’ve ever been given. It was a conditioner of sorts. It trained me to organize, dissect, and solve. It taught me how to head toward and be prepared for point B even when I don’t yet see that it exists. It challenges me to be brave.

Gosh. Maybe I’m more like my dad than I realize.

At least, I hope like hell I am. 

The Sky Ain't The Limit

JOSH BREWER



It was 1940, and the Allied forces supply lines were heavily under attack—losing ships, men, and thousands of tons of vital supplies to enemy submarines each month. A man named Henry J. Kaiser won a contract to build cargo vessels for the British war effort.

Less than a year after Kaiser secured the contract, the Japanese bombed Pearl Harbor, devastating the naval fleet stationed there. Suddenly the United States found itself at war. The immediate need for ships that could power the US war effort was critical. Kaiser stepped forward at just the right moment and achieved the impossible.

Kaiser was an industrial visionary who had helped build Hoover Dam, one of the greatest Public Works projects in US history; the Grand Coulee Dam, which stripped the Great Pyramid of Egypt of its title of *Greatest Man-Made*

Structure on Earth; and the Oakland Bay Bridge, whose great span carried hundreds of thousands of people each day to the shining city of San Francisco. All were constructed in record-breaking time. Incredibly, whenever he seized an opportunity that was supposedly beyond what he had the experience to tackle, he achieved results that far surpassed what anyone expected.

Despite knowing nothing about shipbuilding, Kaiser was able to keep the US war effort afloat and simultaneously change the entire shipbuilding industry. In just three months, Kaiser's crew had everything in place required to produce the nearly 1,500 vessels necessary to assure victory and the protection of the nation. Kaiser the dam builder had the beginnings of what would become one of the most successful shipyards in naval history.

Kaiser was a leader with purpose, vision, and commitment. He was the driving force behind enormous projects and monuments that stand to this day. He changed lives, industries, and even had a hand in the fate of our nation. But he didn't do it alone.

Kaiser won the shipbuilding contract because he had a proven and trusted team that had conquered insurmountable challenges in the past. These were men who shared Kaiser's belief that anything was possible and who, under his guidance and direction, were given the freedom to experiment, invent, and establish new systems needed to overcome the challenges before them.

This time, he focused his team on innovating the shipbuilding process. They eagerly took advantage of the latest technology available and created an entirely new process that transformed a previously slow, manual practice into

one that enabled thousands of people (skilled and unskilled) to help construct the vessels that played a part in the Allied victory.

For example, Kaiser did away with the current pattern of using rivets to join all the seams on a vessel, which required pairs of skilled laborers to accomplish all the work. Instead, he found that welding the joints and seams produced as strong a ship—if not stronger—and cut the finish time from twelve months to approximately five days. By changing one specific step in the process (welding seams), Kaiser and his team were able to set a world record for fastest ship built. Kaiser did more than assemble ships; he revolutionized an industry.

Kaiser earned the trust and respect of industry giants throughout his career. More importantly, he knew how to instill his vision in his teams, which motivated and inspired them to do far more than they believed they were capable of achieving.

What if a design team applied these kinds of principles? How can a leader—a creative director, art director, or anyone responsible for design in an organization—help a team be more efficient, passionate, and capable of greatness?

The era of the *Rockstar Designer* is waning. How many of us cringe at this notion already? The era of great design teams is dawning. We need to change our attitudes and approach projects with much less *me* and much more *we* if our industry is to help lead and shape the future of business, commerce, and society. Unfortunately, the notion that designers are divas—who are difficult to work with and who care nothing for business goals—continues to undermine our industry as it attempts to mature.



A design team must be well versed in the business and product goals of the company, understand the basics of the technology powering the product, and be able to both visually and verbally articulate answers to the problems they are presented with. As such, we cannot be content with simply pushing pixels around, writing perfectly semantic markup, or delivering copious IA wireframes.

How many designers and teams aren't really doing due diligence: researching, examining branding and business goals, learning the intricacies of their client's product or service, unearthing the desires and experiences of the people the client wants to reach? Too often, the same design style—beautiful and finessed as it may be—is churned out whether the client is a baby boomer health-and-fitness service, a sewing machine manufacturer, or a start-up with a new gizmo for collaborating on projects within organizations. Regurgitated style over slim substance is the opposite of design and certainly the enemy of innovation.

If we take a cue from Kaiser's approach to achieving the impossible and his facility with team organization, we would turn loose the talented, passionate people we hired to do what they do best. We would do everything possible to remove the friction around process and move past these clichés about design (and clichés *within* our designs) once and for all.

As we can see with Kaiser, our design teams need the type of strong leadership that provides just the right amount of freedom, original vision, and structure for people to shine.

Miles Davis, one of the most influential jazz musicians in the last sixty years, was a man with an unwavering vision.

Through a lifetime of dedication and a relentless pursuit of his passion, he ushered in whole eras in jazz music. In 1959, Miles assembled a group of some of the most talented musicians in the industry—including saxophonists John Coltrane and “Cannonball” Adderly, pianist Bill Evans, and others—to record what would become one of the most important and critically acclaimed works of jazz of all time, the album *Kind of Blue*.

Miles's vision for what he intended to elicit out of these men was clear and direct. He provided a new musical framework that allowed them unprecedented freedom of expression. He was intent on creating a new form of expression that broke away from bebop's dense, complex style of jazz, which had evolved during the previous decade. His vision—and the talent and ability to think in new ways backing it up—changed the landscape of jazz forever and launched most of his sidemen into jazz stardom.

Another visionary, Steve Jobs, once said, “Be a yardstick of quality. Some people aren't used to an environment where excellence is expected.” When leaders hold themselves to a higher standard of accountability, the team will also rise and hold one another to a higher standard. Miles Davis was revered for his mastery of the trumpet and was known for his exacting standards of musicianship. He was an innovator. He pushed those around him to greater and greater heights and was relentless in his demand for excellence. Sometimes, these words from Jobs and stories of other people who make magnificent things happen rush by us but are not taken to heart. Are we actually stopping to examine precisely how we fail and succeed at this in our work?

Great leaders do not tolerate an environment where people belittle, demean, or humiliate each other. Rather, they

promote and provide honest criticism (constructive, objective, and useful) and challenge people to reach beyond what they believe they can achieve. Great leaders also guard against a sense of entitlement among team members and within themselves—that irrational expectation of favorable treatment and unquestioned compliance with one’s expectations—as it can be cancerous to the team and potentially to the entire organization.

It is essential to keep an eye on all these facets of leadership and often equally important that we not take ourselves too seriously. Kaiser was known for having painted his cement trucks bright pink simply because he thought it was a *happy* color. As ridiculous as it seems, little acts of playfulness like this provide a respite from the mundane and encourage a team to have fun.

Both Kaiser and Davis were known for being playful, and yet they demanded a great deal out of those working closely with them. Kaiser in particular focused on cultivating a diligent management process that was—in his mind—the key component in ensuring the speedy completion of any project. So playfulness must know its place. Too much process can cause a design team to get lost in a quagmire of rules and regulations, ultimately stunting creativity. People like Kaiser know that process must have a purpose; it doesn’t exist for its own sake. However, with too little process, you end up with each designer doing what is right in his or her own eyes, a design free-for-all that loses sight of challenge and purpose.

Discipline is a set of self-imposed rules, parameters within which we operate. It is a bag of tools that allows us to design in a consistent manner from beginning to end. Discipline is also an atti-

tude that provides us with the capacity of controlling our creative work so that it has continuity of intent throughout rather than fragmentation. Design without discipline is anarchy, an exercise of irresponsibility.

—Massimo Vignelli¹

Designers are notorious for allowing themselves more latitude than they should for the sake of *creativity*. The result can lead to a visual language that lacks consistency and meanders in purpose. Yes, a rigid process can lead to a rigid product. However, eschewing process in favor of “flexibility” or “creativity” will only perpetuate the notion that designers are unpredictable and lack a sense of accountability.

Research has shown that children function best and are most secure when they have structure and clearly defined boundaries. Designers are no different. Ask yourself when the last time was that you and your team put your process under the microscope? We all know how design and development companies *describe* their process on their websites. But let’s be honest, that description often does not reflect the day-to-day reality of the life of a project.

Even a semi-defined structure will reduce the tendency to fixate, over-think, and over-iterate on a problem. Involving the entire team in the process of developing this system helps you reduce general confusion and allows the team to work quickly and iteratively within those constraints, producing a higher quality product in the end.

Standardizing a basic set of tools that are used by the whole team will also radically improve the way the team operates and the methods by which they deliver results. Standardization, then, helps everyone to feel a greater

sense of ownership of the final product. Using the same set of tools is a big step toward ensuring consistency in design patterns, allowing for iteration, and the speedy propagation of design changes across the team.

When some designers are using Photoshop® and Illustrator®, some are using Fireworks®, and still others are spending their day in OmniGraffle®, expect a fair amount of friction around the sharing of files, assets, and overall comprehension of the project. A smaller set of common tools will help to decrease friction and also allow the design team to talk about the designs in a consistent manner. And that, invariably, will lead to more credibility with other teams (or clients).

Credibility also comes when a design team creates a culture that fosters and rewards the ability to rethink standard practices that may not be *best practices*. The ability to deliver a solution that was clearly the result of thinking outside of conventional methods will continually attract talented people who refuse to be limited by the way things are done today.

Kaiser said, “The fundamental assumption is that there is nothing that reasonable men undertake which cannot be accomplished.” Some called this *positive ignorance*, but to others it was simply vision mixed with audacity and entrepreneurial prowess. His spirit and optimism could be seen in the astonishing techniques the Kaiser engineers were able to invent. How do you quickly yet safely build a dam so gigantic that it would normally take two hundred years for its concrete to cool and, therefore, dry? They embedded water pipes into the concrete itself, to carry away the heat. Now, *that* is innovative design thinking that ignored conventional best practices of the day.

The people who have helped define what it means to design in this era of the web pushed forward, confident they could challenge conventional wisdom and uncover new ways to do things. Men and women like Zeldman, Holzschlag, Clarke, Veen, and Bowman helped lead the Web Standards movement at the turn of this century. More recently we have designers like Marcotte, who challenges us to think *responsively*, and Wroblewski, who urges us to take a *mobile first* approach. These people and others like them are the living proof of the *positive ignorance* in our field, an irrepressible optimism that there is nothing that we can’t do, even if we can’t do it quite yet.

It is the implementation of all of these concepts together as a system that will allow a design team to have the time, space, and resources to do what it does best—articulate, refine, and solve problems beautifully. Design can be most powerful when it helps people to see that which does not yet exist.

Now, more than ever, design teams are being given the chance to help lead and shape the future of businesses. The day may be coming soon when corporations and institutions respect the opinions and contributions of design teams as much as they do the engineering and financial divisions of their organizations.

If you want to create things that people love, if you want to cultivate a team that can accomplish the impossible, it is essential to find the kind of leaders who are driven to find ways to change the behavior, process, and thinking of their teams.

The era of great design teams is upon us. It will be led by men and women who challenge what we think is possible,

inspire us to do more than we believe we can, and encourage us to be even greater than they are.

These leaders free us as teams to reach inside ourselves and create what has never been seen or done before. 

When you're creating your own shit, man, even the sky ain't the limit.

—Miles Davis

¹ Massimo Vignelli, *The Vignelli Cannon*, (Lars Muller Publishers, 2010).

Lesson

JOSH BREWER

A few years ago, we uprooted our family and moved to San Francisco. The company I was working for at the time as Creative Director had just taken a small round of funding with the specific goal of rapidly expanding the business. Moving was a big decision for us, but we were enthusiastic about taking this next step in our lives.

My wife, whose full-time job is raising two children, also happens to be an incredibly talented decorator—or *organator* (organizer + decorator), as she likes to call herself. Her knack for arranging a space and bringing it to life is amazing, and I was constantly encouraging her to start a blog and begin sharing her delightfully smart and creative ideas. But she was always a bit reluctant.

“Who’s gonna read it?” she would ask.

“Just start the blog,” I said. “You’ll be surprised.”

Turns out I was in for the surprise.

Dana finally agreed to let me design and build her site. I became the *designer* and my wife became the *client*. To conduct the process as professionally as possible, I even set up a formal session during which we began to talk about what she envisioned for her new blog: how it would be organized, what the content would be, the *look and feel*—all the usual things you discuss when meeting with a client for the first time.

Seek first to understand is a principle that is absolutely essential for good interpersonal communication. I picked it up years ago from Steven Covey's book, *The 7 Habits of Highly Effective People*. I work hard to incorporate this principle into both my personal and business relationships and consider myself to be pretty good at using this to elicit the real problem that needs to be solved in order for a design to be successful.

Surely, this process would be easy. Dana was passionate about her topic, and she was my partner in life. The love of my life. I was an experienced web designer who highly valued good communication. What could possibly go wrong?

However, as Dana and I spent more time together, starting to design and build her new blog, we found ourselves increasingly frustrated with each other. To be candid, she was actually becoming irritated with me. I, on the other hand, was routinely channeling nearly all of the negative clichés about designers you can imagine. Pronouncements like, "You just don't do that." and "That's just wrong!" began to roll off my tongue, complete with eye-rolling and defensive body language.

And, great communicator that I was, I would become extremely annoyed when I had to explain *why*. My furrowed brow of frustration was pretty much the antithesis of "Seek first to understand" and more like "Stop talking to me, leave me alone, and just let me make this thing for you; it will be awesome, and you will like it, and so will other people."

Finally, one day, as we were slogging through another session of trying to get this thing off the ground, Dana said, "Okay, forget it. I don't want to do this with you. Honestly,

if this is how you treat other clients or the people you work with, you should be ashamed of yourself."

Ouch! Did she really just say that?

Cue defensive male posture and ready the rebuttals.

Fortunately, I managed to stop myself and instead opened up to what she was saying. It wasn't easy. Here was the woman of my dreams, the one person that I know and am known by more than anyone on the planet, the wife to whom I pledged my heart and my life, telling me in no uncertain terms that I was not listening, was not open to her feedback, and was not taking what she wanted into account.

Okay, Mr. Seek-first-to-understand-professional-designer-guy, where is your *essential principle of interpersonal communication* now?

It was nowhere to be found. In fact, it turned out my ego was running the show more than I wanted to admit. I mean, after all, people would see her site and know I designed it. It would represent my abilities and reputation. I had to make sure it was perfect.

Notice how much of that was all about *me*? Wait a minute. Who was I designing this *for*?

That's right, *my wife*.

So after I got down off of my high horse and humbled myself enough to listen, Dana and I were able to work together to create something that reflected who she is and what she loves rather than a showcase for my skills as a designer.

This experience serves as my constant reminder that design is for the client, not for us, and that humility and openness are qualities not only worth cultivating but critically important for working with *every* client—even the ones who once said, “I do.”

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Colophon

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